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ELECTRIC & GAS DRYER
SERVICE MANUAL

CAUTION

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

MODEL: Electric Gas
DLEX8000*, DLGX8001*
DLEX8100*, DLGX8101*

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 injury to persons, 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 injury to persons, 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.

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.

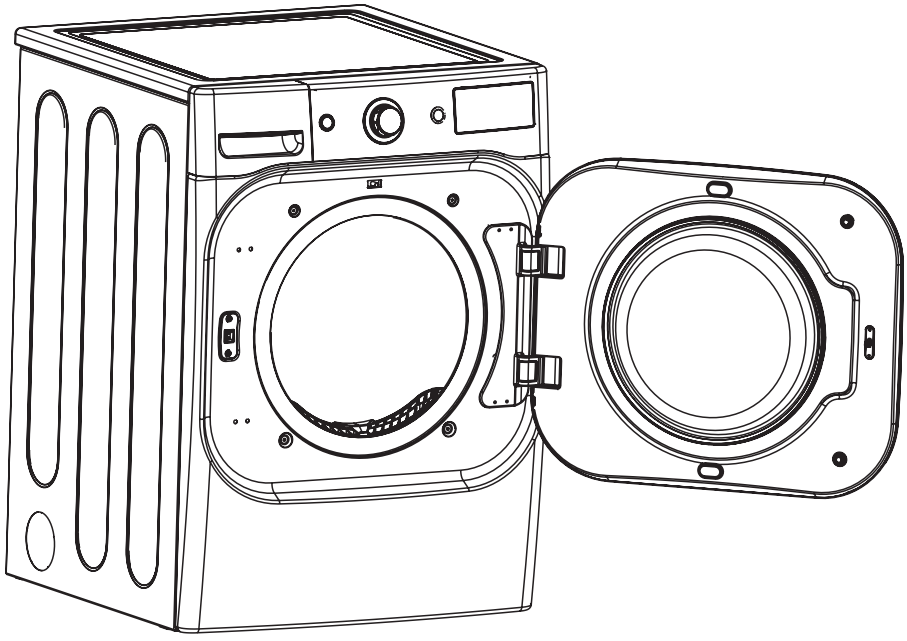
- OR -

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 the failed electronic control assembly in an anti-static bag, observe the instructions above.

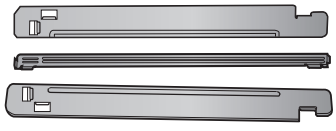
CONTENTS

1 SPECIFICATIONS



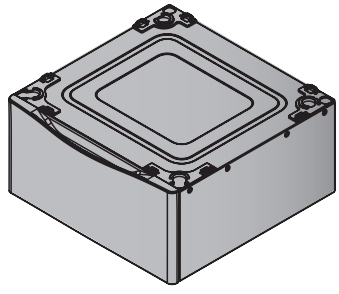
Model	DLEX8000* DLEX8100*	DLGX8001* DLGX8101*
Name	Electric and Gas Dryer	
Power supply	Please refer to the rating label regarding detailed information	
Size	29” (W) X 32.1” (D) X 40.8” (H) (inch)	
Dryer capacity	IEC 9.0 cu.Ft.	IEC 9.0 cu.Ft.
Weight	158 (lbs)	161 (lbs)

■ ACCESSORIES



Stacking kit (1 each)
Purchased Separately

See page 7



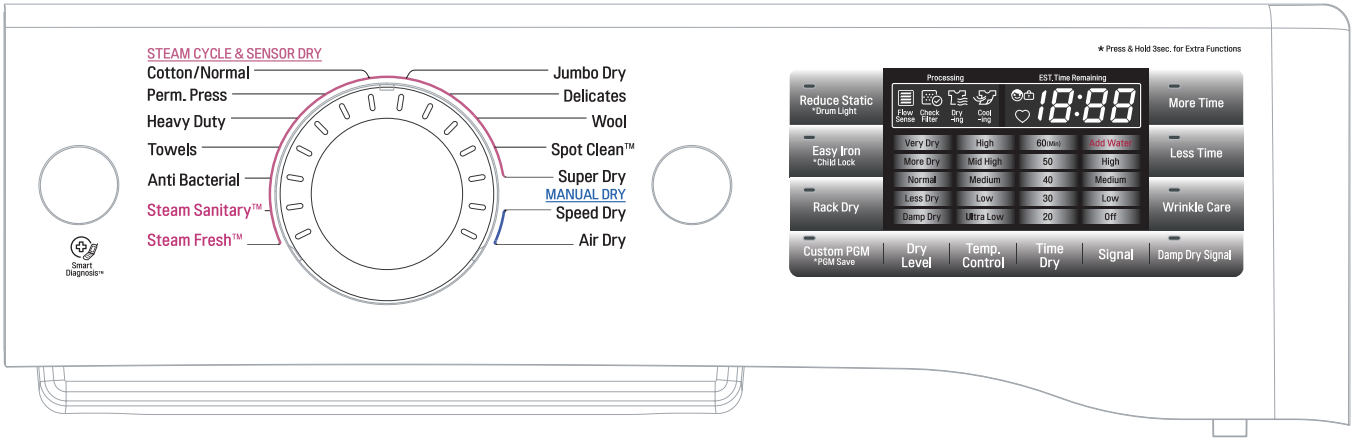
Pedestal (1 each)
Purchased Separately

See page 8

ITEM		DLEX8000* DLEX8100*	DLGX8000* DLGX8101*	REMARK
Material and Finish	Color	Blue White / Stainless Silver		
	Top Plate	Powder coating		
	Door Trim	Chrome		
Power Supply	ELEC.	120 V / 240 V / 60 Hz (26 A)		
		120 V / 208 V / 60 Hz (23 A)		
	GAS	120 V / 60 Hz (13 A)		
Power Consumption	Motor	545 W (6.35 A)		
	Heater	5400 W (22.5 A)		AC 240 V (Electric Model)
		4100 W (21 A)		AC 208 V (Electric Model)
	Lamp	1 W (0.085 A)		DC 12V
	Gas valve	13 W (0.11 A) x 2		DC 120V(Gas Model)
	AG heater	1100 W (9.2 A)		DC 120V(Steam Model)
	Pump	2.4 W (0.15 A)		DC 9V(Steam Model)
Control Type		Electronic		
Drum Capacity		9.0 cu.ft.		
Weight (lbs) - Net/Gross		158	161	
Number of Programs		14		
Number of Dry Options		5		
Number of Temperature Controls		5		
Number of Dry Levels		5		
Sound levels		High / Medium / Low / Off		
Sensor	Moisture	Available		Electrode sensor
	Temperature	Available		Thermistor
Reversible Door		Available		
Drum		Alcosta		
Dryer Rack		Available		
Child Lock		Available		
Interior Light		Available		
Product (WxDxH)		29" x 32.1" x 40.8"		
Packing (WxDxH)		30.9" x 33.2" x 44.2"		

2 FEATURES AND BENEFITS

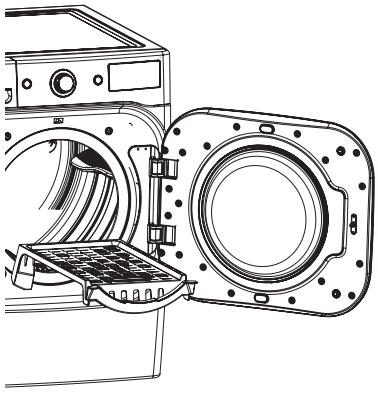
DLEX8000* / DLGX8100*
DLEX8100* / DLGX8101*



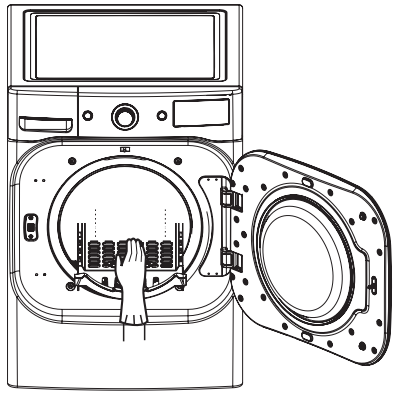
3 INSTALLATION INSTRUCTIONS

Dryer Rack Installation Instructions

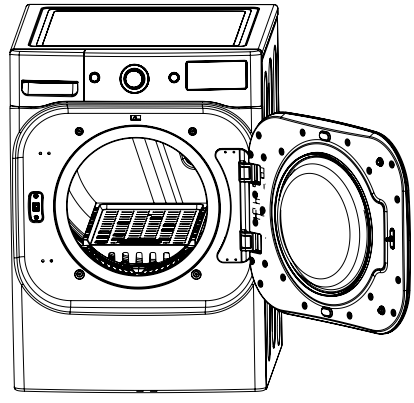
1 Open the door. Hold the dryer rack with both hands.



2 Put the dryer rack into the drum



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



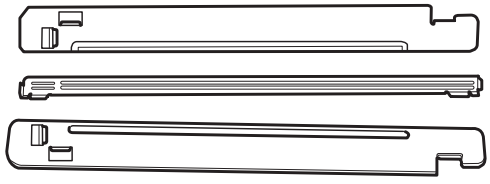
Stacking Kit Installation Instructions

To ensure safe and secure installation, please observe the instructions below.

WARNING

Do not attempt this alone!

At least two people are required to lift and position the dryer on top of a washing machine!
Failure to heed this warning can result in serious physical injury and damage to the appliance.
To reduce the risk of Injury to persons adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses.

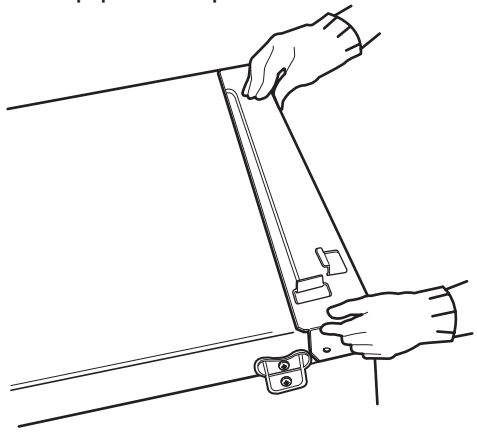


Stacking kit

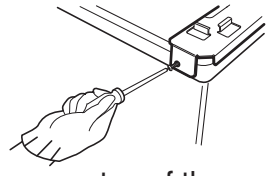
1 Place the washer firmly on a stable, even and solid floor as product installation instructions describe in the owner's manual.

2 Peel the protective paper from the tape on the side bracket.

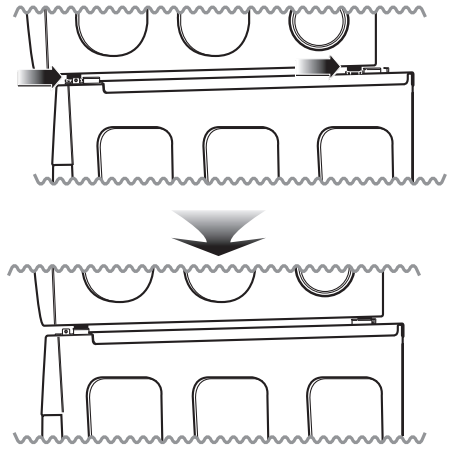
3 Fit the side bracket firmly to the side of the top plate by attaching the double-faced tape to the top plate as picture shown.



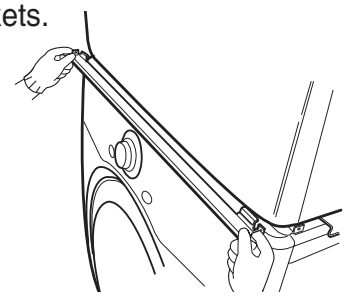
4 Secure the side bracket to the washer with a screw on the back of the bracket. Repeat Steps 2, 3, and 4 for the other side.



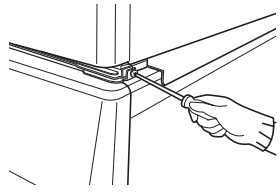
5 Place the dryer on top of the washer by placing the legs as shown. Be careful not to pinch fingers between the washer and dryer. Slide the dryer back against the stop on the side rail.



6 Insert the front rail of the stacking kit. Push the front rail back against the stops on the side brackets.



7 Attach the front bracket to the side rails with a screw on each side.

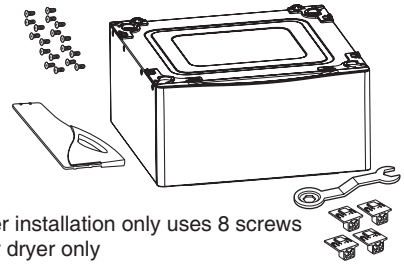


- Do not use a stacking kit with a gas dryer in potentially unstable conditions like a mobile home.

Pedestal Installation Instructions

The pedestal accessory includes:

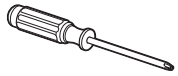
- Drawer divider (1)
- Screws (18) †
- Wrench (1)
- T-clips (4) ††



† Dryer installation only uses 8 screws
†† For dryer only

Tools Needed for Installation:

- Phillips screwdriver
- Wrench (supplied)



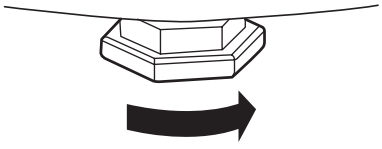
To ensure safe and secure installation, please thoroughly follow the instructions below.

⚠ WARNING

- **Incorrect installation can cause serious accidents.**
- **The appliances are heavy. Two or more people are required when installing the pedestal.** There is a risk of serious back injury or other injuries.
- **Do not allow children to play in or on the drawer.** There is a risk of suffocation or injury.
- **Do not step on the handle.** There is a risk of serious injury.
- **If appliances are already installed, disconnect them from all power, water, or gas lines and from draining or venting connections.** Failure to do so can result in electrical shock, fire, explosion, or death.
- **To reduce the risk of Injury to persons adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses.**

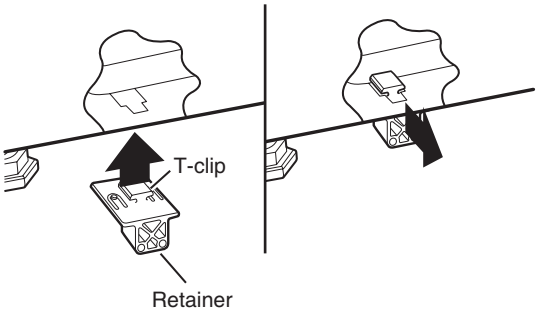
1 Make sure the leveling feet of the dryer are fully retracted.

NOTE: The appliance and pedestal assembly must be placed on a solid, sturdy, level floor for proper operation.

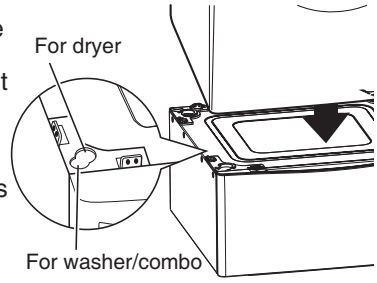


Retract fully

2 Insert the T-clip of the 4 retainers into the dryer base as shown. Press up on the back of the clip and pull outward to lock into place.



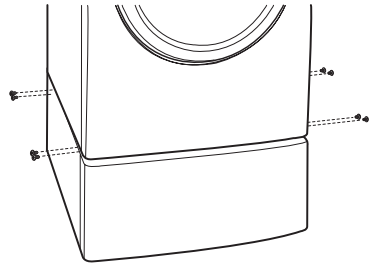
3 Place the dryer on the pedestal. Make sure the front and back feet are in the correct positions. The dryer feet will fit into the innermost positions as shown.



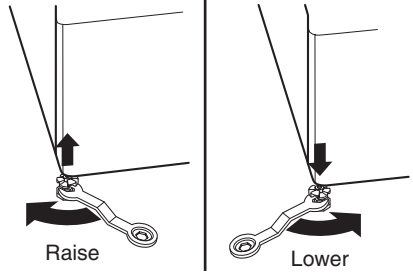
4 Make sure the screws on the pedestal align with the holes in the retainers, then install 4 screws on each side to securely attach the appliance to the pedestal.

NOTE: If the screws are not installed properly, noise and vibration may result.

Move the appliance to the desired location.



5 Loosen the locknuts on all 4 leveling feet of the **pedestal** until you can turn them with the wrench. Turn clockwise to raise or counterclockwise to lower until the pedestal is level and all 4 feet are solidly against the floor.

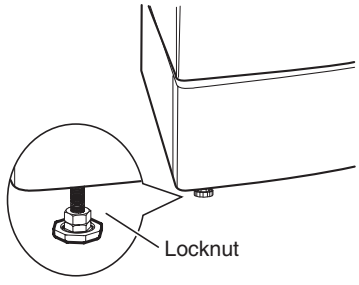


6 Securely tighten all locknuts by hand.

NOTE: Noise and vibration may result if locknuts are not tightened.

Be sure to connect the appliances to all water, power, or gas lines and draining or venting connections before operation.

If there is excessive vibration during the first operation after installation, slightly adjust the leveling feet.



Connecting gas dryers

⚠WARNING

To reduce the risk of fire, electric shock, or injury to persons when using this appliance, follow basic precautions, including the following:

- **Gas supply requirements:**
  As shipped from the factory, this dryer is configured for use with natural gas. It can be converted for use with LP (Liquefied Propane) gas. Gas pressure must not exceed 13 inches of water column.
- **A qualified service or gas company technician must connect the dryer to the gas service.**
  Failure to do so can result in fire, explosion, or death.
- **Isolate the dryer from the gas supply system by closing its individual manual shutoff valve during any pressure testing of the gas supply.** Failure to do so can result in fire, explosion, or death.
- **Supply line requirements:**
  Your laundry room must have a rigid gas supply line to your dryer. In the United States, an individual manual shutoff valve MUST be installed within at least 6 ft. (1.8 m) of the dryer, in accordance with the National Fuel Gas Code ANSI Z223.1 or Canadian gas installation code CSA B149.1. A⅛ - inch NPT pipe plug must be installed. Failure to do so can result in fire, explosion, or death
- **If using a rigid pipe, the rigid pipe should be ½ - inch IPS. If acceptable under local codes and ordinances and when acceptable to your gas supplier, ⅜- inch approved tubing may be used where lengths are less than 20 ft. (6.1 m). Larger tubing should be used for lengths in excess of 20 ft. (6.1 m).**
  Failure to do so can result in fire, explosion, or death.
- **Connect the dryer to the type of gas shown on the nameplate.** Failure to do so can result in fire, explosion, or death.
- **To prevent contamination of the gas valve, purge the gas supply of air and sediment before connecting the gas supply to the dryer. Before tightening the connection between the gas supply and the dryer, purge remaining air until the odor of gas is detected.** Failure to do so can result in fire, explosion, or death.
- **DO NOT use an open flame to inspect for gas leaks. Use a noncorrosive leak-detection fluid.** Failure to do so can result in fire, explosion, or death.
- **Use only a new AGA- or CSA-certified gas supply line with flexible stainless steel connectors.** Failure to do so can result in fire, explosion, or death.
- **Securely tighten all gas connections.** Failure to do so can result in fire, explosion, or death.
- **DO NOT attempt any disassembly of the dryer; any disassembly requires the attention and tools of an authorized and qualified service person or company.** Failure to do so can result in fire, explosion, or death.
- **Use a pipe-joint compound that is insoluble in Liquefied Petroleum (LP) gas on all pipe threads.** Failure to do so can result in fire, explosion, or death.

Electrical Requirements for Gas Models Only

⚠WARNING

To reduce the risk of fire, electric shock, or Injury to persons when using this appliance, follow basic precautions, including the following:

- **Do not, under any circumstances, cut or remove the third (ground) prong from the power cord.** Failure to follow this warning can result in fire, explosion, or death.
- **For personal safety, this dryer must be properly grounded.** Failure to follow this warning can result in fire, explosion, or death.
- **The power cord of this dryer is equipped with a 3-prong (grounding) plug which mates with a standard 3-prong (grounding) wall outlet to minimize the possibility of electric shock hazard from this appliance.** Failure to follow this warning can result in fire, explosion, or death.
- **This dryer must be plugged into a 60 Hz, 120 VAC, grounded outlet protected by a 15-ampere fuse or circuit breaker.** Failure to follow this warning can result in fire, explosion, or death.
- **Where a standard 2-prong wall outlet is encountered, it is your personal responsibility and obligation to have it replaced with a properly grounded 3-prong wall outlet.** Failure to follow this warning can result in fire, explosion, or death.

Connecting gas dryers(cont.)

⚠WARNING

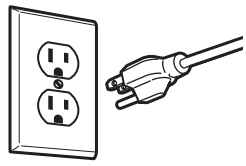
To reduce the risk of fire, electric shock, or injury to persons when using this appliance, follow basic precautions, including the following:

- **Installation and service must be performed by a qualified installer, service agency, or the gas supplier.** Failure to do so can result in fire, explosion, or death.
- **Use only a new stainless steel flexible connector and a new AGA-certified connector.** Failure to do so can result in fire, explosion, or death.
- **A gas shutoff valve must be installed within 6 ft. (1.8 m) of the dryer.** Failure to do so can result in fire, explosion, or death.
- **The dryer is configured for Natural Gas when shipped from the factory. Make sure that the dryer is equipped with the correct burner orifice for the type of gas being used (Natural Gas or Liquefied Petroleum).** Failure to do so can result in fire, explosion, or death.
- **If necessary, the correct orifice (for the LP, orifice kit order part number 383EEL3002D) should be installed by a qualified technician and the change should be noted on the dryer.** Failure to do so can result in fire, explosion, or death.
- **All connections must be in accordance with local codes and regulations** . Failure to do so can result in fire, explosion, or death.
- **Gas dryers MUST exhaust to the outdoors.** Failure to do so can result in fire, explosion, or death.

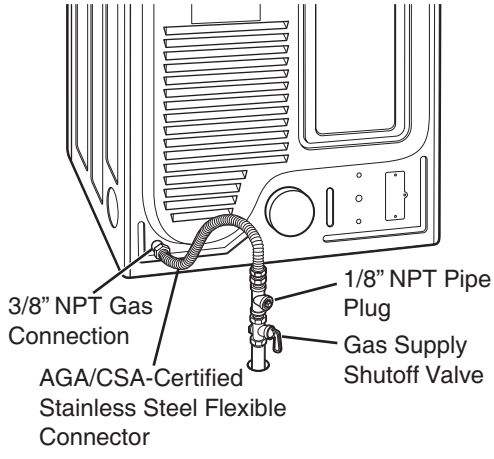
Connecting the Gas Supply

1. Make sure that the gas supply to the laundry room is turned OFF. Confirm that the type of gas available in your laundry room is appropriate for the dryer. The dryer is prepared for Natural Gas with a 3/8 - inch NPT gas connection.
2. Remove the shipping cap from the gas connection at the back of the dryer. Be careful not to damage the threads of the gas connector when removing the shipping cap.
3. Connect the dryer to your laundry room's gas supply using a new flexible stainless steel connector with a 3/8- inch NPT fitting.
4. Securely tighten all connections between the dryer and your laundry room's gas supply. Turn on your laundry room's gas supply and check all pipe connections (both internal and external) for gas leaks with a noncorrosive leak-detection fluid.

Electrical Connection



Plug dryer into a **120 VAC, 60 Hz** grounded 3-prong outlet.



High-Altitude Installations

The BTU rating of this dryer is AGA-certified for elevations below 10,000 feet.

If your gas dryer is being installed at an elevation above 10,000 feet, it must be derated by a qualified technician or gas supplier.

Connecting electric dryers

⚠WARNING

To help prevent fire, electric shock, serious injury, or death, the wiring and grounding must conform to the latest edition of the National Electrical Code, ANSI/NFPA 70 and all applicable local regulations. Please contact a qualified electrician to check your home's wiring and fuses to ensure that your home has adequate electrical power to operate the dryer.

Electrical Requirements for Electric Models Only

⚠WARNING

To reduce the risk of fire, electric shock, or injury to persons when using this appliance, follow basic precautions, including the following:

- **This dryer must be connected to a grounded metal, permanent wiring system, or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the dryer.** Failure to do so can result in fire, explosion, or death.

- **The dryer has its own terminal block that must be connected to a separate 240 VAC, 60-Hertz, single-phase circuit, fused at 30 amperes (the circuit must be fused on both sides of the line). ELECTRICAL SERVICE FOR THE DRYER SHOULD BE OF THE MAXIMUM RATE VOLTAGE LISTED ON THE NAMEPLATE. DO NOT CONNECT DRYER TO 110-, 115-, OR 120-VOLT CIRCUIT.** Failure to follow these instructions can result in fire, explosion, or death.

- **If branch circuit to dryer is 15 ft. (4.5 m) or less in length, use UL (Underwriters Laboratories) listed No.-10 AWG wire (copper wire only), or as required by local codes. If over 15 ft. (4.5 m), use UL-listed No.-8 AWG wire (copper wire only), or as required by local codes. Allow sufficient slack in wiring so dryer can be moved from its normal location when necessary.** Failure to do so can result in fire, explosion, or death.

- **The power cord (pigtail) connection between wall receptacle and dryer terminal block IS NOT supplied with dryer. Type of pigtail and gauge of wire must conform to local codes and with instructions on the following pages.** Failure to follow these instructions can result in fire, explosion, or death.

- **A 4-wire connection is required for all mobile and manufactured home installations, as well as all new construction after January 1, 1996. A 4-wire connection must be used where local codes do not permit grounding through the neutral wire.** Failure to do so can result in fire, explosion, or death.

⚠WARNING

To reduce the risk of fire, electric shock, or injury to persons when using this appliance, follow basic precautions, including the following:

- **Do not modify the plug and internal wire provided with the dryer.**

- **The dryer should be connected to 4-hole outlet.**

- **If it does not fit the outlet, a proper outlet will need to be installed by a qualified electrician.**

⚠WARNING

To reduce the risk of fire, electric shock, or injury to persons when using this appliance, follow basic precautions, including the following:

- **Any installation in a manufactured or mobile home must comply with the Manufactured Home Construction and Safety Standards Title 24 CFR, Part 3280 or Standard CAN/CSA Z240 MH and local codes and ordinances.**

- **A 4-wire connection is required for all mobile and manufactured home installations, as well as all new construction after January 1, 1996.** Failure to do so can result in fire, explosion, or death.

Connecting electric dryers(cont.) USA only

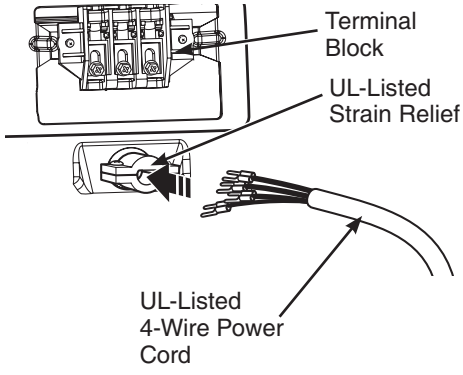
⚠WARNING

- **Connect the power cord to the terminal block. Each colored wire should be connected to same color screw. Wire color indicated on manual is connected to the same color screw in block. Failure to follow these instructions may result in a short or overload.**
- **Grounding through the neutral conductor is prohibited for: (1) new branch-circuit installations, (2) mobile homes, (3) recreational vehicles, and (4) areas where local codes prohibit grounding through the neutral conductor.**

Four-Wire Connection for Electric Dryers: Power Cord

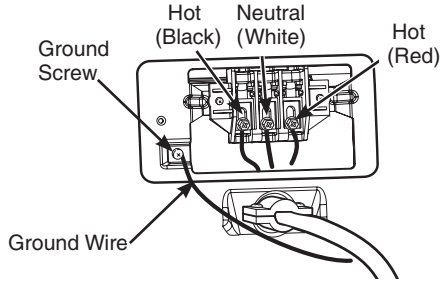
- A 4-wire connection is required for all mobile and manufactured home installations, as well as all new construction after January 1, 1996.
- A UL-listed strain relief is required.

1. Remove the terminal block access cover on the upper back of the dryer. Install a UL-listed strain relief into the power cord through-hole; then thread a UL-listed, **30 A, 240 V, 4-wire, #10 AWG-minimum copper** conductor power cord through the strain relief.



- **Use a 30 A, 240 V, UL-listed power cord with #10 AWG-minimum copper** conductor and closed loop or forked terminals with upturned ends.

2. Transfer the dryer's ground wire from behind the green ground screw to the center screw of the terminal block. Attach the two hot leads of the power cord to the outer terminal block screws. Attach the white neutral wire to the center terminal block screw. Attach the power cord ground wire to the green ground screw.**TIGHTENALL SCREWS SECURELY**. Reinstall the terminal block access cover.



Connecting electric dryers(cont.) USA only

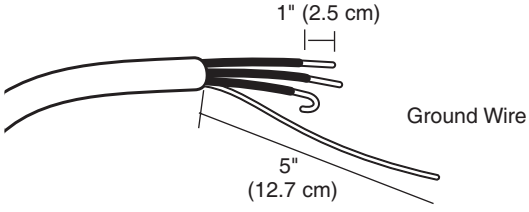
⚠WARNING

- **Connect the power cord to the terminal block. Each colored wire should be connected to same color screw. Wire color indicated on manual is connected to the same color screw in block. Failure to follow these instructions may result in a short or overload.**
- **Grounding through the neutral conductor is prohibited for: (1) new branch-circuit installations, (2) mobile homes, (3) recreational vehicles, and (4) areas where local codes prohibit grounding through the neutral conductor.**

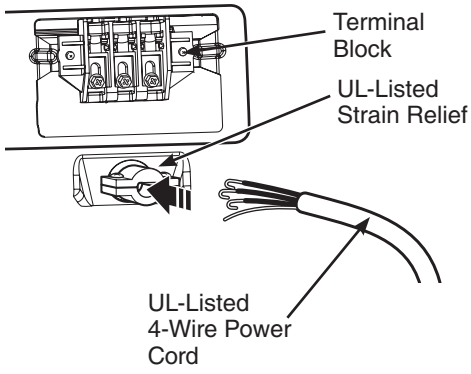
Four-Wire Connection for Electric Dryers: Direct Wire

- A 4-wire connection is required for all mobile and manufactured home installations, as well as all new construction after January 1, 1996.
- A UL-listed strain relief is required.

1. Remove 5 inches (12.7 cm) of the outer covering from the wire. Remove 5 inches of insulation from the ground wire. Cut off approximately 1½ inches (3.8 cm) from the other three wires and strip 1 inch (2.5 cm) insulation from each wire. Bend the ends of the three shorter wires into a hook shape.

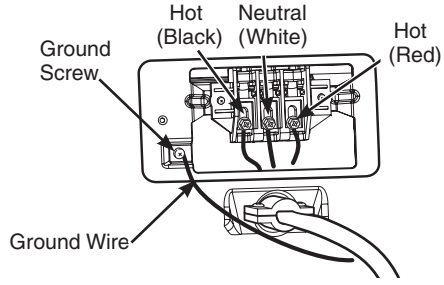


2. Remove the terminal block access cover on the upper back of the dryer. Install a UL-listed strain relief into the power cord through-hole; then thread the power cable prepared in Step 1 through the strain relief.



- Use UL-listed **4-wire #10 AWG-minimum copper** conductor cable.
- Allow at least 5 ft. (1.5 m) length to allow for removal and reinstallation of the dryer.

3. Transfer the dryer's ground wire from behind the green ground screw to the center screw of the terminal block. Attach the two hot leads of the power cable to the outer terminal block screws. Attach the white neutral wire to the center terminal block screw. Attach the power cable ground wire to the green ground screw. **TIGHTEN ALL SCREWS SECURELY**. Reinstall the terminal block access cover.



Connecting Electric Dryers(cont.) USA only

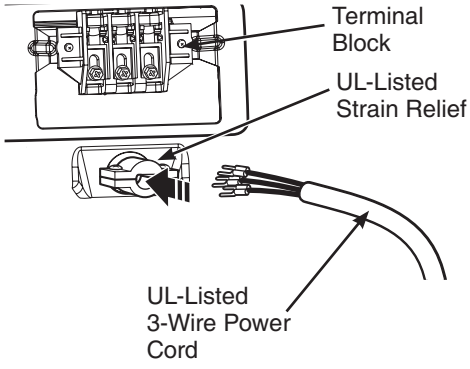
⚠WARNING

- **Connect the power cord to the terminal block. Each colored wire should be connected to same color screw. Wire color indicated on manual is connected to the same color screw in block. Failure to follow these instructions may result in a short or overload.**
- **Grounding through the neutral conductor is prohibited for: (1) new branch-circuit installations, (2) mobile homes, (3) recreational vehicles, and (4) areas where local codes prohibit grounding through the neutral conductor.**

Three-Wire Connection for Electric Dryers: Power Cord

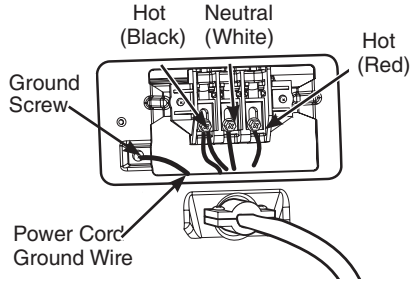
- A 3-wire connection is NOT permitted on new construction after January 1, 1996.
- A UL-listed strain relief is required.

1. Remove the terminal block access cover on the upper back of the dryer. Install a UL-listed strain relief into the power cord through-hole; then thread a UL-listed, **30 A, 240 V, 3-wire, #10 AWG-minimum copper** conductor power cord through the strain relief.



- Use a **30 A, 240 V, UL-listed power cord with #10 AWG-minimum copper** conductor and closed loop or forked terminals with upturned ends.

2. Attach the two hot leads of the power cord to the outer terminal block screws. Attach the neutral wire to the center terminal block screw. Connect the external ground (if required by local codes) to the green ground screw. **TIGHTEN ALL SCREWS SECURELY**. Reinstall the terminal block access cover.



Connecting Electric Dryers(cont.) USA only

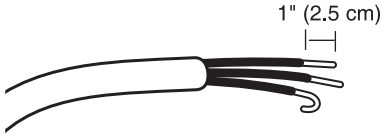
⚠WARNING

- **Connect the power cord to the terminal block. Each colored wire should be connected to same color screw. Wire color indicated on manual is connected to the same color screw in block. Failure to follow these instructions may result in a short or overload.**
- **Grounding through the neutral conductor is prohibited for: (1) new branch-circuit installations, (2) mobile homes, (3) recreational vehicles, and (4) areas where local codes prohibit grounding through the neutral conductor.**

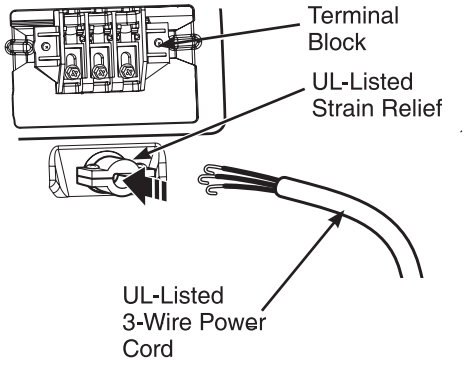
Three-Wire Connection for Electric Dryers: Direct Wire

- A 3-wire connection is NOT permitted on new construction after January 1, 1996.
- A UL-listed strain relief is required.

1. Remove 3½ inches (8.9 cm) of the outer covering from the wire. Strip 1 inch (2.5 cm) insulation from each wire. Bend the ends of the three wires into a hook shape.

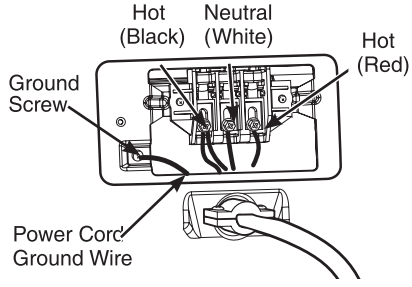


2. Remove the terminal block access cover on the upper back of the dryer. Install a UL-listed strain relief into the power cord through-hole; then thread the power cable prepared in Step 1 through the strain relief.



- Use UL-listed **3-wire #10 AWG-minimum copper** conductor cable.
- Allow at least 5 ft. (1.5 m) length to allow for removal and reinstallation of the dryer.

3. Attach the two hot leads of the power cord to the outer terminal block screws. Attach the neutral wire to the center terminal block screw. Connect the external ground (if required by local codes) to the green ground screw. **TIGHTEN ALL SCREWS SECURELY**. Reinstall the terminal block access cover.



4 DRYER CYCLE PROCESS

DLEX8000* / DLGX8001*
DLEX8100* / DLGX8101*

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	STEAM FRESH™	MID HIGH / ADJUSTABLE	OFF	20 min / ADJUSTABLE	Saturation	64±2˚C	5 min	45±5˚C	3 Hr
	STEAM SAINTARY™	HIGH	OFF	39 min	Saturation	66±2˚C	5 min	45±5˚C	
	ANTI BACTERIAL	HIGH	Very DRY	70 min	Saturation	66±2˚C	5 min	45±5˚C	
	SPOT CLEAN™	HIGH	OFF	22 min	Saturation	66±2˚C	5 min	45±5˚C	
	JUMBO DRY	MEDIUM	NORMAL / ADJUSTABLE	85 min	Saturation	60±2˚C	5 min	45±5˚C	
	HEAVY DUTY	HIGH	NORMAL / ADJUSTABLE	54 min	Saturation	66±2˚C	5 min	45±5˚C	
	PERM PRESS	LOW	NORMAL / ADJUSTABLE	32 min	Saturation	50±2˚C	5 min	45±5˚C	
	COTTON/NORMAL	MEDIUM	NORMAL / ADJUSTABLE	41 min	Saturation	58±2˚C	5 min	45±5˚C	
	DELICATES	LOW	NORMAL / ADJUSTABLE	28 min	Saturation	50±2˚C	5 min	38±5˚C	
	TOWELS	MID HIGH	NORMAL / ADJUSTABLE	55 min	Saturation	66±2˚C	5 min	45±5˚C	
	WOOL	LOW	OFF	59 min	Saturation	60±2˚C	5 min	45±5˚C	
	SUPER DRY	MEDIUM	VERY	55 min	Saturation	66±2˚C	5 min	45±5˚C	
Manual Dry	SPEED DRY	HIGH	OFF	25 min	Saturation	66±2˚C	5 min		3 Hr
	AIR DRY	NO HEAT	OFF	30 min	Saturation				
Load			Motor		→				Off Time: 6 min / On Time: 10 sec
			Heater		Temperature Control for each cycle				

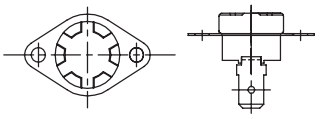
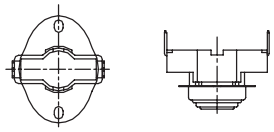
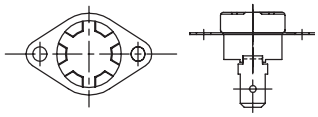
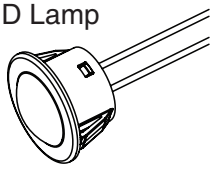
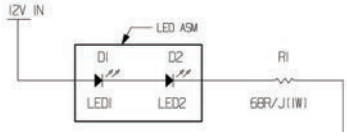
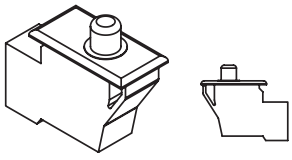
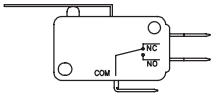
*Sensor dry : Dry Level is set by users.

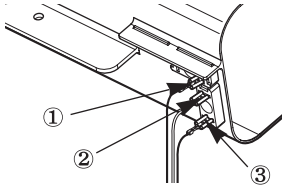
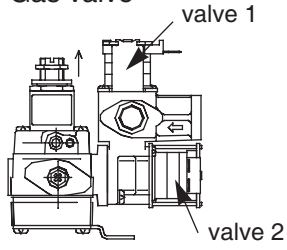
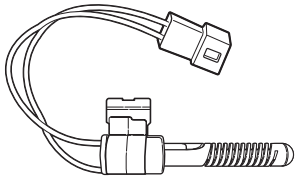
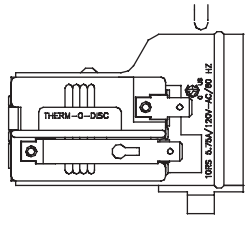
**Manual dry : Temperature control is set by users.

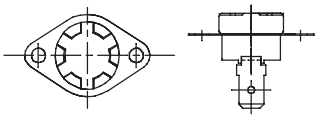
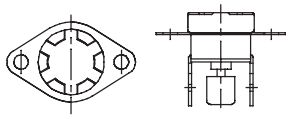
Default settings can be adjusted by users.

5 COMPONENT TESTING INFORMATION

⚠ CAUTION ***When checking components, turn the power off and discharge voltage.***

Component	Test Procedure	Check result	Remark
1. Thermal cut off  • Check Top Marking: N140	Measure resistance of terminal to terminal ① Open at 284 ± 41°F (140 ± 5°C) ② Auto reset -31°F (-35°C) Same shape as outlet thermostat.	If thermal fuse is open must be replaced 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 221 ± 9°F (94 ± 7°C)	① Resistance value ≒ ∞ ② Resistance value < 5Ω	• Heater case - Hi limit • Electric type
3. Outlet Thermostat (Auto reset)  • Check Top Marking: N85	Measure resistance of terminal to terminal ① Open at 185 ± 41°F (85 ± 5°C) ② Close at 167 ± 41°F (75 ± 5°C) Same shape as thermal cut off.	① Resistance value ≒ ∞ ② Resistance value < 5Ω	• Blow housing - Safety • Electric type
4. LED Lamp 	Schematic: 	If the lamp is turned on by connecting is normal.	It is not measured by multimeter because V_{th} is 3.2V
5. 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	
6. 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
7. 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
8. Thermistor 	Measure resistance of terminal to terminal Temperature condition: 58°F ~ 104F (10~40°C)	Resistance value: 10Ω	• Heater case - Hi limit • Electric type
9. Motor			• See Page 21
10. Gas valve 	Measure resistance of the following terminal ① Valve 1 terminal ② Valve 2 terminal	Resistance value: > 1.5~2.5 kΩ	• Gas type
11. Igniter 	Measure resistance of terminal to terminal	Resistance value: 50~800 Ω	• Gas type
12. 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
13. 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 158 ± 41°F (70 ± 5°C)	① Resistance value ≒ ∞ ② Continuity < 1Ω	• Gas type • Gas funnel
14. Outlet Thermostat (Manual reset)  • Check Top Marking: N110	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

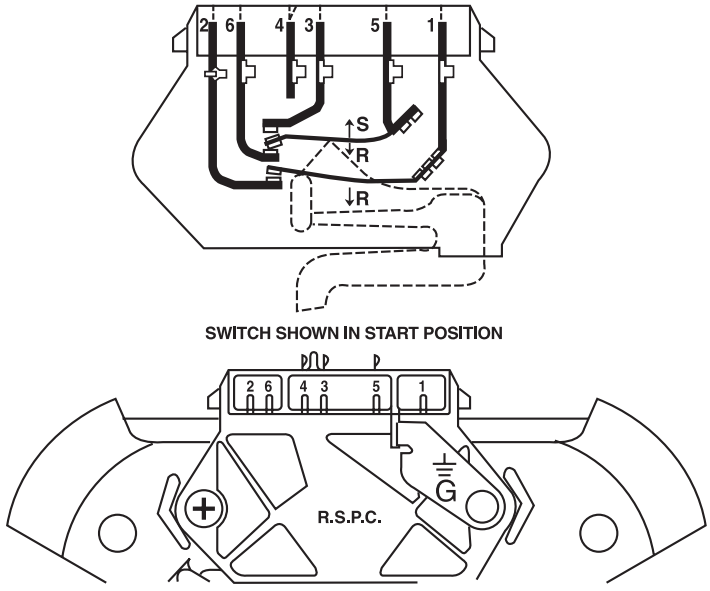
6 MOTOR DIAGRAM AND SCHEMATIC

NOTE *When checking components, turn the power off and discharge voltage.*

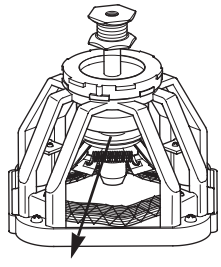
■ Contact On / Off by Centrifugal Switch

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

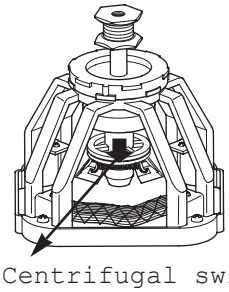


■ STOP MODE
(When Motor does not operate)



Centrifugal switch

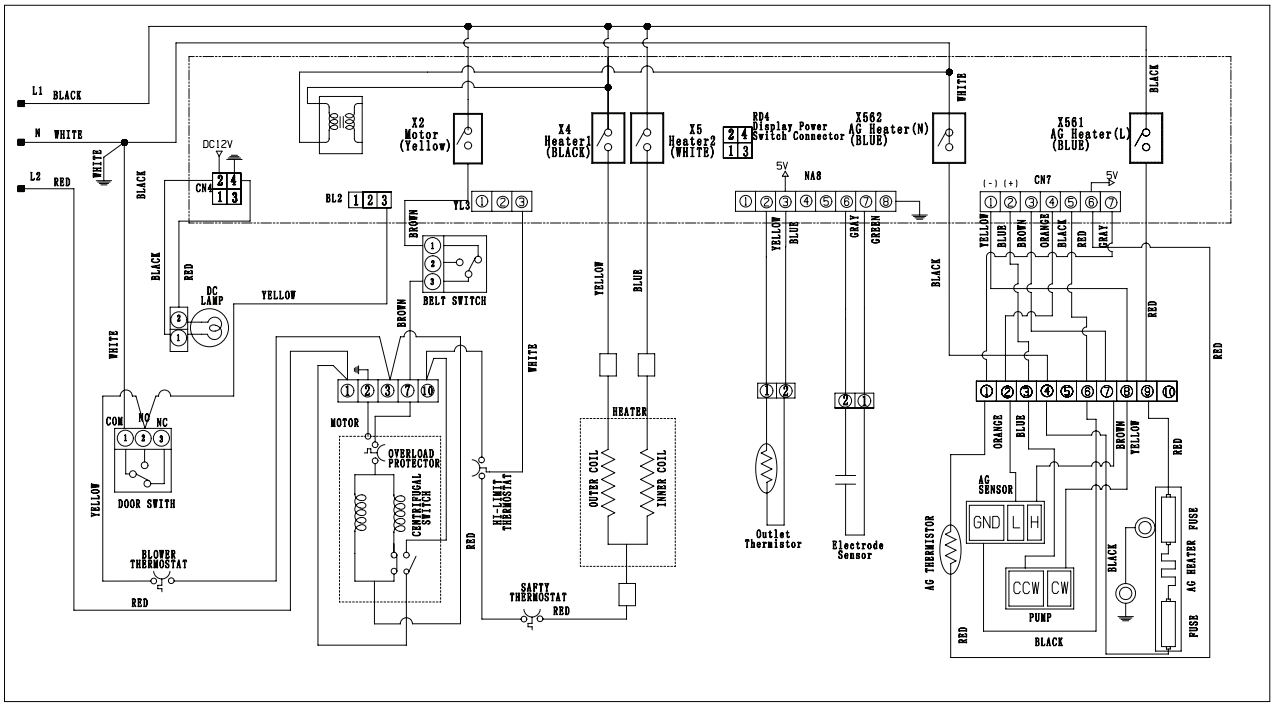
■ RUN MODE
(Motor operates)



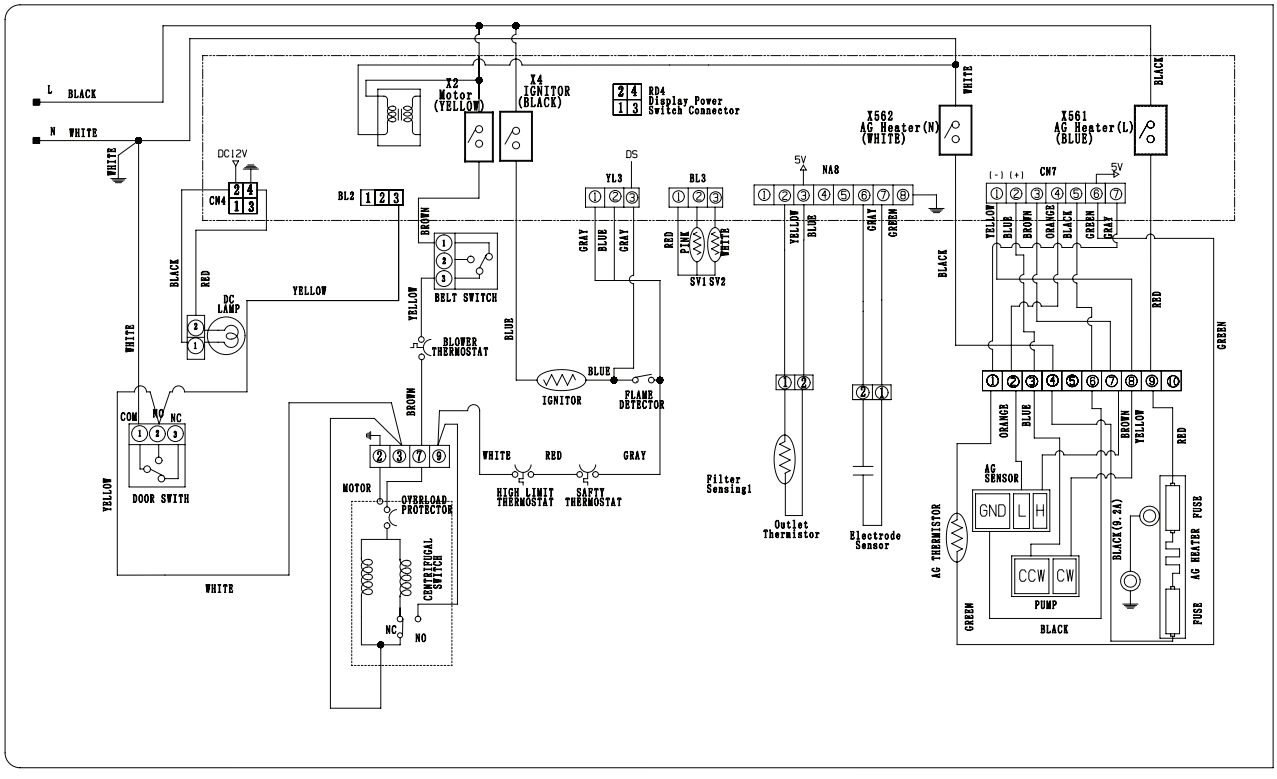
Centrifugal switch
(Pull Drive forward)

7 WIRING DIAGRAM

ELECTRIC DRYER WIRING DIAGRAM



GAS DRYER WIRING DIAGRAM



8 STEAM FUNCTION

8-1. Steam Cycle Guide

	STEAM	DEFAULT TIME	TEMP. CONTROL	DRY LEVEL	FABRIC STATE	FABRIC TYPE	MAXIMUM AMOUNT
STEAM SANITARY™		STEAM SANITARY™ (39 minutes)			Dry	Comforter Bedding	Single (1 each)
						Children's clothing	3 lbs.
STEAM FRESH™		STEAM FRESH™ (20 minutes)	O		Dry	Comforter	Single (1 each)
						Shirts*	5 each
	+ REDUCE STATIC	STEAM FRESH™ (10 minutes)			Dry	Shirts	8 lbs. (18 Items)
	+ EASY IRON	STEAM FRESH™ (12 minutes)			Dry	Shirts	Shirts* (5 each)
SPOT CLEAN™		SPOT CLEAN™ (22 minutes)			Dry	Shirt	Single (1 each)
STEAM OPTION	+ REDUCE STATIC	HEAVY DUTY COTTON/TOWELS NORMAL PERM.PRESS DELICATES		O	Wet	Varies by selected cycle	8 lbs. (18 Items)
	+ EASY IRON			O	Wet	Varies by selected cycle	Shirts* (5 each)
TIME DRY	+ REDUCE STATIC	TIME DRY (45 minutes)	O		Wet	Varies by selected	8 lbs. (18 Items)
	+ EASY IRON	TIME DRY (47 minutes)	O		Wet	Varies by selected	Shirts* (5 each)

*Shirt: 70% cotton/30% poly blend. Except especially delicate fabrics.

IMPORTANT NOTES ABOUT STEAM CYCLES:

- The steam feeder must be filled with water up to the MAX line. Otherwise, an error message will be displayed.
- If the lint filter or exhaust duct is clogged, the steam options will not give proper results.
- For best results, load articles of similar size and fabric type.
  Do not overload.
- Water only - Do not add any additives or other materials as these will damage your dryer.
- Before moving the dryer, make sure the steam feeder is empty.
- Best results are obtained with cotton/poly blend fabrics.

8-2. Troubleshooting

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
 **indicator lights is on during the drying cycle**	• Water supply error.	• Check steam feeder drawer: (1) Make sure steam feeder is filled with water to MAX line. (2) Make sure steam feeder is seated properly and drawer is fully closed. (3) Turn the dryer off then restart the steam cycle. • Do not use distilled water; the water level sensor in steam generator will not work. • Pump not working. Unplug dryer and call for service.
Water drips from nozzle when steam cycle starts.	• This is normal.	• This is steam condensation. The dripping water will stop after a short time.
Steam doesn't generate but no error code is shown.	• Water level error.	• Unplug dryer and call for service.
Garments still wrinkled after STEAM FRESH™.	• Too many or to different types of garments in dryer.	• Small loads of 1 to 5 items work best. • Load fewer garments. Load similar-type garments.
There are no creases left on garment after STEAM FRESH™.	• The function of this cycle is to remove wrinkles from fabric.	• Use an iron to make creases.
Garments have static after REDUCE STATIC.	• This is normal.	• Depends on individual moisture level in skin.
Garments are too damp or too dry after REDUCE STATIC.	• Correct drying options not selected.	• Select load weight manually before starting REDUCE STATIC option.
Garments are not uniformly damp after EASY IRON.	• This is normal.	• Depends on the amount or type of garments.
Water drips from door during steam cycle.	• This is normal.	• This is steam condensation on door surface.
Steam is not visible during steam cycle.	• This is normal.	• Steam vapor is difficult to see when the door is closed.
Drum does not turn during steam cycle.	• This is normal.	• The drum is turned off so that the steam vapor remains in the drum.

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
Cannot see steam vapor at the beginning of cycle.	• This is normal.	• Steam is released at different stages of the cycle for each option.
The display shows: bl 9	• MORE TIME pressed.	• Pressing the MORE TIME button adjusts the load size from 1to 5 articles or a big load indicated by bl 9 in the display.
Odors remain in clothing after STEAM FRESH™.	• STEAM FRESH™ did not remove odor completely.	• Fabrics containing strong odors should be washed in a normal cycle.

8-3. Display Fault/Error Codes

The error codes below will be displayed when attempting to start a drying cycle or after activating the Diagnostic Test mode.

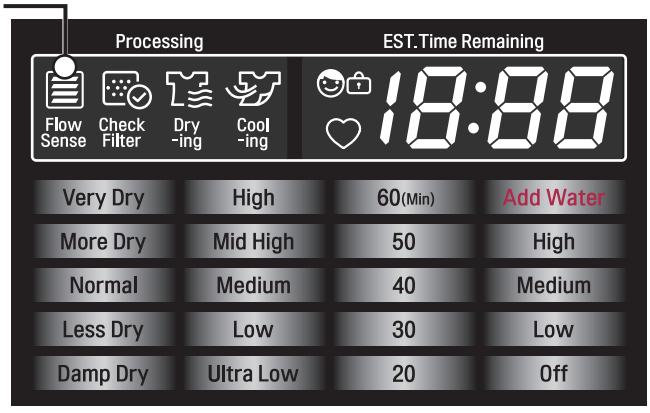
DISPLAY	CHECKING PART	CAUSE	REMARK
tE1	Thermistor of blower housing	Outlet thermistor open or shorted.	• tE1 error is displayed in the drying cycle or test mode. • Replace the steam generator.
tE2	Thermistor of blower housing	Outlet thermistor open or shorted.	• tE2 error is displayed in the drying cycle or test mode. • Replace the steam generator.
tE4	Thermistor of steam generator	Steam generator thermistor open or shorted.	• tE4 error is only displayed in the test mode. • Replace the steam generator.
E5	Water supply pump	When the pump valve is less than 10 in the test mode	• tE5 error is only displayed in the test mode. • Check the connection between harness wire and connector. • Replace the water supply pump.
Add	Steam generator	Sensors do not detect that steam generator is full within 60 seconds.	• If water in the steam feeder is not enough this error may be displayed. Fill the feeder and restart the cycle.
PS	Wire Connection (Black-White-Red)	Wire Connection is wrong. Wire Connection is loose.	• verify proper connection of the power cord. (Electric dryer only.) * PS means power supply.
EE	EE PROM Error	• EE PROM operation is adnormal.	• EE error is displayed only in the test mode

9 FLOW SENSOR FUNCTION

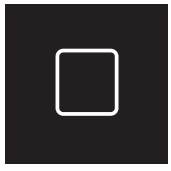
9-1 Flow Sensor

This FlowSense™ function detects the clogging or blocking of ducts.
Clogged duct vents or hoses decrease efficiency in drying cloths. Clogged vents can also cause fire.
This function alerts you to the need of cleaning the duct.
When the alarm about Duct clogging is displayed, clean the duct or call a servicer to clean them.

Flow Sensor Function



■ How does the Flow sense function display the clogging of duct ?

	
4 Bars	NO Bars
CLOGGED	NORMAL
Check and Clean Duct.	Duct OK. The Dryer can work.

The FlowSense™ display consists of four bars inside a box. The display has only two possible displays as only two possible displays as shown here (Also see the figure shown below):

① No bars displayed.

② 4 bars displayed.

9-2 Installation Test (Exhaust 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.

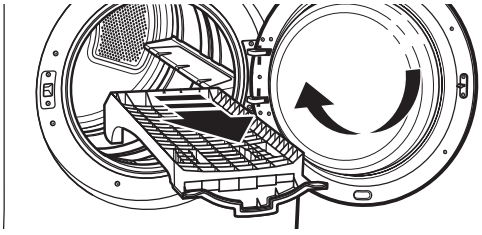
- Your dryer features FLOW SENSE™, an innovative sensing system that automatically detects blockages and restrictions in dryer ductwork. Keeping ductwork clean of lint buildup and free of restrictions allows clothes to dry faster and reduces energy use.

NOTE

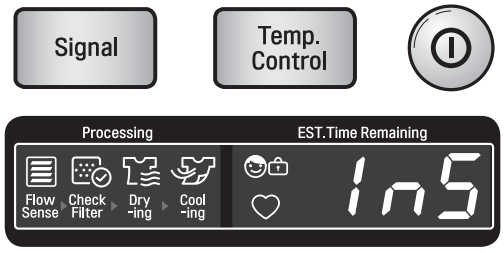
The dryer should be cool before starting this test. If the dryer was warmed up during installation, run the AIR DRY cycle for a few minutes to reduce the interior temperature.

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 it may affect the accuracy of the results.

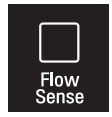


2. **Press and hold the SIGNAL ON/OFF and TEMP. CONTROL buttons and then press the POWER button.** This button sequence activates the installation test. The code `InS` will display if the activation is successful.



3. **Press START/PAUSE button.**
   The dryer will start the test, which will last about two minutes. The heat will be turned on and the temperatures in the drum will be measured.

4. **Check the display for results.**
   During the test cycle, monitor the FLOW SENSE™ display on the control panel. If no bars are displayed, when the cycle ends, the exhaust system is adequate. If the exhaust system is severely restricted, the display will show four bars.
   Other problems may also be shown with error codes. Refer to the next page for error code details and solutions.

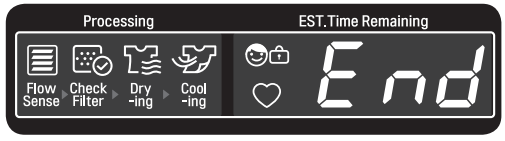


NO BARS:
OK

FOUR BARS:
RESTRICTED

Four bars 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, `End` will display. The test cycle will end and the dryer will shut off automatically after a short delay.



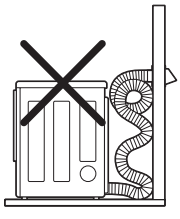
• Check the Error Code before you call for service

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. • 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.

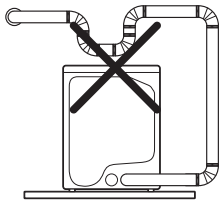
• **Check the duct condition**
If the FLOW SENSE™ LED is turned on, check the exhaust system for restrictions and damage. Repair or replace the exhaust system as needed.

Restricted or Blocked Airflow

Avoid long runs or runs with multiple elbows or bends.

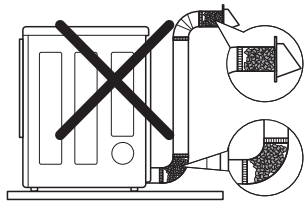


Excess or crushed transition duct



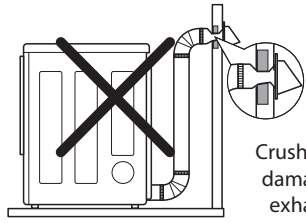
Too many elbows or exhaust too long

Check for blockages and lint buildup.



Lint buildup or blockage

Make sure the ductwork is not crushed or restricted.



Crushed or damaged exhaust

10 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)

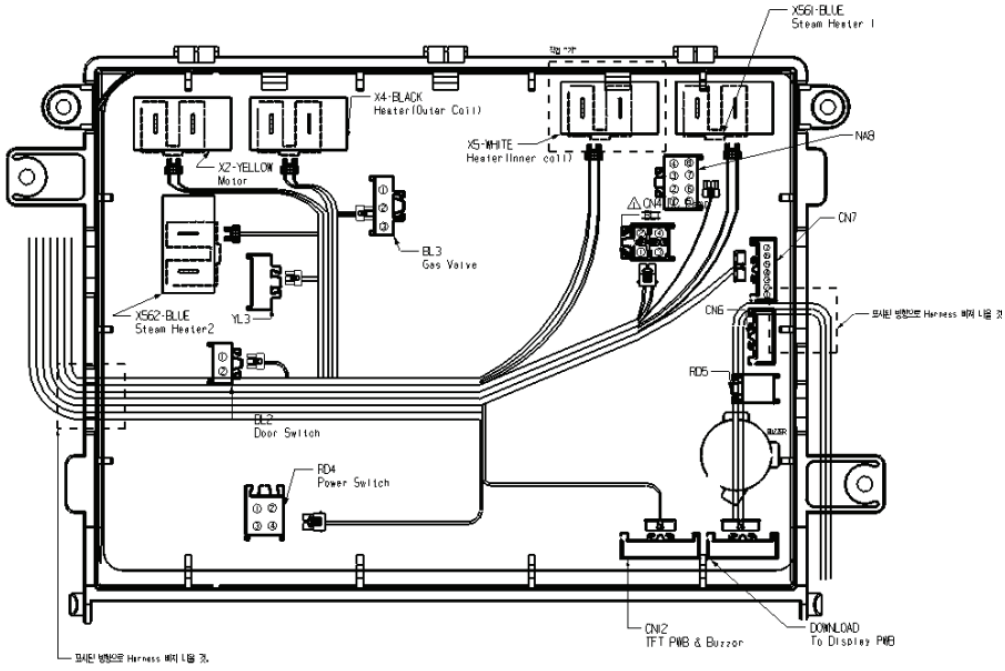
■ ACTIVATING THE DIAGNOSTIC TEST MODE

1. UNIT must be in standby (unit plugged in, display off)
2. Press POWER while pressing MORE TIME and LESS TIME simultaneously.
3. Press START/PAUSE button to advance through diagnostics.

Pressing the START/PAUSE	CHECKING ACTION	DISPLAY	CHECKPOINT
None	Electric control and Temperature sensor	1nES(Elec Type) 1n9S(Gas Type)	Standard
		U03	MAIN PGM ver(1nES - U03 - d02)
		d02	DISPLAY PGM
		tE1	Thermistor open
		tE2	Thermistor shorted
		tE4	AG Thermistor open or shorted
Once	Motor+Controller	240 = Low moisture 68 = High moisture	Motor runs
			Displays Moisture Sensor Operation If moisture sensor is contacted with damp cloth. The display number is below180 under normal circumstances.
Twice	■ ELECTRIC TYPE Motor+Heater 1(2700 W) ■ GAS TYPE Motor	Current Temp. (5~70)	■ ELECTRIC TYPE Heater 1 is energized - 2700 W ■ GAS TYPE is not opened (Temperature in the drum is displayed in degrees C.)
3 times	■ ELECTRIC TYPE Motor+Heater 1+Heater 2 (5400 W) ■ GAS TYPE Motor+Gasvalve	Current Temp. (5~70)	■ ELECTRIC TYPE: Heater 1 and heater 2 are energized - 5400 W ■ GAS TYPE: Gas valve is energized (Temperature in the drum is displayed in degrees C.) ■ DUAL SENSOR FAILURE CHECK : Values of TEMPERATURE and HUMIDITY are '000', the display shows SE ERROR.
4 times	Motor+Pump+ Heater 2(runs for 1 second) (Heater 1 off)	Pump AD valve (11~255)	Pump runs
		E5	Pump Error
5 times	Motor, Pump, Heater 2 off	OO	
6 times	Loads off, Controller off		Power off

✳ To check pump operation:
When pressed 4 times in 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.

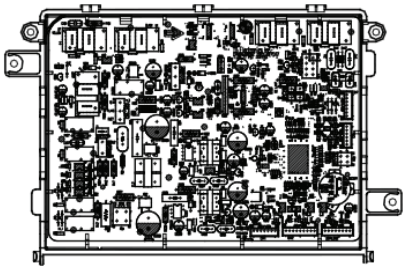
■ Function of PCB Connector



Part	Connect No.	Color	Load of Pin No.	Remark
Tap Relay	X2	Yellow	Motor	Electric & Gas Model
	X4	Black	Heater (Outer Coil)	Electric Model
			Igniter	Gas Model
	X5	White	Heater (Inner Coil)	Electric & Gas Model
	X561	Blue	Steam Heater (In)	
	X562	Blue	Steam Heater (out)	
Pin Connect	CN4	Blue	②-④ DC Lamp	
	BL2	Blue	② Door Switch Sensing Signal	
	YL3	Yellow	① Belt Switch In (Motor) ③ Duct Sensing Signal (Hi Limit)	Electric Model
			① Frame Detect Signal	Gas Model
	NA8	Natural (White)	②③ Outlet Thermistor ⑥⑦ Electrode Sensor ⑧ Earth	Electric & Gas Model
	BL3	Blue	①② Gas Valve 1 (SV1) ①③ Gas Valve 2 (SV2)	Gas Model
	CN7	Natural (White)	①② Pump (AG) ③⑤ AG Sensor H ④⑤ AG Thermistor	Electric & Gas Model ※ AG (Steam)
	RD4	Red	①②③④ Power Switch (To Display PWB)	
	RD4	Natural (White)	All To Display PWB	

Caution	When measuring power, be sure to wear insulated gloves, to and 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



PCB ASSEMBLY LAYOUT

< Table1 > : Connection of the Tab Relay with Heater (Elec)

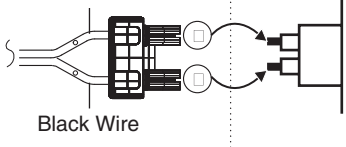
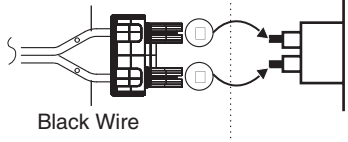
Heat coil	X4	X5	X4	X5	Remark
High Mid High Medium	on	on	on	on	Temperature Control below 68 ± 4°C. Turn on Heater1 and Heater2.
Low Extra Low	on	off	on	off	Temperature Control below 52 ± 4°C. Only Turn on Heater1.

< Table 2 > : Connection of the Tab Relay with Burner (Gas)

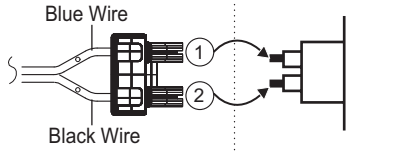
	X4	X5	Remark
High Mid High Medium	O	—	Temperature Control below 70 ± 4°C. Turn on Burner
Low Extra Low	O	—	Temperature Control below 47 ± 4°C. Turn on Burner

2. Status Mode Of The Connection

< Table1 > : Connection of Tab Relay with the Tab Relay of the PCB ASSEMBLY (Elec)

	Color	Connection		Remark
		Harness	PCB	
Connector Housing	Black	Yellow Wire  Black Wire Connector Housing	Tap relay X4	Check the Matching color Between Harness wire and Tab Relay. (Black Housing – Black Tab Relay)
	White	Blue Wire  Black Wire Connector Housing	Tap relay X5	Check the Matching color Between Harness wire and Tab Relay. (White Housing – White Tab Relay)

< Table 2 > : Connection of Tab Relay with PCB ASSEMBLY (Gas)

	Color	Harness	PCB	Remark
Connector Housing	Black	 Connector Housing	Tap relay X4	Check the Matching color Between Harness wire and Tab Relay. (Black Housing – Black Tab Relay)

3. Status Mode Of wrong Connection

< Table1 > : Wrong Connection of the Tab Relay and Connector Housing (Elec)

Items	Case	Heater Outer Operation(black)	Heater Inner 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	Heater Inner	Heater Outer	Power On
5.Black and White Housing	Housing and Wire ①, ② CROSS	Off	Off	Power Off

< Table2 > : Wrong 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

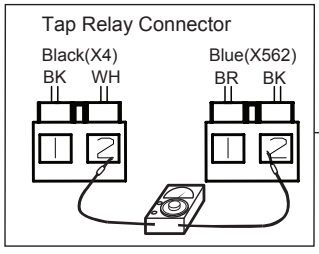
- In case of power failure(<Table1>-1,2,5,<Table2>-1), Please check the Connection of “2.Status Table of Connection”.
In case of power failure(<Table1>-4), please check the Connection of “2. Status Table of Connection”. Because improper Connection of the equipment-dryer can be damaged of changing heater.

■ Test 1 120V AC Electrical supply

NOTE: To properly check power supply in case of floating neutral or high resistance connections, a load must be applied to the circuit. It is important that the power button be pressed while checking the voltages as described below.

With the dryer plugged in, press the POWER button to turn on dryer.

YES

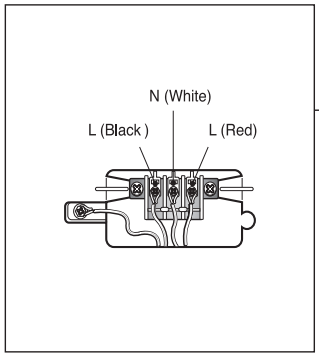


Check the voltage at the main PCB between Black wire on the blue tab relay connector(X562) and White wire on the black tab relay connector(X4) Is 120VAC present while pressing the start button?

YES

- Replace main PCB.
- Replace display PCB.

NO

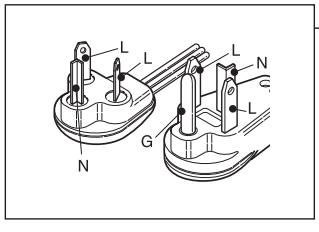


(NOTE: For gas dryers skip this step.) With the dryer plugged in, check the voltage at the terminal block between the neutral (WH) and L1 (BK) terminals. Is the voltage 120 VAC while pressing the START/PAUSE button?

NO

- Check power cord.
- Check terminal block connections.

YES



With the dryer plugged in, check the voltage at the power cord plug between the neutral and L1 (and L2 for electric dryers). Is the voltage 120 VAC while pressing the START/PAUSE button?

NO

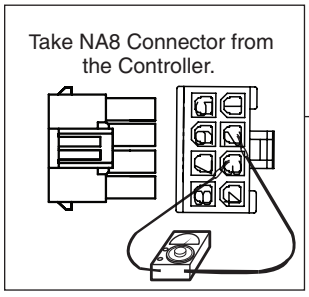
- Check the power supply fuse or circuit breaker.
- Check the receptacle connections.

YES

Replace the power cord.

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

Caution	Before measuring resistance, be sure to turn the power off and discharge voltage. (When discharging, contact the metal plug of power cord with the ground.)
Trouble Symptom	① During diagnostic test, tE1 and tE2, an error occurs. ② During operation, the heater does not turn off. ③ Difference between actual and sensed temperature is significant.
Measurement Condition	After turning power off, measure the resistance.

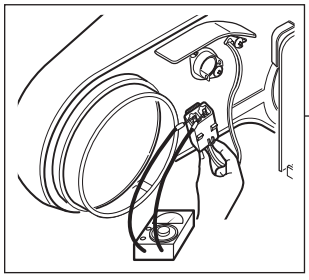


Measure the resistance between the NA8-③(BL) and NA8-②(YL) Does the resistance measured match the temperature of the thermistor in the chart? (Use room termistor is warm from running the dryer.)

YES

- Check if control and the 8 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

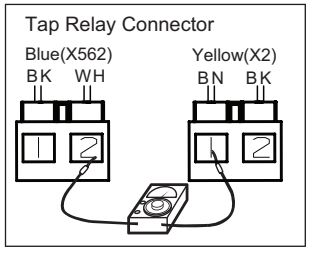
Check harness-linking connector.

■ Table 1. Resistance for Thermistor Temperature.

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

■ Test 3 Motor Test

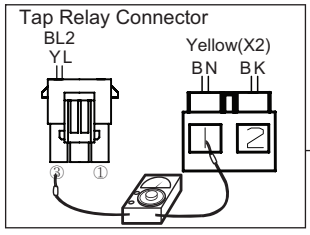
Caution	Before measuring resistance, be sure to turn the power off and discharge voltage. (When discharging, contact the metal plug of power cord with ground wire.)
Trouble Symptom	Drum dose not rotate; no blower function, no heater function.
Measurement Condition	Turn the dryer's power off, then measure resistance.



Is resistance below 3 Ω between White wire on the blue tab relay connector(X562) and Brown wire on the yellow tab relay connector(X2)
※ Measure while door is closed.

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

NO



Is resistance below 3 Ω between Brown wire on the yellow tab relay connector(X2) and Connect BL2-③(Yellow wire) ?
※ Measure while door is closed.

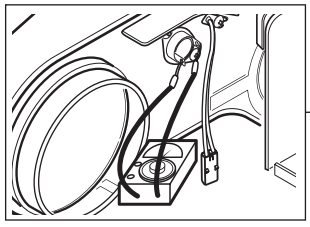
NO → • Check if door frame presses door switch knob. • Check door switch. • Check harness connection.

YES

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

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

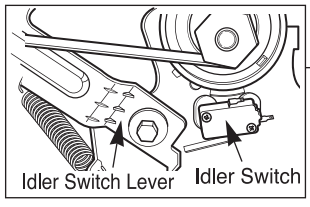
NO



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

NO → • Replace outlet • Thermostat. (Refer to 'component')

YES

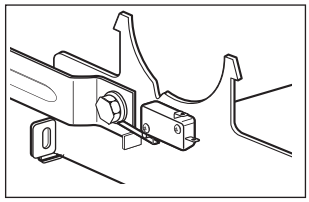


Does idle switch attached to motor bracket operate level by drum belt?
(Not operating lever is normal.)

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

Is resistance below 1 Ω between idler switch terminals?

NO → • Replace idler switch.



YES

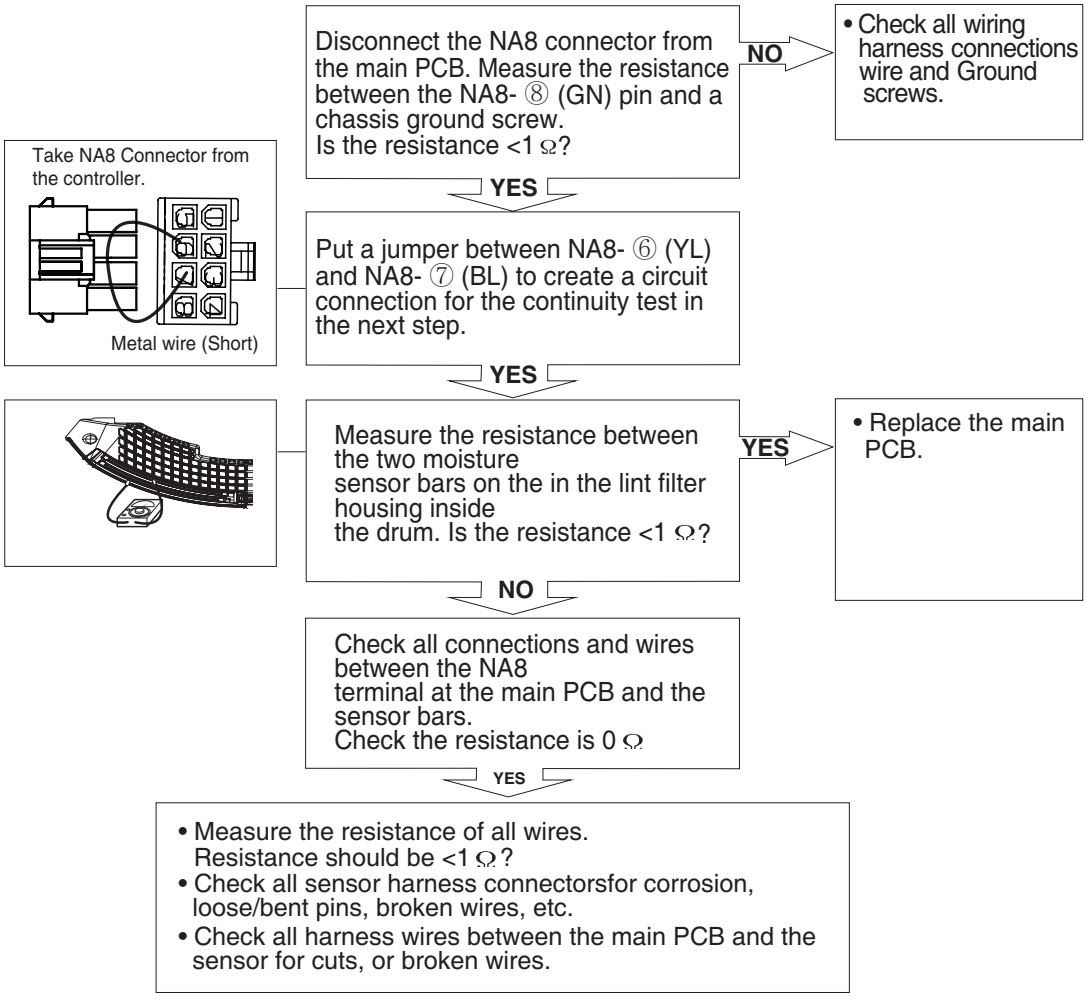
• Check motor. (Refer to 'motor diagram & check')
• Check if control connector is contacted.

■ Test 4 Moisture sensor

NOTE: This test has two parts. The best test of the moisture sensing system is done in the diagnostic mode. This FUNCTIONAL TEST will test the sensor bars, wiring harness and PCB operation. If the results of this test are normal, the sensor system and PCB response are normal. The problem is somewhere else.

FUNCTIONAL TEST (Control)

1. Enter the diagnostic mode. (See DIAGNOSTIC TEST MODE.)
2. With the door closed, press the START/PAUSE button once. The dryer will start tumbling without heat.
3. Open the door. The drum will stop tumbling and the "dE" error code will be displayed and the chime will sound several times (if turned on).
4. With one hand, reach into the drum and place your fingers across the moisture sensor bars.
   (CAUTION: The dryer drum will turn in this test. Your hand will be close to the rotating drum vanes. Keep your hand close to the filter housing to avoid being hit by the moving vanes.)
5. Use your other hand to press the door switch. The dryer drum will start rotating automatically.
6. Observe the numerical display. Depending on conditions, the number displayed should be between 30 and 255. The numbers should start decreasing as the control senses the moisture in your skin.
7. After you have observed the number decreasing, remove your fingers from the sensor bars. The numbers will continue to decrease for a few seconds (minimum 30) and the begin to increase (maximum 255).
8. If this test fails, proceed with the MECHANICAL TEST below.

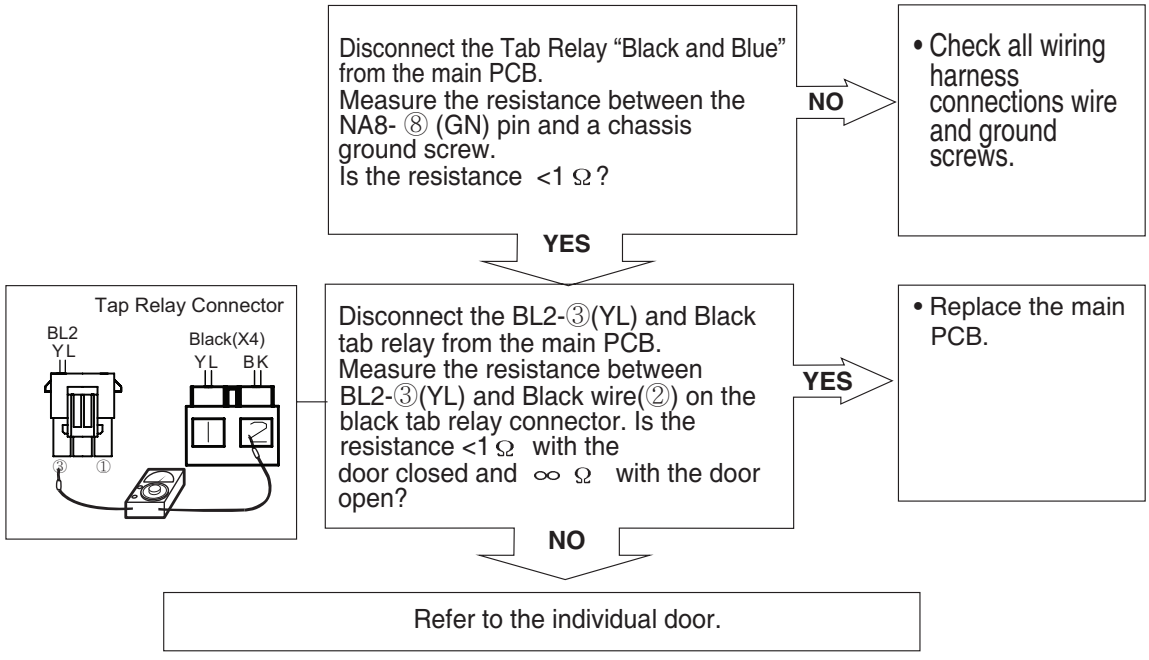


■ Test 5 Door swich test

NOTE: This test has two parts. The best test of the door switch system is done in the diagnostic mode. This FUNCTIONAL TEST will test the door switch, wiring harness and PCB operation. If the results of this test are normal, the door switch system and PCB response are normal. The problem is somewhere else.

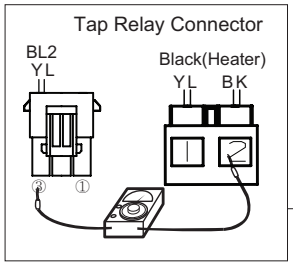
FUNCTIONAL TEST (Control)

1. Enter the diagnostic mode. (See DIAGNOSTIC TEST MODE.)
2. With the door closed, press the START/PAUSE button once. The dryer will start tumbling without heat.
3. Open the door. The drum will stop tumbling. The "dE" error code should be displayed, the chime should sound seven times (if turned on), and the drum light (if equipped) should come on. If the "dE" error code is not displayed or the light does not come on, proceed with the MECHANICAL TEST below. If the error displays and light comes on, the door switch is working properly.



■ Test 6 Heater switch test - Electric Type

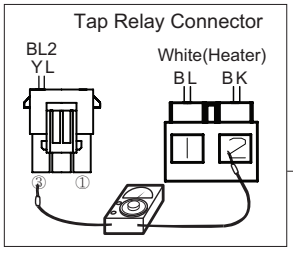
Caution	Before measuring resistance, be sure to turn the power off, and do voltage discharge. (When discharging, contact the metal plug of the power cord with a ground line.)
Trouble Symptom	While operating, Heating will not work. Drying time takes longer.
Measurement Condition	After turning the power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



Enter diagnostic mode and press the START/PAUSE button twice. Measure the voltage between L2(Red wire on the terminal block) and Black wire on the black tab relay connector. Is the voltage 240 VAC?

NO → • Check power supply.

YES



Disconnect the BL2, black tab relay and white tab relay connectors at the main PCB. Measure the resistance between BL2-③(YL) and Black wire on the black tab relay connector. Is the resistance 18-22 Ω?

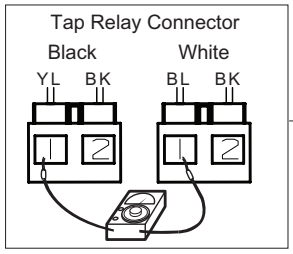
NO → • Check wiring and connectors to the element.
• See element component test.

YES

Measure the resistance between BL2-③(YL) and Blue wire on the white tab relay connector. connector. Is the resistance 18-22 Ω ?

NO → • Check wiring and connectors to the element.
• See element component test.

YES

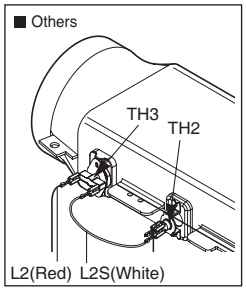


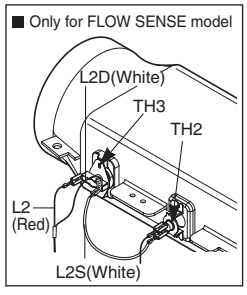
Measure the resistance between Black wire on the black tab relay connector and Blue wire on the white tab relay connector. Is the resistance 36-44 Ω?

NO → • Check wiring and connectors to the element.
• See element component test.

YES

Refer to the hi-limit thermostat and thermal cut off component tests.

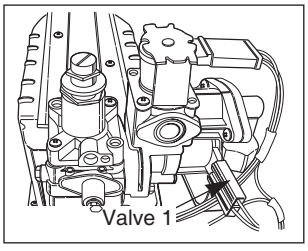


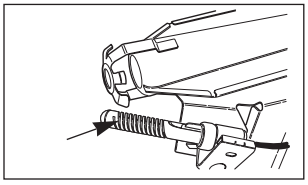


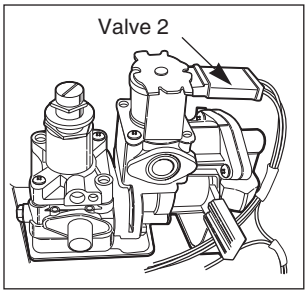
※ Wires
- L2(Red)
- L2D(White) : Go to the duct(YL3 in main pcb)
- L2S(White) : Go to the safety.

■ Test 7 CAS 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, is the valve at least 90 V DC? **NO** → • Check thermostat hi-limit safety

YES

Igniter operates? (after 1 minute, igniter becomes reddish) **NO** → • Check Igniter and frame detect

YES

When measuring Valve 2 voltage, value is more is the valve at least 90 V DC? (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 than1.5 ~ 2.5 kΩ? (Measure after Power off) **YES** → • Change valve

NO

If valve 1 and valve 2 read less than 10 V DC, are the valves 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

■ Test 8 Motor Assembly, DC, Pump

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 wire.)
Trouble Symptom	During the diagnostic test, E5 error occurs.
Measurement Condition	Turn the dryer's power off, then measure resistance.

After activating the *diagnostic test, press the START/PAUSE button 4 times.
Is AD value displayed higher than 10 ?

Note : Let the dryer start each test step Before continuing to the next. If you press the button in rapid-fire succession, you could damage the main board.

NO

- Replace the DC pump

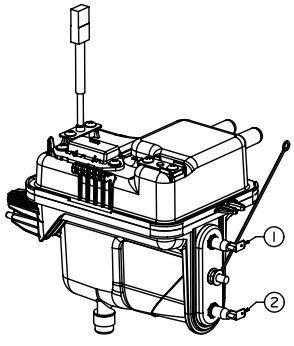
YES

Normal condition

*** see page 26 for diagnostic test information.**

■ Test 9 Generator Assembly

Caution	Before measuring resistance, be sure to turn power off, and discharge voltage. (When discharging, contact the metal plug of power cord with the ground wire.)
Trouble Symptom	① During steam cycle, generator assembly is not heating. ② During diagnostic test, tE4 error occurs.
Measurement Condition	Turn the dryer's power off, then measure resistance.



Is resistance 14.3 Ω (± 5%) between heater terminal ① and ② ?

NO

- Replace the generator assembly
- If the measured resistance is out of spec, replace the steam generator assembly.

YES

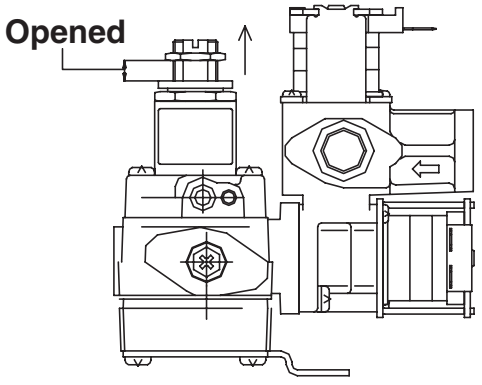
Normal condition

11 CHANGE GAS SETTING (NATURAL GAS, PROPANE GAS

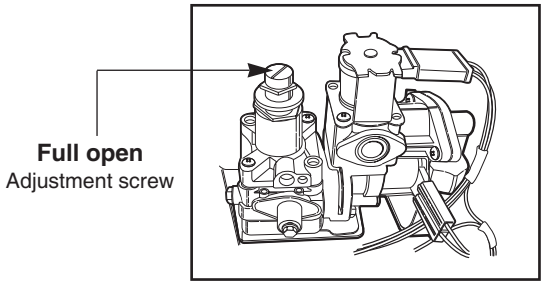
⚠ Warning *Changing orifices and gas valve adjustments improperly can result in explosion and/or fire. Conversion must be made by a qualified techni*

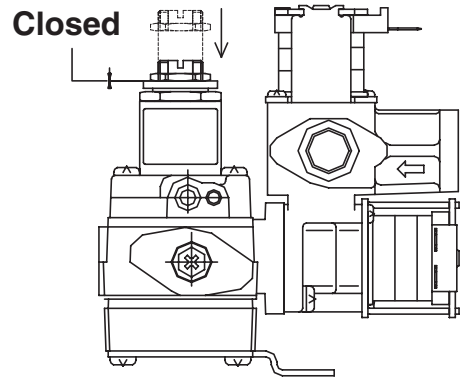
Initially, The burner is set for natural gas at the factory. The propane orifice conversion kit is sold as a service part to autherized servicers only. Part numbers are shown below.

STEP 1 : VALVE SETTING

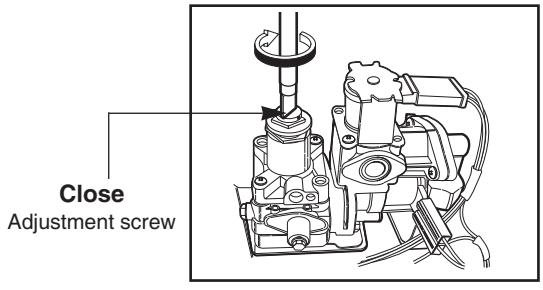


NATURAL GAS SETTING

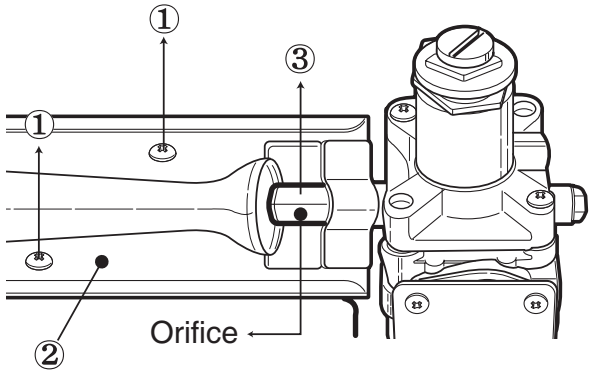




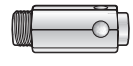
PROPANE GAS SETTING



STEP 2 : ORIFICE CHANGE

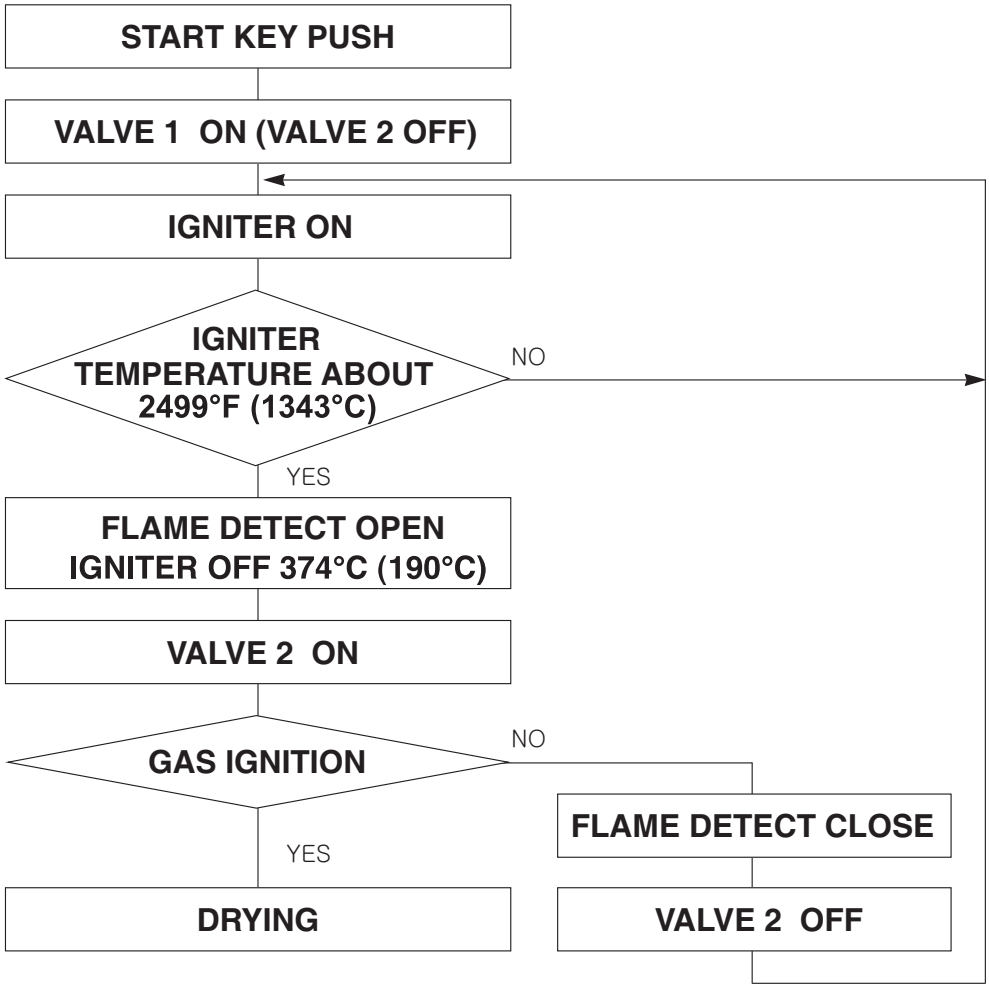


① Remove 2 screws.
② Disassemble the pipe assembly.
③ Replace natural gas orifice with propane gas orifice.

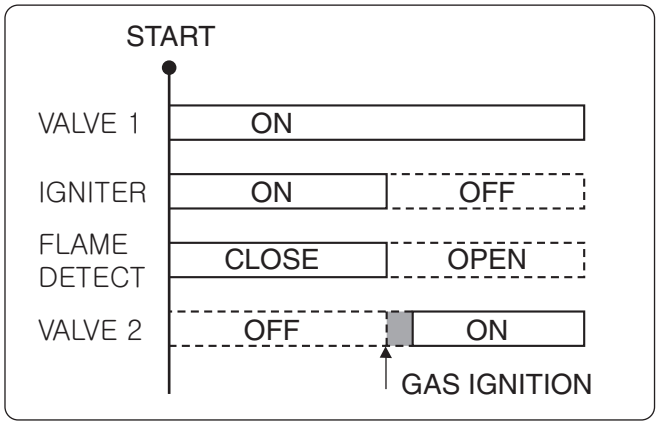
Gas type	Orifice P/No	Marking	Shape
Natural Gas	4948EL4001B	NCU	
Propane Gas	4948EL4002C	PCK	

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

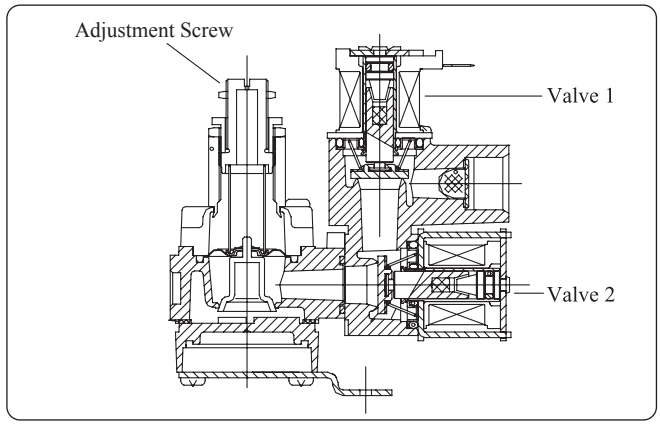
■ GAS VALVE FLOW



GAS IGNITION



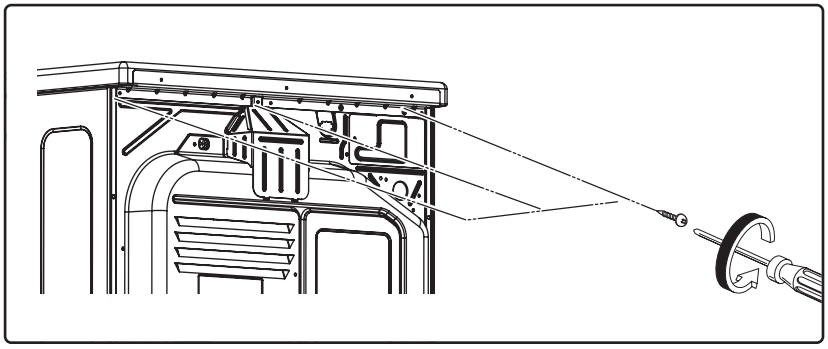
GAS VALVE STRUCTURE



12 DISASSEMBLY INSTRUCTIONS

※ Unplug the dryer before servicing.

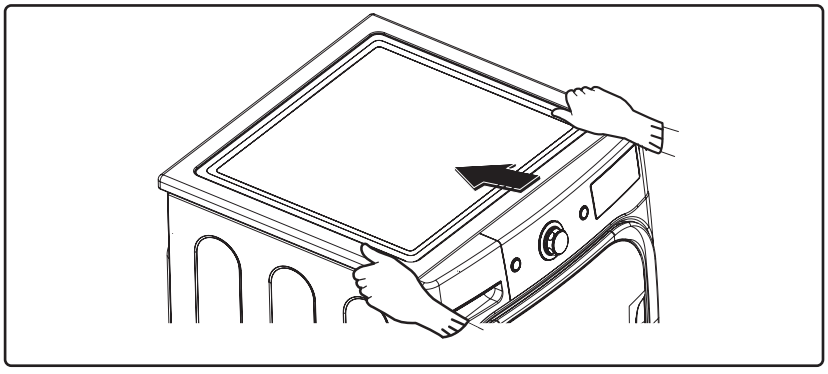
① TOP PLATE



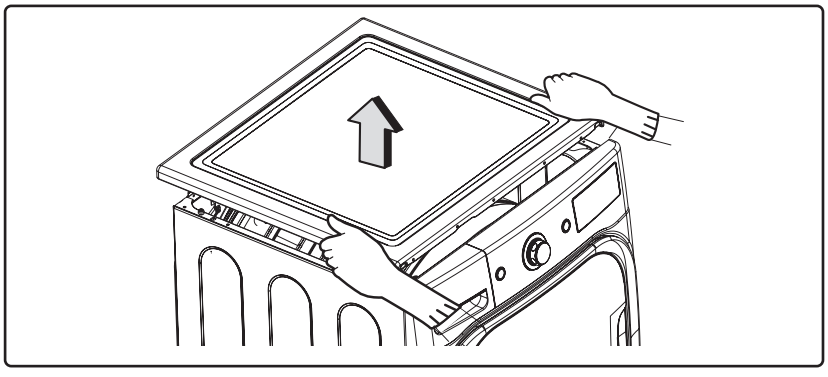
⚠ WARNING !

When you disassemble the top plate, be sure to disconnect the dryer from its electrical supply. Protect your hands and arms from sharp edges when working. To reduce the risk of Injury to persons adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses.

1. Remove 3 screws on the upper plate.



2. Push the top plate backward.

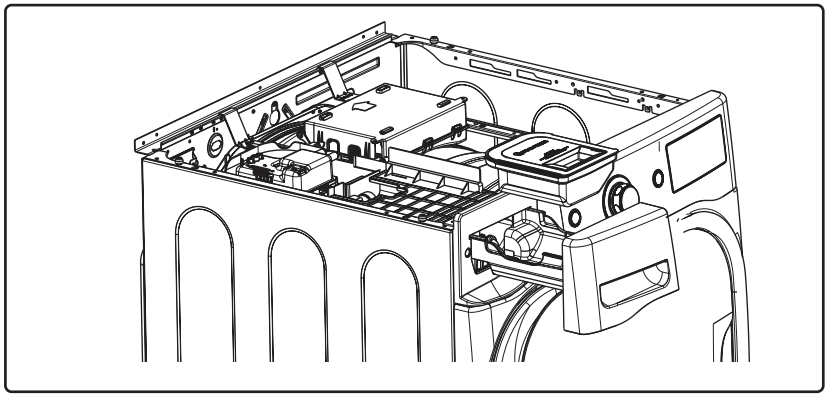


3. Lift the top plate.

⚠ WARNING !

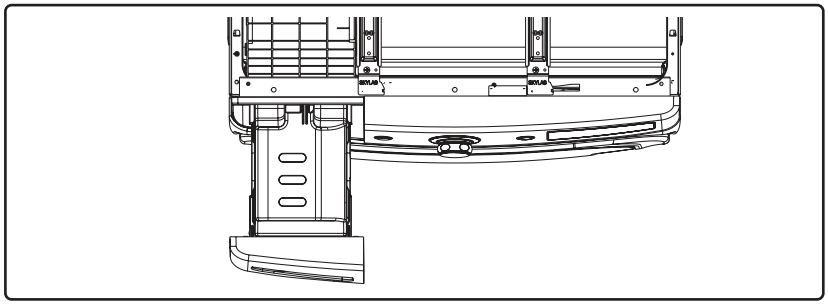
THE DRYER TOP PLATE IS VERY LARGE AND HEAVY. Fallure to follow instructions can result in damage to the dryer, property damage or Injury to persons.

② PANEL DRAWER ASSEMBLY



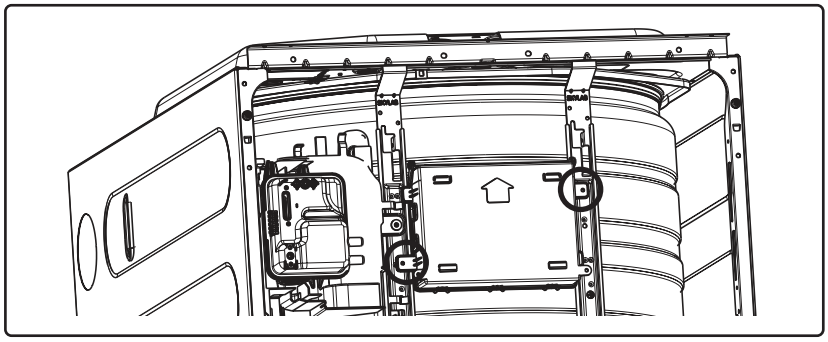
1. Pull the drawer.

2. Lift out the steam feeder.

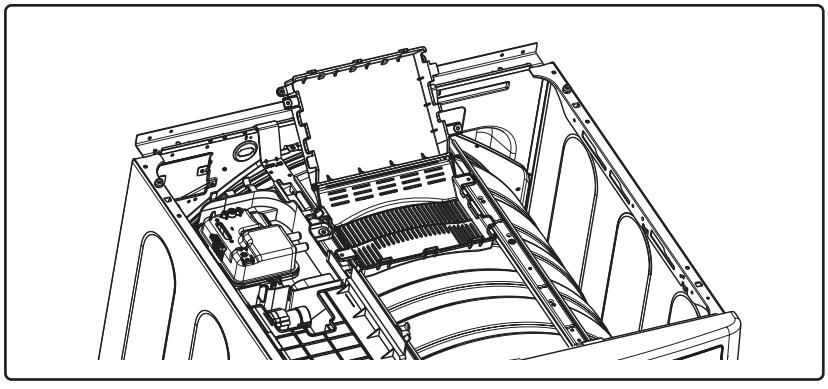


3. Lift the hook and pull out the drawer.

③ PCB ASSEMBLY

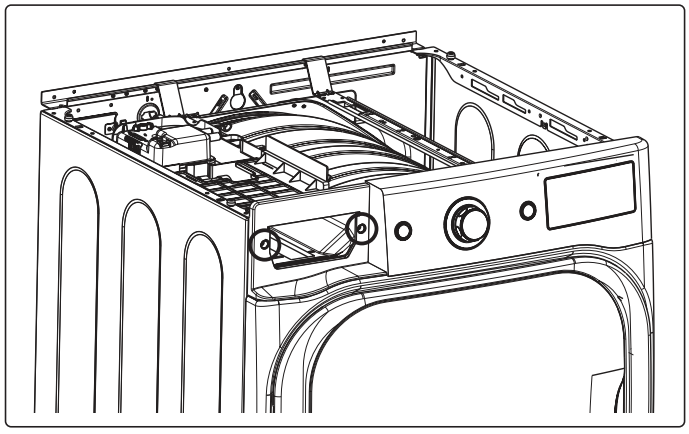


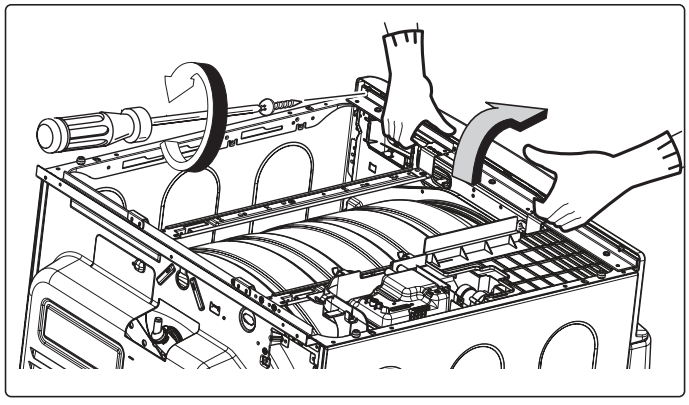
1. Remove 2 screws on the frame body.

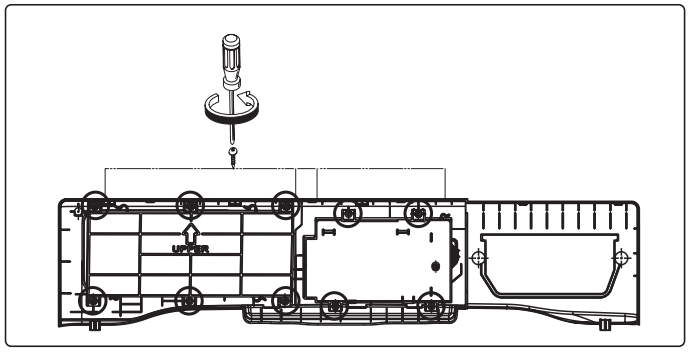


2. Open the cover guide and disconnect the connectors.

④ CONTROL PANEL ASSEMBLY







⚠ WARNING !

When you disassemble the control panel, be sure to disconnect the dryer from its electrical supply. Protect your hands and arms from sharp edges when working. To reduce the risk of Injury to persons adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses.

1. Remove 2 screws on the control panel.

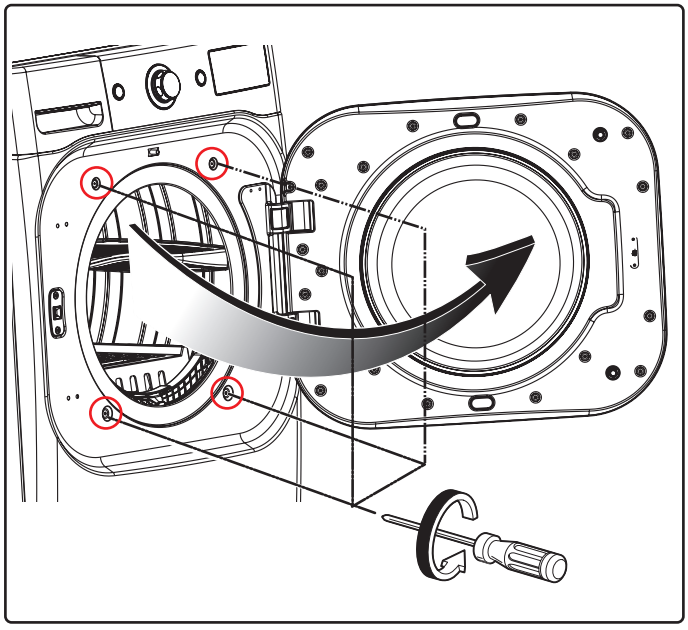
2. Remove 1 screws on the panel frame.

3. Pull the control panel assembly upward and then forward.

4. Remove 10 Screws on the PCB assembly.

5. Disassemble the control panel assembly.

⑤ COVER CABINET



⚠ WARNING !

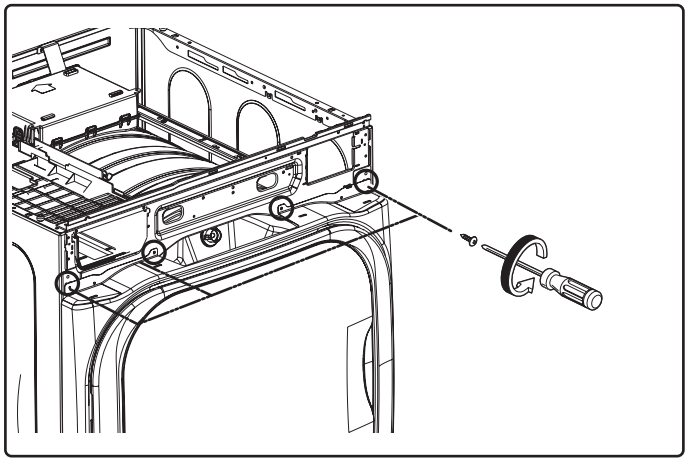
When you disassemble the door switch connector, be sure to disconnect the dryer from its electrical supply. Protect your hands and arms from sharp edges when working. To reduce the risk of Injury to persons adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses.

1. Disassemble the top plate.

2. Disassemble the control panel assembly.

3. Open the door.

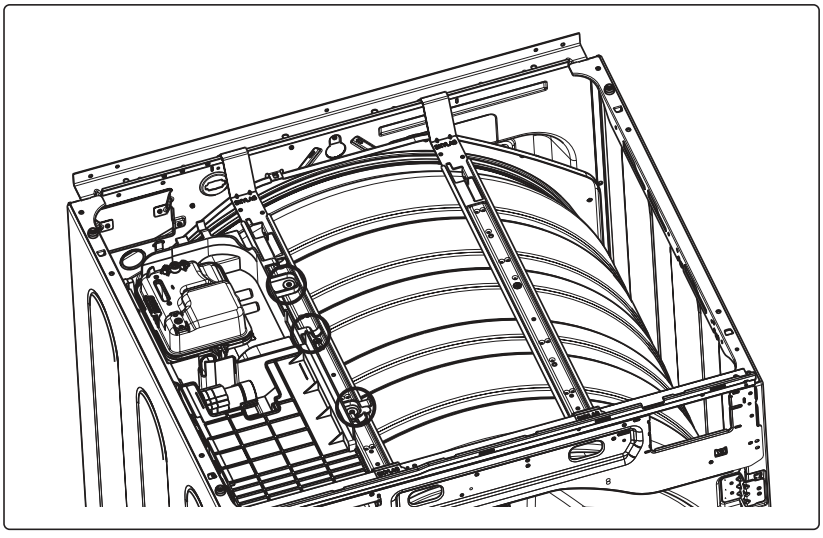
4. Remove 4 screws.



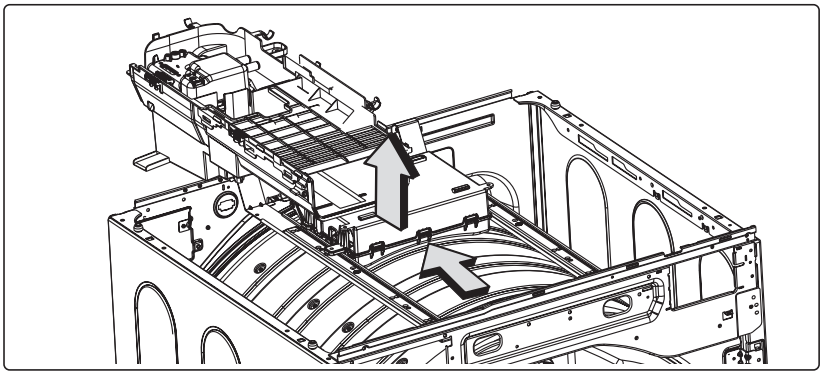
5. Remove 4 screws from the top of cabinet cover.

6. Disconnect the harness of door switch.

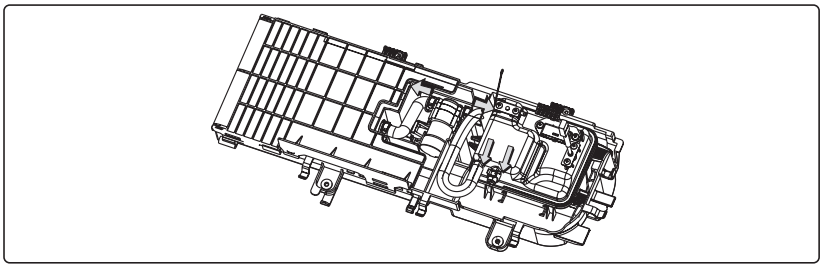
⑥ GUIDE ASM



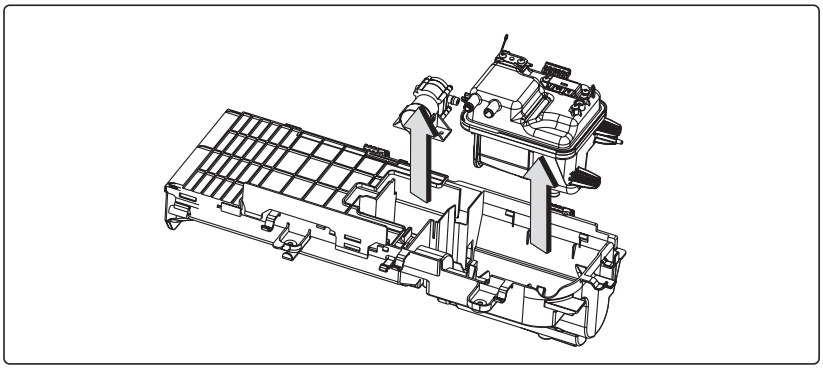
1. Remove 3 screws on the frame body.



2. Push the guide assembly to the back side and then lift it.

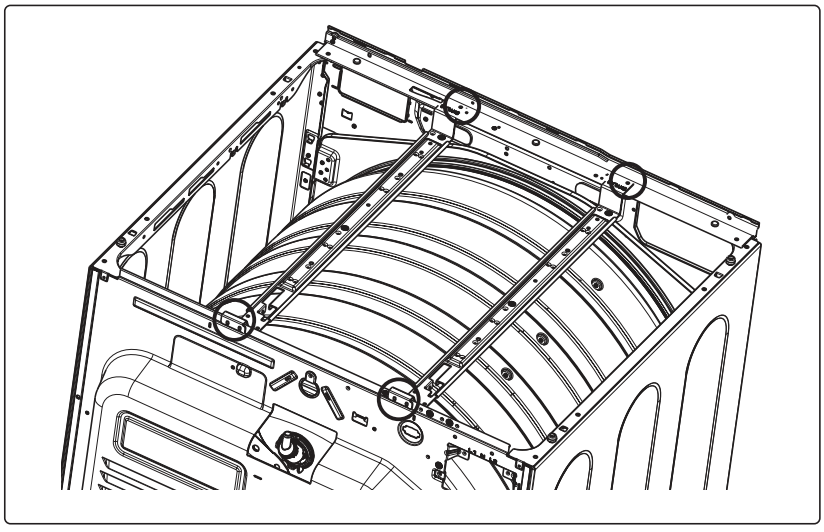


3. Separate 2 hoses from the pump and generator.

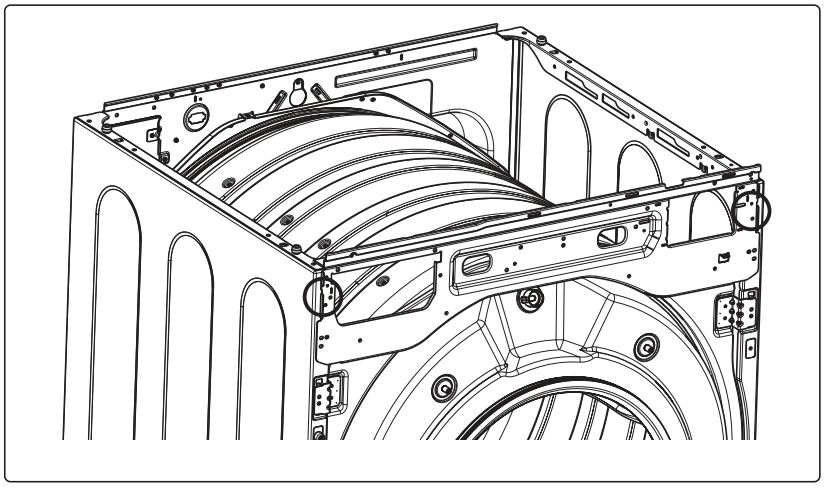


4. Lift a pump and generator up.

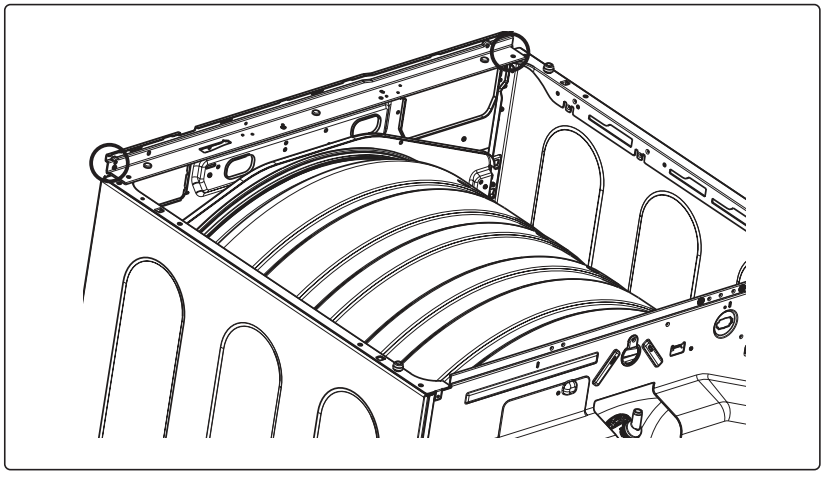
⑦ BODY FRAME & PANEL FRAME



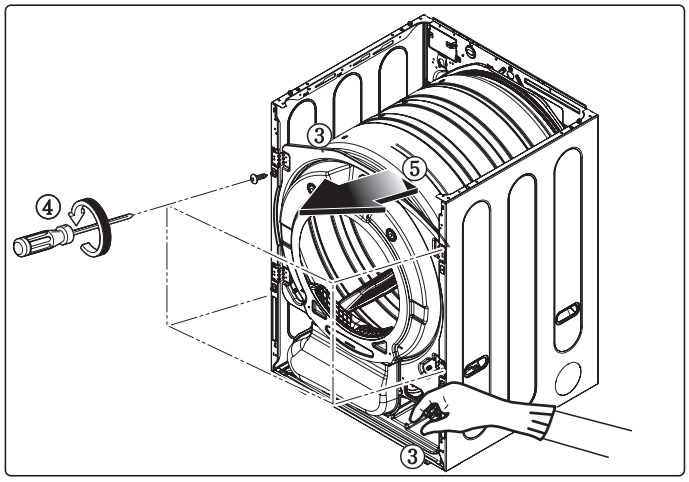
1. Remove 6 screws on the frame body.
   and then disassemble the frame body.

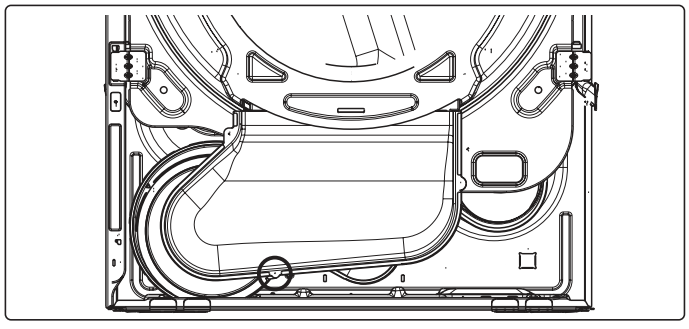


2. Remove 4 screws on the panel frame
   and then remove it.



⑧ TUB DRUM [FRONT]





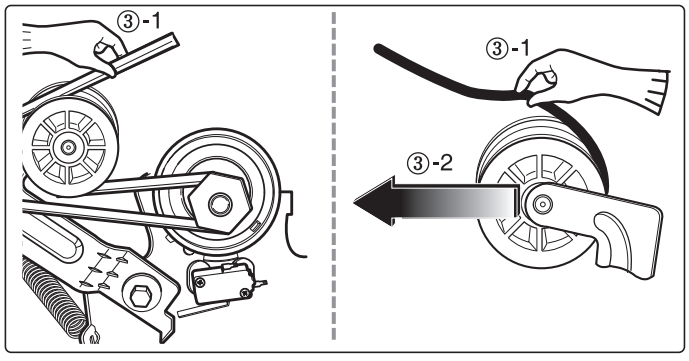
⚠ WARNING !

When you disassemble the lamp connector, be sure to disconnect the dryer from its electrical supply. Protect your hands and arms from sharp edges when working. To reduce the risk of Injury to persons adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses.

1. Disconnect the door lamp and electrode sensor connector.
2. Remove 4 screws.

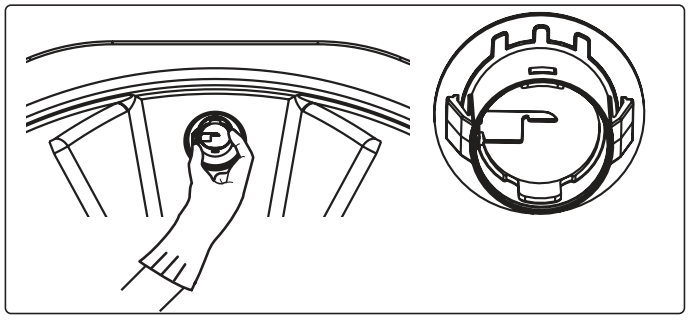
1. Remove 1 screw.

⑨ DRUM ASSEMBLY



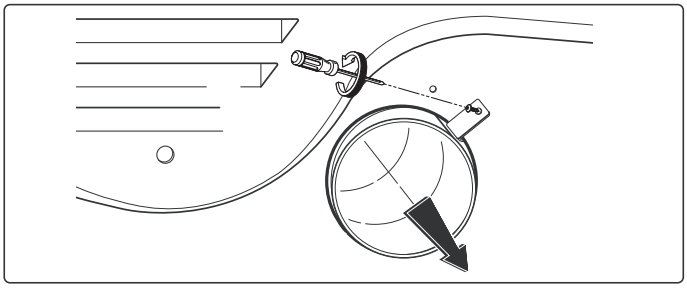
1. Open the top plate.
2. Remove the cabinet cover and the front bulkhead.
3. Loosen belt from motor and idler pulleys.
4. Carefully remove the drum.

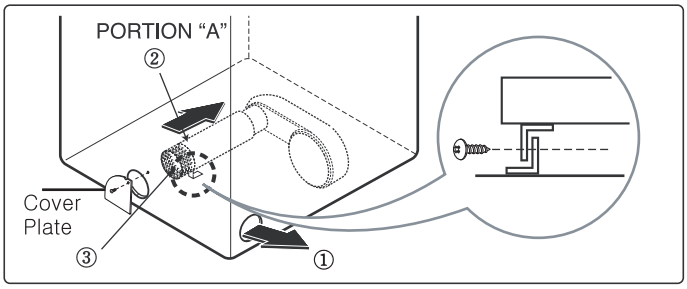
⑩ CHANGING THE DRUM LAMP

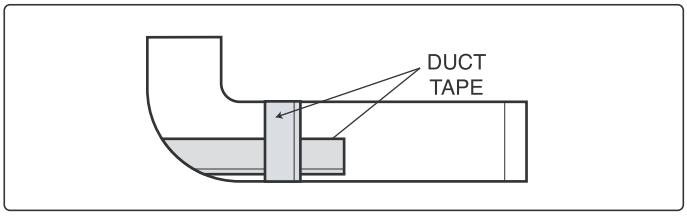


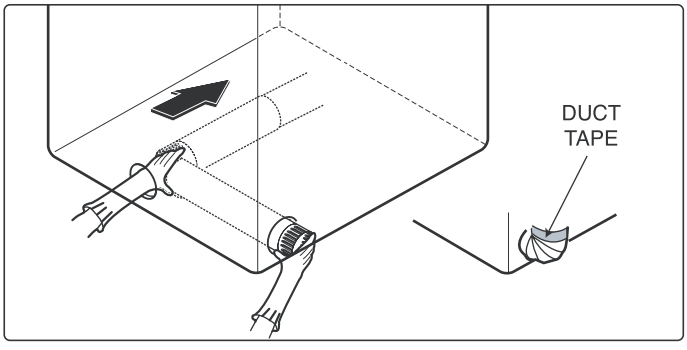
1. Remove the control panel.
2. Hold the lamp in place while pressing lamp both side.
3. Replace the new lamp.

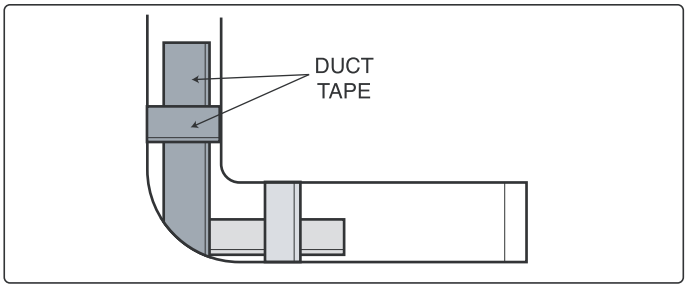
⑪ DRYER EXHAUST CHANGE











⚠ WARNING !

Before performing this exhaust installation, be sure to disconnect the dryer from its electrical supply. Protect your hands and arms from sharp edges when working inside the cabinet. To reduce the risk of Injury to persons adhere to all industry recommended safety procedures including the use of long sleeved gloves and safety glasses.

1. Remove screw and exhaust duct.

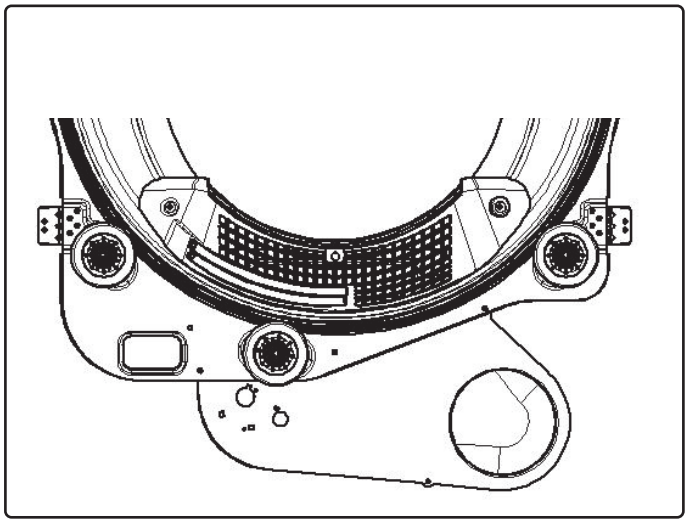
2. Detach and remove a knockout at the bottom left or right side as desired. (Right side vent not available on gas dryer)
①, ②, and ③ indicate the steps, in order.

3. Replace the removed piece with the short, tabbed duct from the kit and tighten the screw.
(The kit is a service part.)

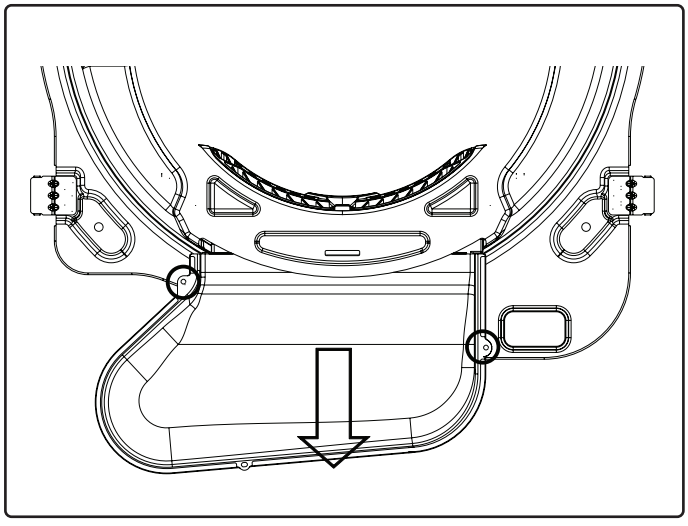
4. Attach the elbow to the other short piece of 4" duct from the kit. Tape the joint.

5. Insert the elbow duct assembly through the side opening and connect the elbow to the internal duct. Tape the joint.
Note : Use real foil duct tape. Do not use the inexpensive canvas and adhesive tape. It will dry out, leak lint, and present a fire hazard.

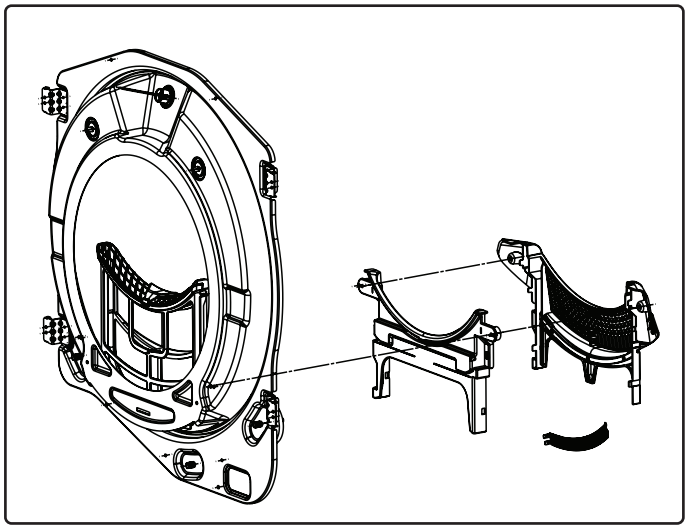
⑫AIR DUCT & FILTER ASSEMBLY



1. Remove 5 screws.



2. Pull down to remove the Air Duct.

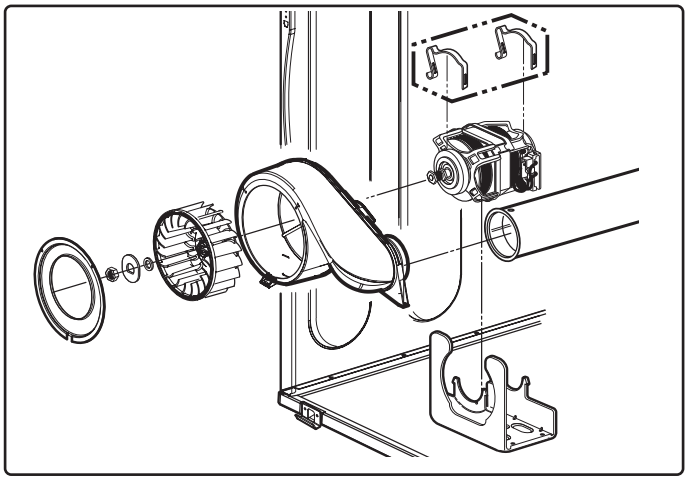


3. Remove the filter.

4. Remove cover filter and guide filter.

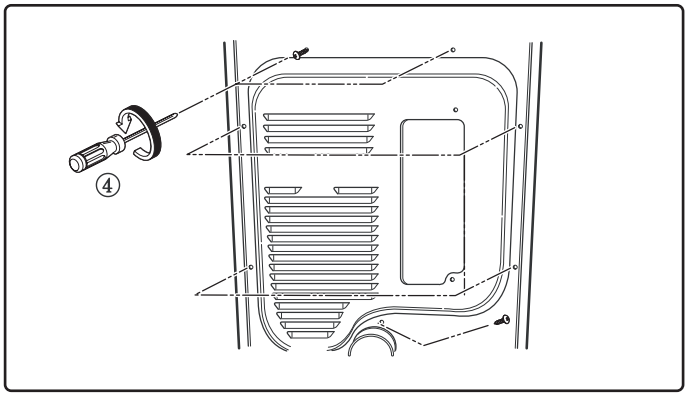
5. Disconnect the electrode sensor.

⑬ BLOWER HOUSING



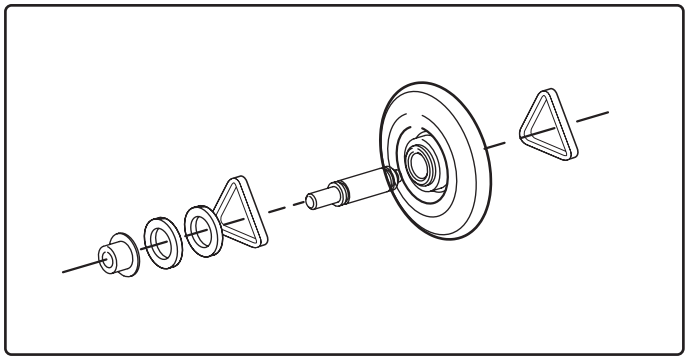
1. Remove the top plate.
2. Remove the cabinet cover and front bulkhead.
3. Remove the drum assembly.
4. Remove 2 screws and cover (Air guide).
5. Remove the bolt and washer.
6. Remove the blower wheel. (Left-hand thread!).
7. Disconnect the motor clamp and motor.

⑭ BACK COVER



1. Open the top plate.
2. Remove the cover cabinet and front bulkhead.
3. Remove the drum assembly.
4. Remove 7 screws.
5. Pull the rear bulkhead towards the front.

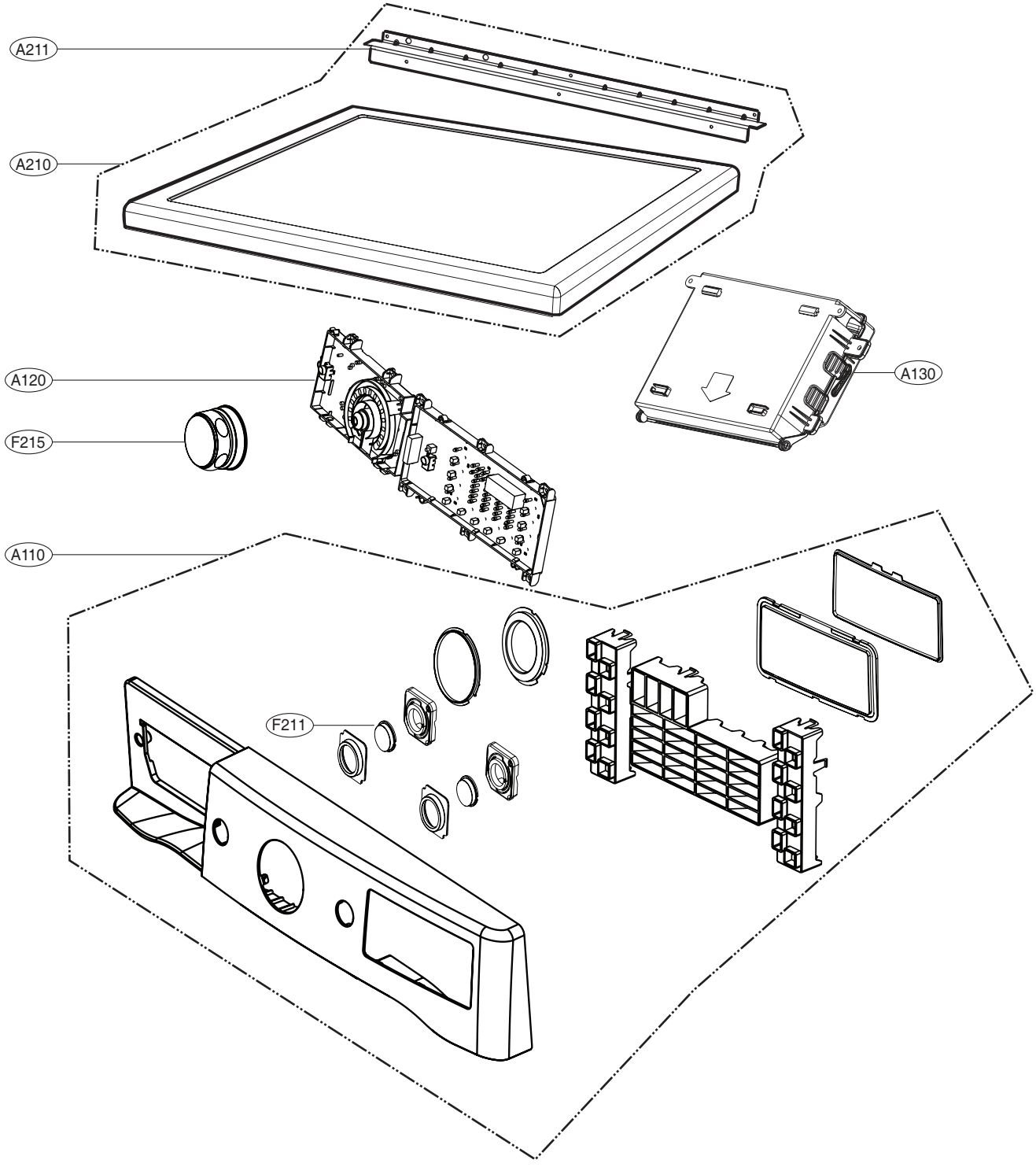
⑮ ROLLERS



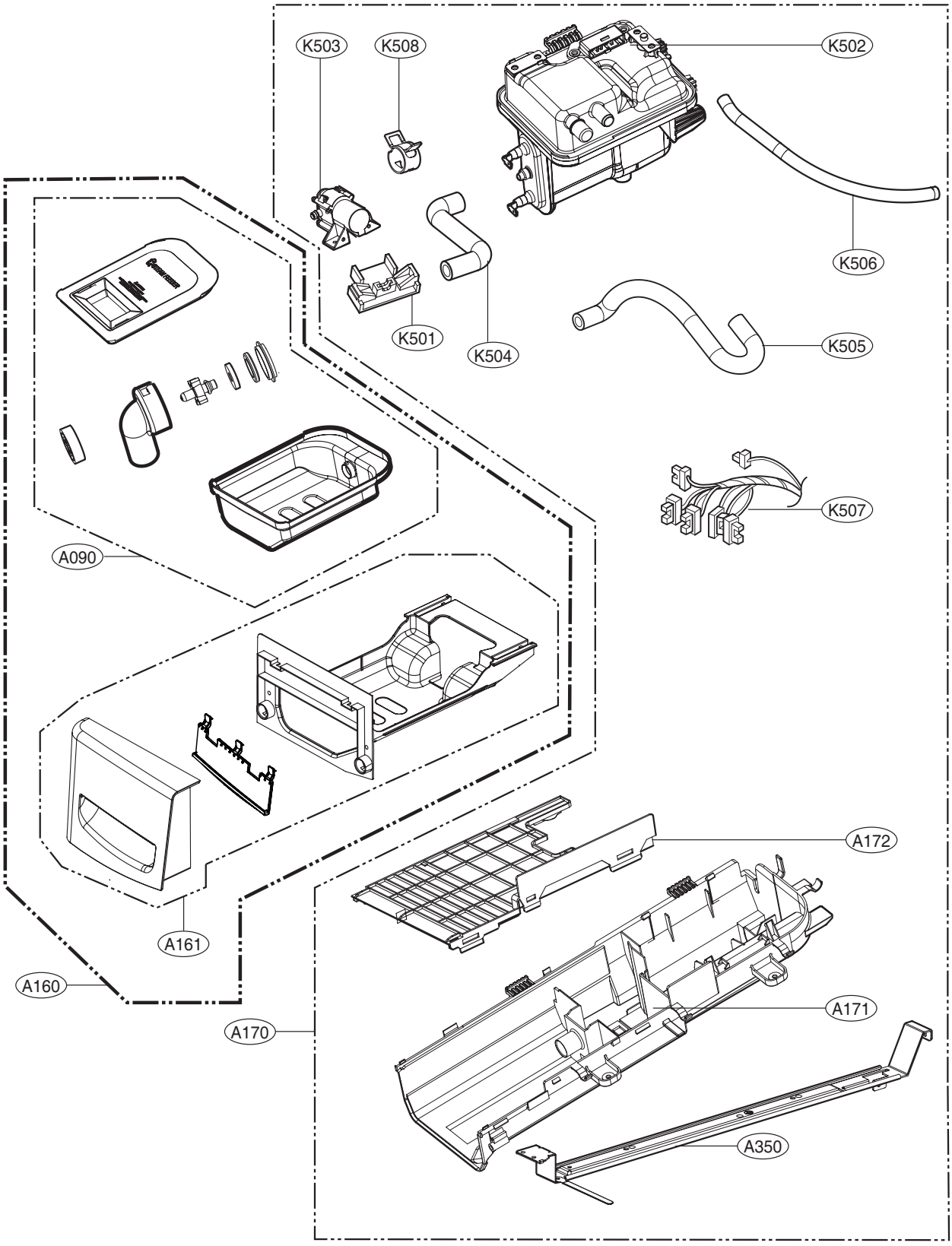
1. Disassemble the top plate.
2. Remove the cover cabinet and front bulkhead.
3. Remove the drum assembly and front bulkhead.
4. Disconnect the air duct from the front bulkhead.
5. Remove the rollers from the front bulkhead. and rear bulkhead.

13 EXPLODED VIEW

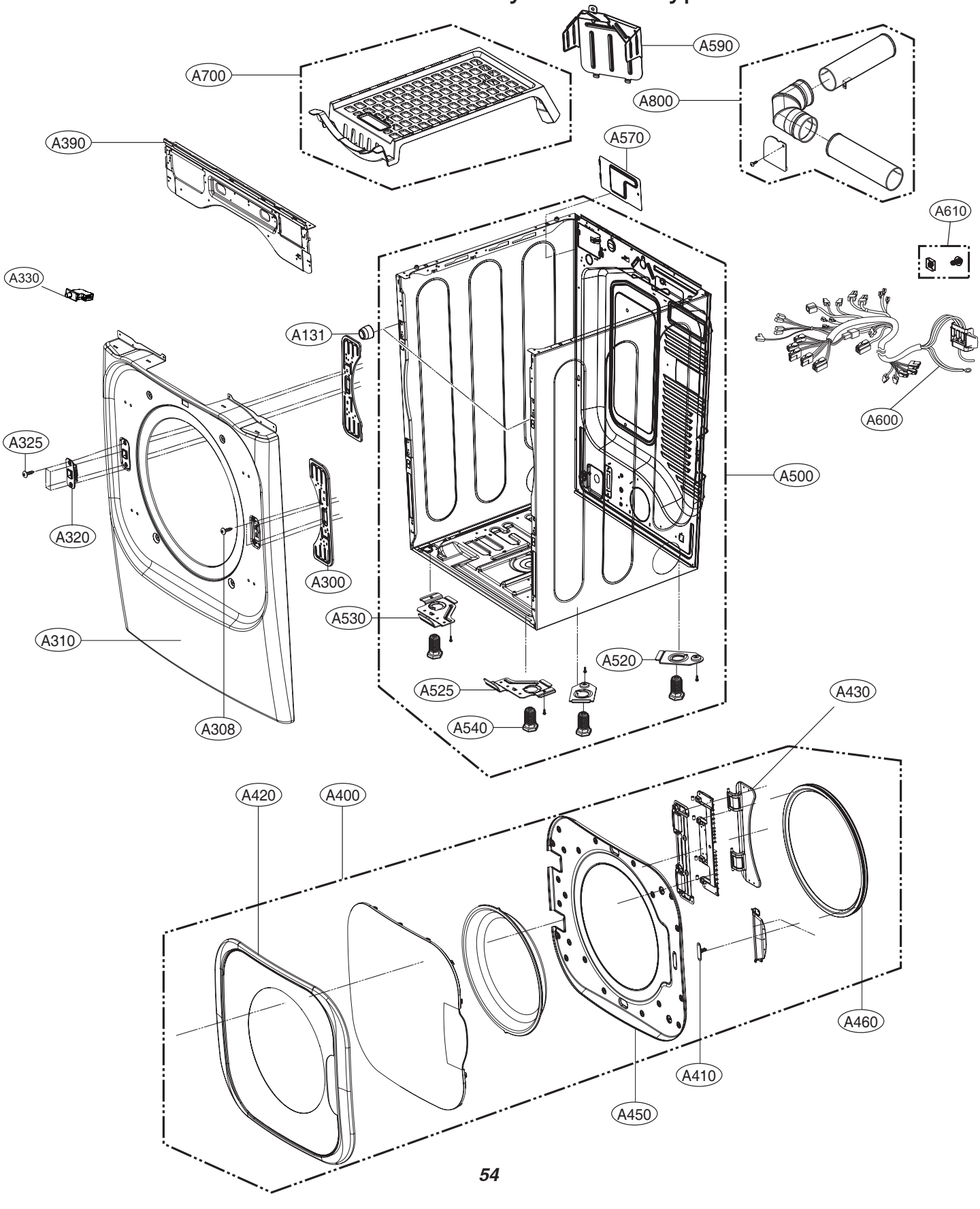
13-1. Control Panel and Plate Assembly



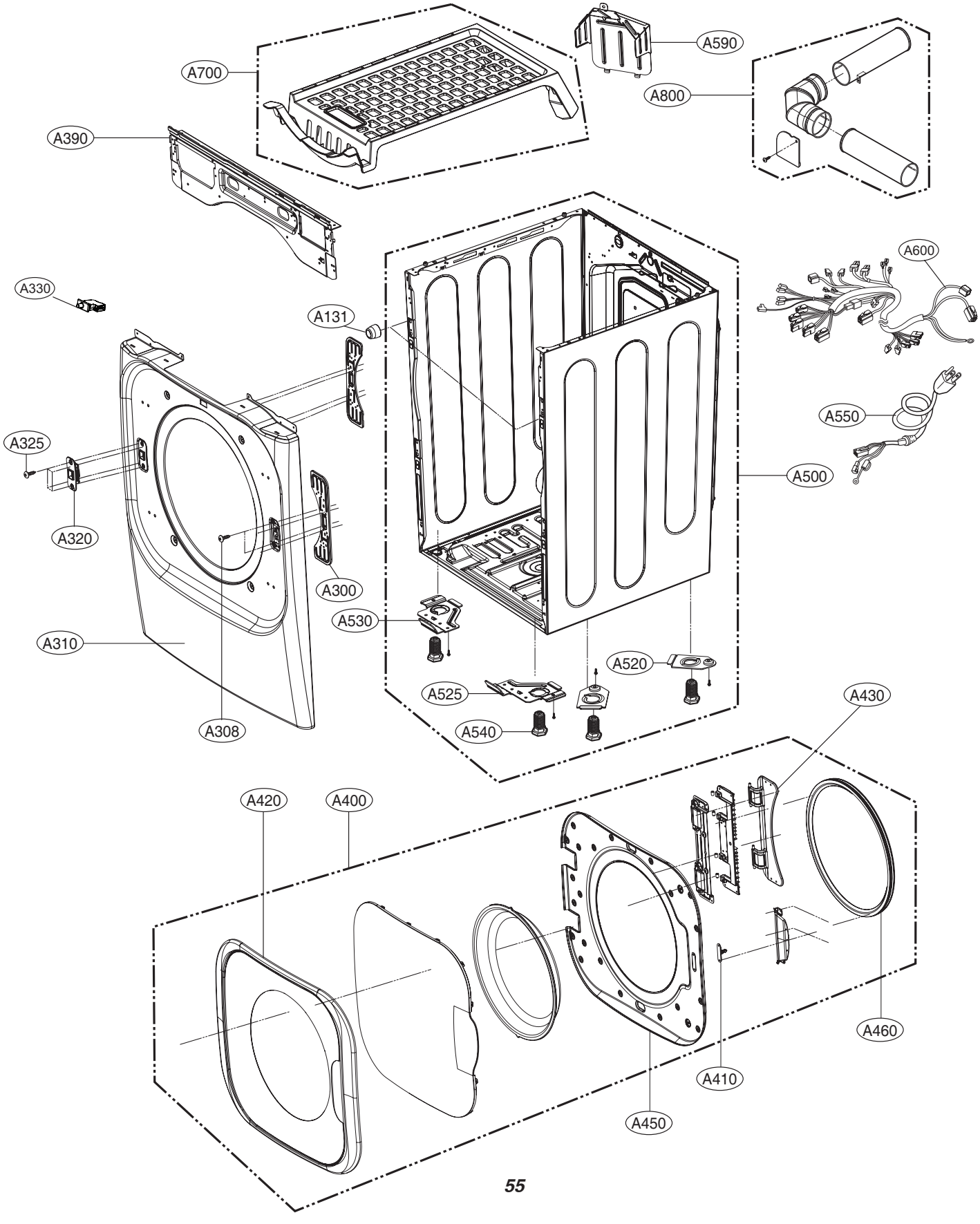
13–2. Panel Drawer Assembly and Guide Assembly



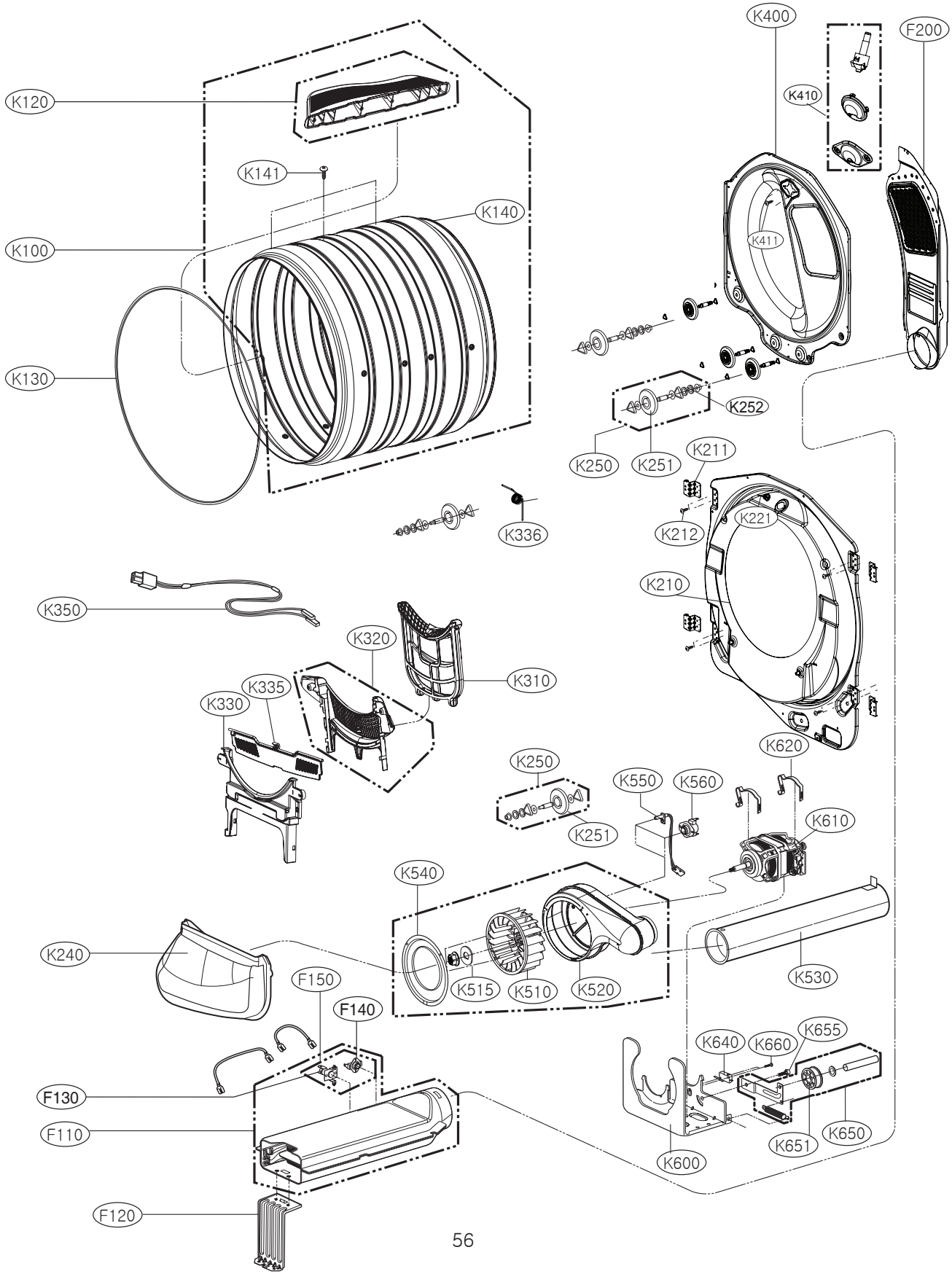
13-3-1. Cabinet and Door Assembly: Electric Type



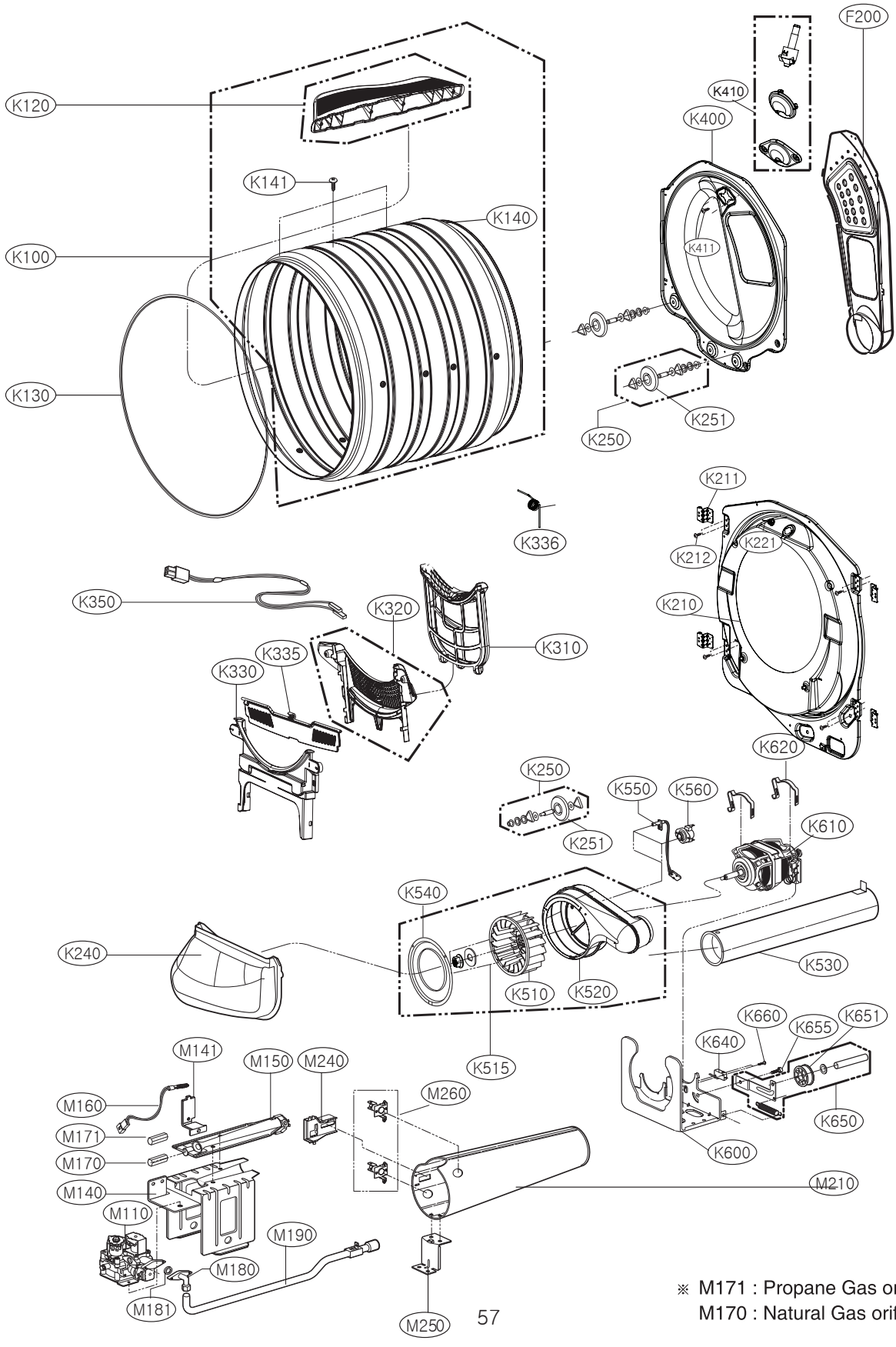
13-3-2. Cabinet and Door Assembly: Gas Type



13-4-1. Drum and Motor Assembly: Electric Type



13-4-2 Drum and Motor Assembly: Gas Type



※ M171 : Propane Gas orifice
M170 : Natural Gas orifice

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