MFL69290445

SEC. / WORK	가 BRAND	나 MODEL	다 P/NO.	PRINTING DEGREE EXTERIER	PRINTING DEGREE INTERIER	MATERIAL AND PRINTING DESCRIPTION	LG MODEL 명	LANGUAGE	PAGE	REMARK
45	LG	DLE7000*	MFL69290445	1	1	-	-	English	48	EUS

REV. NO. 기호	REVISION DESCRIPTION 변경 사항	REF. NO. 시방 번호	DATE 년/월/일	PREPARED 시방자	APPROVED 승인자
2					
1	분해도 페이지 표기 및 숫자 이미지로 수정	EAGL600213	21/06/09	안 영 민	김 재 석

PDF
ILLUSTRATOR

DR COMPLETED
도면 DR 완료
완료일 :

TRIG.	UNIT	mm	SCALE 1/1

MODELING	DESIGNED	REVIEWED	CHECKED	APPROVED
	안 영 민 21.05.24		안 영 민 21.05.24	김 재 석 21.05.24

TITLE: MANUAL,Service 1/1

LG 전자 (주)
LG Electronics Inc.

RELATED DWG.

DWG. No. MFL69290445

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U.S.A. Website: http://us.lgservice.com
Canadian Website: http://lg.ca

ELECTRIC & GAS DRYER
SERVICE MANUAL

CAUTION

READ THIS MANUAL CAREFULLY IN ORDER TO
PROPERLY DIAGNOSE PROBLEMS AND TO SAFELY
PROVIDE QUALITY SERVICE ON THESE DRYERS.

MODEL : DLE7150* DLG7151*
DLE7000* DLG7001*

IMPORTANT SAFETY NOTICE

The information in this service guide is intended for use by individuals possessing skill and experience in electrical, electronic, and mechanical appliance repair. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

⚠ WARNING !

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks. To reduce the risk of personal injury, adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses. Failure to follow all of the safety warnings in this manual could result in property damage, personal injury or death. Be careful when opening and closing the door. Fingers and hands can get caught in the door and cause injury if the door drops forward unexpectedly. Do not place heavy items on or lean against the top of the door when it is open. Do not attempt to pull the hamper door open more than 40 degrees. The Dryer could tip forward, causing injury or damage.

RECONNECT ALL GROUNDING DEVICES

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

WHAT TO DO IF YOU SMELL GAS:

- ***Do not try to light a match, or cigarette, or turn on any gas or electrical appliance.***
- ***Do not touch any electrical switches. Do not use any phone in your building.***
- ***Clear the room, building or area of all occupants.***
- ***Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions carefully.***
- ***If you cannot reach your gas supplier, call the fire department.***

IMPORTANT

Electrostatic Discharge (ESD) Sensitive Electronics

ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

- Use an anti-static wrist strap. Connect wrist strap to green ground connection point or unpainted metal in the appliance.

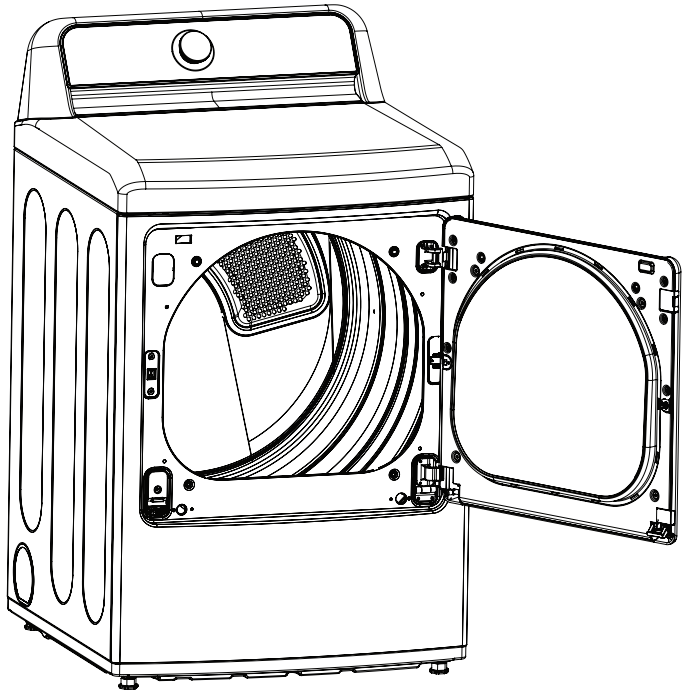
- OR -

Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.

- Before removing the part from its package, touch the anti-static bag to a green ground connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.
- When repackaging failed electronic control assembly in anti-static bag, observe above instructions.

CONTENTS

1 SPECIFICATIONS

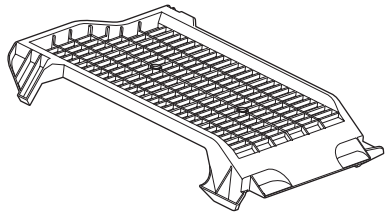


- Name: Electric and Gas Dryer
- Power supply: Refer to the rating label on the dryer.
  Gas: 120 VAC Electric: 240VAC
- Size: 27 X 29.5 X 44.2 (inch)
- Dryer capacity: IEC 7.3 cu.ft.
- Weight: 114.9 lb (Elec)
  118.6 lb (Gas)

Specifications are subject to change by manufacturer.

■ ACCESSORIES

Optional accessory

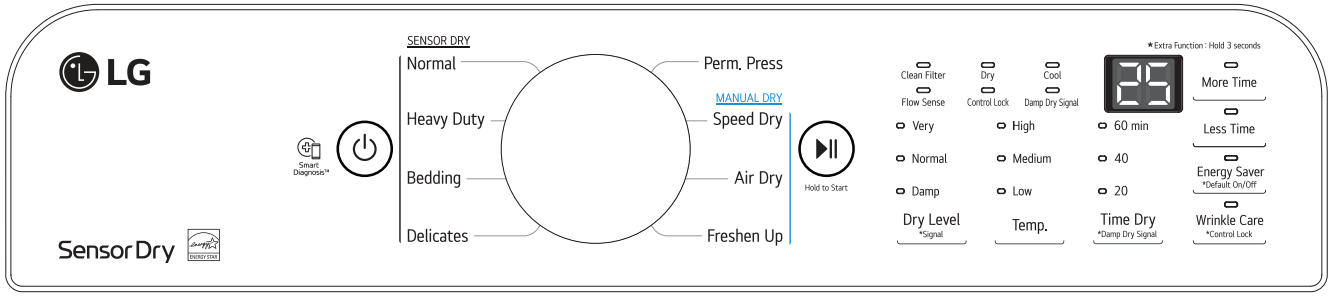


Dryer rack (1 each)

See page 6 of this manual for usage instruction.

ITEM		DLE7100* DLG7101* DLE7000* DLG7001*		REMARK
Material & Finish	Color	Blue White		
	Top Plate	Powder coating		
	Door Trim	Spray		
Power Supply		Elec.	120 V / 240 V / 60 Hz (26 A)	
			120 V / 208 V / 60 Hz (23 A)	
		Gas	120 V / 60 Hz (5 A)	
Power Consumption	Motor	250W (4.5A)		AC 120V
	Heater	5400W (22.5A)		AC 240V(Electric Model)
	Gas Valve	13 W (0.11A) x 2		DC 120V(Gas Model)
	Pump	2.4w(0.15A)		
Control Type		Electronic		
Drum Capacity		7.3 cu.ft.		
Weight (lbs) - Net		Electric dryer : 118.2 Gas dryer : 121.0		
No. of Programs		8		
No. of Dry Options		6		
No. of Temperature Controls		3		
No. of Dry Levels		3		
Sensor	Moisture	Available		Electrode sensor
	Temperature	Available		Thermistor
Reversible Door		Available		
Drum		Alcosta		
Dryer Rack		Available		
Control Lock		Available		
Packing (WxDxH)		29.3 X 31.3 X 48.0 (inch)		

2 FEATURES AND BENEFITS



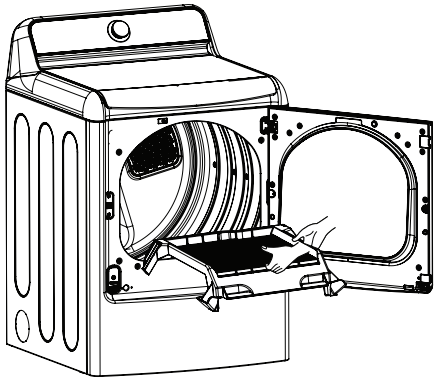
3 INSTALLATION INSTRUCTIONS

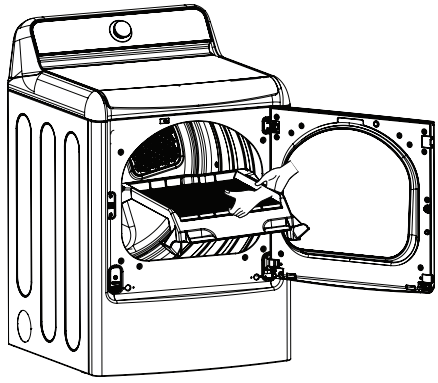
Dryer Rack Installation Instructions

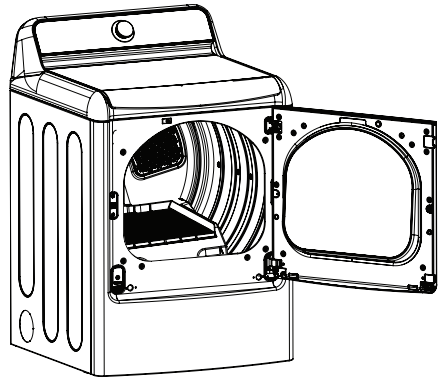
1 Open the door. Hold the dryer rack with both hands.

2 Put the dryer rack into the drum

3 Check and be sure that the front of the rack is properly seated on the lint filter.







3-1 Connecting Electric Dryers

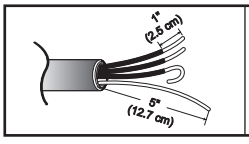
Review the following options to determine the appropriate electrical connection for your home.

4-wire receptacle (NEMA type14-30R)

Use the instructions under option 1 if your home has a 4-wire receptacle (NEMA type 14-30R).

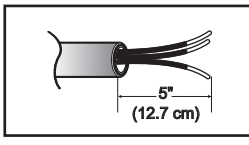
3-wire receptacle (NEMA type10-30R)

Use the instructions under option 2 or 3 if your home has a 3-wire receptacle (NEMA type 10-30R). Use option 2 if local codes and ordinances permit the connection of a chassis ground to the neutral connector. If this is not permitted, use option 3.



4-wire direct

If this type is available at your home. you will be connecting to a fused disconnect or circuit breaker box

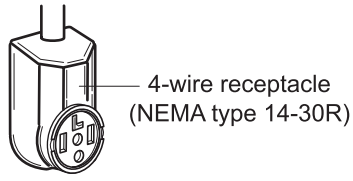


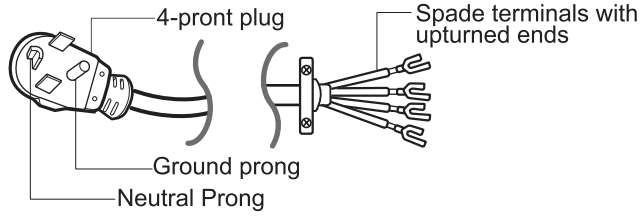
3-wire direct

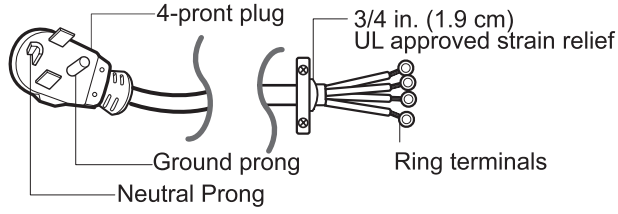
If this type is available at your home. you will be connecting to a fused disconnect or circuit breaker box

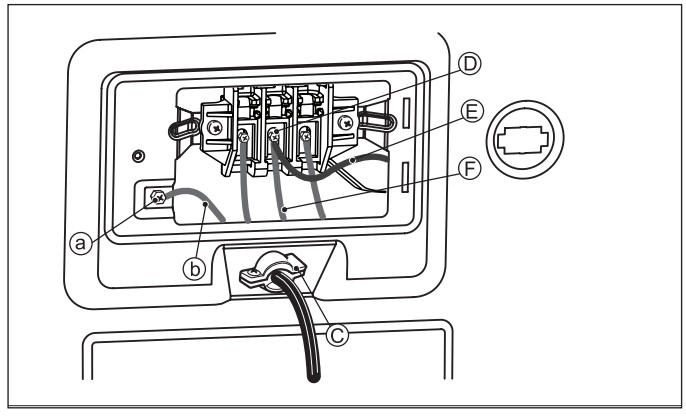
Option 1: 4-wire connection with a Power supply cord.

- If your local codes or ordinances do not allow the use of a 3 wire connection, or you are installing your dryer in a mobile home, you must use a 4-wire connection.





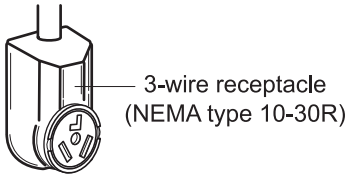


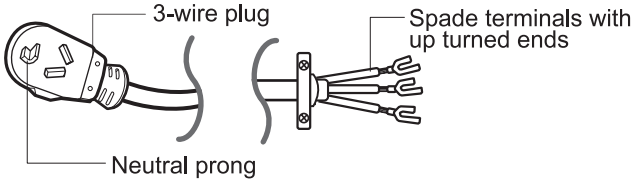


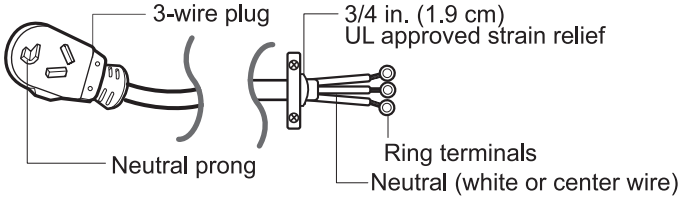
1. Connect the neutral wire (white) of the power cord to the center terminal block screw.
2. Connect the red and black wires to the left and right terminal block screws.
3. Connect the ground wire (green) of the power cord to the external ground screw. Remove the neutral ground wire of appliance and connect it to center screw.
4. Make sure that the strain relief screw is tightened and that all terminal block nuts are tight and the power cord is in the right position.

Option 2: **3-Wire Connection with a Power Supply Cord**

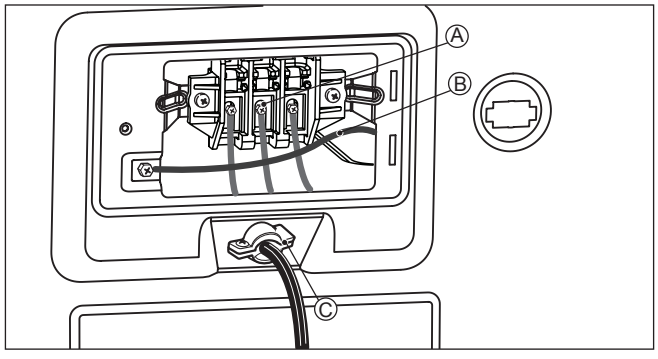
lf your local codes or ordinances permit the connection of a frame-grounding conductor to the neutral wire, use these instructions. If your local codes or ordinances do not allow the connection of a frame-grounding conductor to the neutral wire, use the instructions under **Section 3: Optional 3-wire connection.**







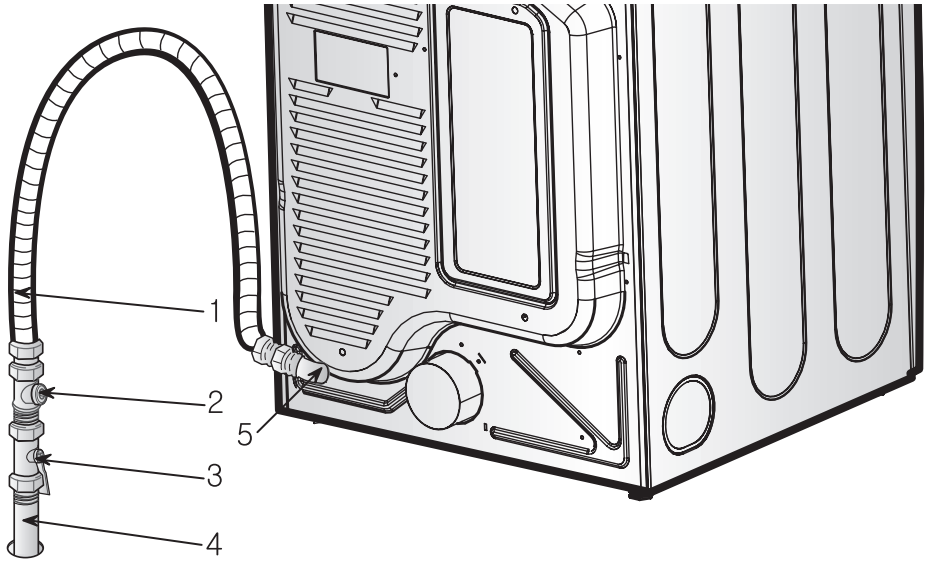
1. Connect the neutral (white or center) wire (B) to the center, silver colored, screw (A) and tighten securely.
2. Connect the other two power cord wires (red and black) to the left and right terminal block screws and tighten securely.
3. Tighten the strain relief screws (C) securely.



3-2 Connecting the gas supply

For further assistance, refer to section on Gas Requirements.

1. Make certain your dryer is equipped for use with the type of gas in your laundry room. Dryer is equipped at the factory for natural gas with a 3/8" N.P.T. gas connection.
2. Remove the shipping cap from the gas connection at the rear of the dryer. Make sure you do not damage the pipe thread when removing the cap.
3. Connect to gas supply pipe using a new flexible stainless steel connector.
4. Tighten all connections securely. Turn on gas and check all pipe connections (internal & external) for gas leaks with a non-corrosive leak detection fluid.
5. For LP (Liquefied Petroleum) gas connection, refer to section on Gas Requirements.



1 New Stainless Steel Flexible Connector - Useonly if allowed by local codes (Use Design A.G.A. Certified Connector)

2 1/8" N.P.T. Pipe Plug (for checking inlet gas pressure)

3 Equipment Shut-Off Valve-Installed within 6' (1.8 m) of dryer

4 Black Iron Pipe
Shorter than 20' (6.1 m) - Use 3/8" pipe Longer than 20' (6.1m) - Use 1/2" pipe

5 3/8" N.P.T. Gas Connection

4 DRYER CYCLE PROCESS

Cycle		Default			Conditions of operation and termination				
					Drying		Cooling		Wrinkle care
		Temp-erature	Dry Level	Display time	Electro-sensor	Temp-Control	Default time	Temp-Control**	Time
Sensor Dry *	Perm. Press	Low	Normal Dry / Adjustable	32min	Saturation	52±3℃ 126±5°F	5min	47±5℃ 113±9°F	3Hr
	Normal	Medium	Normal Dry / Adjustable	Elec : 67 Gas : 63	Saturation	60±4℃ 140±7°F	5min	47±5℃ 113±9°F	
	Delicates	Low	Normal Dry / Adjustable	28min	Saturation	52±3℃ 126±5°F	5min	47±5℃ 113±9°F	
	Bedding	Medium	Normal Dry / Adjustable	55min	Saturation	60±4℃ 140±7°F	5min	47±5℃ 113±9°F	
	Heavy Duty	High	Normal Dry / Adjustable	54min	Saturation	60±4℃ 155±7°F	5min	47±5℃ 113±9°F	
Manual Dry **	Speed Dry	High / Adjustable	Off	25min / Adjustable	Saturation	(68±4℃) (155±7°F)	5min	47±5℃ 113±9°F	3Hr
	Air Dry	No Heat	Off	30min / Adjustable	Saturation	NO HEATER	5min	(47±5℃) (113±9°F)	
	FRESEEN UP	Medium	Off	20min	Saturation	(66±5℃)	5min	(45±5℃)	
Load			Motor		→				Off Time: 6min / On Time: 10sec
			Heater		Temperature Control for each cycle				

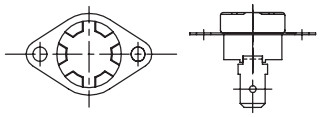
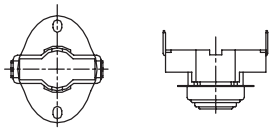
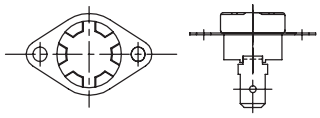
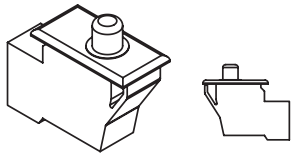
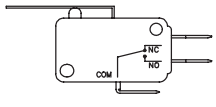
* Sensor dry: Dry Level is set by users.
** Manual dry: Temperature control is set by users.
Default settings can be adjusted by users.

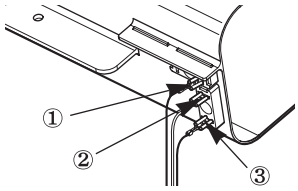
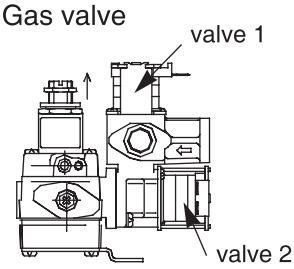
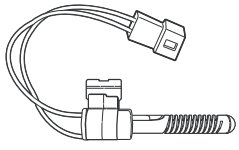
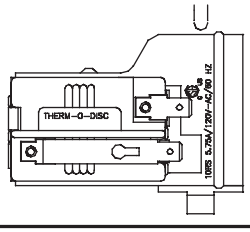
NOTE

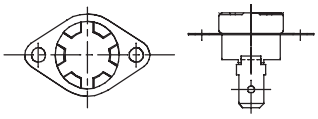
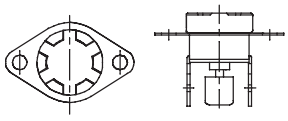
The Energy Saver option is turned on by default in the Cotton/Normal cycle.
Turn off the Energy Saver option for a faster Normal cycle which begins with heated drying.
To turn the Energy Saver default off, press and hold the Wrinkle Care button for three seconds.
ON or OFF appears in the display.

5 COMPONENT TESTING INFORMATION

⚠ CAUTION When checking the component, be sure to turn the power off, and do voltage discharge sufficiently.

Component	Test Procedure	Check result	Remark
1. Thermal cut off  • Check Top Marking: N140	Measure resistance of terminal to terminal ① Open at 284 ± 9°F (140 ± 5°C) ② Auto reset -31°F (-35°C) Same shape as outlet thermostat.	If thermal fuse is open must be replace ① Resistance value ≒∞ ② Continuity (250°F ↓) < 1Ω	• Heater case-Safety • Electric type
2.Hi limit Thermostat (Auto reset) 	Measure resistance of terminal to terminal ① Open at 257 ± 9°F (125 ± 5°C) ② Close at 201± 9°F (94 ± 7°C)	① Resistance value ≒∞ ② Resistance value < 5Ω	• Heater case - Hi limit • Electric type
3.Outlet Thermostat (Cut off)  • Check Top Marking: N85	Measure resistance of terminal to terminal ① Open at 185 ± 9°F (85 ± 5°C) Same shape as thermal cut off.	① Resistance value ≒∞ ② Resistance value < 5Ω	• Blower housing - Safety
4. Door switch 	Measure resistance of the following terminal 1) Door open ① Terminal: COM - NC (1-3) ② Terminal: COM - NO (1-2) 2) Door closed ① Terminal: COM - NC (1-3) ② Terminal: COM - NO (1-2)	① Resistance value < 1Ω ② Resistance value ≒∞ ① Resistance value ≒∞ ② Resistance value < 1Ω	
5. Idler switch 	Measure resistance of the following terminal: COM - NC	1.Lever open ① Resistance value < 1Ω 2. Lever push (close) ② Resistance value ≒∞	

Component	Test Procedure	Check result	Remark
6. Heater 	Measure resistance of the following terminal ① Terminal: 1 (COM) - 2 ② Terminal: 1 (COM) - 3 ③ Terminal: 2 - 3	① Resistance value: 10Ω ② Resistance value: 10Ω ③ Resistance value: 20Ω	• Electric type
7. Thermistor 	Measure resistance of terminal to terminal Temperature condition: 58°F ~ 104°F (10~40°C)	Resistance value: 10Ω	• Heater case Hi limit • Electric type
8. Motor			• See Page 15
9. Gas valve 	Measure resistance of the following terminal ① Valve 1 terminal ② Valve 2 terminal	① Resistance value 1.5k~2.5kΩ ② Resistance value 1.5k~2.5kΩ	• Gas type
10. Igniter 5318EL3001 	Measure resistance from terminal to terminal.	Resistance value 50~800 Ω (for 5318EL3001)	• Gas type
11. Flame Detect 	Measure resistance of terminal to terminal ① Open at 370°F (Maximum) ② Close at 320°F	① Resistance value ≒∞ ② Resistance value < 1Ω	• Gas type

Component	Test Procedure	Check result	Remark
12. Outlet Thermostat (Auto reset)  • Check Top Marking: N95	Measure resistance of terminal to terminal ① Open at 203 ± 41°F (95± 5°C) ② Close at 159 ± 41°F (70± 5°C)	① Resistance value ≒∞ ② Continuity < 1Ω	• Gas type • Gas funnel
13. Outlet Thermostat (Manual reset)  • Check Top Marking: N100	Measure resistance of terminal to terminal ① Open at 230 ± 41°F (110 ± 5°C) ② Manual reset	① Resistance value ≒∞ ② Continuity < 1Ω	• Gas type • Gas funnel

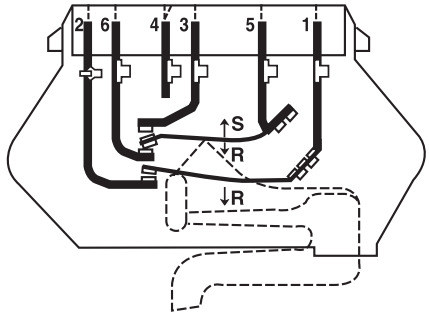
6 MOTOR DIAGRAM AND SCHEMATIC

NOTE When checking Component, be sure to turn Power off, then do voltage discharge sufficiently.

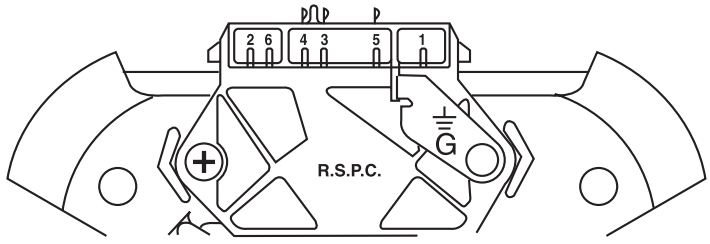
■ Contact On / Off by Centrifugal Switch

Terminal No		①	②	③	④	⑤	⑥	Remark
Mode	Resistance							
Motor STOP	2 ~ 3Ω				●	●		Motor
	≒ ∞	●	●					Heater (Electric Models)
	≒ ∞			●			●	Gas Valve (Gas Models)
Motor RUN	3 ~ 5Ω				●	●		Motor
	< 1Ω	●	●					Heater (Electric Models)
	< 1Ω			●			●	Gas Valve (Gas Models)

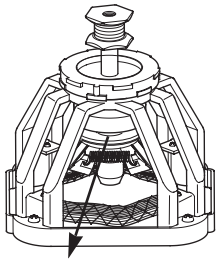
····· Open
——— Close



SWITCH SHOWN IN START POSITION

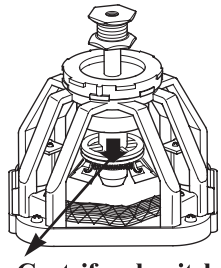


■ STOP MODE
(When motor does not operate)



Centrifugal switch

■ RUN MODE
(Motor operates)

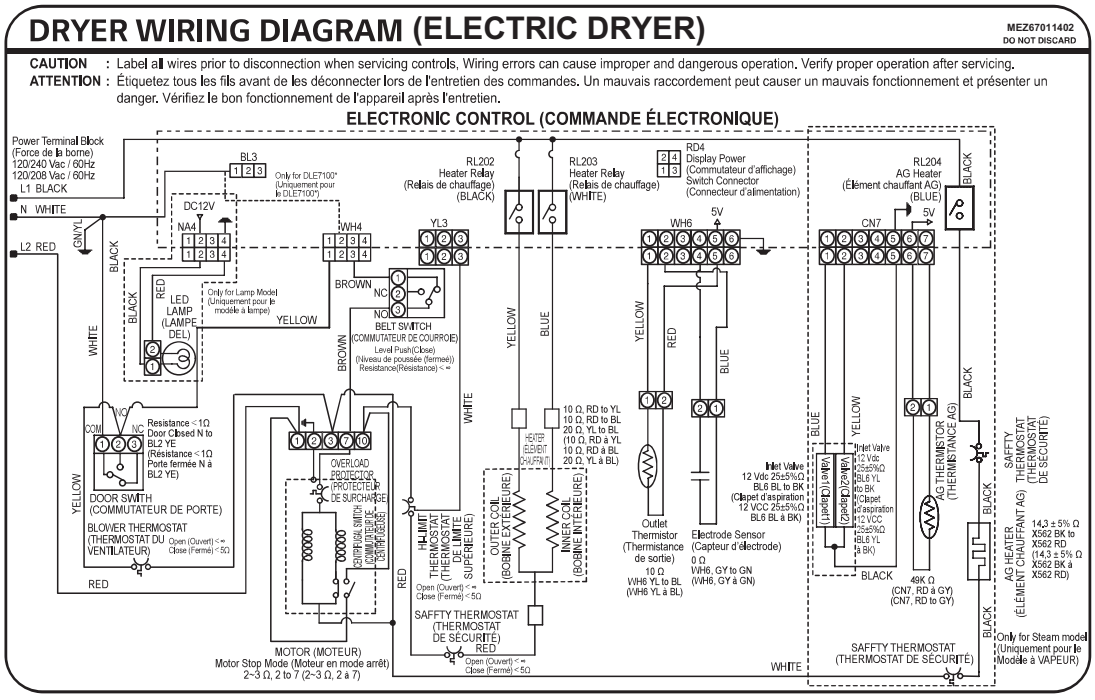


Centrifugal switch
(Pull Drive forward)

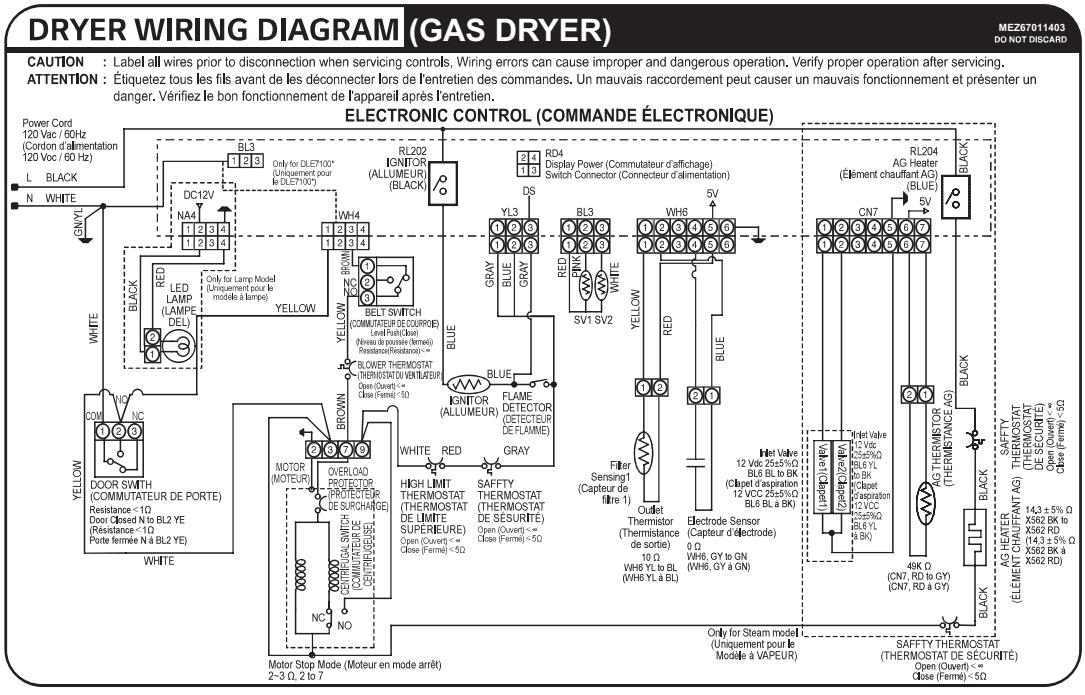
7 WIRING DIAGRAM

⚠ CAUTION Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangrous operation. Verify proper operation after servicing.

ELECTRIC DRYER WIRING DIAGRAM



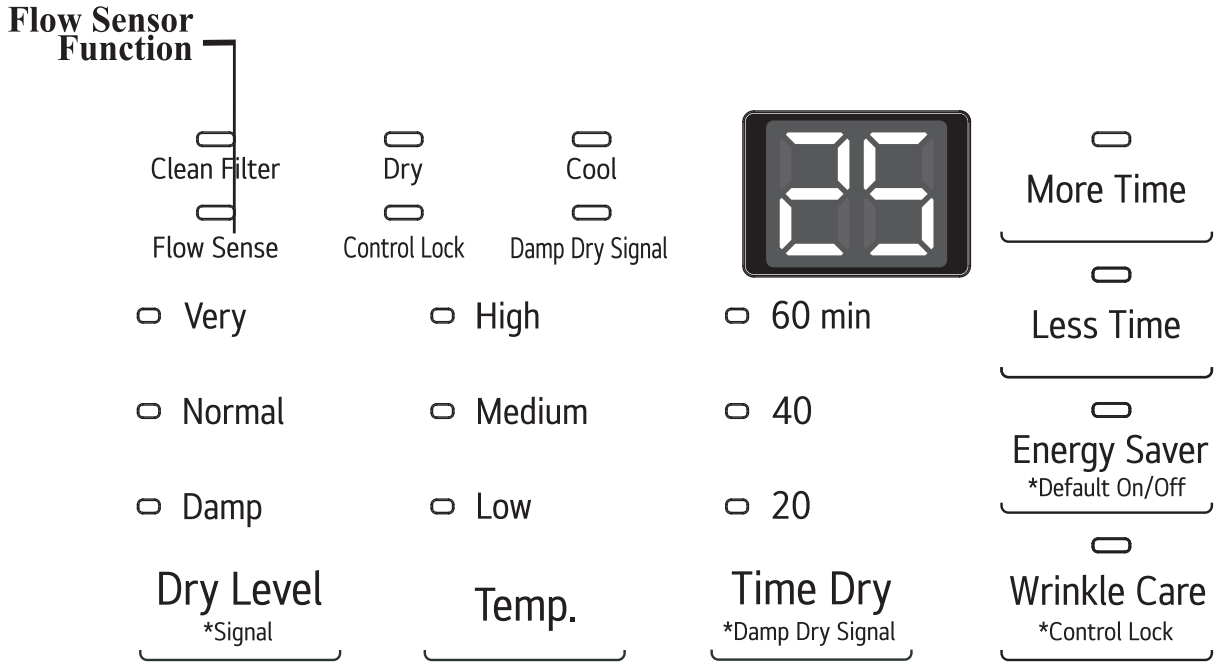
GAS DRYER WIRING DIAGRAM



8 FLOW SENSORFUNCTION

8-1 Flow sensor

This FlowSense™ function detects the clogging or blocking of ducts.
Clogged duct vents or hoses decrease efficiency in drying clothes. Clogged vents can also cause fire.
This function alarms you, when to clean the ducts.
When the alarm about duct clogging is on display of the panel, your duct vents should be cleaned by yourself or a serviceman.



Installation Test (Duct Check)

Once you have completed the installation of the dryer, use this test to make sure the condition of the exhaust system is adequate for proper operation of the dryer. This test should be performed to alert you to any serious problems in the exhaust system of your home.

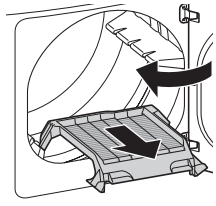
- This dryer features Flow Sense™, an innovative sensing system that automatically detects blockages and restrictions in dryer ductwork. Keeping ductwork clean of lint buildup and free of restrictions allows clothes to dry faster and reduces energy use.

NOTE

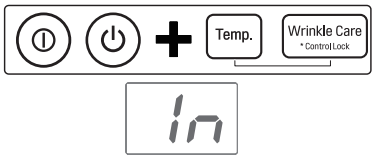
The dryer should be cool before starting this test. If the dryer was warmed up during installation, run the AIR DRY cycle for a few minutes to reduce the interior temperature.

To activate the installation test:

1 **Remove the drying rack and literature, and then close the door.**
Do not load anything in the drum for this test, as in may affect the accuracy of the results.



2 Press and hold the **POWER, Temp., and Wrinkle Care** buttons until In and a usage count alternate in the display. (The usage count indicates the number of cycles run with no load during the last 5 cycles.)



3 **Press the START/PAUSE button.**
The dryer will start the test, which will last about 2 minutes. The heat will be turned on and the temperatures in the drum will be measured and displayed. A chime sounds when the test portion of the cycle is complete.

4 **Check the display for results.**
During the test cycle, monitor the Flow Sense™ display on the control panel. If the Flow Sense™ LED is not turned on, when the cycle ends, the exhaust system is adequate. If the exhaust system is severely restricted, the Flow Sense™ LED will be turned on. Other problems may also be shown with error codes. See the chart below for error code details and solutions.

LED; turned on :
RESTRICTED

The Flow Sense™ LED indicates that the exhaust system is severely restricted. Have the system checked immediately, as performance will be poor.

5 **End of cycle.**
At the end of the test cycle, 0 will display. The test cycle will end and the dryer will shut off automatically after a short delay.

- **Check the error code before you call for service**

Error Code	Possible Causes	Solutions
tE1 or tE2	• Temperature sensor failure.	• Turn off the dryer and call for service.
HS	• Humidity sensor failure.	• Turn off the dryer and call for service.
PS or PF or nP	• Electric dryer power cord is not connected correctly, or house power supply is incorrect.	• Check the power supply or the connection of the power cord to the terminal block. Refer to the **Connecting Electric Dryers** section of this manual for complete instructions.
	• House fuse is blown, circuit breaker has tripped, or power outage has occurred.	• Reset circuit breaker or replace fuse. Do not increase the fuse capacity. If the problem is a circuit overload, have it corrected by a qualified electrician.
gAS	• Gas supply or service turned off. (Gas Model only.)	• Confirm that house gas shutoff and the dryer gas shutoff are both fully open.

- **Check the duct condition**

Troubleshooting for flow sensor dryer

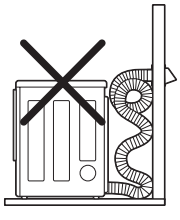
• Check the Error Code before you call for service

Error Code	Possible Causes	Solutions
tE1 *or* **tE2**	• Temperature sensor failure	• Turn off the dryer and call for service.
HS	• Humidity Sensor failure.	• Turn off the dryer and call for service.
PS *or* **PF** *or* **nP**	• Electric dryer power cord is not connected correctly, or house power supply is incorrect. • House fuse is blown, circuit breaker has tripped, or power outage has occurred.	• Check the power supply or the connection of power cord to the terminal block. Refer to the **Connecting electric dryers** section of this manual for complete instructions. • Reset circuit breaker or replace fuse. Do not increase the fuse capacity. If the problem is a circuit overload, have it corrected by a qualified electrician.
The display shows "d90", "d95" 	• The duct work is about 90%-95% blocked.("d90" or "d95" error code displayed 2 hours only) • House exhaust system blocked.	• **Do not use the dryer until the exhaust system has been cleaned and/or repaired.** Using the dryer with a severely restricted exhaust is dangerous and could result in a fire or other property damage. • Check the outside dryer vent while the dryer is operating to make sure there is strong airflow. • If ther exhaust system is extremely long, have it repaired or rerouted. • Keep the area around the dryer clean and free of clutter. • Check the vent hood for damage or lint clogging. • Make sure the area around the vent hood is clear.
FLOW SENSE™ indicator shows four bars during the drying cycle or the display shows "d80" after drying.	• Ductwork is too long or has too many turns/restrictions. • Significant blockage of the ductwork due to lint buildup or debris. • The appliance has detected a restriction in the external dryer venting.	• Install a shorter or straighter duct run. See the Instructions. • Ductwork should be checked/cleaned soon. Dryer can be used in this condition, but drying times may be longer. • If exhaust restrictions are sensed by the FLOW SENSE ™ system, the indicator will remain on for two hours after the end of the cycle. Opening the door or pressing the POWER button will turn off the display.

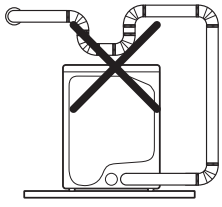
• **Check the duct condition**
If the FLOW SENSE™ LED is turned on, check the exhaust system for restrictions and damage. Repair or replace the exhaust system as needed.

Restricted or Blocked Airflow

Avoid long runs or runs with multiple elbows or bends.

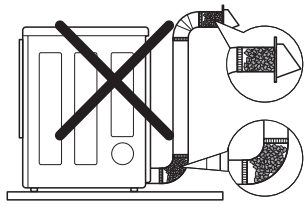


Excess or crushed transition duct



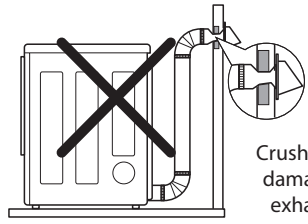
Too many elbows or exhaust too long

Check for blockages and lint buildup.



Lint buildup or blockage

Make sure the ductwork is not crushed or restricted.



Crushed or damaged exhaust

9 DIAGNOSTIC TEST

1. **This TEST should be used for Factory test /Service test. Do not use this DIAGNOSTIC TEST other than specified.**
2. **Activating the Heater manually with the Door open may trip the thermostat attached to the heater, therefore do not activate it manually. (Do not press the door switch to operate the heater while the door is open)**

■ ACTIVATING THE DIAGNOSTIC TEST MODE

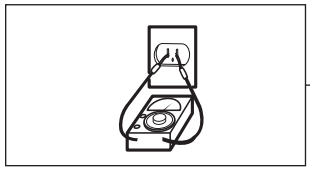
1. UNIT must be in standby (unit plugged in, display off)
2. Press Power and press More Time and Less Time simultaneously for one half second.
3. Press START/PAUSE button to advance through diagnostics.

Pressing the START/PAUSE	CHECKING ACTION	DISPLAY	CHECKPOINT
None	Electric Control & Version	L00(Elec Type) L01(Gas Type)	Standard
		U	Main PGM
		D	Display PGM
		tE	Thermistor Open
			Thermistor Shorted
Once	Modem Port	go	Receive the signal
		--	Not receive the signal
	Motor+Controller	30 = High moisture 239 = Low moisture	Motor runs
			Displays Moisture Sensor Operation If moisture sensor is contacted with damp cloth. The display number is below 180 in normal condition
Twice	■ ELECTRIC TYPE Motor+Heater1(2700W) ■ GAS TYPE Motor	Current Temp. (5~70)	■ ELECTRIC TYPE : Heater1 is energized – 2700 W ■ GAS TYPE : Valve not energized (Temperature in the drum is displayed in degrees C.)
3 Times	■ ELECTRIC TYPE Motor+Heater1+Heater2 (5400W) ■ GAS TYPE Motor+Gasvalve	Current Temp. (5~70)	■ ELECTRIC TYPE : Heater1 and Haeter2 are energized – 5400 W ■ GAS TYPE : Gas valve is energized (Temperature in the drum is displayed in degrees C.)
4times	■ ELECTRIC TYPE Motor+Heater1+Heater2 (5400W) ■ GAS TYPE Motor+Gasvalve	Current Temp. (5~70)	■ ELECTRIC TYPE : Heater1 and Haeter2 are energized – 5400 W ■ GAS TYPE : Gas valve is energized (Temperature in the drum is displayed in degrees C.)
5times	Loads Off / LED off		Power Off

✳ To check pump operation:
At the fourth press of the test mode, if the AD value of the pump is higher than 10 on the display, the pump is normal.
If it is lower than 10, E5 error will be displayed.

■ Test 1 120V AC Electrical Supply

Caution	When measuring power, be sure to wear insulated gloves to avoid an electric shock
Trouble Symptom	No power was applied to controller. (LED, LCD Display off)
Measurement Condition	With dryer power on; connector linked to controller.

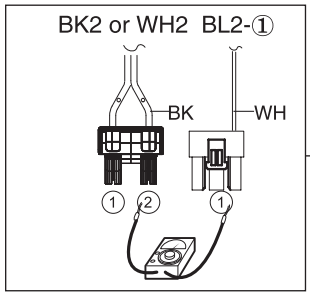


Check the outlet, is the voltage 110V ~ 125V AC?

NO

- Check the fuse or circuit breaker

YES

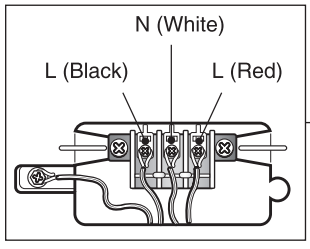


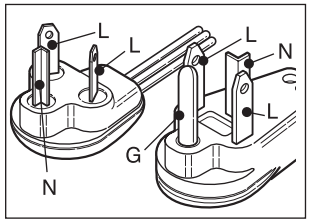
Check if the voltage measured between connector BK2 or WH2-② (Black Wire) linked to the Controller and BL2-① (White Wire) Is 110~125V?

NO

- Check if power cord is properly connected.

YES





① Check if the controller wire is disconnected.
② Check if terminal block and power cord are connected (Check plug).
- Does power cord N (Natural) line match to terminal center N (Natural) line?

NO

- Reconnect the controller.

YES

Replace controller.

Caution	When measuring power, be sure to wear insulated gloves to avoid an electric shock.
Trouble Symptom	Check the tab relays Connection properly.
Measurement Condition	With dryer power on; connector linked to controller.

1. Power Connection

Connection of the Tab Relay with Heater (Electric)

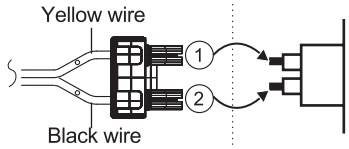
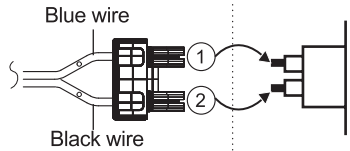
	Tab Relay 1	Tab Relay 2	Heater 1	Heater 2	Remark
High Mid High Medium	on	on	on	on	Temperature control below 68± 4℃ turn on Heater 1 and Heater 2.
Low Extra Low	on	off	on	off	Temperature control below 52± 4℃ only Turn on Heater 1.

Connection of the Tab Relay with Burner (Gas)

	Tab Relay 1	Burner	Remark
High Mid High Medium	O	O	Temperature Control below 70± 4℃ Turn on Burner
Low Extra Low	O	O	Temperature Control below 47± 4℃ Turn on Burner

2. Status Mode Of The Connection

Connection of Tab Relay with the PCB ASSEMBLY (Electric)

	Color	Connection		Remark
		Harness	PCB	
Connector Housing	Black			Check the matching color between harness wire and tab relay. (Black housing – black tab relay)
	White			Check the matching color Between harness wire and tab Relay. (White Housing – White tab Relay)

3. Incorrect Connection Error and Results.

Incorrect Connection of the Tab Relay and Connector Housing (Elec)

Items	Case	Heater1 Operation (black)	Heater2 Operation (White)	PCB condition Of operation
1.Black and White Housing	Wire ①, ② CROSS	Off	Off	Power Off
2.Black Housing	Wire ①, ② CROSS	Off	Off	Power Off
3.White Housing	Wire ①, ② CROSS	Normal	Normal	Power On
* 4.Black and White Housing	Housing CROSS	Heater2	Heater1	Power On
5.Black and White Housing	Housing and Wire ①, ② CROSS	Off	Off	Power Off

Incorrect Connection of the Tab Relay and Connector Housing (Gas)

Items	Case	Heater1 Operation (black)	Heater2 Operation (White)	PCB condition of operation
1.Black and White Housing	Wire ①, ② CROSS	Off	Off	Power Off

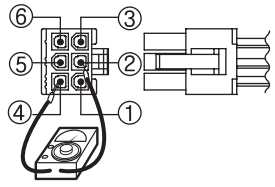
⚠ CAUTION

-Caution! Improper connection of the heater can damage the heater or the main board.

■ Test 2 Thermistor Test --- Measure with Power Off

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with the ground.)
Trouble Symptom	① During Diagnostic Test, tE1 and tE2 error occur. ② During operation, heater would not turn off, or remains on. ③ Difference between actual and sensed temperature is significant.
Measurement Condition	After turning power off, measure the resistance.

Take the NA6 Connector from the Controller.

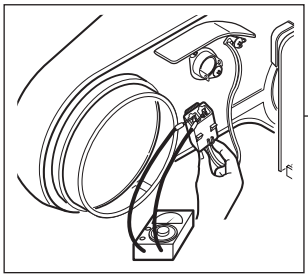


Short with metal to the NA6 connector's Pin ① (Blue Wire) and Pin ④ (Orange Wire) to controller.

YES

- Check if control and the 6-pin connector are properly connected.
- Replace controller

NO



Check if resistance is in the range of Table 1 when measuring resistance between terminals after separating harness from thermistor assembly connector.

NO

- Replace thermistor.

YES

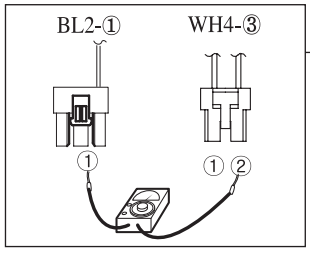
Check harness-linking connector.

■ Table 1. Resistance for Thermistor Temperature.

Air TEMP. [°F(°C)]	RES. [KΩ]	Air TEMP. [°F(°C)]	RES. [KΩ]	Air TEMP. [°F(°C)]	RES. [KΩ]
50°F (10°C)	18.0	90°F (32°C)	7.7	130°F (54°C)	2.9
60°F (16°C)	14.2	100°F (38°C)	6.2	140°F (60°C)	3.0
80°F (21°C)	11.7	110°F (43°C)	5.2	150°F (66°C)	2.5
70°F (27°C)	9.3	120°F (49°C)	4.3	160°F (71°C)	2.2

■ Test 3 Motor Test

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with earth line.)
Trouble Symptom	Drum does not rotate, fan does not turn, heater does not function.
Measurement Condition	Turn the dryer's power off, then measure resistance.



Is resistance below 3Ω between connector BL2- ① (White wire) and WH4-③ (Brown wire)?
※ Measure while door is closed.

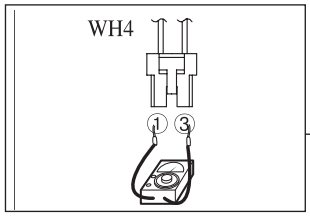
YES → • Replace control. (Relay check) • Check controller connector.

NO ↓

Is resistance below 3Ω between connector BL2- ① (White wire) and WH4-① (Yellow wire)?
※ Measure while door is closed.

NO → • Check if door frame presses door switch knob. • Check door switch. • Check harness connection.

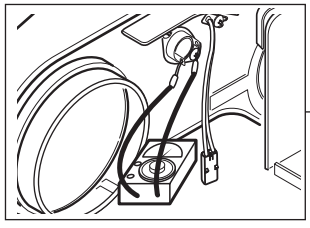
YES ↓



Is resistance below 3Ω between connector WH4-① (Yellow wire) and WH4-③ (Brown wire)?

YES → • Replace control. (Relay check) • Check controller connector.

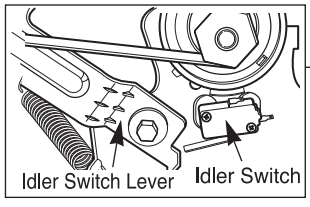
NO ↓



Is resistance below 1Ω between terminals of outlet thermostat attached to blower housing?

NO → • Replace outlet • Thermostat. (Refer to page 12)

YES ↓

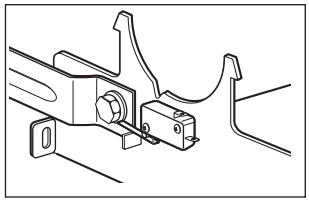


Does idle switch attached to motor bracket operate level by drum belt? (Not operating lever is normal.)

YES → • Check Idler assembly. • Drum belt cuts off • Drum belt takes off from motor pulley.

Is resistance below 1Ω between idler switch terminals?

NO → • Replace idler switch.

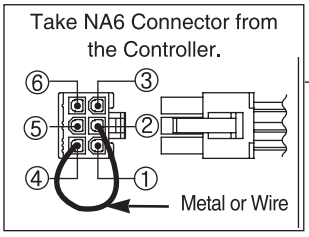


YES ↓

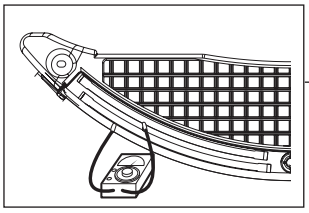
• Check motor. (Refer to page 15)
• Check if control connector is contacted.

■ Test 4 Moisture Sensor

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with ground line.)
Trouble Symptom	Degree of dryness does not match with dry level.
Measurement Condition	Turn the dryer's power off, then measure resistance.



Short with metal to the 6 pin connector's Pin② (Orange Wire) and Pin ④ (Blue Wire) to controller.

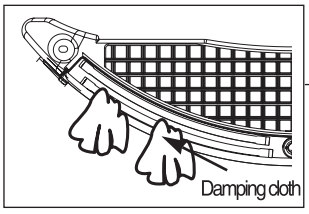


When measuring resistance in electric load, is resistance below 1Ω?

NO

- Check electro load and harness connector
- Check harness-linking connector.

YES



When contacting cloth to electro load:
1. Is the measurement within the range of Table 2 during diagnostic test?
2. Is the measurement within the range of Table 2 when measuring the voltage in the NA6 connector's Pin ② (Orange wire) and Pin ④ (Blue wire)?

NO

- Replace control and check.

YES

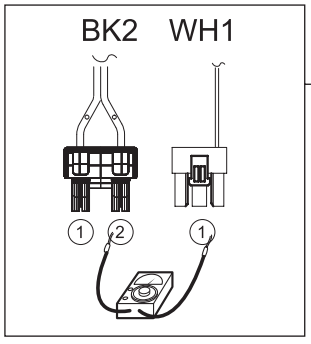
Normal Condition

■ **Table 2. IMC Ratio and Display Value / Voltage (IMC: Initial Moisture Content)**

IMC	Display Value	Voltage (DC) (between NA6 terminal ②, ④)	Remark
70% ~ 40%	50 ~ 130	2.5V	Wet after removing from washing machine
40% ~ 20%	130 ~ 20	2.0V ~ 4.0V	Damp dry
10% ~ Dried clothes	205 ~ 240	Over 4.0V	Completely-dried clothes

■ Test 5 Door Switch Test

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with earth line.)
Trouble Symptom	Door opening is not sensed. (During operation, when opening door, drum motor, and heater run continuously) door close is not sensed. (Drum motor will not operate. Display will flash at half-second intervals.)
Measurement Condition	After turning dryer power off, measure resistance.



Measure while door is closed. Check it resistance is below 2500Ω between BL2-① (White wire) and BK2-② Connector
BL2,WH4 after taking BL2, WH4 out from controller.

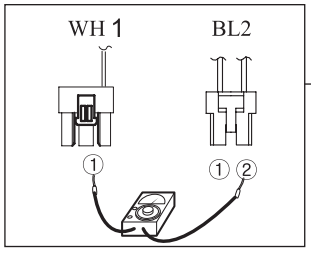
YES → • Door switch check (Refer to component testing.)

NO ↓

Measure while door is open. Check it resistance is 300~60 Ω between BL2-① (White wire) and BK2-② (Black wire). Connector BL2, WH4 after taking BL2, WH4 out from controller

NO → • Check lamp. (When opening lamp, replace then measure again.)
• Door switch check (Refer to component testing.)

YES ↓



Measure while door is open. Check it resistance is below 1Ω between WH4- ① (Yellow wire) and BL2-① (White wire) after taking connector BL2,WH4 out from controller.

YES → • Door switch check (Refer to component testing.)

NO ↓

Measure while door is closed. Check it resistance is below 1Ω between WH4- ① (Yellow wire) and BL2-① (White wire) after taking connector BL2, WH4 out from controller.

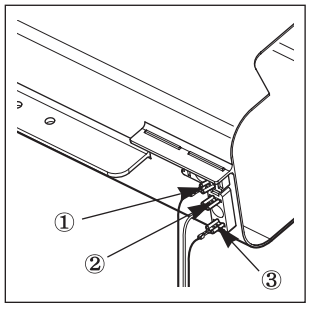
NO → • Door switch check (Refer to component testing.)

YES ↓

Check controller.
Check Harness-linking connector.

■ Test 6 Heater Switch Test - Electric Type

Caution	Before measuring resistance, be sure to turn power off, and do voltage discharge. (When discharging, contact the metal plug of power cord with earth line.)
Trouble Symptom	While operating, heating will not work. Drying time takes longer.
Measurement Condition	After turning power off, measure the resistance.

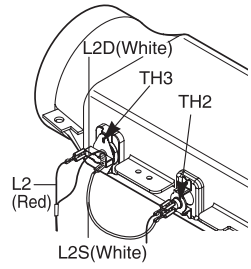


1. Is resistance between heater terminal ① and ② below 18 ~ 22Ω?
2. Is resistance between heater terminal ① and ③ below 18 ~ 22Ω?
3. Is resistance between heater terminal ② and ③ below 9 ~ 11Ω?

NO → • Replace heater.

YES

■ Only for FLOW SENSE model



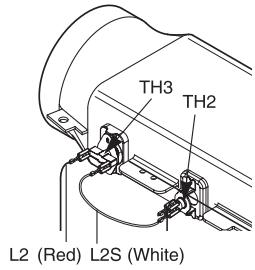
Check if the value of measured resistance is below 1Ω between terminal TH2 (Safety thermostat). **NO** → • Replace TH2 (Safety thermostat) and TH3 (Hi-Limit thermostat)

YES

Check if the value of measured resistance is below 1Ω between terminal TH3 (HI-Limit thermostat). **NO** → • Replace TH2 (Safety thermostat) and TH3 (Hi-Limit thermostat)

YES

■ Others



Check motor. Check if the value of measured resistance is below 1Ω between terminal ① and ⑩ at RUN condition. **NO** → • Check motor and replace it.

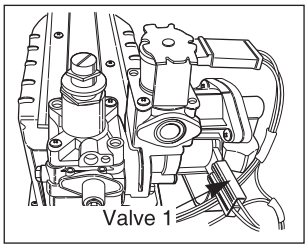
YES

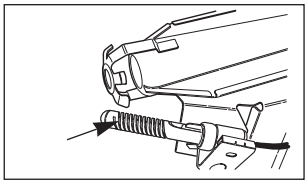
Check controller.
Check Harness-linking connector.

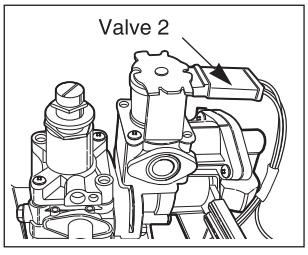
※ Wires
- L2 (Red)
- L2D (White) Go to the duct (YL3 in main pcb
- L2S (White) Go to the safety.

■ Test 7 GAS Valve Test - Gas Type

Caution	When measuring power, be sure to wear insulated gloves, to avoid electric shock.
Trouble Symptom	While operating, heating will not work. Drying time takes longer
Measurement Condition	With dryer power on







Power on & start (Normal cycle)

NO

When measuring Valve 1 voltage, More than DC 90 Vdc? — NO → • Check thermostat hi-limit safety

YES

Igniter operates? (after 1 minute, igniter becomes reddish) — NO → • Check igniter & flame detect

YES

When measuring Valve 2 voltage, value is more than DC 90Vdc? (10 sec after Igniter off) — YES → • Check gas connection or gas supply

NO

When measuring terminal resistance on valve 1 and valve 2, valves are more than 1.5 ~ 2.5 kΩ? (Measure after off) — YES → • Change valve

NO

If valve 1 and valve 2 are under DC 10 Vdc, valves are off? — NO → • Change valve

YES

• Harness check
• Controller change

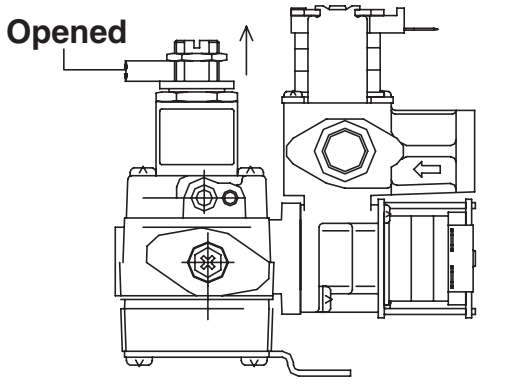
NOTE: When the gas valve operates after disassembling, ignition will be off several seconds.
It is normal because there is no circulation of air

10 CHANGE GAS SETTING (NATURAL GAS, PROPANE GAS)

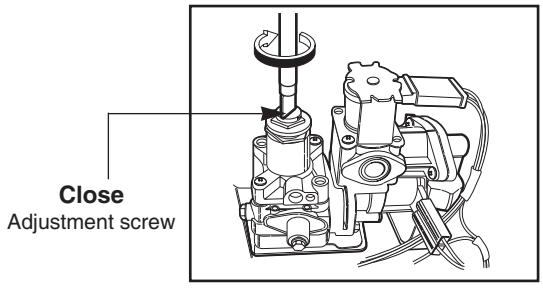
⚠ Warning *Changing orifices and gas valve adjustments improperly can result in an explosion and/or fire. Conversion must be made by a qualified technician.*

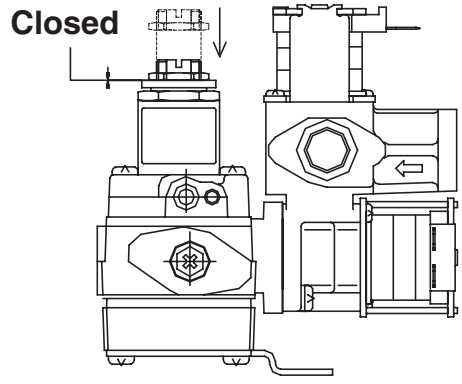
Initially, The burner is set for natural gas at the factory. The propane orifice conversion kit is sold as a service part to authorized servicers only. Part numbers are shown below.

STEP 1 : VALVE SETTING

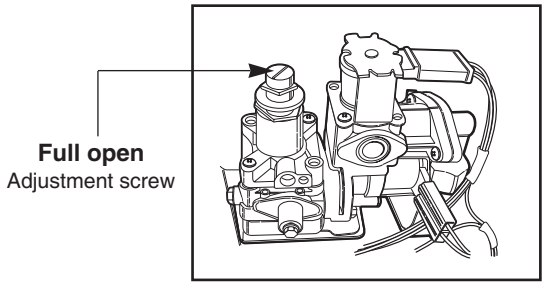


NATURAL GAS SETTING

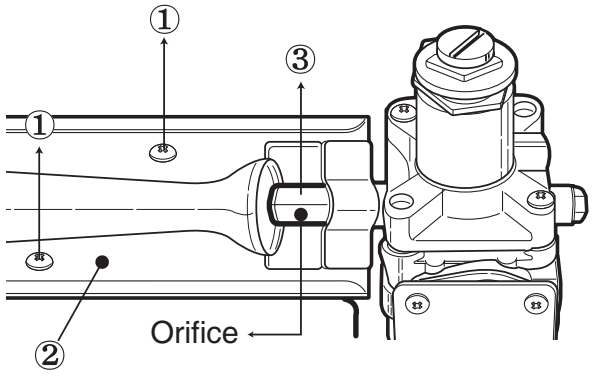




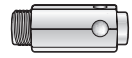
PROPANE GAS SETTING



STEP 2 : ORIFICE CHANGE

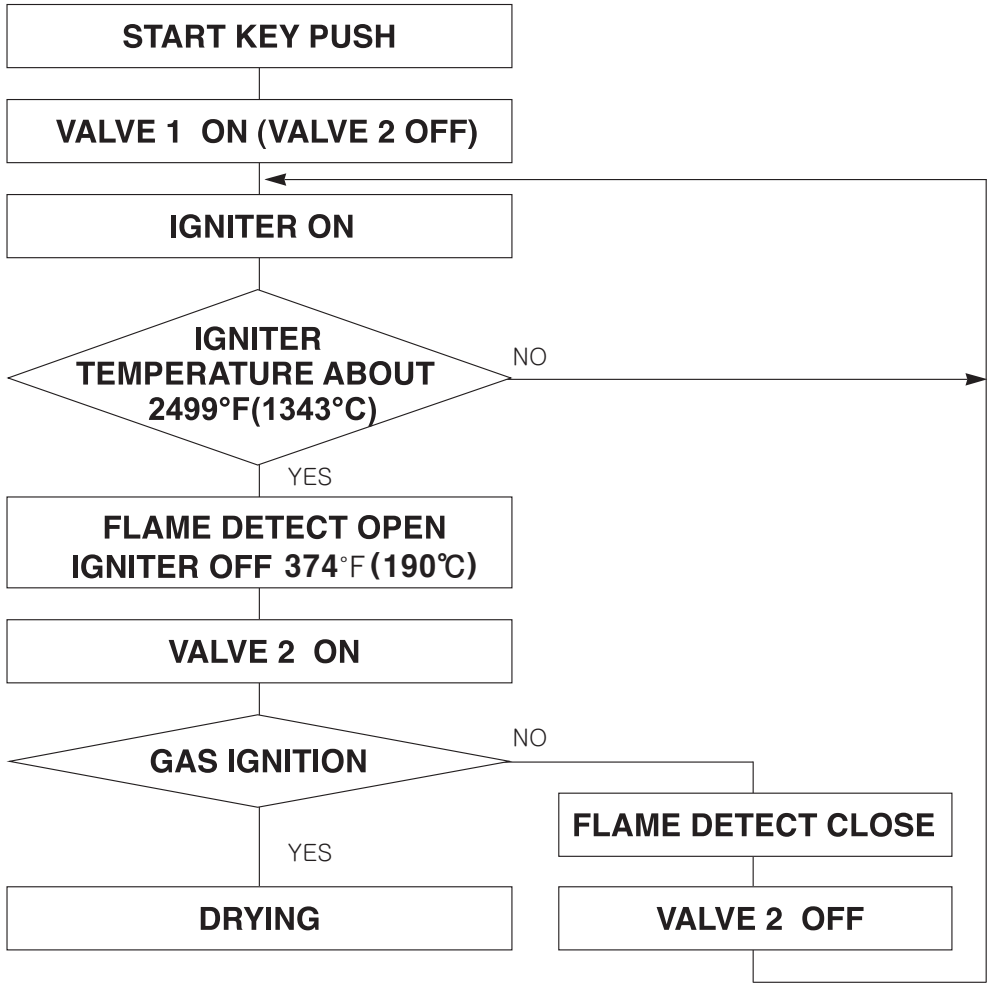


① Remove 2 screws.
② Disassemble the pipe assembly.
③ Replace natural gas orifice with propane gas orifice.

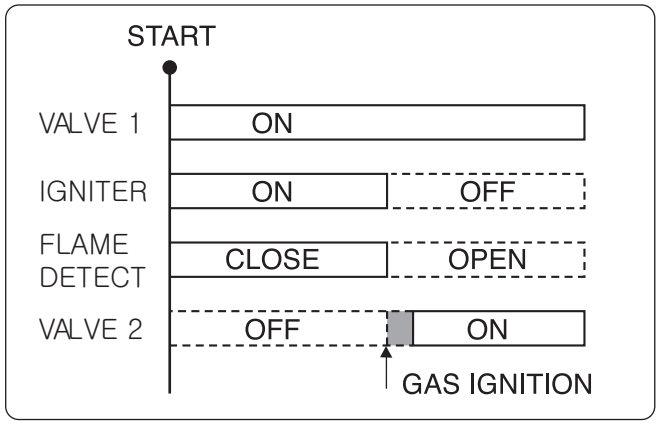
Gas type	Orifice P/No	Marking	Shape
Natural Gas	4948EL4001B	NCU	
Propane Gas	4948EL4002C	PCK	

※ **Kit contents:** Orifice (Dia. = 1.47mm, for Propane Gas)
Conversion Label
Instruction Sheet

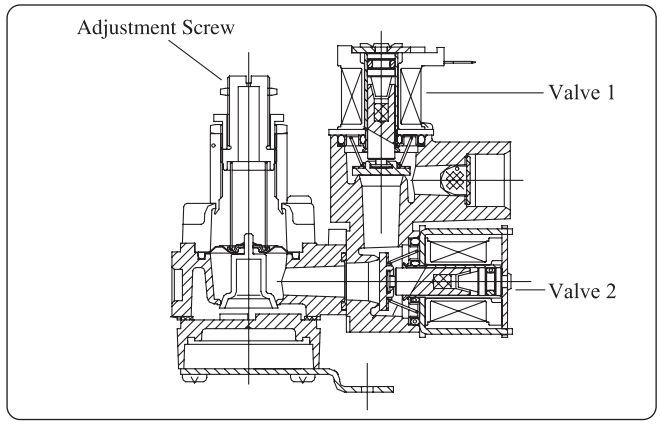
■ GAS VALVE FLOW



GAS IGNITION



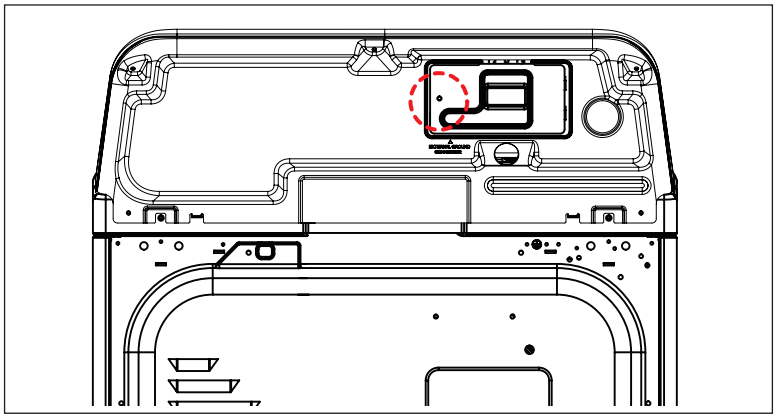
GAS VALVE STRUCTURE



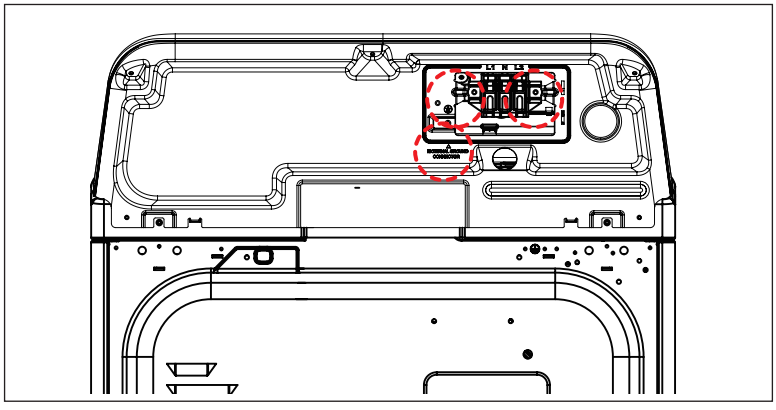
11 DISASSEMBLY INSTRUCTIONS

※ Disassemble and repair the unit only after pulling out power plug from the outlet.

PANEL REAR [ELECTRIC]

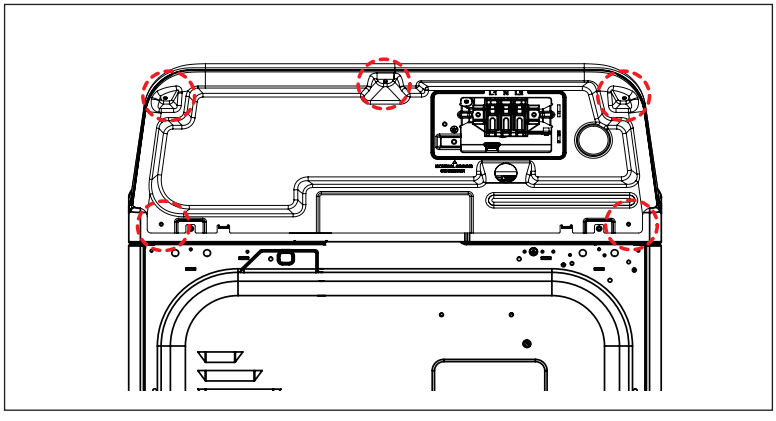


1. Remove 1 screw.
2. Pull out the cover.



3. Remove 3 screws.
4. Disassemble terminal block and wire from panel rear.

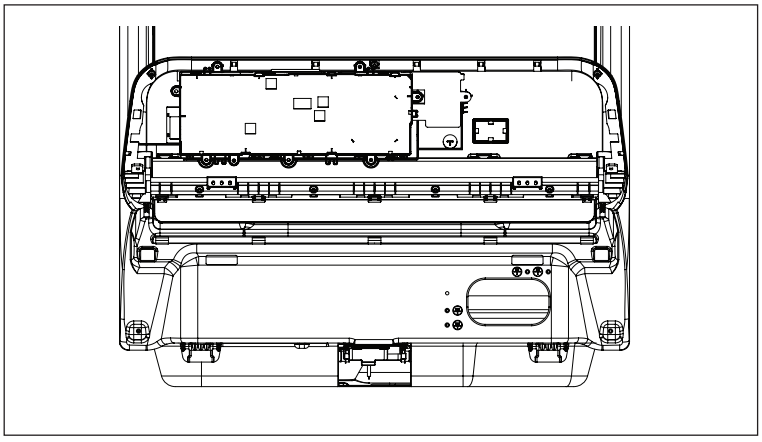
PANEL REAR [ELECTRIC]



1. Remove one screw for removing safety cover.
2. Remove 5 screws remained on the panel rear.
3. Lift out the panel rear.

CONTROL PANEL ASSEMBLY

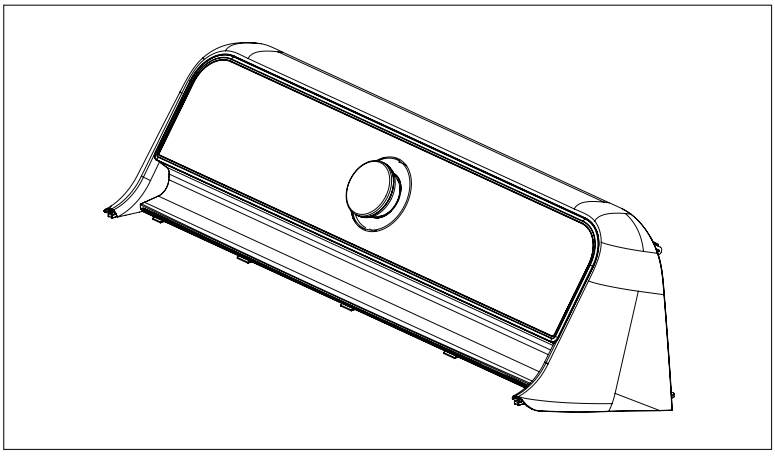
1. Place a towel over the top cover to prevent scratching the surface. Gently lift each corner of the back panel, then roll it forward so it rests on top of the dryer.



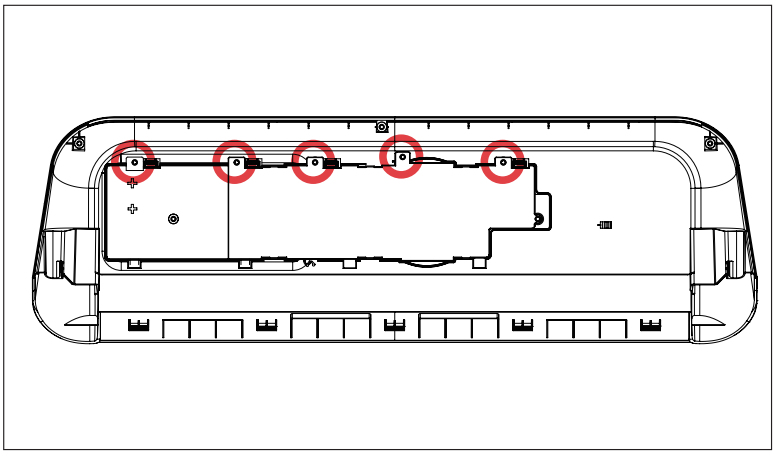
2. Disconnect the wiring from the PWB (PCB) board.

3. Disassemble the control panel assembly from top cover.

CONTROL PANEL



1. The knob can be taken out if pulled forward.



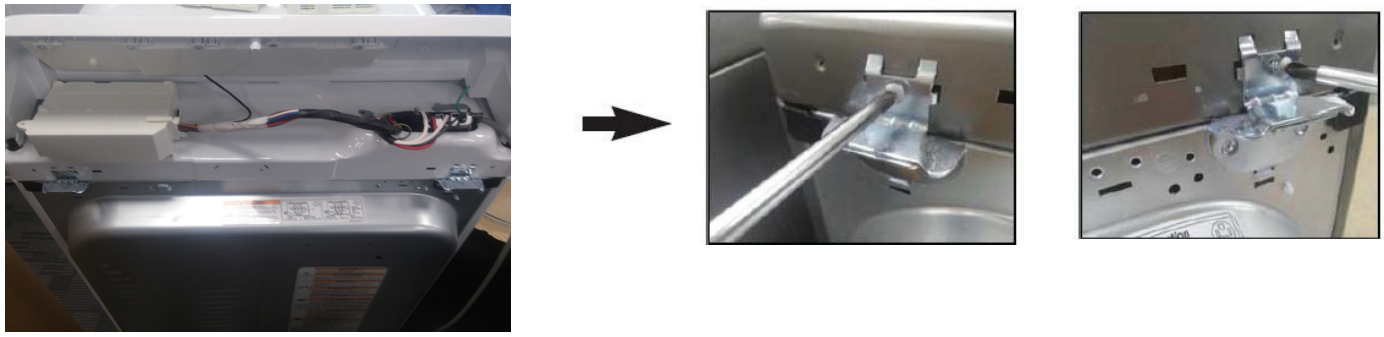
2. Remove 5 screws from control panel assembly.
3. Separate PCB from control panel.

How to change top cover

1. Remove the 5 screws.

2. Disassemble terminal block with power cord.

3. Disassemble rear panel and both side screws.



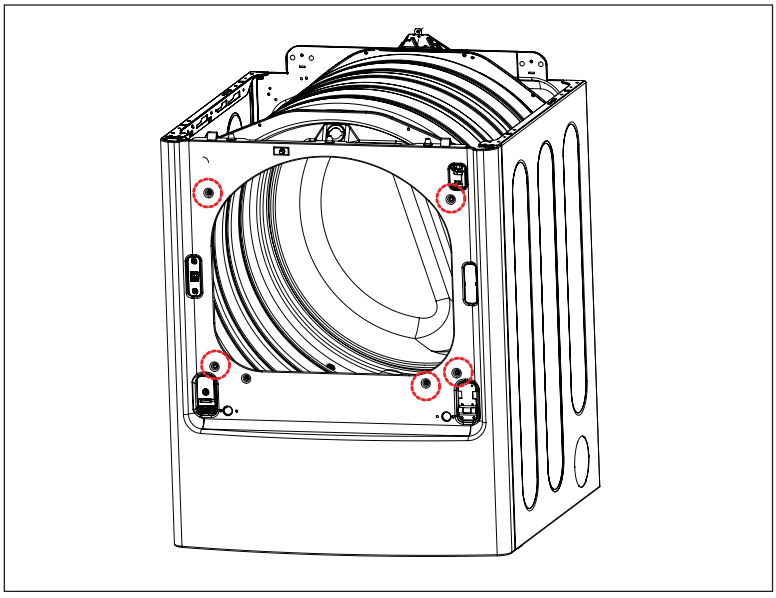
4. Disassemble front panel.
Be careful to avoid breaking the plastic hook (shown) when removing the front panel.

5. Disassemble PCB and housing from the PCB.

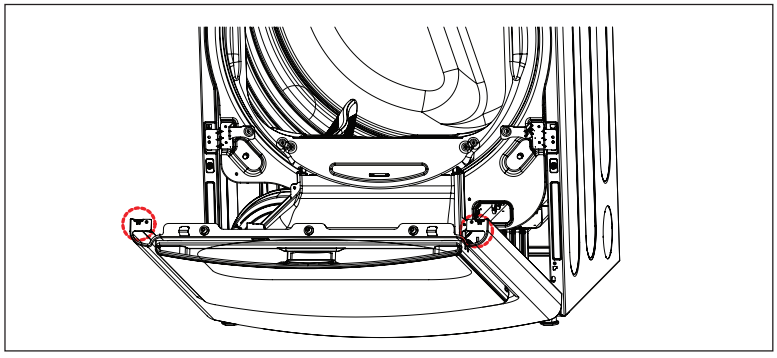
6. Push the 2 spring clamps by using a putty knife between top cover and door cabinet.

7. You can open the top cover.

CABINET COVER

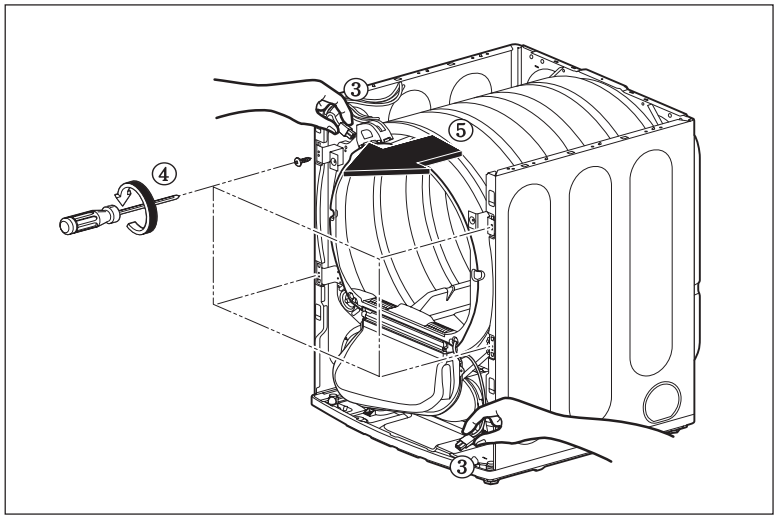


1. Open the door and remove the 6 screws from the cabinet cover then close the door.



2. Remove the 2 screws, then tilt the cabinet cover toward the front of dryer slightly.
3. Disconnect wiring to the door switch and lift the cabinet cover.

FRAME ASSEMBLY (FRONT BULKHEAD)

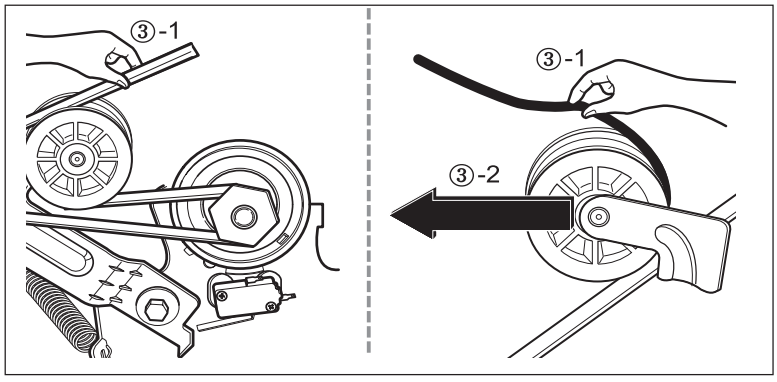


⚠ WARNING!

WHEN YOU DISASSEMBLY THE LAMP CONNECTOR, BE SURE TO TAKE GLOVES AND CAREFUL CABINET EDGE. FAILURE TO DO SO CAN CAUSE SERIOUS INJURY.

1. Disassemble the top plate.
2. Remove cabinet cover.
3. Disconnect the door lamp connector and electrode sensor connector.
4. Remove 4 screws.
5. Disassemble the frame assembly (front bulkhead).

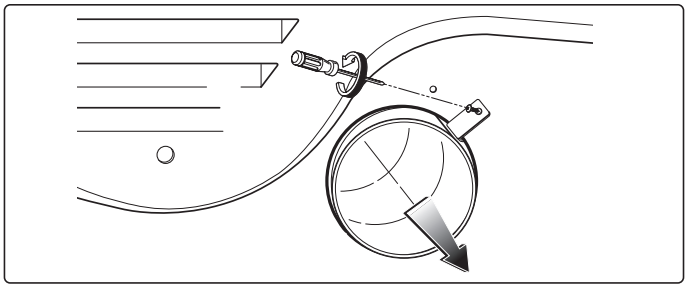
DRUM ASSEMBLY



1. Disassemble the top plate.
2. Remove the cabinet cover frame assembly (front bulkhead).
3. Loosen belt from motor and idler pulleys.
4. Carefully remove the drum.

※ All necessary vent conversion parts are included in the dryer vent kit, part number 3911EZ9131X

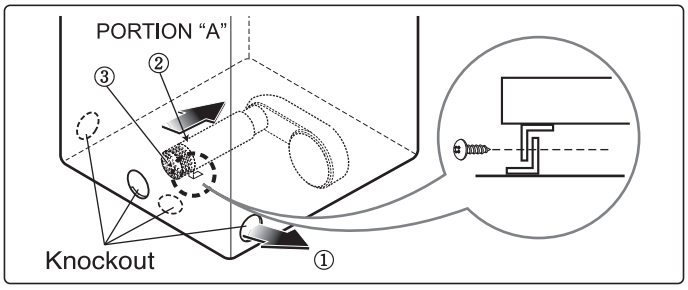
DRYER EXHAUST CHANGE



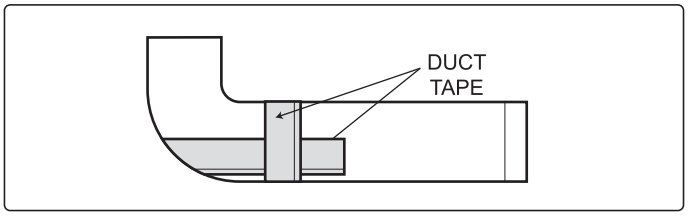
⚠ WARNING!

BEFORE PERFORMING THIS EXHAUST INSTALLATION, BE SURE TO DISCONNECT THE DRYER FROM ITS ELECTRICAL SUPPLY.
TO REDUCE THE RISK OF PERSONAL INJURY, ADHERE TO ALL INDUSTRY RECOMMENDED SAFETY PROCEDURES INCLUDING THE USE OF LONG SLEEVED GLOVES AND SAFETY GLASSES. FAILURE TO FOLLOW ALL OF THE SAFETY WARNING IN THE MANUAL COULD RESULT IN PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

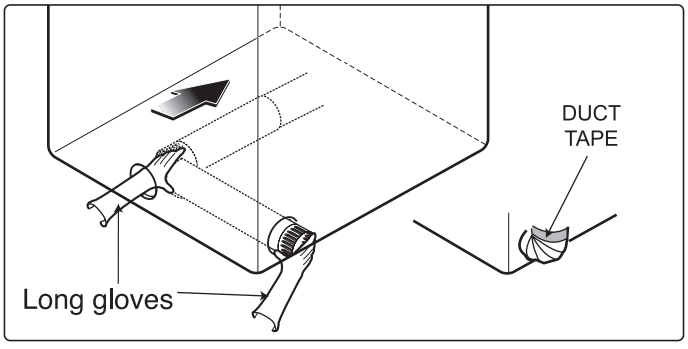
1. Remove the screw and the exhaust duct.



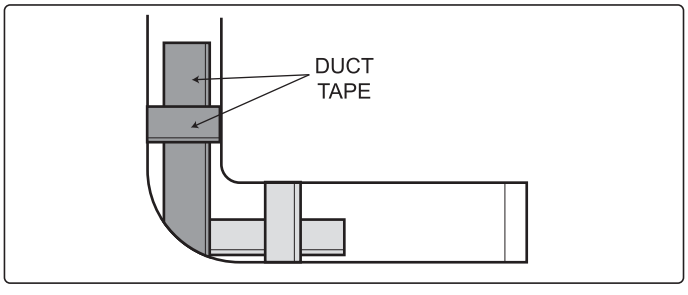
2-1. Detach and remove the knockout at the botton, left, or right side as desired. (Right side vent not available on gas dryer)



2-2. Place the shorter duct section into the dryer. Install a screw through the holding tab to the bracket in the base of the dryer.



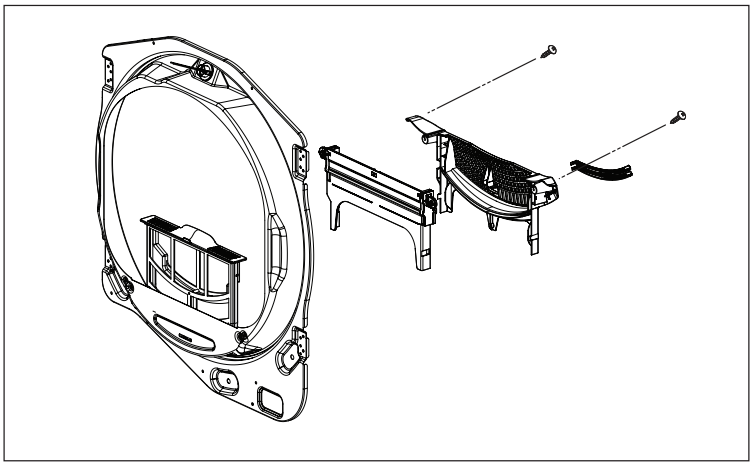
3-1. Attach the 4-inch elbow to the remaining 4-inch duct. Wrap the joint using dust tape. (Use real adhesive-brasked foil tape, not the cheap fabric type sold in discount stores.)



3-2. Insert the elbow duct assembly through the side or base opening and connect the elbow to the internal duct.

Using shorter pieces of duct tape, reach through the vent hole and wrap the duct joint inside the dryer. Then install the cover over the hold to prevent the entry of vermin.

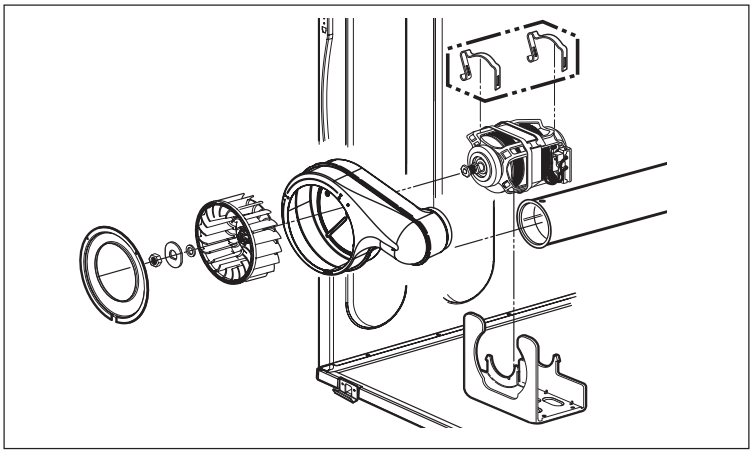
FILTER ASSEMBLY



It is not necessary to remove the electrodes or the grid to change or replace the filter.

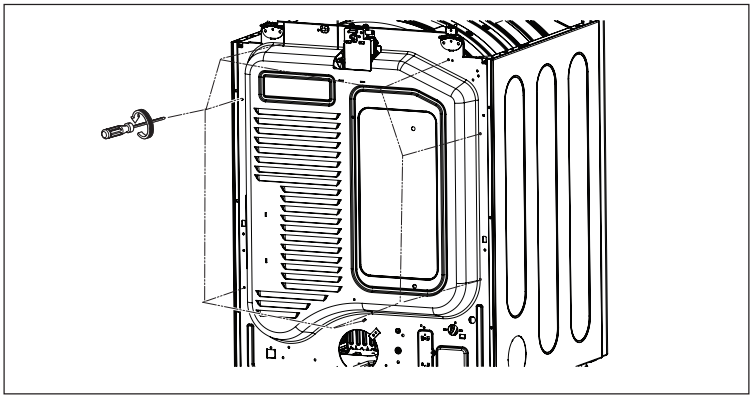
1. Remove the filter.
2. Remove 2 screws.
3. Remove the cover grid.
4. Disconnect the electrode sensor.

BLOWER HOUSING



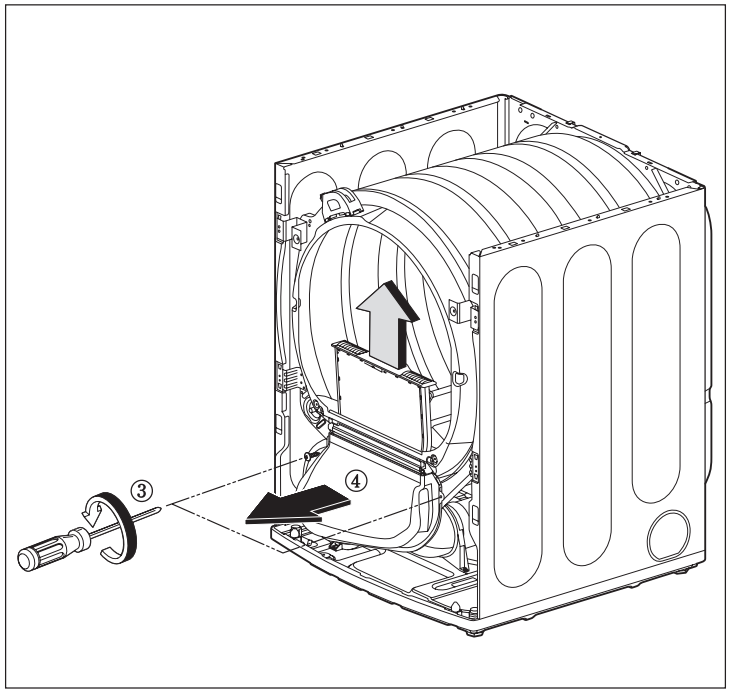
1. Disassemble the top plate.
2. Remove the cabinet cover frame assembly (front bulkhead).
3. Remove the drum assembly.
4. Remove 2 screws and cover (Air guide).
5. Remove the bolt and washer.
   ※ This is a left-hand thread.
6. Remove the fan.
7. Disconnect the motor clamp and motor.

BACK COVER



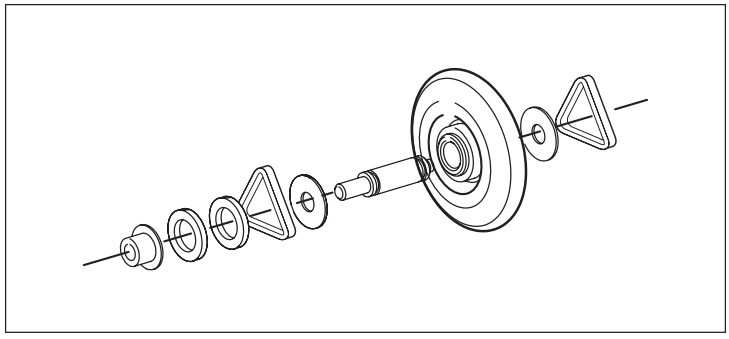
1. Disassemble the top plate.
2. Remove the cabinet cover and frame assembly (front bulkhead).
3. Remove the drum assembly.
4. Remove 7 screws from the back of the dryer.
5. Remove the rear tub drum by taking it out through the inside of the dryer cabinet.

AIR DUCT



1. Disassemble the top plate.
2. Remove the cabinet cover .
3. Remove the filter and 2 screws.
4. Remove the air duct.

ROLLERS



1. Disassemble the top plate.
2. Remove the cabinet cover and frame assembly (front bulkhead.)
3. Remove the drum assembly and tub drum [Rear].
4. Disconnect the air duct from the frame assembly (front bulkhead.)
5. Remove the roller from the frame assembly (front bulkhead.) and tub drum [Rear].

12 FASTENER CHART - SIZES and POSITIONS

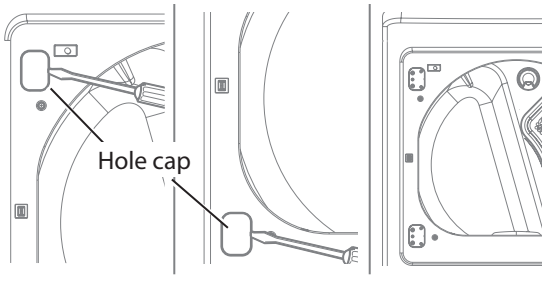
Reversing the Door

⚠WARNING

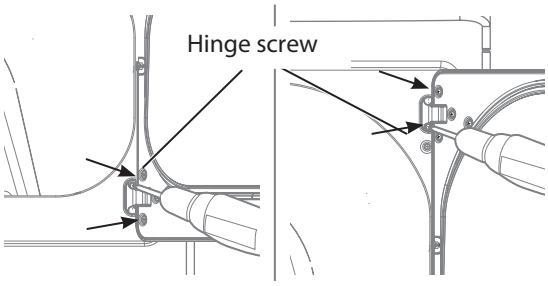
THE DRYER DOOR IS VERY LARGE AND HEAVY. Failure to follow the instructions below can result in damage to the dryer, property damage or injury to persons.

- **To avoid damage to the dryer or the door, support the door with a stool or box that fits under the door, or have an assistant support the weight of the door.**
- **Avoid dropping the door to avoid damage to the door or the floor.**

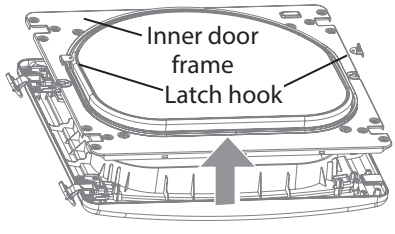
1. Open the door and remove the two plastic hole caps on the catch side by gently prying up with a flat blade screwdriver. Save these for step 6.



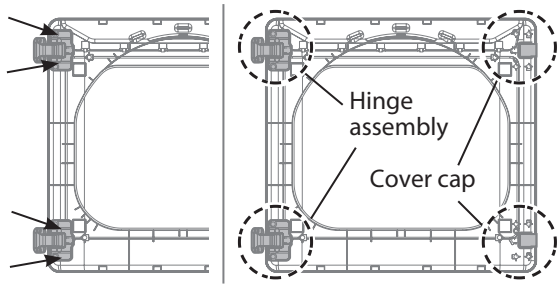
2. While supporting the door, remove the 4 screws, two from each hinge. Set the door aside face down on a protected surface to prevent damage to the door or the work surface.



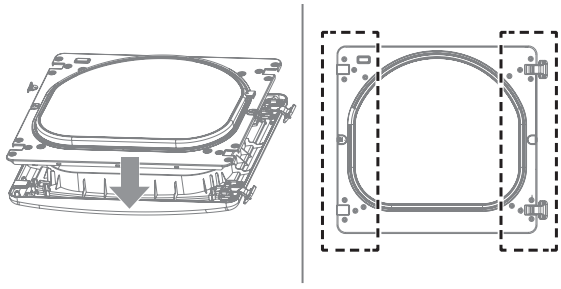
3. With the door on a protected surface, remove the 12 screws on each side of the door and lift off the inner door frame using a flat blade screwdriver. Remove the latch hook and blank and move them to the opposite side.



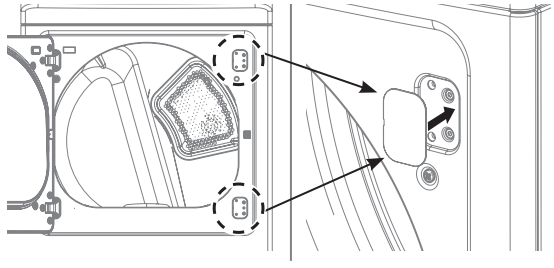
4. Remove the 4 screws securing the hinges to the door frame. Remove the two plastic cover caps. Reinstall the hinges and cover caps on the opposite sides from which they were removed.



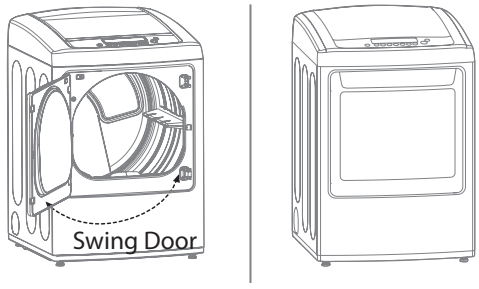
5. With the hinges and cover caps in the new locations, remount the inner door frame onto the outer door frame with the screws removed in step 3 above.



6. Reinstall the door with the screws from steps 1,2.

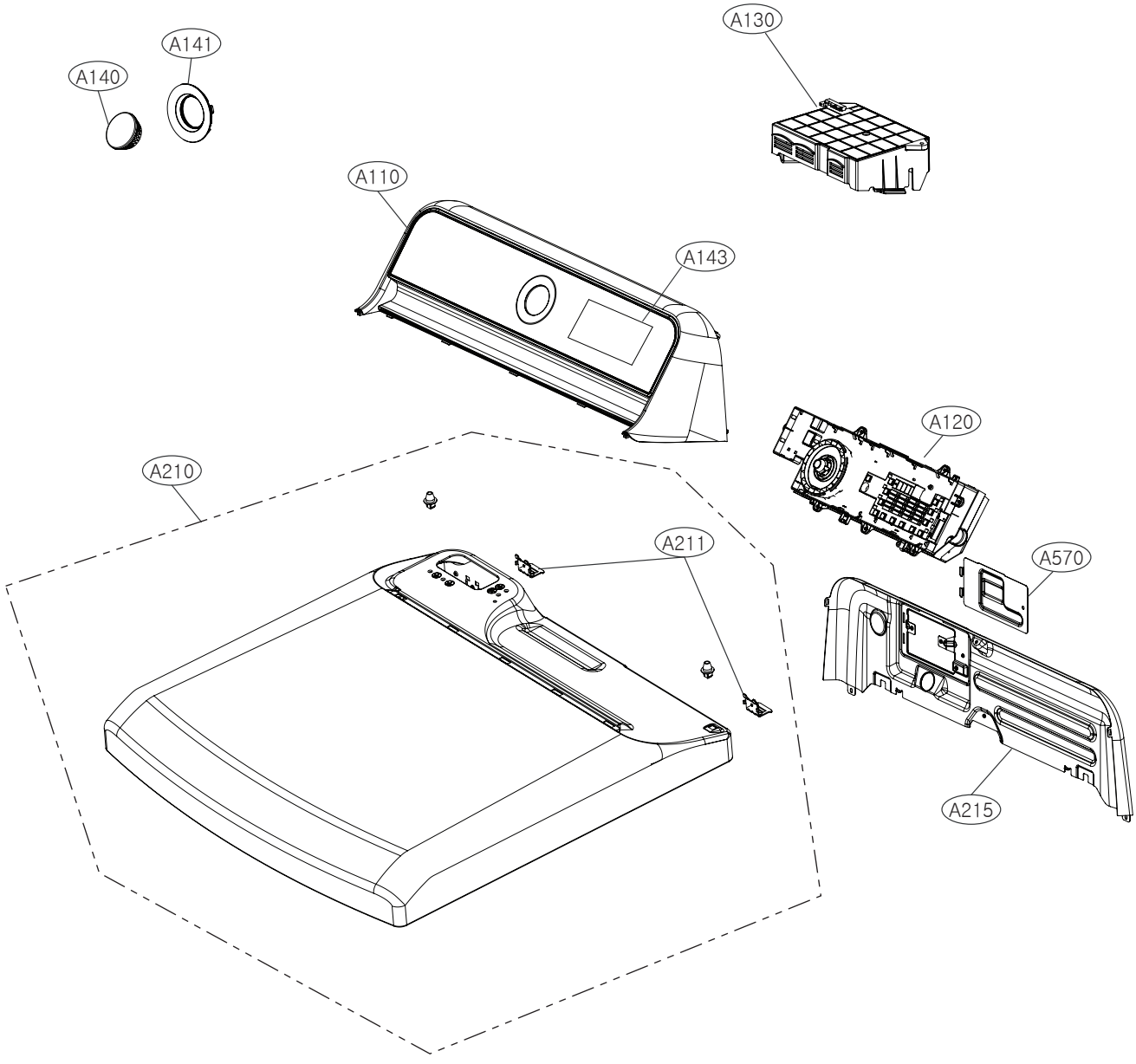


6. Test the swing of the door to make sure the hinges and latch are properly aligned and that the door closes and latches correctly.

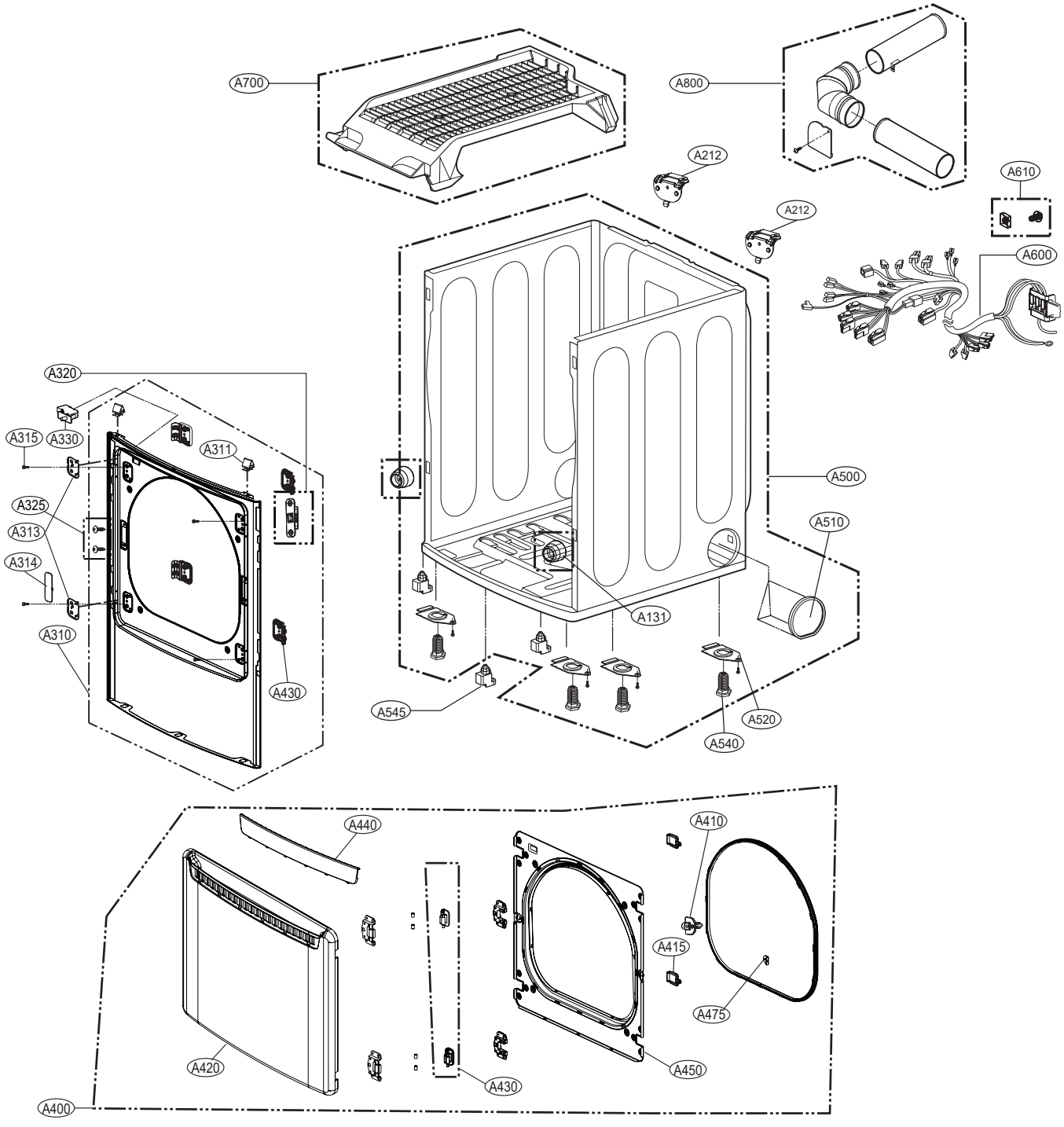


13 EXPLODED VIEW

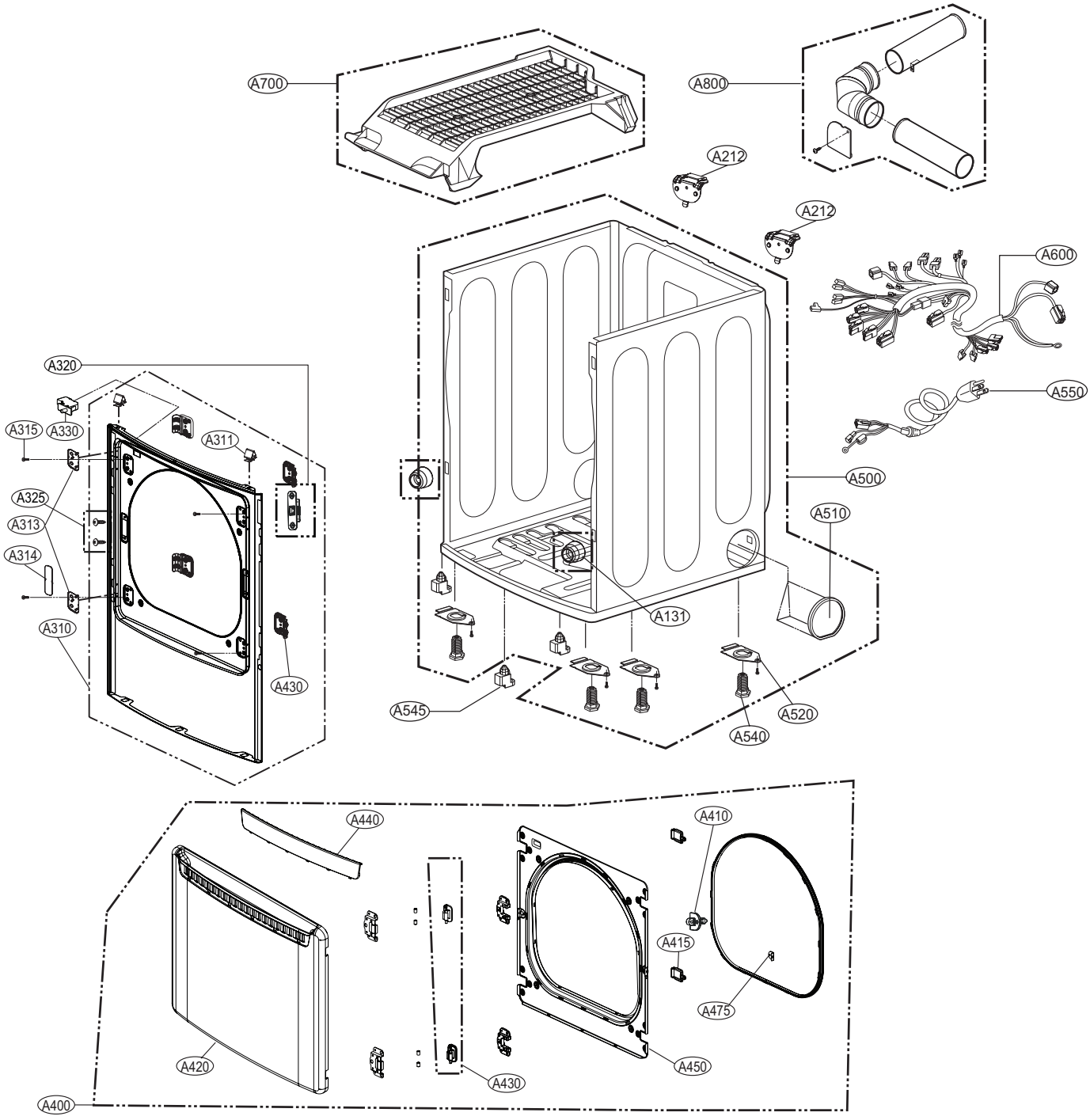
13-1. Control Panel and Plate Assembly



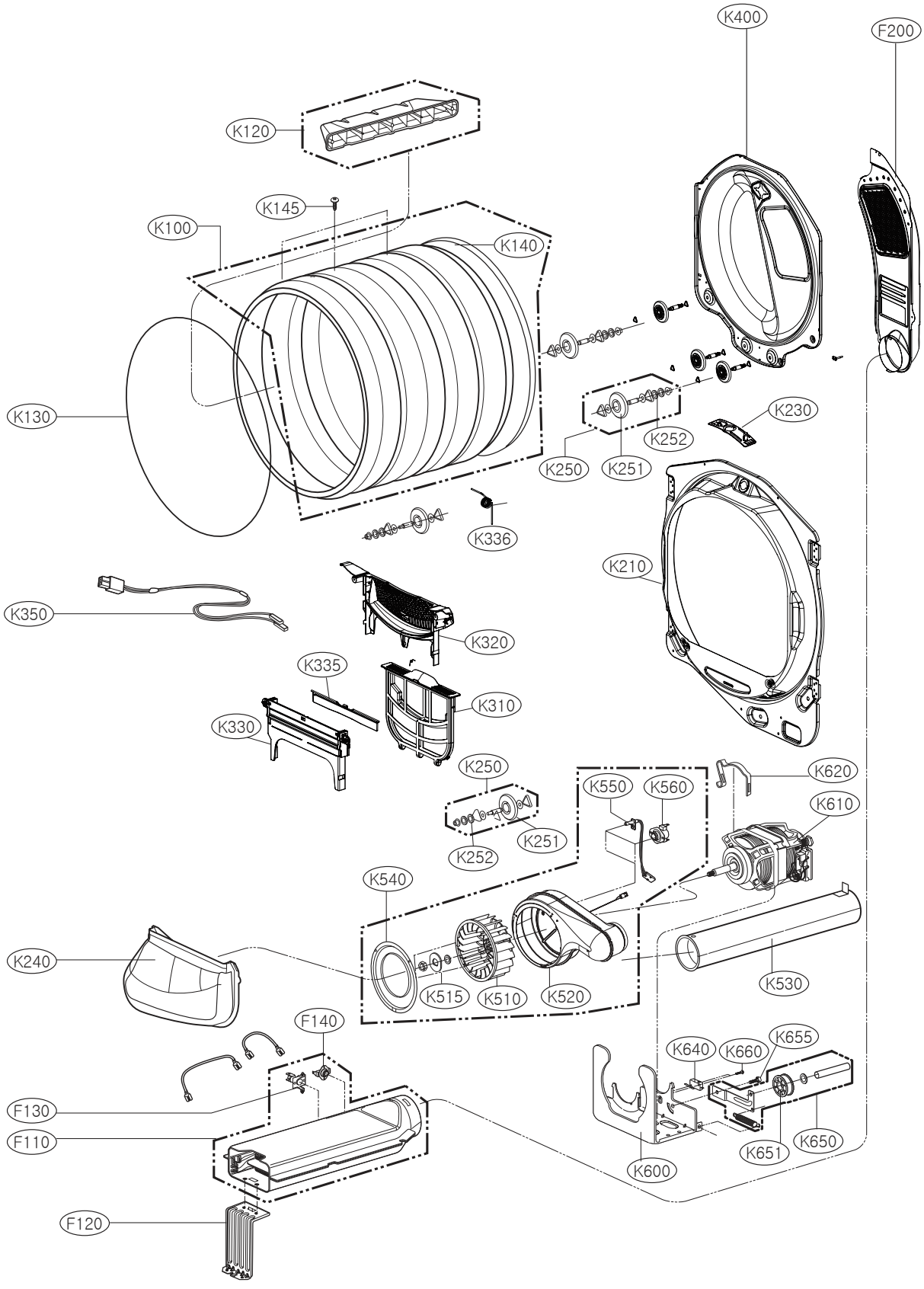
13-2-1Cabinet and Door Assembly: Electric Type



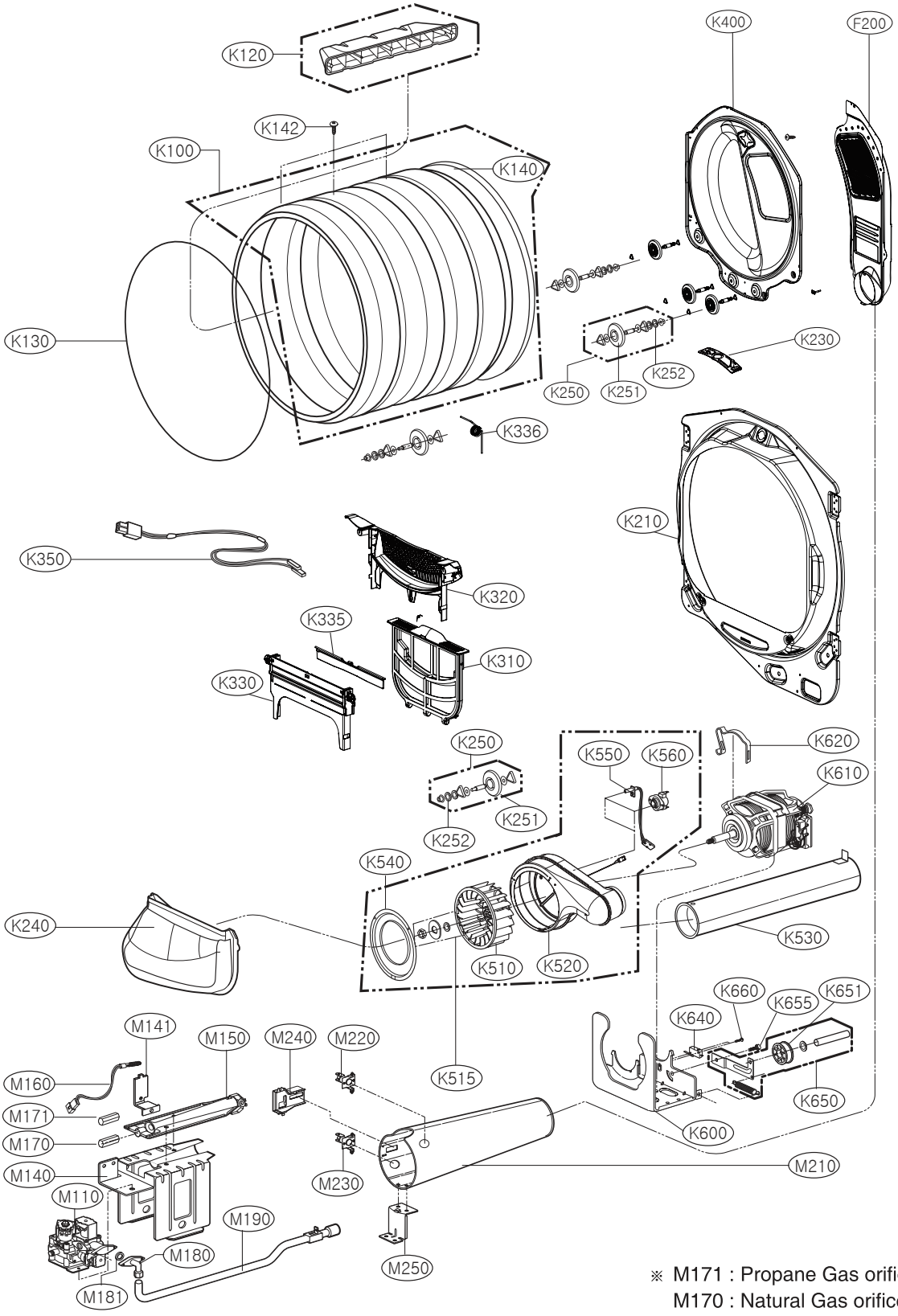
13-2-2. Cabinet and Door Assembly : Gas Type



13-3-1.Drum and Motor Assembly: Electric Type



13-3-2.Drum and Motor Assembly: Gas Type



※ M171 : Propane Gas orifice
M170 : Natural Gas orifice

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