Electrolux

Technical Service Manual

Front Load Electric and Gas Dryers (EFME617SIW/EFMG617SIW/ EFME517SIW/EFMG517SIW/EFME417SIW/EFMG417SIW)

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Table of Contents

Read the entire Manual before attempting to service this product. Pay attention to all Warnings, Cautions and Notes. Failure to do so could result in serious personal injury and / or equipment damage.

DEFINITIONS

WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTE

Used to address practices not related to personal injury.

IMPORTANT

Information that requires special attention from the user.

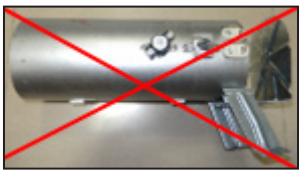
2. Purpose of this Manual

The purpose of this Manual is to provide information regarding repair procedures of Dryer (Both Electric and Gas Models) fitted with the Electronic Control System. This Manual is intended for the use of Service Engineers of Electrolux.

The Manual includes the following topics:

- Product Features, Model Specifications
- Electrical Characteristics and Specifications
- Accessibility of the Electrical and Mechanical Components
- Diagnostics Systems
- Error Codes and Troubleshooting

- Any work on Electrical Appliances must be carried out by a qualified professional.
- Confirm that the Power System is operational before working on the Appliance.
- Ensure that the gas pipelines are connected properly as mentioned in the Installation section for Gas Dryer Models.
- Check that the Appliance is restored to its original safety condition after the operation is complete.
- Take the plug out of the socket to disconnect the power supply before you access internal components. This platform is not fitted with an ON / OFF switch.
- Replace the heating element with the one that has the same characteristics to maintain safety measures for the Appliance (**See Figure**).
- Always empty the Appliance before laying it on its side for any servicing.
- Always wear gloves before servicing any components.



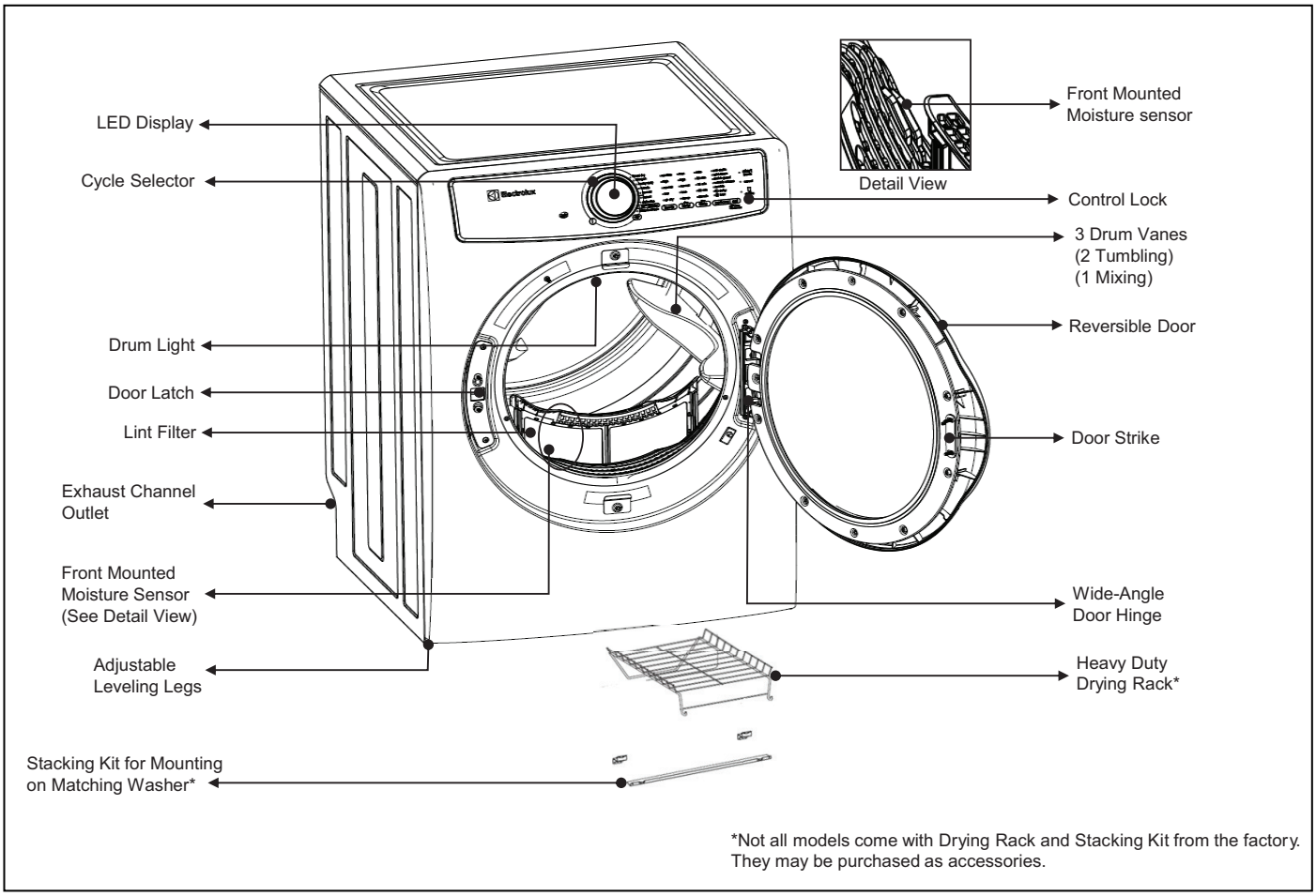
Heating Element with different Specification

- The resistance values of the components shown in this Service Manual (SM) are purely indicative and approximate.
- The Sensors located on the Display Board could be at a potential of 220 Volts (If applicable).
- Do not place any container under the Appliance to avoid collecting drops of water.

WARNING

Certain internal parts are intentionally not grounded and may present a risk of electric shock only during servicing. Do Not Contact any part while the Appliance is energized. For example, Water Valve.

4. Product Features (For Models 617, 517 and 417 Series)



*Not all models come with Drying Rack and Stacking Kit from the factory. They may be purchased as accessories.

Burner Assembly

Model	Description
EFME617SIW / EFME517SIW / EFME417SIW	 Electrical Heater Assembly
EFMG617SIW / EFMG517SIW / EFMG417SIW	 Gas Burner Assembly

5. Model Specifications

Description	EFME617SIW	EFMG617SIW	EFME517SIW	EFMG517SIW	EFME417SIW	EFMG417SIW
Capacity D.O.E.	8.0 Cu. Ft.	8.0 Cu. Ft.	8.0 Cu. Ft.	8.0 Cu. Ft.	8.0 Cu. Ft.	8.0 Cu. Ft.
Features						
Controls	Ready-Select®	Ready-Select®	-	-	-	-
Dryer Drum Interior	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Interior Light	Yes	Yes	Yes	Yes	Yes	Yes
Door Trim	Chrome	Chrome	-	-	-	-
Ready Steam™	Option	Option	-	-	-	-
Perfect Steam	Yes	Yes	Yes	Yes	Yes	Yes
Eco	Yes	Yes	Yes	Yes	Yes	Yes
DrySense™ Technology	Yes	Yes	-	-	-	-
Wrinkle Release Technology	Yes	Yes	Yes	Yes	Yes	Yes
Shrink Gaurd	Yes	Yes	-	-	-	-
Anti Static	Yes	Yes	Yes	Yes	No	No
TimeWise® Technology	Yes	Yes	-	-	-	-
Extended Tumble	Yes	Yes	Yes	Yes	No	No
Precision Moisture Sensor	Yes	Yes	Yes	Yes	Yes	Yes
Time Remaining Display	Yes	Yes	Yes	Yes	Yes	Yes
Cycle Status Display	Yes	Yes	Yes	Yes	Yes	Yes
Cycle Signal	Chime	Chime	-	-	-	-
Cycle Signal "ON / OFF "	Yes	Yes	Yes	Yes	Yes	Yes
Control Lock	Yes	Yes	Yes	Yes	Yes	Yes
Start / Pause / Cancel Buttons	Yes	Yes	Yes	Yes	Yes	Yes

Model Specifications

Description	EFME617SIW	EFMG617SIW	EFME517SIW	EFMG517SIW	EFME417SIW	EFMG417SIW
Energy Saver Option	Yes	Yes	Yes	Yes	Yes	Yes
Delay Start	1 to 12 Hours	1 to 12 Hours	1 to 12 Hours	1 to 12 Hours	1 to 12 Hours	1 to 12 Hours
Tumble Speed (RPM)	50	50	50	50	50	50
Reversible Door	Yes	Yes	Yes	Yes	Yes	Yes
Lint Screen	Yes	Yes	Yes	Yes	Yes	Yes
Sound Package	Silent Design™	Silent Design™	-	-	-	-
Adjustable Leveling Legs	Yes	Yes	Yes	Yes	Yes	Yes
Cycles						
Dry cycles	9	9	8	8	7	7
Specialty Cycles	1	1	1	1	1	1
Options						
Temperature Selections	5	5	5	5	4	4
Dryness Level Selections	5	5	5	5	4	4
Timed Dry	30, 45, 60, 75, AUTO	30, 45, 60, 75, AUTO	30, 45, 60, 75, AUTO	30, 45, 60, 75, AUTO	30, 45, 60, AUTO	30, 45, 60, AUTO
Optional Accessories						
Dryer Stacking Kit	PN # STACKIT4X	PN # STACKIT4X	PN # STACKIT4X	PN # STACKIT4X	PN # STACKIT4X	PN # STACKIT4X
White Pedestal	P/N EPWD157SIW	P/N EPWD157SIW	P/N EPWD157SIW	P/N EPWD157SIW	P/N EPWD157SIW	P/N EPWD157SIW
Titanium Pedestal	P/N EPWD157STT	P/N EPWD157STT	P/N EPWD157STT	P/N EPWD157STT	P/N EPWD157STT	P/N EPWD157STT
LP Gas Conversion Kit	NA	P/N PCK4200	NA	P/N PCK4200	NA	P/N PCK4200
Drying Rack	PN # 137067300	PN # 137067300	-	-	-	-
Certifications						
NSF® Certified Sanitize	No	No	No	No	No	No

Model Specifications

Description	EFME617SIW	EFMG617SIW	EFME517SIW	EFMG517SIW	EFME417SIW	EFMG417SIW
Product Specifications						
A - Height (Single)	38"	38"	38"	38"	38"	38"
Height (Stacked)	75.75"	75.75"	75.75"	75.75"	75.75"	75.75"
B - Width	27"	27"	27"	27"	27"	27"
C - Depth	31.5"	31.5"	31.5"	31.5"	31.5"	31.5"
Depth with Door Open 90°	53.5"	53.5"	53.5"	53.5"	53.5"	53.5"
Pedestal Dimensions						
A - Height	15.25″	15.25"	15.25"	15.25"	15.25"	15.25"
B – Width	27"	27"	27"	27"	27"	27"
C - Depth	26-1/2"	26-1/2"	-	-	-	-
Depth with Drawer Fully Extended	42-1/2"	42-1/2"	-	-	-	-

6. Electrical Characteristics (For Models 617, 517 and 417 Series)

6.1 Electronic Control

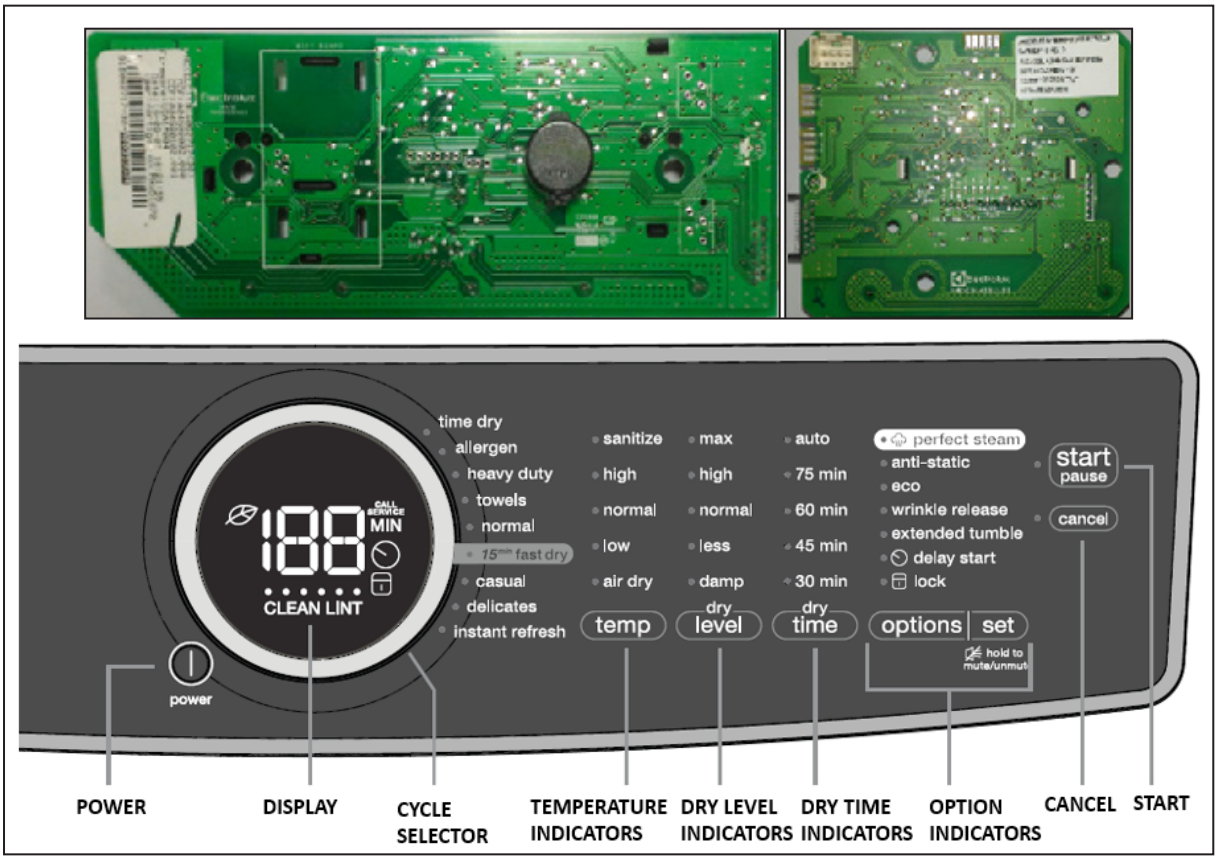
The Electronic Control is made up of the following components:

1. User Interface (UI) Board
2. Electronic Control Board

6.1.1 User Interface (UI) Board

The User Interface (UI) PCB contains the selector dial and buttons to adjust temperature, dry level, dry time, and options.

User Interface (UI) Board Assembly



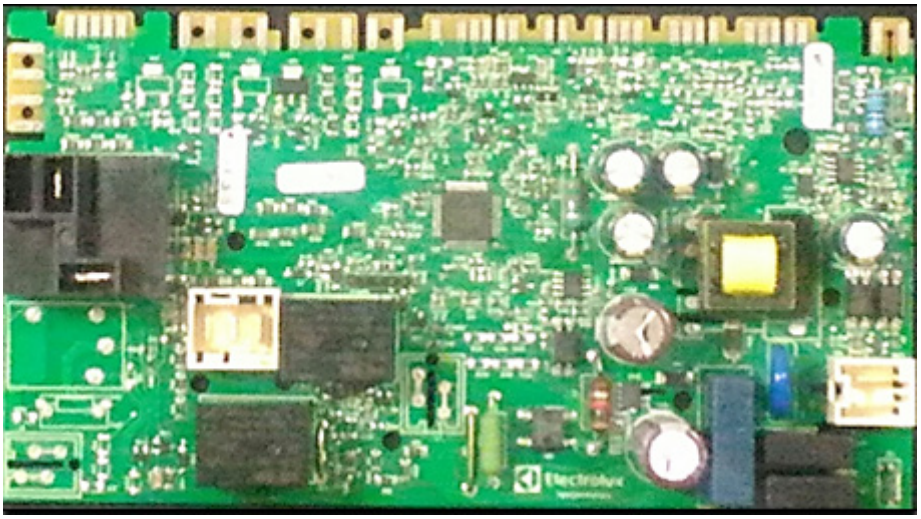
6.1.2 Electronic Control Board

The Electronic Control Board supplies the power supply voltage to the User Interface (UI) Board and all other electrical components.

The commands acquired by the User Interface (by turning the selector, selecting an option, and so on.) are sent to the Electronic Control Board, which powers all the electrical components (Thermistor, Thermal Limiter, High-Limit Thermostat, Burner Assembly and the User Interface (UI) Board).

1. It controls the Temperature of Exhaust air via the Thermistor sensor.
2. It senses opening and closing of the Door.
3. It controls the speed of the Motor.
4. It controls Thermal Limiter, Thermistors, High-Limit Thermostat ands so on.
5. Its controls Heater Assembly.

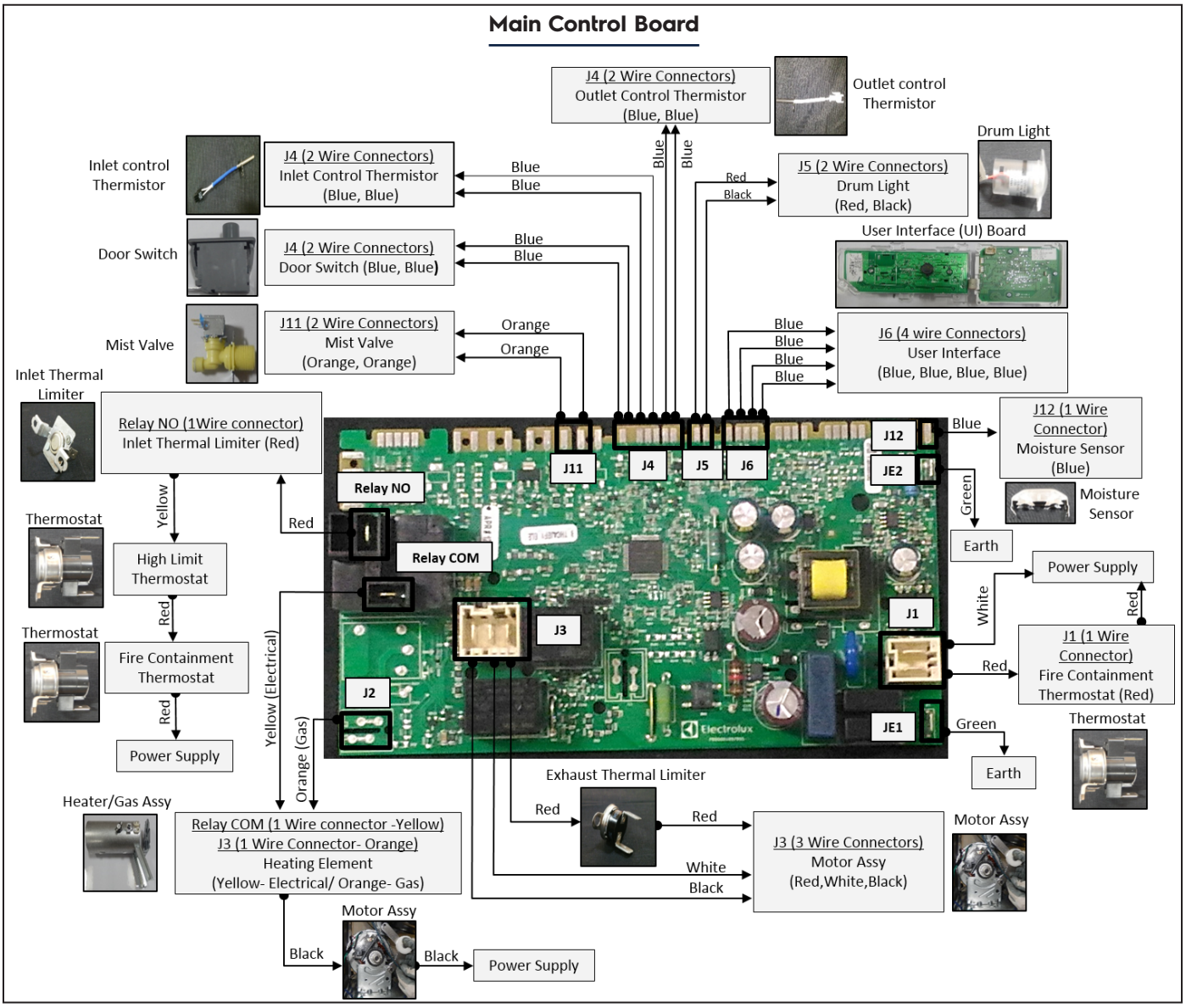
Electronic Control Board



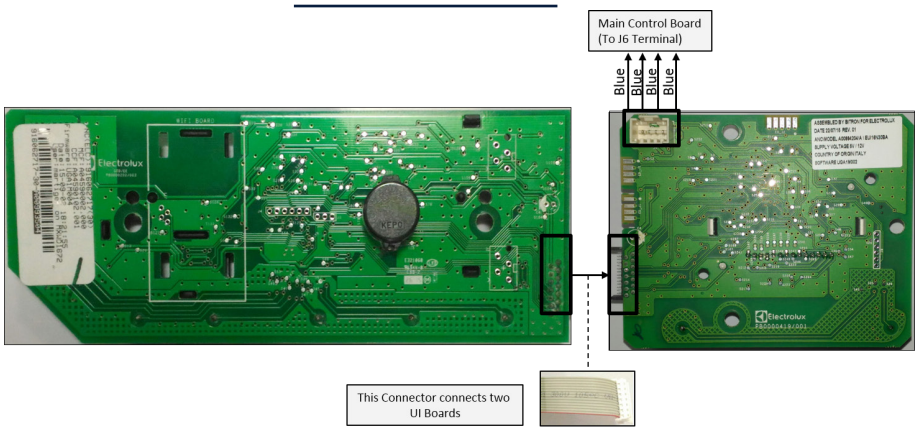
Electrical Characteristics (For Models 617, 517 and 417 Series)

6.2 Schematic Diagram

Main Control Board

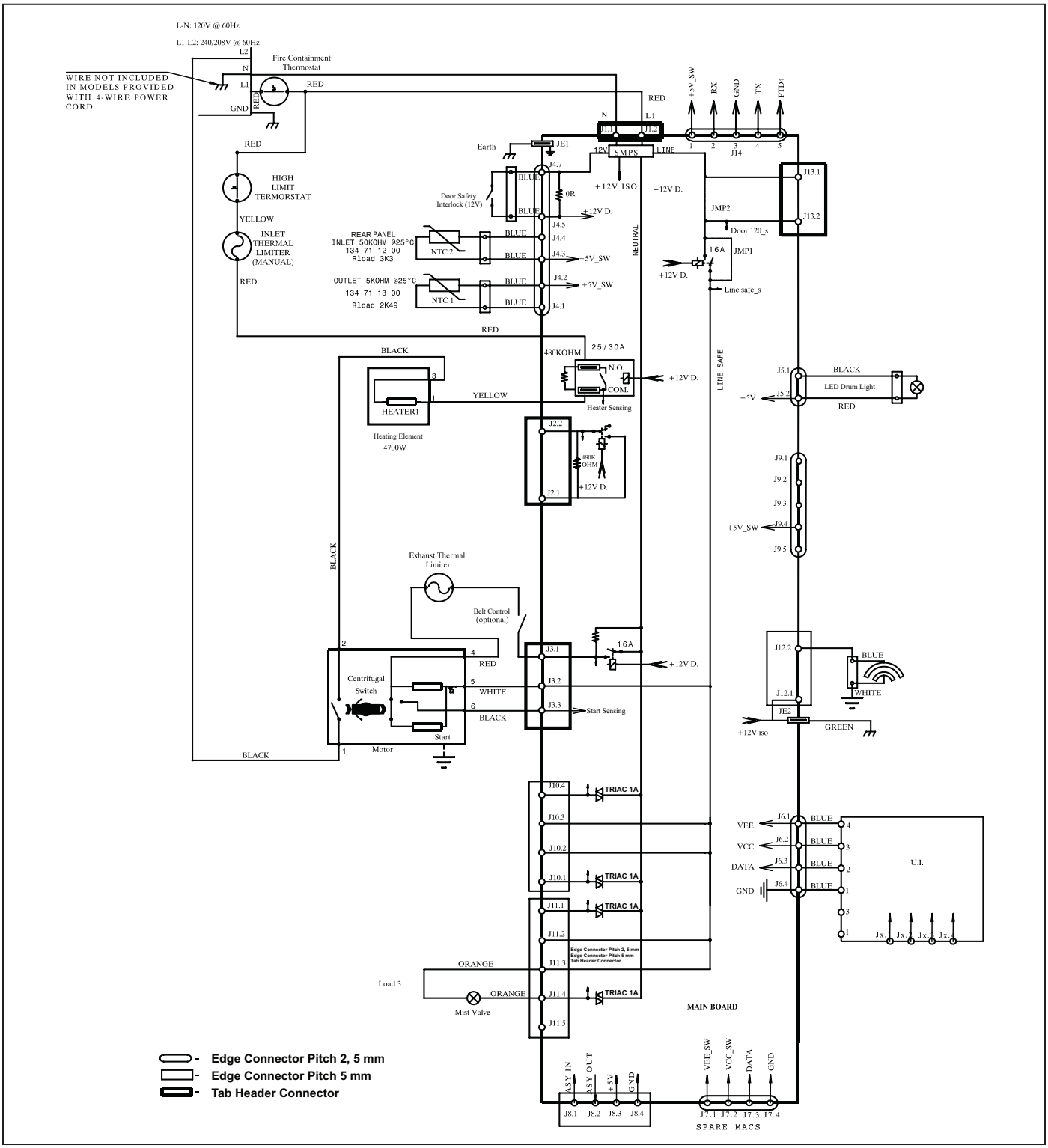


User Interface Board



Electrical Characteristics (For Models 617, 517 and 417 Series)

6.3 Wiring Diagram – EFME617SIW / EFME517SIW / EFME417SIW

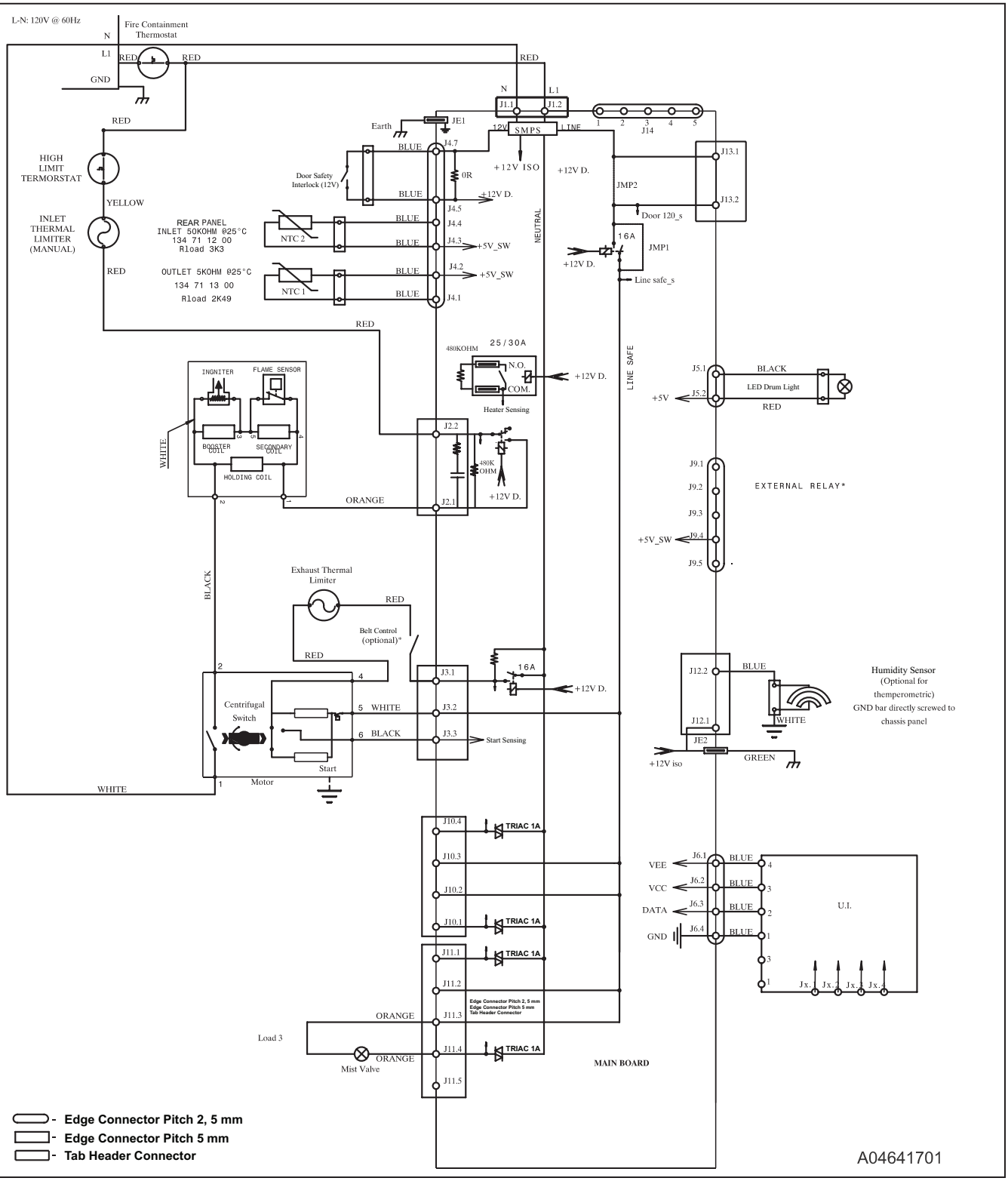


CAUTION

Disconnect electric current before servicing.

Electrical Characteristics (For Models 617, 517 and 417 Series)

6.4 Wiring Diagram – EFMG617SIW / EFMG517SIW / EFMG417SIW



CAUTION

Disconnect electric current before servicing.

7. Electrical Components (For Models 617, 517 and 417 Series)

7.1 Electrical Component Resistance and Specification Table

<table>
<tr><th>S.No.</th><th>Component</th><th>Specification</th></tr>
<tr><td>1</td><td>Heating Element
(For Electric Model Only)
(137114000)</td><td>Wattage: 4700 W ± 3%,
Resistance Across the Terminals: 10.39 Ω ± 3%.</td></tr>
<tr><td>2</td><td>Inlet Control Thermistor
(For Both Gas and Electrical Model) (134711200)</td><td>
<table>
<tr><th>Parameter</th><th>Specification</th><th>Test Condition</th></tr>
<tr><td>Upper Category Temperature</td><td>300 °C</td><td>-</td></tr>
<tr><td>Lower Category Temperature</td><td>10 °C</td><td>-</td></tr>
<tr><td>Rated Resistance R_n</td><td>3359 Ω ± 2%</td><td>-</td></tr>
<tr><td>Rated Temperature</td><td>100 °C</td><td>-</td></tr>
<tr><td>B-Value: B (0/100)</td><td>3970 K ± 1%</td><td>-</td></tr>
<tr><td>B-Value: B (100/200)</td><td>4159 K</td><td>-</td></tr>
<tr><td>Resistance at 25 °C</td><td>50000 Ω ± 5%</td><td>-</td></tr>
<tr><td>Dissipation Factor</td><td>2 mW/K</td><td>AIR</td></tr>
<tr><td>Thermal Cooling Time Constant</td><td>20 secs</td><td>AIR</td></tr>
<tr><td>B-Value: B(200/300)</td><td>4267 K</td><td>-</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>Outlet Control Thermistor
(For Both Gas and Electrical Model) (134711300)</td><td>
<table>
<tr><th>Parameter</th><th>Specification</th><th>Test Condition</th></tr>
<tr><td>Upper Category Temperature</td><td>90 °C</td><td>-</td></tr>
<tr><td>Lower Category Temperature</td><td>0 °C</td><td>-</td></tr>
<tr><td>Rated Resistance R_n</td><td>5000 Ω ± 2%</td><td>-</td></tr>
<tr><td>Rated Temperature</td><td>25 °C</td><td>-</td></tr>
<tr><td>B-Value: B (0/100)</td><td>3450 K ± 1%</td><td>-</td></tr>
<tr><td>Dissipation Factor</td><td>3 mW/K</td><td>AIR</td></tr>
<tr><td>Thermal Cooling Time Constant</td><td>50 secs</td><td>AIR</td></tr>
</table>
</td></tr>
<tr><td>4</td><td>Door Switch
(For Both Gas and Electrical Model) (134813600)</td><td>Contact Rating To Meet – 10 A, 1/3 hp, 125/250 V AC.</td></tr>
<tr><td>5</td><td>Drum Light
(For Both Gas and Electrical Model) (A03824001)</td><td>LED Diode: Everlight LED, ELSW-F91C1-OLPGS-C6500,
Maximum LED Current: 350 mA, Power: 1 W,
Minimum Flux: 35 lumen (55 Typical),
White LED (Cold White) Typical 6500 K.</td></tr>
</table>

Electrical Components (For Models 617, 517 and 417 Series)

<table>
<tr><th>S.No.</th><th>Component</th><th>Specification</th></tr>
<tr><td>6</td><td>Motor
(For Both Gas and Electrical Model) (134693300)</td><td>
<table>
<tr><th colspan="2">Performance Specifications</th></tr>
<tr><td>Voltage - cycles</td><td>115V-60 Hz</td></tr>
<tr><td>Breakdown torque, ft - oz</td><td>26.0 nom</td></tr>
<tr><td>Locked rotor current, amps</td><td>46.5 max.</td></tr>
<tr><td>Full load torque, ft - oz</td><td>16.2 nom</td></tr>
<tr><td>Full load current, amps</td><td>5.1 nom</td></tr>
<tr><td>Full load, watts</td><td>400 nom</td></tr>
<tr><td>Full load, rpm</td><td>1685 nom</td></tr>
<tr><td>Horse power</td><td>1/3 hp output</td></tr>
<tr><td>Locked rotor trip time</td><td>3-6 secs</td></tr>
</table>
</td></tr>
<tr><td>7</td><td>Inlet Thermal Limiter
(For Electric Model Only)
(137032600)</td><td>U.L. and C.S.A. Rated: 125/250 V AC, 25 A Resistive, 125 V AC, 20 F.L.A., 60 L.R.A. Inductive, 240 V AC, 10 F.L.A., 60 L.R.A. Inductive,
Opening Temp: 275 ° ± 10.8 °F, Closing Temp: -31 °F.</td></tr>
<tr><td>8</td><td>Inlet Thermal Limiter
(For Gas Model Only)
(137539200)</td><td>UL and C.S.A. Rated: 125/250 V AC, 25 A Resistive, 125 V AC, 20 F.L.A., 60 L.R.A. Inductive, 240 V AC, 10 F.L.A., 60 L.R.A Inductive,
Opening Temp: 314 ° ± 6 °F, Closing Temp: -31 °F.</td></tr>
<tr><td>9</td><td>Outlet Thermal Limiter
(For Both Gas and Electrical Model) (134711401)</td><td>U.L. Rated : 240 V, 10 A F.L.A and 60 A L.R.A at 350 °F,
C.S.A. Rated: 120 V, 15 A Resistive,
Opening Temp: 180 ° ± 8 °F,
Closing Temp: -31 °F.</td></tr>
<tr><td>10</td><td>High-Limit Thermostat
(For Gas Model Only)
(137116700)</td><td>240 V, 25 Amp Resistance,
Opening Temp: 200 ± 6 °F,
Closing Temp: 130 ± 7 °F,
Maximum Temperature: 350 °F.</td></tr>
<tr><td>11</td><td>High-Limit Thermostat
(For Electrical Model Only)
(14516000)</td><td>240 V, 25 Amp Resistance,
Opening Temp: 260 ± 8 °F,
Closing Temp: 190 ± 11 °F,
Maximum Temperature: 350 °F.</td></tr>
<tr><td>12</td><td>Fire Containment Thermostat
(For Both Gas and Electrical Model) (137116700)</td><td>240 V ,25 Amp Resistance,
Opening Temp: 180 ± 8 °F,
Closing Temp: -31 °F,
Maximum Temperature: 350 °F.</td></tr>
<tr><td>13</td><td>Mist Valve
(For Both Gas and Electrical Model) (137544800)</td><td>Electrical Rating: 120 V, -60 Hz or 105 V -50 Hz, 5 Watts,
Flow rate: 140 cc ± 8% @ 20-120 psi and / or ± 5% @ 50 psi for 7.5 secs.</td></tr>
<tr><td>14</td><td>Igniter
(For Gas Model Only)
(137524000)</td><td>Steady State Current to be 3.90 to 5.00 A @ 132 ± 1 V AC and 75 ° ± 5 °F Ambient, time to reach 2000 °F: 16 secs Max. @ 115 ± 1 V AC and 75 ° ± 5 °F Ambient Temp, Igniter Must Not Exceed 3100 °F in 10 secs at 132 ± 1 V AC and 75 ° ± 5 °F Ambient.</td></tr>
</table>

7.2 Heating Element

⚠ WARNING

- **When replacing the heating element, refer to the code shown in the list of spare parts relating to the Appliance.**
- **It is strictly forbidden to tamper with the heating element in any way.**

7.2.1 General Characteristics

For Electric Models

The Heating Element converts Electric Power into heat through the process of resistive heating. Electric current passing through the element encounters resistance, resulting in heating of the element.

In Electric Dryers, heat is generated by the heating element. The element is a coil of heating wire enclosed in a metal chamber. Electric current flowing through the coil creates heat and the air being pulled through the chamber absorbs this heat and becomes hot.

For Gas Models

The Gas models are equipped with a Gas Valve and Burner assemblies enclosed in a metal chamber. The Gas flows through the valve and is ignited which creates heat. Air is pulled through the chamber and becomes hot.

Component Specifications

S.No.	Component	Specification
1	Heater (For Electric Model only)	Wattage: 4700 W ± 3%, Resistance Across the Terminals: 10.39 Ω ± 3%.

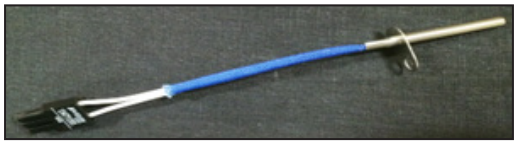
7.3 Inlet Control Thermistor

⚠ WARNING

When replacing the Inlet Control Thermistor, refer to the code shown in the list of spare parts relating to the Appliance.

7.3.1 General Characteristics

The Thermistor is a type of resistor whose resistance varies significantly with temperature.



The Thermistor measures the temperature of the air in the Dryer and adjusts the heat accordingly. When a Thermistor fails, it can cause the Dryer not to heat at all or heat up to the wrong temperature.

It is used to check the temperature of air near Drum Inlet in Rear Air Duct.

Electrical Components (For Models 617, 517 and 417 Series)

Component Specifications

<table>
<tr><th>S.No.</th><th>Component</th><th>Specifications</th></tr>
<tr><td>1</td><td>Inlet Control Thermistor</td><td>
<table>
<tr><th>Parameter</th><th>Specification</th><th>Test Condition</th></tr>
<tr><td>Upper Category Temperature</td><td>300 °C</td><td>-</td></tr>
<tr><td>Lower Category Temperature</td><td>10 °C</td><td>-</td></tr>
<tr><td>Rated Resistance Rn</td><td>3359 Ω ± 2%</td><td>-</td></tr>
<tr><td>Rated Temperature</td><td>100 °C</td><td>-</td></tr>
<tr><td>B-Value: B (0/100)</td><td>3970 K ± 1%</td><td>-</td></tr>
<tr><td>B-Value: B (100/200)</td><td>4159 K</td><td>-</td></tr>
<tr><td>Resistance at 25 °C</td><td>50000 Ω ± 5%</td><td></td></tr>
<tr><td>Dissipation Factor</td><td>2 mW/K</td><td>AIR</td></tr>
<tr><td>Thermal Cooling Time Constant</td><td>20 secs</td><td>AIR</td></tr>
<tr><td>B-Value: B (200/300)</td><td>4267 K</td><td>-</td></tr>
</table>
</td></tr>
</table>

7.4 Outlet Control Thermistor

⚠ WARNING

When replacing the Outlet Control Thermistor, refer to the code shown in the list of spare parts relating to the Appliance.

7.4.1 General Characteristics

A **Thermistor** is a type of resistor whose resistance varies significantly with temperature.

The Thermistor measures the temperature of the air in the Dryer so that the Dryer knows its temperature limits.

When a Thermistor fails, it can cause the Dryer to not heat at all or heat up to the wrong temperature.

It is used to check the temperature of air between the blower and exhaust.

Component Specifications

<table>
<tr><th>S.No.</th><th>Component</th><th>Specifications</th></tr>
<tr><td>1</td><td>Outlet Control Thermistor</td><td>
<table>
<tr><th>Parameter</th><th>Specification</th><th>Test Condition</th></tr>
<tr><td>Upper Category Temperature</td><td>90 °C</td><td>-</td></tr>
<tr><td>Lower Category Temperature</td><td>0 °C</td><td>-</td></tr>
<tr><td>Rated Resistance Rn</td><td>5000 Ω ± 2%</td><td>-</td></tr>
<tr><td>Rated Temperature</td><td>25 °C</td><td>-</td></tr>
<tr><td>B-Value: B (0/100)</td><td>3450 K ± 1%</td><td>-</td></tr>
<tr><td>Dissipation Factor</td><td>3 mW/K</td><td>AIR</td></tr>
<tr><td>Thermal Cooling Time Constant</td><td>50 secs</td><td>AIR</td></tr>
</table>
</td></tr>
</table>

7.5 Door Switch and Drum Light

WARNING

When replacing the Door Switch and Drum Light, refer to the code shown in the list of spare parts related to the Appliance.

7.5.1 General Characteristics

The Dryer Door Switch is a push button that controls the operation of the Dryer light inside the drum. When the door is closed, drum light will be OFF and drum light will be ON when the door is opened.

The Dryer Door Switch also senses the position of the door (open or closed), thus allowing the Dryer to start its function only when the door is closed.

Component Specifications

S.No.	Component	Specification
1	Door Switch	Contact Rating to meet – 10 A, 1/3 HP, 125/250 V AC, Operating force – 500 gf.
2	Drum Light	LED Diode: Everlight LED, ELSW-F91C1-OLPGS-C6500, Maximum LED Current: 350 mA, Power: 1 W, Minimum Flux: 35 lumen (55 Typical), White LED (Cold White) Typical 6500 K.

Electrical Components (For Models 617, 517 and 417 Series)

7.6 Single-Phase Induction Motor

WARNING

When replacing the Motor, refer to the code shown in the list of spare parts relating to the Appliance.

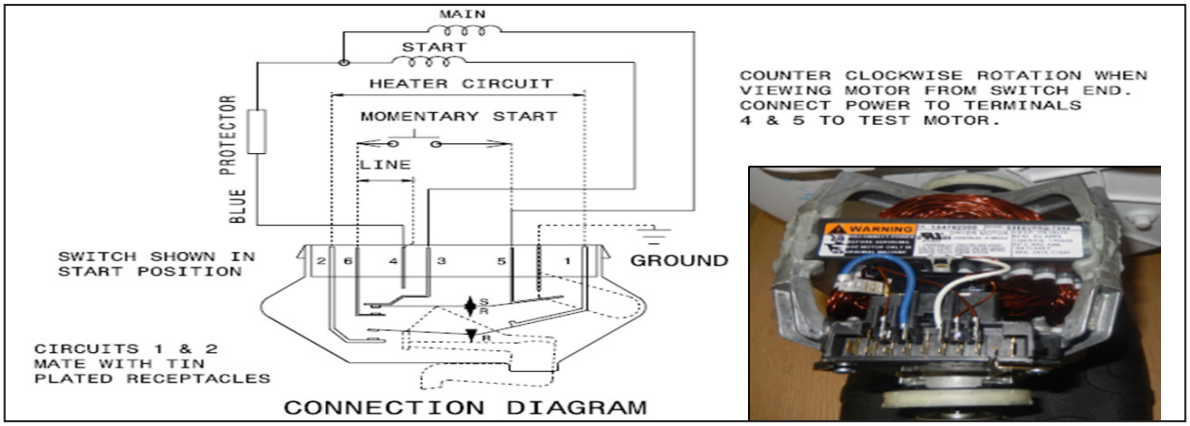
7.6.1 General Characteristics

A single-phase AC current is supplied to the main winding that produces a pulsating magnetic field. The pulsating field could be divided into two fields, which are rotating in opposite directions. The interaction between the fields and the current induced in the rotor bars generates opposing torque.

The Motor Assembly is used to drive the Dryer Drum as well as Blower. Motor is activated from Electronic Control Board through the Door Switch.

The Motor is equipped with Overload Thermal Protection Tripper. This ensures that the Motor is switched OFF if any thermal overload occurs.

Connection Diagram



Performance Specifications	
Voltage-cycles	115 V-60 Hz
Breakdown torque, ft-oz	26.0 nom
Locked rotor current, amps	46.5 max.
Full load torque, ft-oz	16.2 nom
Full load current, amps	5.1 nom
Full load, watts	400 nom
Full load, rpm	1685 nom
Horse power	1/3 hp output
Locked rotor trip time	3-6 secs

7.7 Inlet Thermal Limiter

WARNING

When replacing the Inlet Thermal Limiter, refer to the code shown in the list of spare parts relating to the Appliance.

7.7.1 General Characteristics

A Limiter is a heat-sensitive fuse attached to the heating element, and it disconnects electrical power to the heater when the Dryer gets overheated.

The specific purpose of the Thermal Limiter is to prevent overheating and fires. It is made of a heat-sensitive material that melts or otherwise becomes electrically open when the temperature rises beyond its limit.

Component Specifications

S.No.	Component	Specification
1	Inlet Thermal Limiter	U.L. and C.S.A. Rated: 125/250 V AC, 25 A Resistive, 125 V AC, 20 F.L.A., 60 L.R.A. Inductive, 240 V AC, 10 F.L.A., 60 L.R.A. Inductive, For Electrical model: Opening Temp: 275 ° ± 10.8 °F, Closing Temp: -31 °F.
		For Gas model: Opening Temp: 314 ° ± 6 °F, Closing Temp: -31 °F.

7.8 Outlet Thermal Limiter

WARNING

When replacing the Outlet Thermal Limiter, refer to the code shown in the list of spare parts relating to the Appliance.

7.8.1 General Characteristics

It is a heat-sensitive fuse attached to the Rear Panel, and it disconnects electrical power to the heater when the Dryer gets overheated.

The specific purpose of the Thermal Limiter is to prevent overheating and fires. It is made of a heat-sensitive material that melts or otherwise becomes electrically open when the temperature rises beyond its limit.

Component Specifications

S.No.	Component	Specification
1	Outlet Thermal Limiter	U.L. Rated: 240 V, 10 A F.L.A and 60 A L.R.A at 350 °F, C.S.A. Rated: 120 V, 15 A Resistive, Opening Temp: 180 ° ± 8 °F, Closing Temp: -31 °F.

7.9 High-Limit Thermostat

WARNING

When replacing the High-Limit Thermostat, refer to the code shown in the list of spare parts relating to the Appliance.

7.9.1 General Characteristics

A Thermostat is a device that is used to control a heating or cooling system so that it maintains a certain temperature or keeps the temperature within a certain range. It acts as a switch which makes the circuit open or close. If temperature goes beyond the specified range, it opens the circuit else circuit remains close.

Electrical Components (For Models 617, 517 and 417 Series)

Function of Hi-Limit Thermostats

Based on the vast amount of heat produced by clothes Dryers during the course of normal operation, it is important that a secondary safety option is available in case problems arise. A Hi-Limit Thermostat serves as a safety feature that keeps the Dryer from becoming hotter than a certain temperature. Once the temperature reaches at a certain point within the Dryer, the circuit that provides power to the heater will open. This allows the Hi-Limit Thermostat to act as a secondary safety option for the primary thermostat, and also for other components such as the Thermistor and Blower.

Hi-Limit Thermostats During Normal Operation

The standard position of the Hi-Limit Thermostat is closed, allowing current to flow to the heater without interruption. Under normal conditions, the Dryer's primary operating thermostat will cycle the heater ON and OFF to prevent temperatures from rising too high within the Dryer. The Hi-Limit Thermostat will remain unaffected through all of these cycles, since the temperature inside of the Dryer will stay lower than what is required to activate the Hi-Limit Sensors (generally 250-degrees Fahrenheit, though the exact temperature may vary).

Conditions to Activate Hi-Limit Thermostats

If the temperature within the Dryer exceeds the temperature allowed by the Hi-Limit Thermostat, the unit will activate and turn OFF the power to the Dryer's heater. There are several conditions that could lead to this increased temperature, including a fault in a part such as the Primary Operating Thermostat, Thermistor, and Blower. Other conditions that can lead to an increase in temperature are significant enough to trip the Hi-Limit Thermostat, include the improper configuration of components, such as the Primary Thermostat or heater. Blocked or clogged exhaust vents can also cause a significant increase in the temperature within the Dryer and are one of the most common causes for the activation of a Hi-Limit Thermostat.

Component Specifications

S.No.	Component	Specification
1	High-Limit Thermostat	240 V, 25 Amp Resistance For Electrical model: Opening Temp: 260 ± 8 °F, Closing Temp: 190 ± 11 °F, Max. Temperature: 350 °F
		For Gas model: Opening Temp: 200 ± 6 °F, Closing Temp: 130 ± 7 °F, Maximum Temperature: 350 °F.

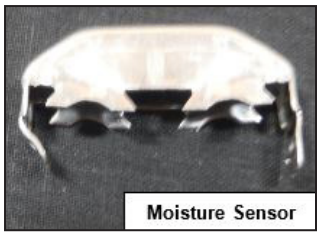
7.10 Contact / Moisture Sensor

⚠ WARNING

When replacing the Contact / Moisture Sensor, refer to the code shown in the list of spare parts related to the Appliance.

7.10.1 General Characteristics

A "Moisture Sensor" or "Dryness Control" retards the advancing of the timer. The device uses an Electronic Control Board in conjunction with sensor strips inside the drum, which come into contact with the clothing as it tumbles. When contact is established with the wet clothing, a short is created between the two strips allowing power to flow to the Electronic Control Board which then acts upon the information allowing the timer to advance or stop.


Moisture Sensor

The Moisture Sensor controls may count the number of times this short occurs over a given period and act upon that information appropriately. More 'hits' means more wet clothing in the Dryer, in which case the control may delay advancing of the timer for longer, to allow more time for them to dry. In this case, less 'hits' would mean fewer or not as damp clothing in the Dryer, which means advancing of the timer may not be retarded as long.

7.11 Mist Valve

WARNING

When replacing the Mist Valve, refer to the code shown in the list of spare parts relating to the Appliance.

7.11.1 General Characteristics

The Mist Valve creates a water mist which is a water spray with a droplet size of "less than 1000 microns at the minimum operation pressure of the discharge nozzle". The droplet size can be controlled by adjusting discharge pressure through a nozzle of a fixed orifice size. By creating a mist, an equal volume of water will create a larger total surface area exposed to the hot air. The larger total surface area better facilitates the transfer of heat, thus allowing more water droplets to turn to steam more quickly.

Component Specifications

S.No.	Component	Specification
1	Mist Valve	Electrical Rating: 120 V, -60 Hz or 105 V -50 Hz , 5 Watts, Flow rate: 140 cc ± 8% @ 20-120 psi and / or ± 5% @ 50 psi for 7.5 secs.

8. Gas Assembly Characteristics (For Gas Models EFMG617SIW / EFMG517SIW / EFMG417SIW)

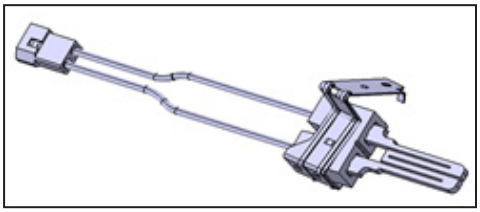
⚠ WARNING

When replacing the Igniter, Burner, Gas Valve, and Flame Sensor, refer to the code shown in the list of spare parts relating to the Appliance.

8.1 Igniter

8.1.1 General Characteristics

An Igniter is used to ignite the gas. An Igniter is placed in the path of the flow of gas, and when the Gas Valve is open, the gas passes across the Igniter element. The Igniter is lighted that burns the gas and produces heat. This heat is used to dry the clothes inside the Dryer.

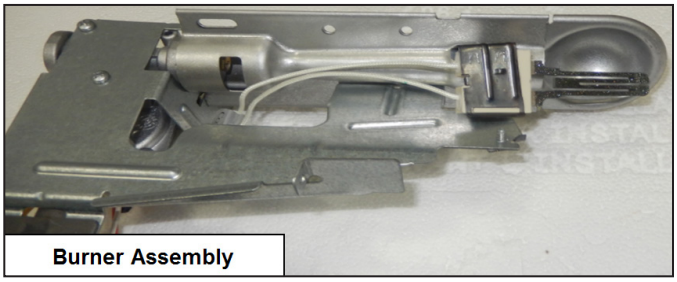


Component Specifications

S.No.	Component	Specification
1	Igniter (For Gas Model only)	Steady State Current to be 3.90 to 5.00 Amps at 132 ± 1 V AC and 75 ° ± 5 °F Ambient, Time to Reach 2000 °F: 16 Secs Max. at 115 ± 1 V AC and 75 ° ± 5 °F Ambient Temp, Igniter Must Not Exceed 3100 °F in 10 Secs at 132 ± 1 VAC and 75 ° ± 5 °F Ambient.

8.2 Burner

8.2.1 General Characteristics



Burner Assembly

A Gas Burner is a device used to generate a flame to heat up air using a gaseous fuel. Heat is generated by burning gas with the help of Igniter and the air is being pulled through the chamber which absorbs the heat and is used to dry the wet clothes.

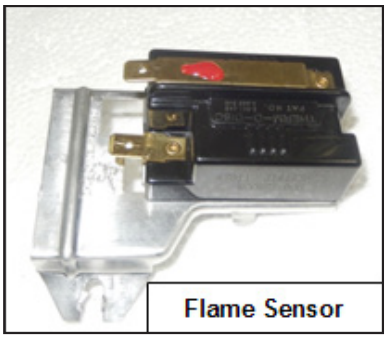
8.3 Gas Valve

8.3.1 General Characteristics

A Gas Valve is a device that controls and restricts the flow of gas into the burner. This is controlled by energizing the plunger inside the coils (Secondary and Booster). When the electric current is passed into the coil, the magnetic field is created. This field controls the opened or closed positions of the valve.

8.4 Flame Sensor

8.4.1 General Characteristics



Flame Sensor

A Flame Sensor is a device that detects the presence of flame due to combustion. It detects the flame by detecting Electromagnetic Radiation, Ionization, or Heat. When the Dryer operates on gas, it requires an Igniter to light the gas and create a flame to heat the air used to dry the clothes. It also requires a Flame Sensor to ensure that the flame continues to burn inside the Flame Chamber. When the Dryer no longer creates enough heat to dry the clothes, or does not ignite a flame, test the Flame Sensor. A bad Flame Sensor will not allow the Dryer to ignite and must be replaced.

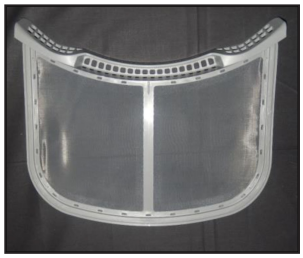
Open the Door of Dryer (See Figures below).

After opening the Door, you can access the following components:

1. Lint Filter
2. Moisture Sensor

9.1 Lint Filter Accessibility

Lift the Lint Filter as shown direction (See Figure) and take it out from the Dryer.

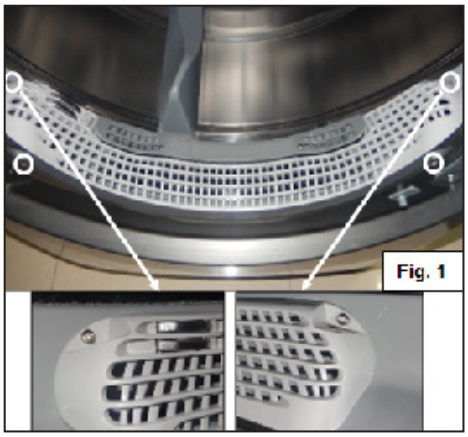


Lint Filter

9.2 Moisture Sensor Accessibility

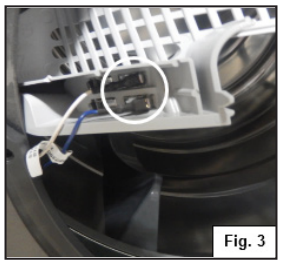
Step: 1

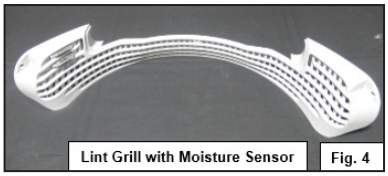
Remove the screws (See Fig. 1) and lift the Lint Grill (See Fig. 2).

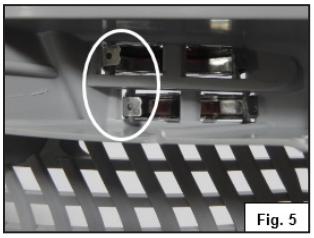


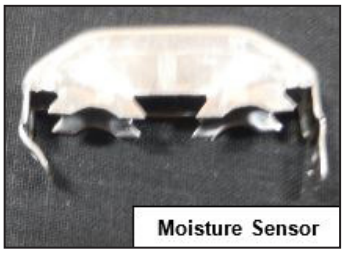
Step: 2

Remove the connector from the Moisture Sensor (See Fig. 3), take out the Lint Grill from the Drum (See Fig. 4) and depress the Sensor tabs to take the Moisture Sensor out from the Lint Grill (See Fig. 5).



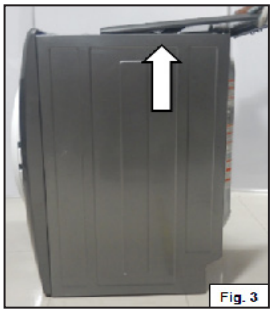






10. Top Panel Accessibility

Remove the screws (See Fig. 1), slide the Top Panel in the direction untill it locks in place as shown (See Fig. 2) and lift the Top Panel in the upward direction (See Fig. 3).



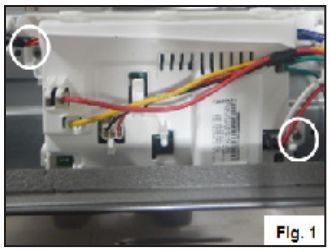
From the Top Panel, you can access the following components:

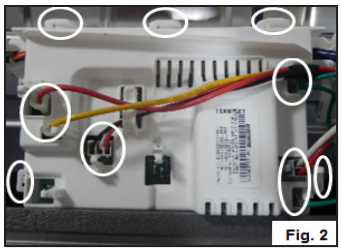
1. Electronic Control Board

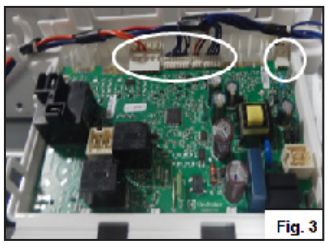
2. Vanes (inside of drum), Attachment Screws (outside of drum)

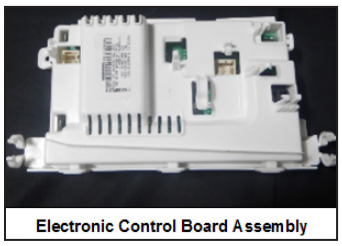
10.1 Electronic Control Board Accessibility

Remove the screws (See Fig. 1), unplug the connectors, release the snap for opening the box (See Fig. 2) and unplug the remaining connectors (See Fig. 3).



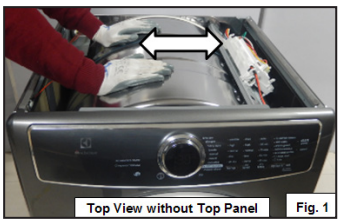


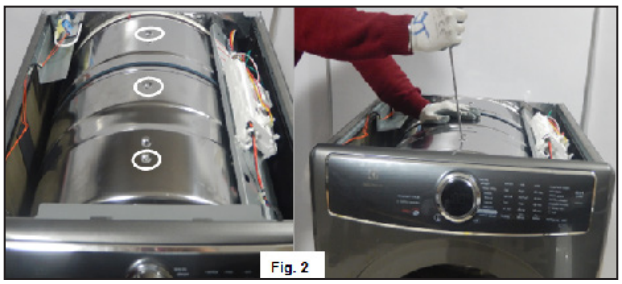




10.2 Vanes Accessibility

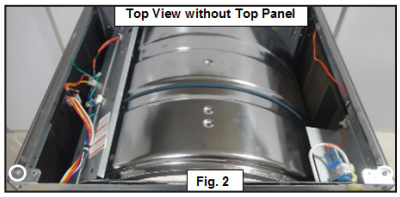
Rotate the drum in any direction to get the mounting location of Vanes (See Fig. 1), remove the screws (See Fig. 2) and take out the Vane from inside of Drum (See Fig. 3).





11. Rear Panel Accessibility

Remove the Rear Panel cover screws which affixes the Rear Bulk Head and Side Panels (See Fig. 1 and Fig. 2).

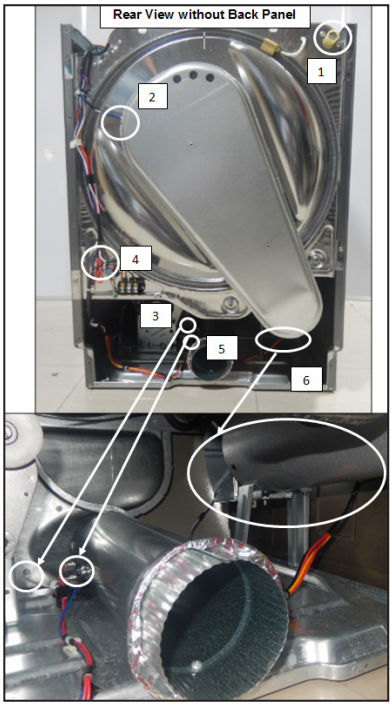


NOTE

Gloves must be worn for accessing any component inside the cabinet.

From the Rear Cover, you can access the following components:

1. Mist Valve
2. Inlet Control Thermistor
3. Outlet Control Thermistor
4. Fire Containment Thermostat
5. Outlet Thermal Limiter
6. Heater Assembly



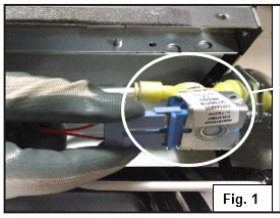
NOTE

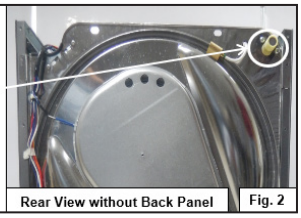
Hand Gloves must be worn for accessing any component inside the cabinet.

11.1 Mist Valve Accessibility

Step: 1

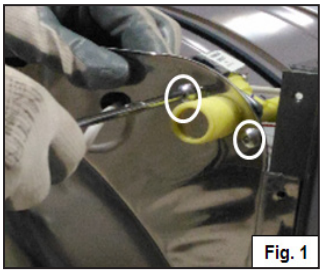
Unplug the Mist Valve connector (See Fig. 1 and Fig. 2).

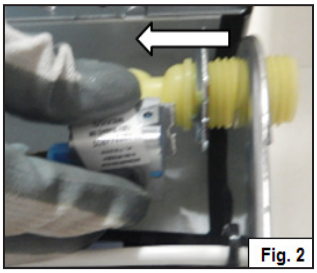




Step: 2

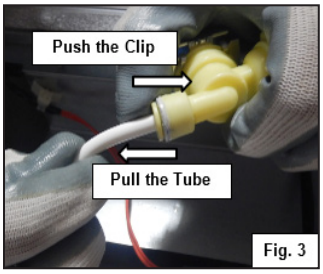
Remove the screws that are fixed at the Rear Panel Bulk Head (See Fig. 1), then twist and pull Mist Valve along the direction shown (See Fig. 2).

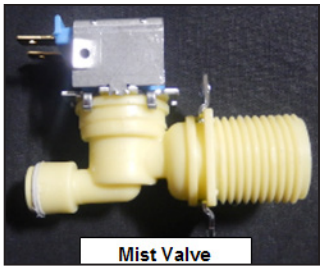




Step: 3

Remove the Inlet tube from Mist Valve by pressing the tube clip as shown (See Fig. 3).





11.2 NTC 2 (Inlet Control Thermistor) Accessibility

Remove the screw from the Air Duct (See Fig. 1), remove Intlet Control Thermistor (See Fig. 2) and unplug the connectors (See Fig. 3).

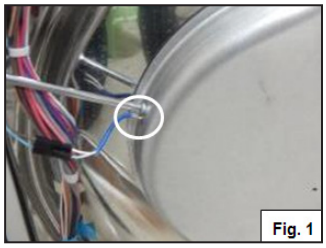


Fig. 1

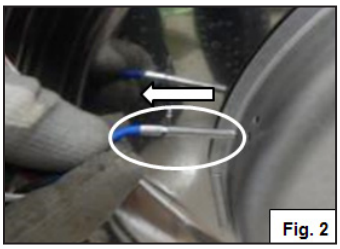


Fig. 2

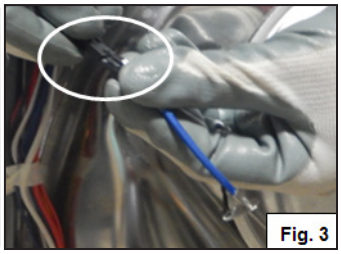
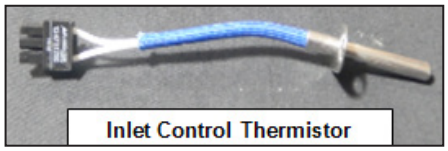


Fig. 3


Inlet Control Thermistor

11.3 NTC 1 (Outlet Control Thermistor) Accessibility

Remove the screw, remove Outlet Control Thermistor in shown direction (See Fig. 1) and unplug the connectors (See Fig. 2).

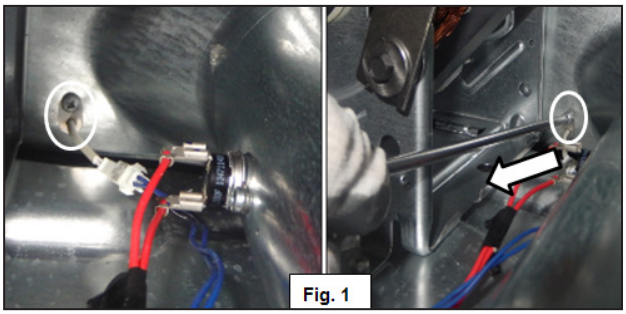


Fig. 1

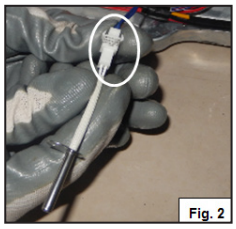
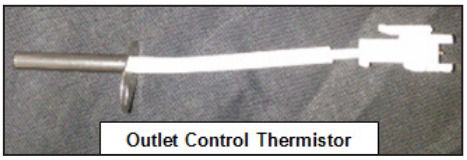


Fig. 2


Outlet Control Thermistor

11.4 Fire Containment Thermostat Accessibility

Remove the Screws (See Fig. 1) and unplug the connector of Fire Containment Thermostat (See Fig. 2).

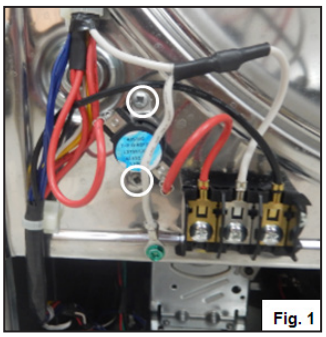


Fig. 1

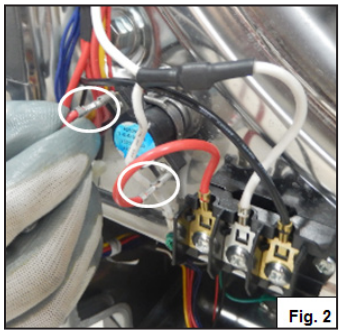


Fig. 2


Fire Containment Thermostat

11.5 Outlet Thermal Limiter Accessibility

Step: 1

Remove the screw from the exhaust tube which is fitted with the base of Dryer (See Fig. 1), pull out the exhaust tube (See Fig. 2) and unplug the connector of Outlet Thermal Limiter (See Fig. 3).

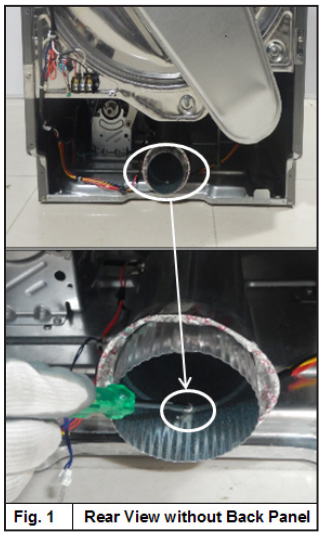


Fig. 1 Rear View without Back Panel

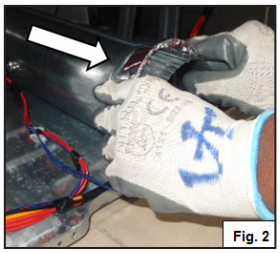


Fig. 2

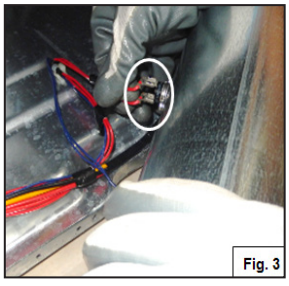
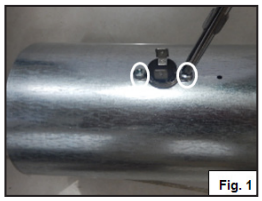


Fig. 3

Step: 2

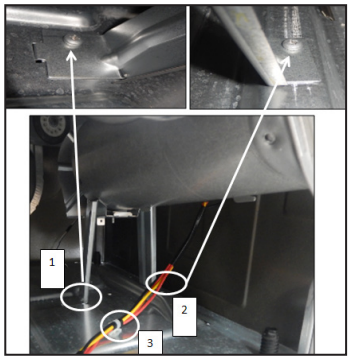
Remove the screws of Thermal Limiter which is attached to the exhaust tube (See Fig. 1).

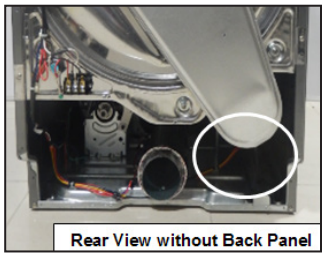


11.6 Heater Assembly Accessibility (For Electric Models - EFME617SIW / EFME517SIW / EFME417SIW)

Step: 1

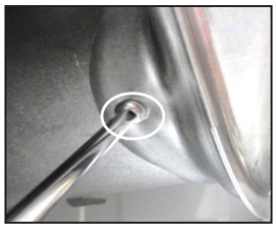
Remove 2 screws (1, 2) that fixes Heater Bracket with the Base Panel and remove the wire clip (3).

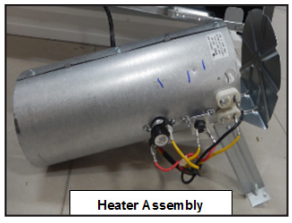




Step: 2

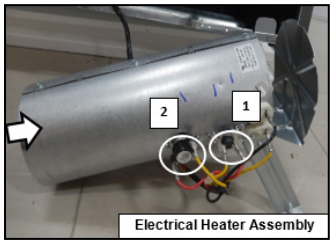
Remove the screw which is fitted to the Inlet Air Duct and remove the Heater Assembly from the machine.

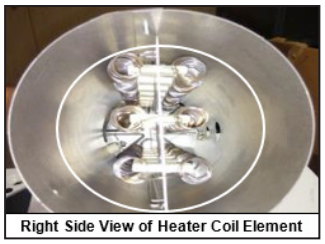




From Heater Assembly, we can Access the following components:

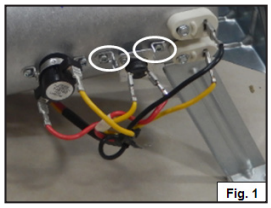
1. Inlet Thermal Limiter
2. High-Limit Thermostat

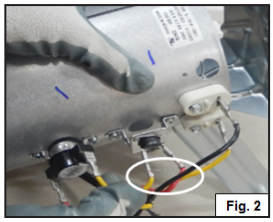




11.6.1 Inlet Thermal Limiter Accessibility

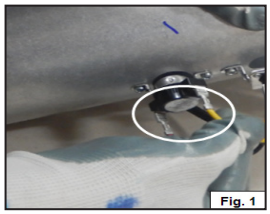
Remove the screws of Inlet Thermal Limiter (See Fig. 1) and unplug the connector of Thermal Limiter (See Fig.2).

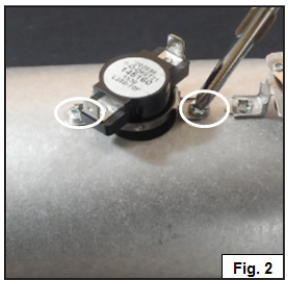


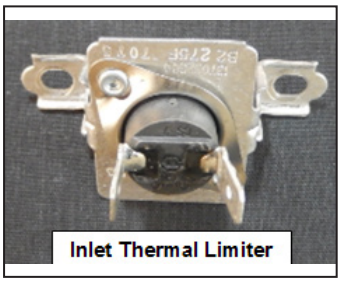


11.6.2 High-Limit Thermostat Accessibility

Unplug the connectors of Thermostat (See Fig. 1) and remove the screw of High-Limit Thermostat (See Fig. 2).







11.7 Heater Assembly Accessibility (For Gas Models – EFMG617SIW / EFMG517SIW / EFMG417SIW)

Step: 1

Remove the screws (1, 2) that fixes Heater Bracket with the Base Panel, then remove wire clip (3). (See Fig. 1)

Rear Panel Accessibility

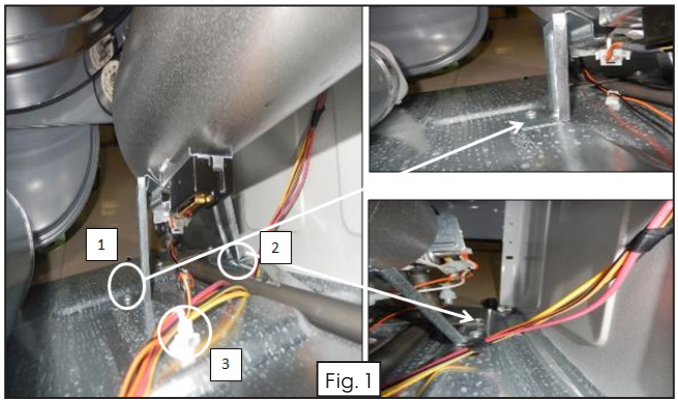


Fig. 1

Step: 2

Remove the screw which is fitted with the Inlet Air Duct. (See Fig. 2)

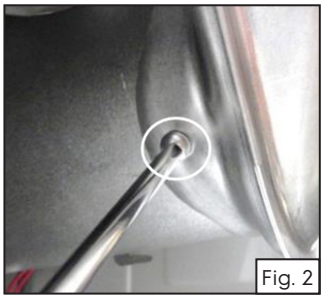


Fig. 2

Step: 3

Remove the Gas Pipe screws (1, 2) which is fitted with the Base Panel. (See Fig. 3)

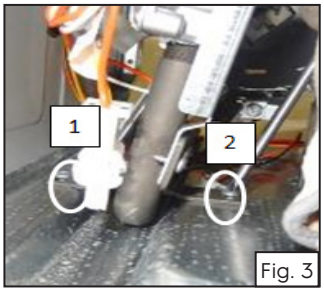


Fig. 3

Step: 4

Remove the screw (1) (See Fig.4) that affixes the Gas Pipe Inlet with the Base Panel and release the connector (2). (See Fig. 5)

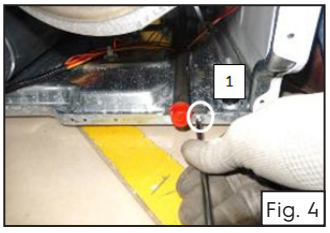


Fig. 4

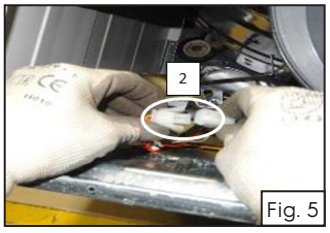
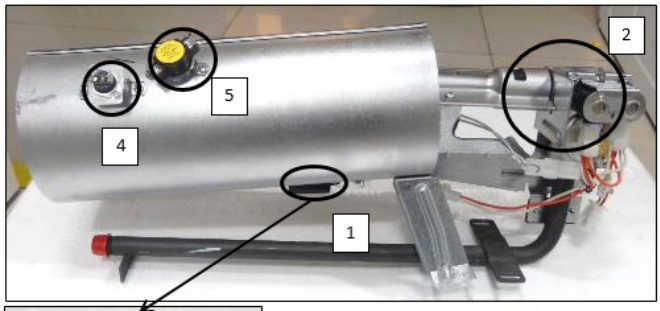
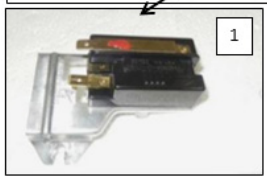


Fig. 5

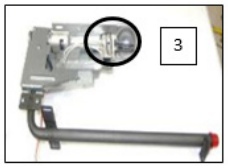
From Heater Assembly, we can access the following components:

1. Flame Sensor
2. Burner Assembly
3. Igniter
4. Inlet Thermal Limiter (Accessibility same as Electrical Model)
5. High-Limit Thermostat (Accessibility same as Electrical Model).





Flame Sensor



Burner Assembly

11.7.1 Flame Sensor Accessibility

Remove the screw (1) of Flame Sensor which fits with Heater Assembly as shown in Fig. 6 and also remove the clamp (2) as shown in Fig. 7.

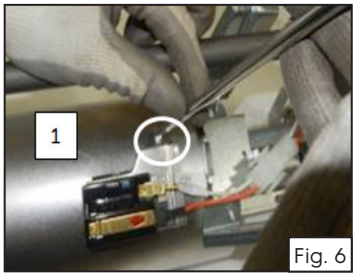


Fig. 6

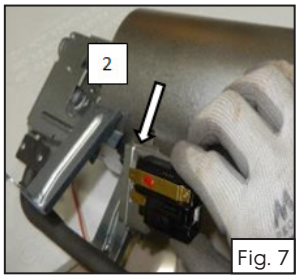
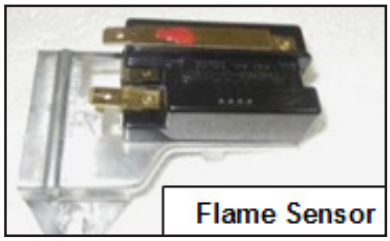


Fig. 7



11.7.2 Burner Accessibility

Remove the screws (1, 2, 3) (See Fig. 8 and 9) which fits with the heater bracket.

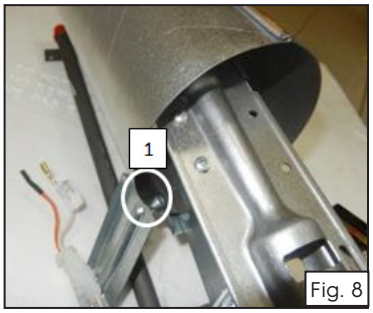


Fig. 8

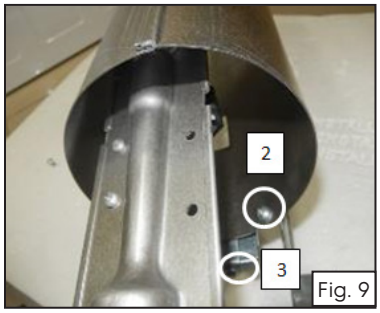
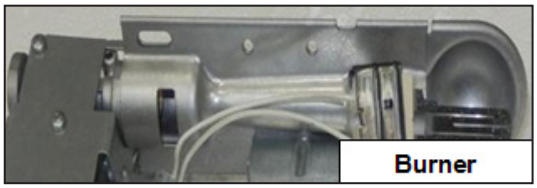


Fig. 9



11.7.3 Igniter Accessibility

NOTE

Igniter is soft brittle material, so handle it carefully.

Remove the screw (1) and push the Igniter (2) from the Burner Assembly stand as shown in Fig. 10.

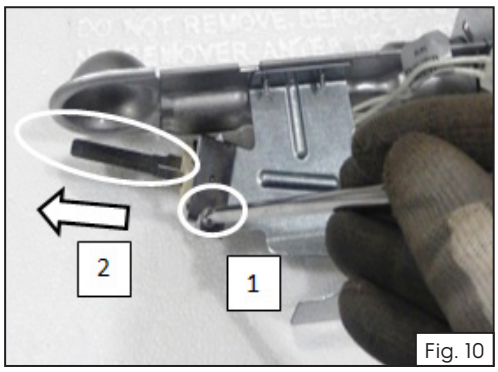
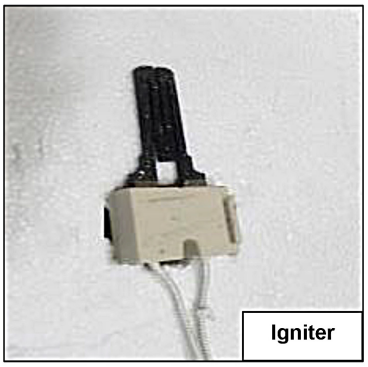


Fig. 10



11.7.4 Inlet Thermal Limiter Accessibility

Inlet Thermal Limiter Accessibility for Gas model is same as the Electrical model. Please refer **Section 11.6.1**.

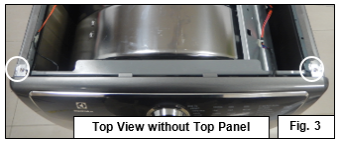
11.7.5 High-Limit Thermostat Accessibility

High-Limit Thermostat Accessibility for Gas model is same as the Electrical model. Please refer **Section 11.6.2**.

12. Front Panel Accessibility

Step: 1

1. Remove the two screws from bottom view (See Fig. 1).
2. Remove the two screws after opening the Door (See Fig. 2)
3. Remove two screws from top of Front Panel (See Fig. 3).


Top View without Top Panel Fig. 3

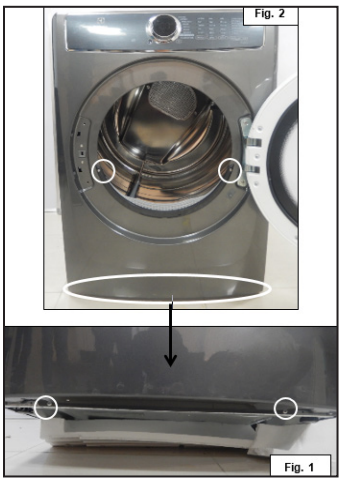


Fig. 2
Fig. 1

Step: 2

Lift the Front Panel upward and outward until it releases from Side Panels (See Fig. 1). Do not remove completely.


Fig. 1


Front Panel in unlocked condition with Side Panels

Step: 3

Unplug the Door Switch Connector and User Interface Connector (See Fig. 1a and Fig. 1b) and remove the Front Panel.

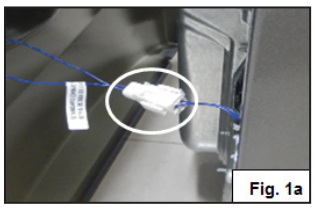


Fig. 1a

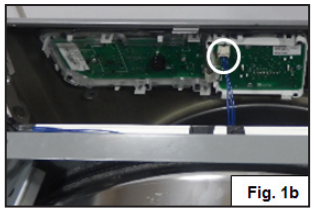


Fig. 1b


Inside View of Front Panel

From Front Panel, you can access the following components:

1. Door Switch
2. User Interface Board Assembly

Inside View of Front Panel

12.1 Door Switch Accessibility

Press the snaps of the Door Switch (See Fig. 1) which is located on the rear side of Front Panel, pull out the switch from another side (See Fig. 2) and unplug the connector from the Door switch (See Fig. 3).

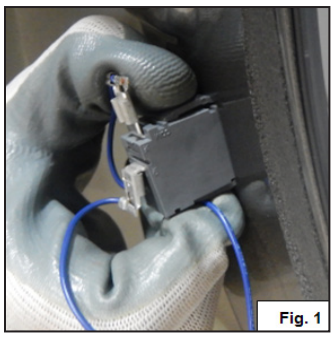


Fig. 1

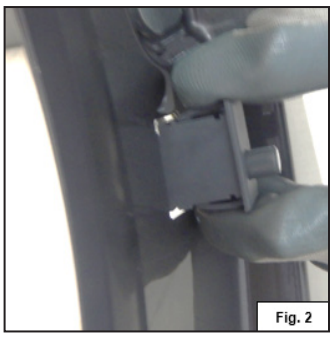


Fig. 2

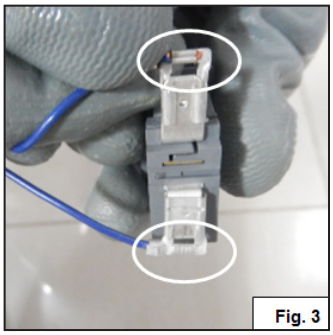
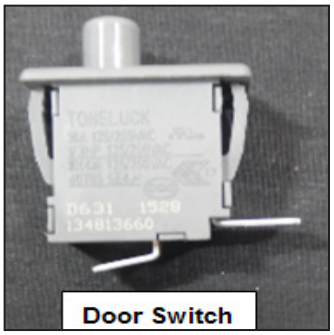


Fig. 3


Door Switch

12.2 User Interface Board Assembly Accessibility

Step: 1

Remove the 14 screws which are used to mount the Control Panel with the Front Panel. (See Fig. 1)

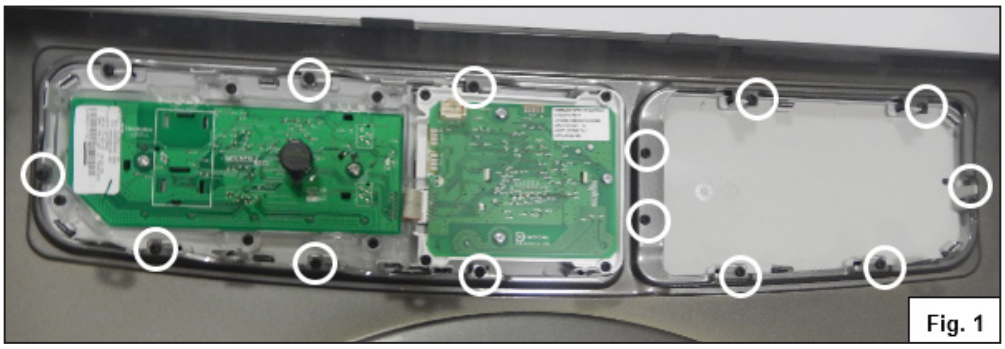


Fig. 1

Step: 2

Release all the 12 snaps to remove Control Panel from Front Panel (See Fig. 2).

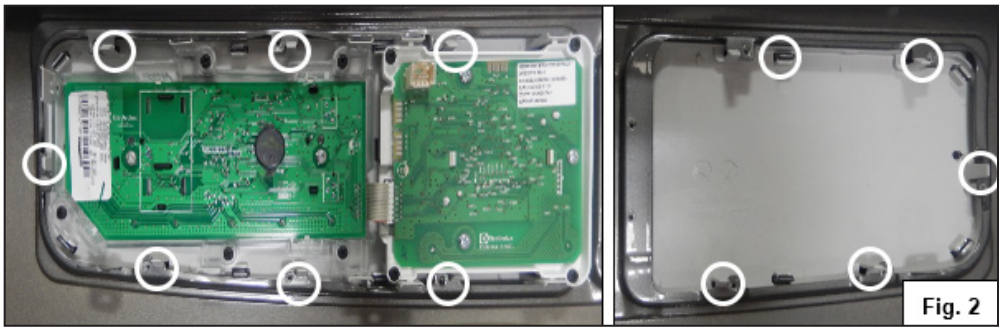


Fig. 2

Step: 3

Remove the 8 screws which are used to mount the User Interface Board Assembly with the Control Panel (See Fig. 3) and unplug the connector of the Cycle Selector Board (See Fig. 4).

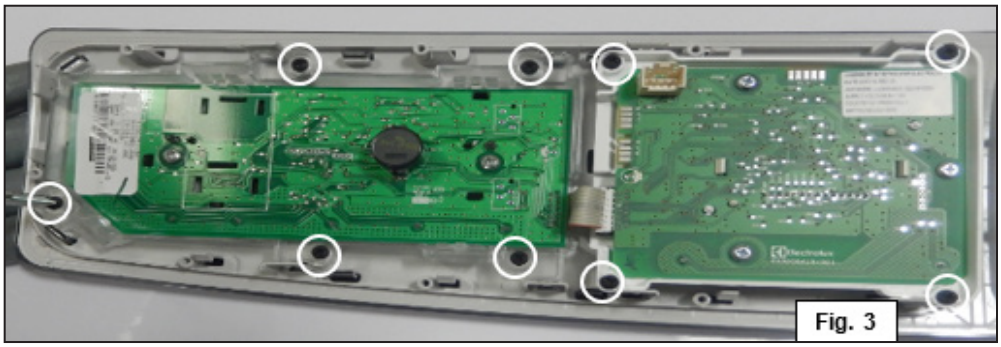


Fig. 3

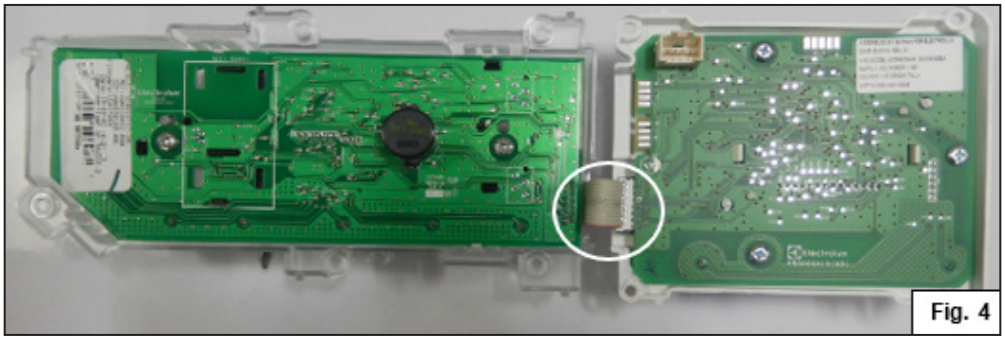
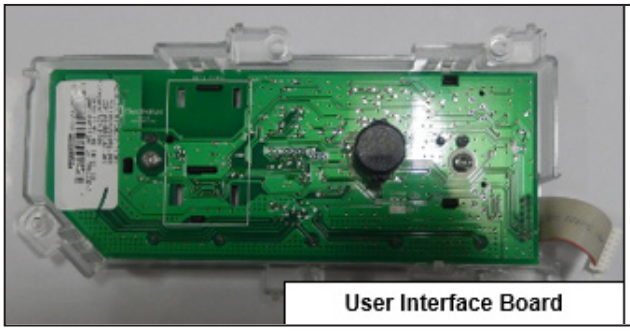
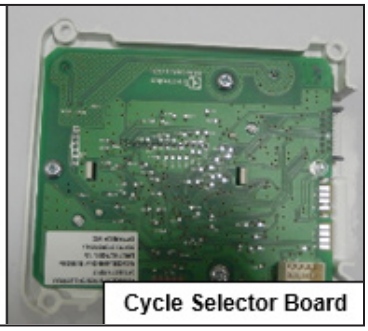


Fig. 4


User Interface Board


Cycle Selector Board

13. Drum Light Accessibility

Unplug the connector of Drum Light (Fig. 1), remove the 2 screws from the Bracket and rotate Drum Light clockwise as shown in (Fig. 2) to remove it from slot and take it out from inside of the unit (Fig. 3).

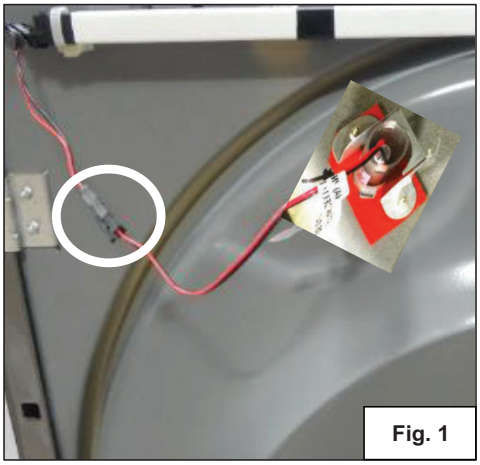


Fig. 1

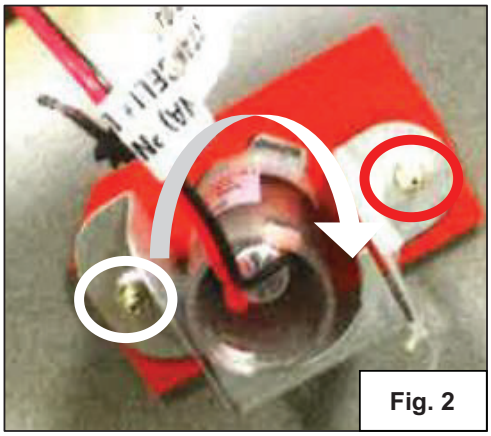


Fig. 2

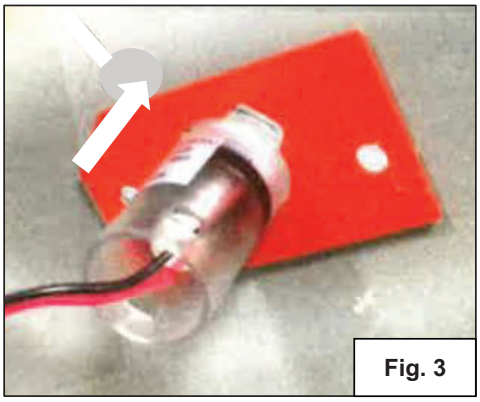


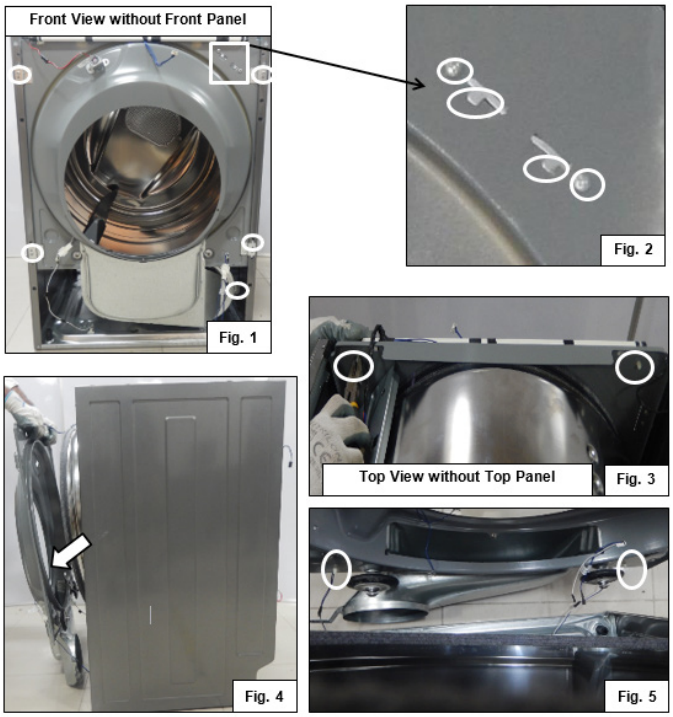
Fig. 3

Drum Light

14.1 Belt Accessibility

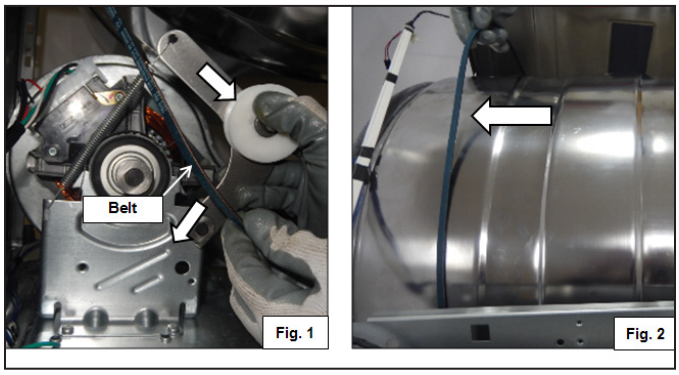
Step: 1

After removing Front Panel, remove the Front Bulk Head screws (See Fig. 1), Air Duct screw (See Fig. 1) and Electronic Control Board bracket mounting snaps and screws (See Fig. 2). Remove the wiring clips (See Fig. 3). Lift the Front Bulk Head to release from the snaps which fit with the Side Panels and move the Front Panel Head away from the unit a few inches, as shown (See Fig. 4). Remove wiring clips (See Fig. 5) and remove Front Bulk Head.



Step: 2

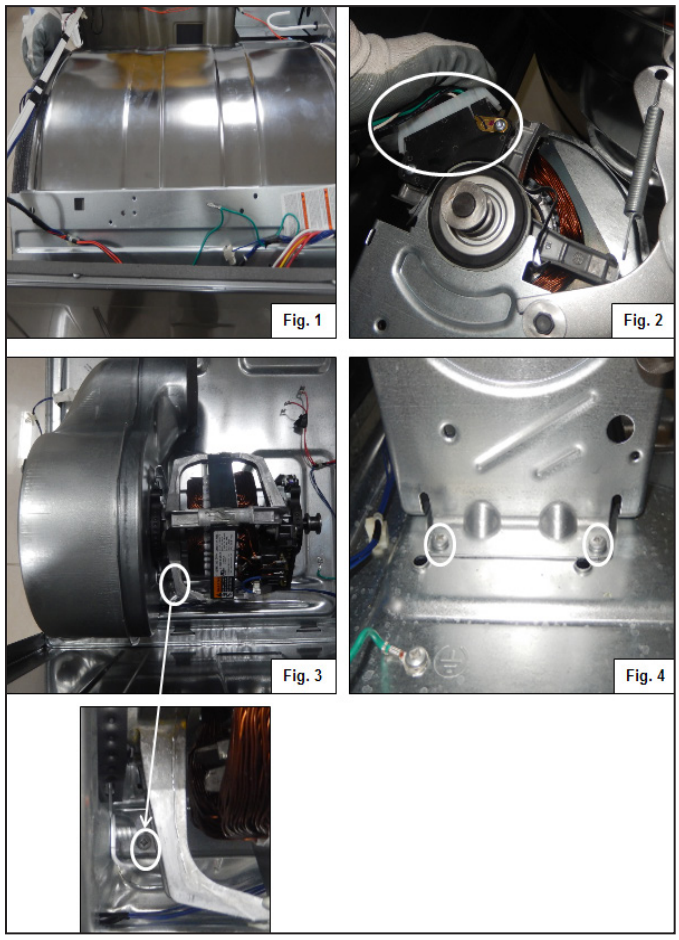
Remove the belt from Idler Arm Assembly as shown (See Fig. 1) and slide the belt as shown (See Fig. 2) to remove it from the Dryer.



14.2 Motor Accessibility

Step: 1

Remove the Drum from the Dryer (See Fig. 1) and unplug the connectors from the Motor Assembly (See Fig. 2). Remove the screws from the Motor Bracket from Top View of Dryer (See Fig. 3), and screws from Rear Side of the Dryer (See Fig. 4). Then slide the snap of bracket which fits with Base Panel.



Motor Assembly Accessibility

Step: 2

Remove the screw from Blower Assembly from Front side of the Dryer (See Fig. 1) and Slide Motor Blower Assembly towards Front side of the Dryer (See Fig. 2).

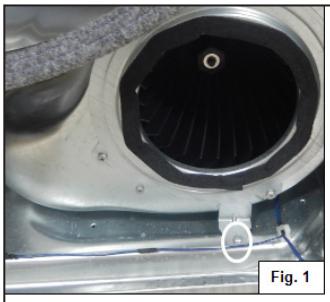


Fig. 1

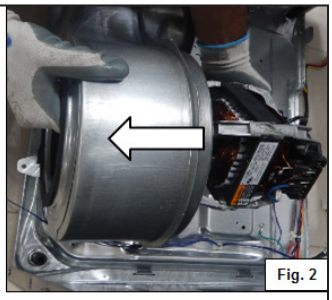
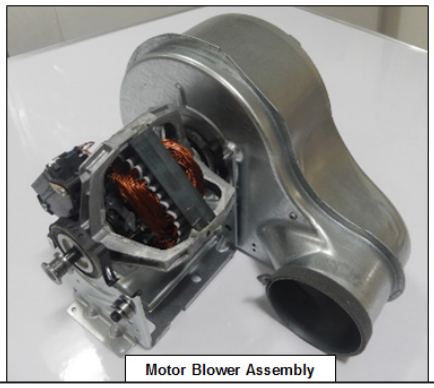


Fig. 2

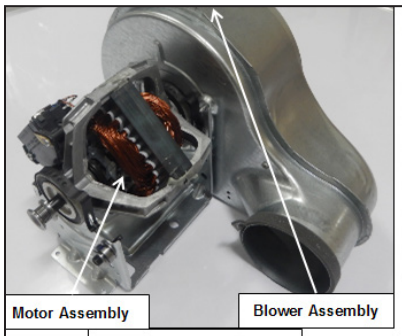


Motor Blower Assembly

Step: 3

In order to remove the Motor and the Blower, follow the steps mentioned below:

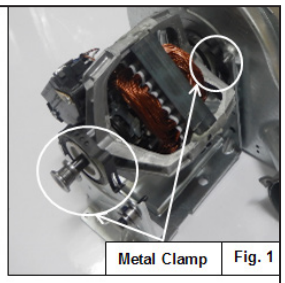
- Remove all holders (metal clamp) (See Fig. 1).
- Hold tightly the Pulley / Shaft at belt connecting area by wrench and remove fan (Blower) by loosening the Nut (See Fig. 2).
- Now you can remove Blower Assembly and Motor separately.



Motor Assembly

Blower Assembly

Motor Blower Assembly



Metal Clamp

Fig. 1

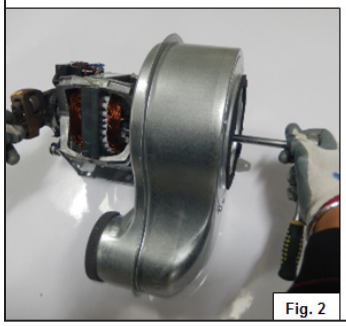
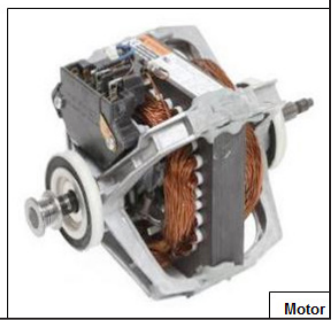


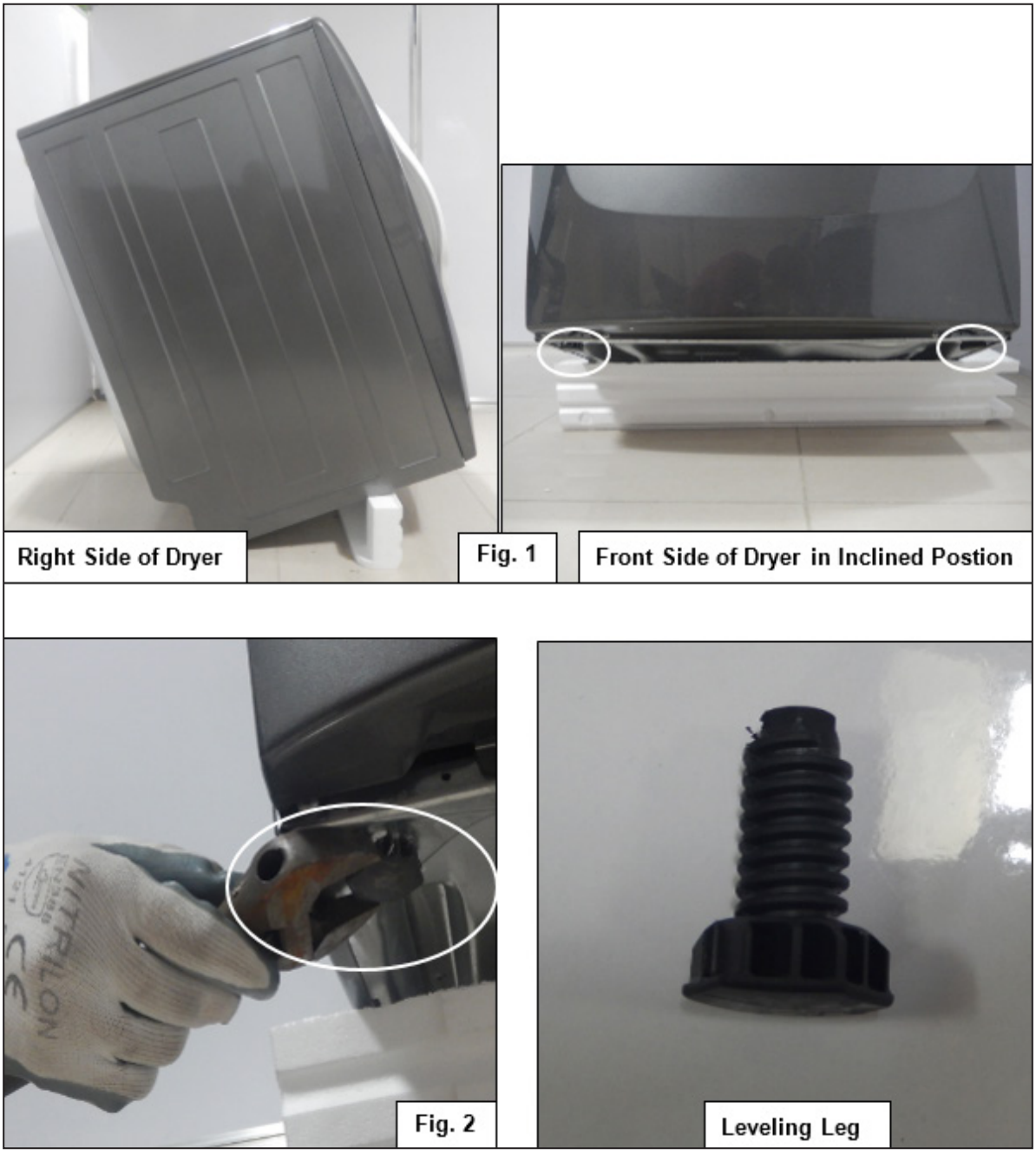
Fig. 2



Motor

15. Leveling Legs Accessibility

Incline the Dryer using a stable wedge as shown (See Fig. 1). Then remove the Leveling Leg with the help of Wrench (See Fig. 2). Similarly, remove the Rear Side Leveling Leg by inclining the Dryer in other direction.



16. Diagnostic System (For Models 617, 517 and 417 Series)

This information is intended for the use of Qualified Technicians only.

⚠ CAUTION

Disconnect electric current before servicing.

16.1 Enter Diagnostic Mode

- Press **power** to turn machine ON.
- Set cycle to **normal**.
- Press the **start** button.
- Power OFF machine by pressing the **power** button.
- Power ON machine by pressing the **power** button again.
- Within 7 seconds, simultaneously hold **temp** + **set** buttons together for 3 seconds.
- Diagnostic Mode is set when LEDs start blinking in sequence, which is the 'Lights / Buttons' test position.

16.2 Scroll Through the Tests

- Tests are selected by using the same method used to select cycles, that is, **cycles** button on 400 Series, and the **rotary** knob on 500 Series and 600 Series. For 400 Series, press the **temp** key to go back to the previous test.
- Test numbers are briefly displayed when each test is selected. The test numbers also correspond to the selector LEDs numbered from 1 at the top going down.

400, 500 and 600 series				
Test No.	**Test Name**	**Components under Test**	**Test Conditions**	**Displayed Feedback**
00	Lights / Buttons test	LEDs, LCD, touch buttons	-- --	# of touch key pressed
01	Motor, NO HEAT, HUM ON	Motor Relay, Door Switch	Drum rotates for 10 mins if door closed	-- --
02	Motor, NTC1 ctrl heater, HUM ON, NTC 1 temp on Display	Motor Relay, Door Switch, Heater Relay, NTC1	Drum rotates for 10 mins if door closed, heater is ON till NTC1 reads 44 °C	NTC1 reading
03	Motor, NTC2 ctrl heater, HUM ON, NTC 2 temp on Display	Motor Relay, Door Switch, Heater Relay, NTC2	Drum rotates for 10mins if door closed, heater is ON till NTC2 reads 120 °C	NTC2 reading
04	HUM ON, Mist Valve ON	Mist TRIAC and Valve	Mist on for 10 mins if door closed	-- --

400, 500 and 600 series				
Test No.	**Test Name**	**Components under Test**	**Test Conditions**	**Displayed Feedback**
05	Moisture Sensor circuit open and short	Moisture Sensor	Moisture sensor expects to read 'open circuit' condition and 'short circuit' condition *	00-open and 11-short circuit and nothing if the sensor is between 00 and 11
06	Error History	Error in Memory	Error are most recent first in order of history (Pressing TEMP + SET keys together clears the history)	E precedes the 2 character alarm code, alternating through the last 3 alarms

NOTE

*** The Moisture Sensor is to the lower left inside the door beside the lint screen. The technician may use metal to short sensor bars. The sensor is touch safe, some materials like dry fingers or a 10 KΩ resistor should have no displayed value.**

16.3 Exit from Diagnostic Mode

- Hold the **power** key for 3 secs, when not in '00 test step Lights / Buttons, or unplug the unit.

16.4 Factory Default Reset

1. Press **power** key and look for console light up.

2. Wait for 10 secs, press simultaneously hold **dry level** + **options** for 3 secs.

16.5 Demo Mode

The Demo works in two ways: interactive mode and automatic loop.

1. The **interactive mode** enables the customer to use interface without activating the Heater or Mist Valve. The machine behavior appears similar to operation. The **start** option turns the drum light ON and if the door is closed the ETR is decreased each second. The Mist Valve is not activated.

2. If no one interacts with the interface for 3 minutes, or **start** button has not been pushed, the machine goes into an automatic loop instead, simulating the cycle execution only on display. This automatic loop cycles until someone touches the user interface and it goes back to interactive mode.

16.6 Enter Demo Mode

1. Switch ON the machine via Power button.

2. Turn the selector in the 7th position from the top clockwise.

3. Simultaneously hold **temp** and **set** for 3 seconds.

4. The message "dn" blinks 3 times on cycle time digits.

5. When no acknowledgement is received, switch the machine OFF and repeat sequence from the beginning.

NOTE

Every time the machine is switched ON, Demo mode is automatically recalled; this occurrence is signaled at the start-up by the text "dn" blinking 3 times on cycle time digits. Unplugging the unit will not clear Demo mode.

16.7 Clear Demo Mode

1. Redo the Enter Demo Mode sequence of actions described above or go to the next step.

2. Press the Reset To Factory Default combination (**dry level** + **options** keys anytime).

3. If the action is acknowledged, the machine reboots in Normal mode.

16.8 Error Codes

Code	Full Name	Notes and Possible Causes	User Interface Notification	Page No.
41	Door Opened at Cycle Start	Door open	No	44
42	Door Open Sensing Error	Door Lock or Wiring or Sensing Circuit on Main Board Failure.	No	44
51	Drum Motor Relay Error	With Line Safe Relay closed, motor sensing detects voltage on motor. 1. Motor Short Circuit to ground (Motor or Wiring) 2. Electrical Noise 3. Line Safe Relay Problem (Main Board Failure) 4. Motor Relay open or short	No	45
52	Drum Motor Start Sensing Error	Motor Relay driven but start sensing not congruent. 1. Motor Fault 2. Main Board Fault	No	46
53	Drum Motor Centrifugal Switch Error	Motor driven but sensing not congruent. 1. Motor Fault 2. Main Board Fault	No	48
54	Drum Motor Sensing Error	Drum Motor Relay Sensing Circuit Failure (Main Board Failure)	No	48
61	Heater Relay Error	1. Heater Disconnected (Wiring or Connector Failure) 2. Heater Failure 3. Heater Relay Failure (Open Circuit)	No	49
63	Heater Short Error	Heater Sensing Circuit Failure (Main Board Failure) Heater Failure	No	49
64	Heater Open Error	Heater Sensing Circuit Failure (Main Board Failure) Heater Failure	No	49
65	Thermostat Open	Heater Thermostat Trip	No	50
67	Heater Sensing Error	Heater Sensing Circuit Failure (Main Board Failure)	No	51
71	NTC1 Error	NTC Open / Disconnected or Main Board Fault	No	51
72	NTC1 Error	NTC Short or Main Board Fault	No	51
73	NTC2 Error	NTC Open / Disconnected or Main Board Fault	No	52
74	NTC2 Error	NTC Short or Main Board Fault	No	52

Code	Full Name	Notes and Possible Causes	User Interface Notification	Page No.
91	User Interface Communication Error	1. Wiring Failure 2. User Interface Board Failure 3. Main Board Failure	No	53
92	User Interface Protocol Incongruence Error	The User Interface mounted is not compatible with the Main Board connected.	No	53
93	Machine Configuration Checksum Error	Wrong Machine Configuration File	Yes	53
94	Cycle Configuration Checksum Error	Wrong Cycle Configuration File	Yes	54
97	Missing Program on CTF Error	1. Wrong selector configuration (MCF) 2. Missing cycle on cycle table (CCF)	Yes	54
9C	User Interface Configuration Checksum Error	Software problem between Main Board and User Interface Board.	Yes	54
9E	User Interface Touch Sensor Not Working	One or more touch buttons have calibration problems. 1. Electrical Noise 2. Humidity / Water on UI Board 3. UI Board Defective	No	54
H1	Power Supply Frequency Out of Range	1. Power Supply Problems 2. Wrong MCF 3. Main Board Failure	Yes	55
H2	Power Supply Amplitude Out of Range	1. Power Supply Problems - Too HIGH VOLTAGE 2. Wrong MCF 3. Main Board Failure	Yes	55
H3	Power Supply Amplitude Out of Range	1. Power Supply Problems - Too LOW VOLTAGE 2. Wrong MCF 3. Main Board Failure	Yes	55
H4	Line Wiring Error	Wrong Line Wiring / Connection	Yes	55
BD	Line Safe Relay Short Circuit Error	Line Safe Relay Problem (Main Board Failure)	No	56
BE	Line Safe Error	Line Sage Relay Problem (Main Board Failure)	No	56
BF	Line Safe Sensing Error	Line Safe Sensing Circuit Failure (Main Board Failure)	No	56
F1	Ventilation Blocked Error	Air Flow Duct clogged or blocked, remove debris, clean and check one way Vent operation.	Yes	56
F6	Safety Reset Error	Main Board Fault	No	57

17. Troubleshooting Based on Alarm Codes

E41	**E41: Door Opened at Cycle Start**	**E41**
	Door open.	
E42	**E42: Door Open Sensing Error**	**E42**
	Door Lock or Wiring or Sensing Circuit on Main Board failure.	

Checks to perform:

> **WARNING**
>
> **Check that all the connectors are correctly inserted.**

Check if the Dryer door is open?
- YES → Close the Door and repeat the diagnostic cycle to check for any further alarms.
- NO ↓

Check for any foreign object blockage on Door Switch?
- YES → Clean and repeat the diagnostic cycle to check for any further alarms.
- NO ↓

Check for any obstacle in the door opening and closing?
- YES → Remove the obstacle and repeat the diagnostic cycle to check for any further alarms.
- NO ↓

Check if the Door Switch wiring terminals connected properly?
- NO → Make the connections proper and repeat the diagnostic cycle to check for any further alarms.
- YES ↓

Check the continuity between terminals of Door Switch (in closed condition). Is the continuity there?
- NO → Change the Door Switch and repeat the diagnostic cycle to check for any further alarms.
- YES ↓

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

E51	**E51: Drum Motor Relay Error**	E51
	Motor Relay stuck open or closed, Wiring defective.	

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Measure resistance between the connectors J3-1 and J3-2 terminals of the Electronic Control Board (See Fig. 1). Is the resistance value not "0"?

NO → Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Unplug the connector from the Motor and measure the resistance between terminals 5 and 4 of Motor. Is the resistance value between "2.9 Ω to 3.5 Ω"? (See Fig. 2)

NO → Replace the Motor and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Check if the wiring connection between Electronic Control Board and Motor is proper. Is the continuity there?

NO → Replace / Repair the Wiring and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

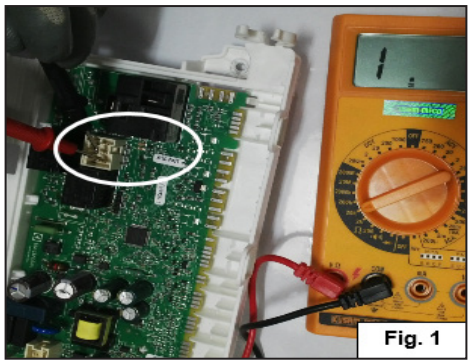


Fig. 1

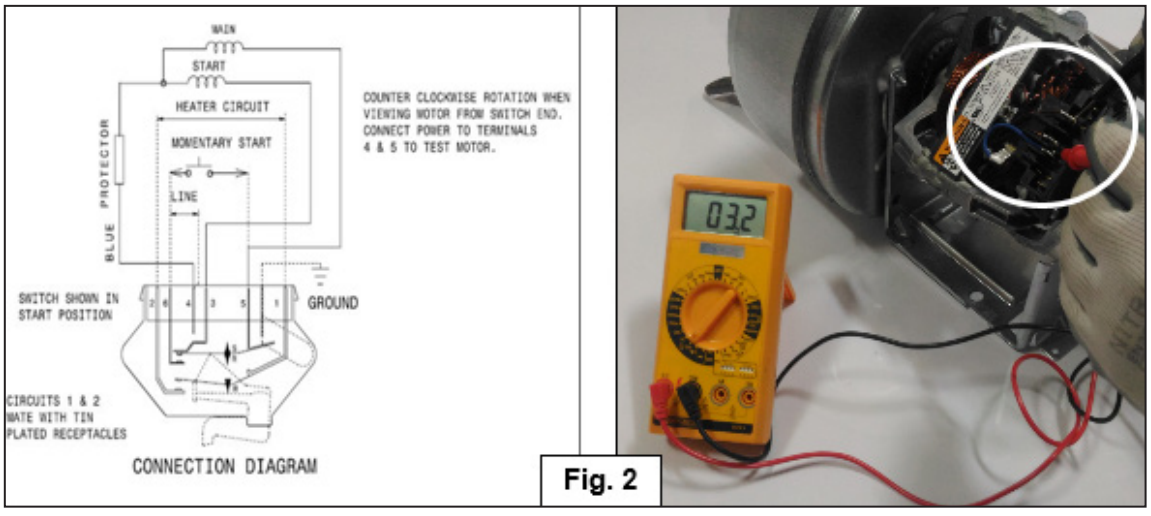


Fig. 2

Troubleshooting Based on Alarm Codes

E52	**E52: Drum Motor Start Sensing Error**	E52
	Motor overheating, Laundry load too heavy, Low power supply, Motor or Wiring defective.	

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Check if the power supply is as per the product specification: (Voltage = 240 V (Electric), 120 V (Gas) Models and Frequency = 60 Hz)

NO → Provide required power supply and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Is there any overload of laundry in Dryer?

YES → Make the laundry as per the product specification and repeat the diagnostic cycle to check for any further alarms.

NO ↓

Remove the laundry and check whether the drum turns freely without posing any resistance. Is there any resistance to drum rotation? (See Fig .1)

YES → Check whether the friction is caused by the Motor (See Fig. 2) or by the tub bearings (See Fig. 3). Replace the defective component. After clearing any obstacles wait till the motor becomes cool because thermal protector may take 30 mins to reset (thermal protector may be tripped because of motor overheating). Repeat the diagnostic cycle to check for any further alarms.

NO ↓

Unplug the connector from the Motor and measure the resistance between terminals 5 and 4. Is the resistance value between "2.9 Ω to 3.5 Ω"? (See Fig. 4)

NO → Replace the Motor and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Check if the wiring connection between Electronic Control Board and Motor is proper. Is the continuity there?

NO → Replace / Repair the Wiring and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

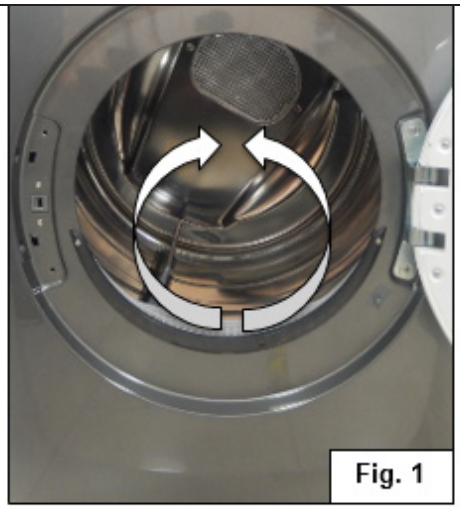


Fig. 1

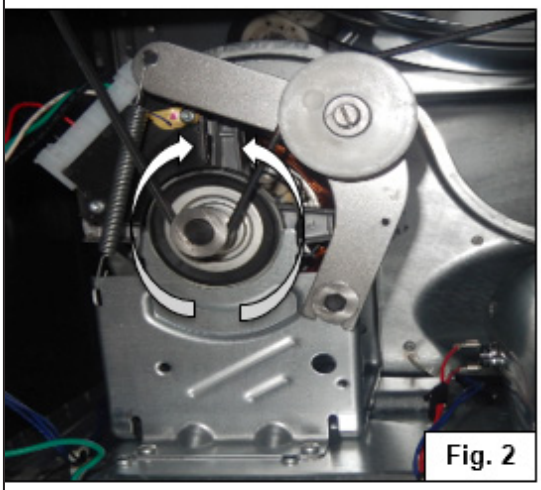


Fig. 2

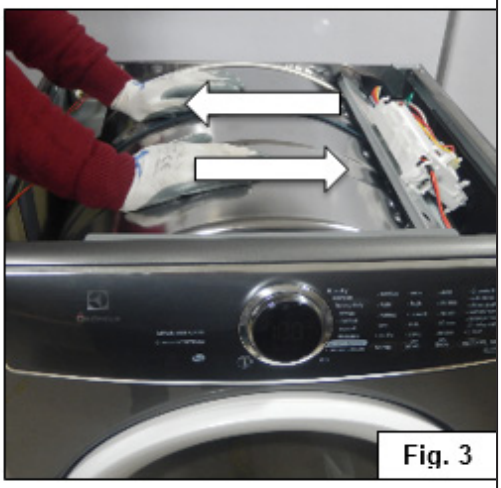
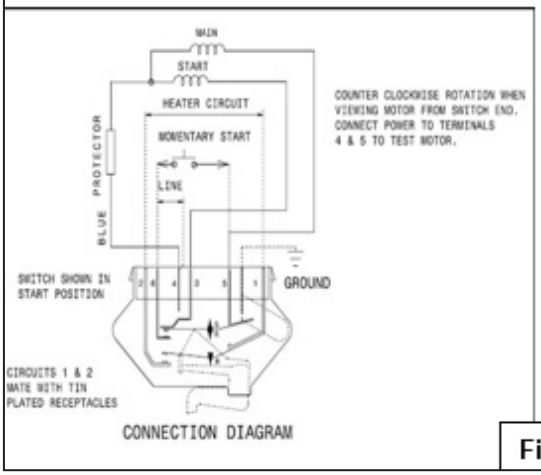


Fig. 3



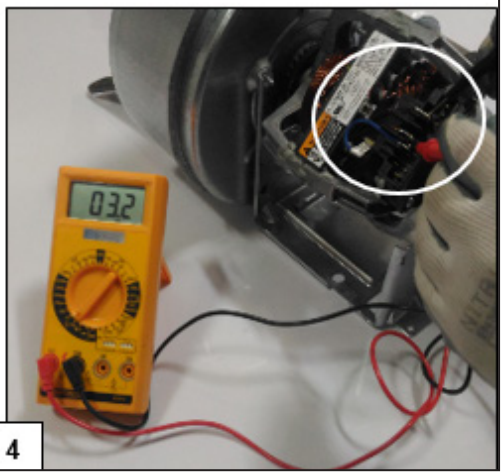


Fig. 4

NOTE

For accessing the Motor, refer Motor Accessibility section.

Troubleshooting Based on Alarm Codes

E53	**E53: Drum Motor Centrifugal Switch Error**	**E53**
	Motor Centripetal Switch, Electronic Control Board defective, or Wiring defective.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Check if the wiring between Electronic Control Board and Motor is proper. Is the continuity there?

NO → Replace / Repair wiring and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Check if the Centripetal Switch of Motor is working mechanically (stuck in open or closed position)?

NO → Replace the Motor and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

E54	**E54: Drum Motor Sensing Error**	**E54**
	Electronic Control Board defective.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

E61	**E61: Heater Relay Error**	**E61**
	Heater Relay stuck open or closed, Wiring defective.	
E63	**E63: Heater Short Error**	**E63**
	Heating Element or Electronic Control Board defective.	
E64	**E64: Heater Open Error**	**E64**
	Heating Element or Electronic Control Board defective.	

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Measure resistance between the connectors RELAY COM and RELAY NO terminals of the Electronic Control Board (See Fig. 1). Is the resistance value not "0"?

NO → Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Measure the resistance between the terminals of Heating Element. Is the resistance value between 10.39 Ω ± 3% at room temperature (20-25 °C)? (See Fig. 2)

NO → Replace the Heating Element and repeat the diagnostic cycle to check for any further alarm.

YES ↓

Check / Replace the wiring and check whether problem is solved?

NO → Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

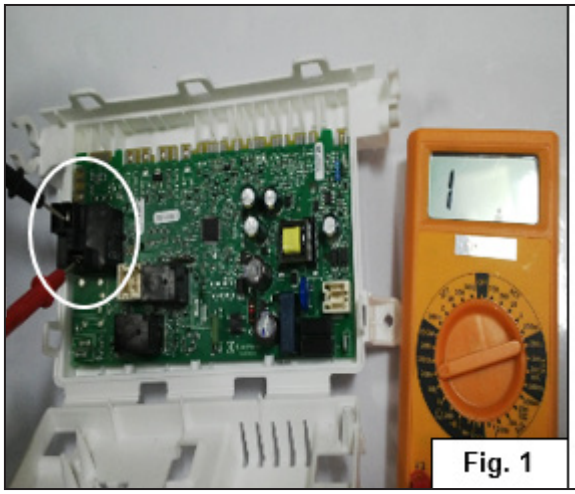


Fig. 1

Fig. 2

Troubleshooting Based on Alarm Codes

E65	**E65: Thermostat Open**	E65
	High Vent restriction, High-Limit Thermostat defective or Inlet Thermal Limiter tripped.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Check the ventilation of Dryer. Is the ventilation clean? (See Fig. 1)
NO → Clean the ventilation and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Check Inlet Thermal Limiter for the continuity. Is the continuity there?
NO → Replace Inlet Thermal Limiter and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Check the working of Exhaust Vent System (there should not be any air blockage) (See Fig. 2)
NO → Remove the air blockage and make Exhaust Vent System proper and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Check High-Limit Thermostat for the continuity. Is the continuity there?
NO → Replace High-Limit Thermostat and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

Check for Blockage in Vent | Fig. 1

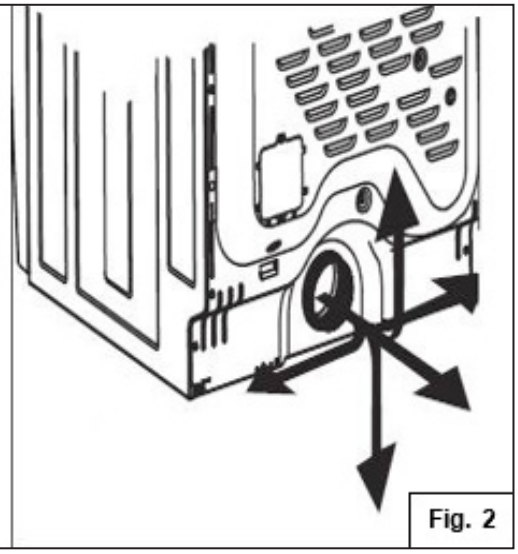


Fig. 2

E67	**E67: Heater Sensing Error** Electronic Control Board defective.	**E67**

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

E71	**E71: NTC 1 Error** NTC 1 (Outlet Control Thermistor) open, Wiring or Electronic Control Board defective.	**E71**
E72	**E72: NTC 1 Error** NTC 1 (Outlet Control Thermistor) short, Wiring or Electronic Control Board defective.	**E72**

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Measure the value of the Thermistor between terminals of J4-1 and J4-2 wiring connector . Is the resistance value between 4.9 KΩ to 6.5 KΩ at 20 °C to 25 °C? (See Fig. 1)

NO → Unplug the connector and measure directly on the NTC 1 terminal. Is the resistance value between 4.9 KΩ to 6.5 KΩ at 20 °C to 25 °C? (See Fig. 2)

NO → Replace the NTC 1 and repeat the diagnostic cycle to check for any further alarms.

YES → Check / Replace the wiring and repeat the diagnostic cycle to check for any further alarms.

YES → Is the wiring between Electronic Control Board and NTC 1 (Outlet Control Thermistor) connected properly?

NO → Check / Replace the wiring and repeat the diagnostic cycle to check for any further alarms.

YES → Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

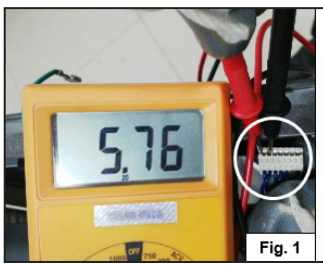


Fig. 1

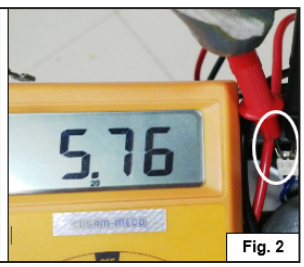


Fig. 2

Troubleshooting Based on Alarm Codes

E73	**E73: NTC 2 Error** NTC 2 (Inlet Control Thermistor) open, Wiring or Electronic Control Board defective.	**E73**
E74	**E74: NTC 2 Error** NTC 2 (Inlet Control Thermistor) short, Wiring or Electronic Control Board defective.	**E74**

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Measure the value of the NTC 2 between terminals of J4-3 and J4-4 wiring connector. Is the resistance value between 49 KΩ to 63.7 KΩ at 20 °C to 25 °C? (See Fig. 1)

NO → Unplug the connector and measure directly on the NTC 2 terminal. Is the resistance value between 49 KΩ to 63.7 KΩ at 20 °C to 25 °C? (See Fig. 2)

NO → Replace the NTC 2 and repeat the diagnostic cycle to check for any further alarms.

YES → Check / Replace the wiring and repeat the diagnostic cycle to check for any further alarms.

YES → Is wiring between Electronic Control Board and NTC 2 (Inlet Control Thermistor) connected properly?

NO → Check / Replace the wiring and repeat the diagnostic cycle to check for any further alarms.

YES → Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

Fig. 1

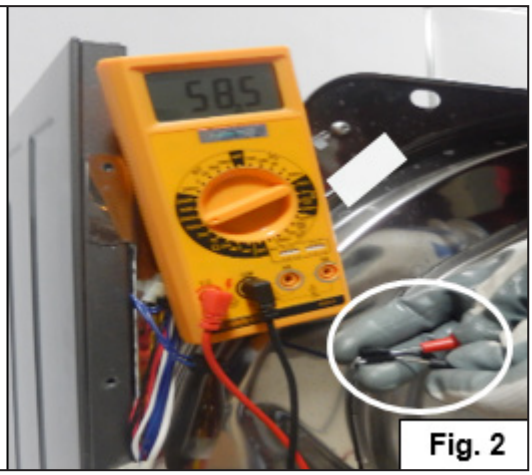


Fig. 2

E91	**E91: User Interface Communication Error** User Interface Board, Electronic Control Board or Wiring defective.	E91

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Check the wiring between Electronic Control Board and User Interface Board. Is the continuity there?

NO → Replace / Repair the wiring and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Replace the User Interface Board and check for further alarms. Is the Appliance OK?

NO → Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

E92	**E92: User Interface Protocol Incongruence Error** Electronic Control Board incompatible with Interface Board.	E92

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Check whether correct Interface Board and Electronic Control Board are installed. Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms. Incorrect configuration possible.

E93	**E93: Machine Configuration Checksum Error** Wrong configuration data loaded, Interface Board (Display Board) or Electronic Control Board or Wiring defective.	E93

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Check if correct Interface Board and Electronic Control Board are installed. Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms. Incorrect configuration possible.

Troubleshooting Based on Alarm Codes

E94	**E94: Cycle Configuration Checksum Error**	E94
	Wrong configuration data loaded or Electronic control Board defective.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Check if correct Cycle Selector Board, User Interface Board and Electronic Control Board are installed. If not then replace the respective board and repeat the diagnostic cycle to check for any further alarms. Incorrect configuration possible.

E97	**E97: Missing Program on CTF Error**	E97
	Discrepancy between programme configuration data and selector recognition data.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Check if correct Cycle Selector Board, User Interface Board and Electronic Control Board are installed. If not then replace the respective board and repeat the diagnostic cycle to check for any further alarms. Incorrect configuration possible.

E9C	**E9C: User Interface Configuration Checksum Error**	E9C
	Software problem between Main Board and Control Board.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Check if correct User Interface Board and Electronic Control Board are installed. If not then replace the respective board and repeat the diagnostic cycle to check for any further alarms.

E9E	**E9E: User Interface Touch Sensor Not Working**	E9E
	Humidity or water on User Interface Board or User Interface Board defective.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Switch OFF the Dryer and check for water or humidity on User Interface Board, dry it and switch it ON again then check whether problem is solved or not. If not then replace the User Interface Board and repeat the diagnostic cycle to check for any further alarms.

EH1	**EH1: Power Supply Frequency Out of Range**	**EH1**
	Power supply frequency out of configured range.	
EH2	**EH2: Power Supply Amplitude Out of Range**	**EH2**
	Line voltage too high or Electronic Control Board fault.	
EH3	**EH3: Power Supply Amplitude Out of Range**	**EH3**
	Line voltage too Low or Electronic Control Board fault.	

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

IMPORTANT

⚠	**The Appliance remains in alarm status until the mains frequency returns to the correct values or the Appliance is switched OFF. Only the family of the alarm is displayed and the diagnostics mode cannot be accessed. The complete alarm can only be read when the situation has normalised.**	⚠

Check if the power supply is as per the product specification (Voltage = 240 V (Electric), 120 V (Gas) Models and Frequency = 60 Hz).

NO → Make the power supply proper as per the product specification and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

EH4	**EH4: Line Wiring Error**	**EH4**
	Line connections in home faulty, Wiring or Electronic Control Board defective.	

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Check Wiring at terminal block for L1-N-L2 wired correctly and repeat the diagnostic cycle to check for any further alarms **(L2 is not applicable for Gas models)**.

Troubleshooting Based on Alarm Codes

EBD	**EBD: Line Safe Relay Short Circuit Error**	EBD
	Electronic Control Board defective.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

Replace Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

EBE / EBF	**EBE / EBF: Line Safe Error / Line Safe Sensing Error**	EBE / EBF
	Electronic Control Board defective.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.

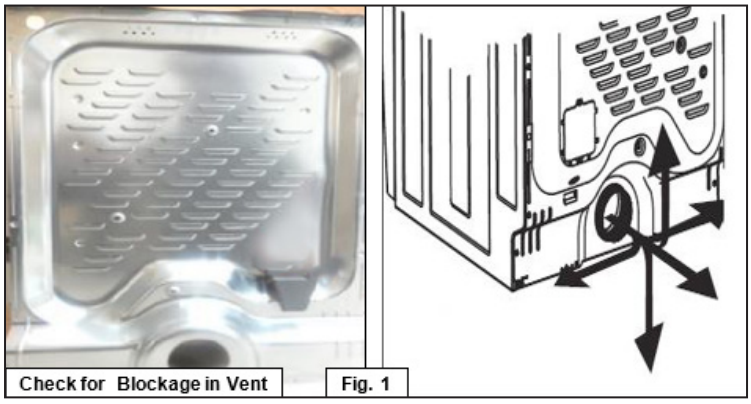
Replace Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

EF1	**EF1: Ventilation Blocked Error**	EF1
	Exhaust blocked, Exhaust Control Thermistor, Inlet Control Thermistor, Contact Sensor or Electronic Control Board defective.	

Checks to perform:

WARNING

Check that all the connectors are correctly inserted.



Check for Blockage in Vent

Fig. 1

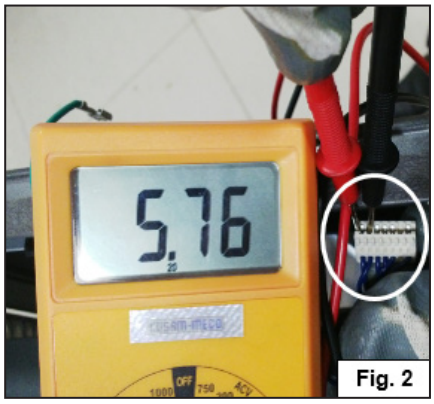


Fig. 2

Check for any foreign material restricting the passage of air in the Vent. (See Fig. 1)

YES → Remove the foreign material and repeat the diagnostic cycle to check for any further alarms.

NO ↓

Check the wiring between Thermistor and Electronic Control Board. Is the continuity there?

NO → Check / Replace the wiring and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Measure the resistance between the connectors of Outlet Thermistor. Is the resistance value between 4.9 KΩ to 6.5 KΩ ? (See Fig. 2)

NO → Replace the Outlet Thermistor and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Check the wiring between moisture sensor and Electronic Control Board. Is the continuity there?

NO → Check / Replace the wiring and repeat the diagnostic cycle to check for any further alarms.

YES ↓

Replace the Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.

EF6	**EF6: Safety Reset Error**	**EF6**
	Electronic Control Board defective.	

Checks to perform:

⚠ WARNING

Check that all the connectors are correctly inserted.

Replace Electronic Control Board and repeat the diagnostic cycle to check for any further alarms.