

# CONDENSING DRYER SERVICE MANUAL

#### CAUTION

READ THIS MANUAL CAREFULLY TO DIAGNOSE TROUBLE CORRECTLY BEFORE OFFERING SERVICE.

MODEL : TD-C70070E



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P/No.:3828EL

# **IMPORTANT SAFETY NOTICE**

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

# **A** WARNING !

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

# **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.

# **IMPORTANT**

Electrostatic Discharge (ESD) Sensitive Electronics

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

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

- OR -

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

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

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ITEMS	TD-C70070E	REMARK
MATERIAL & FINISHES		
DRYING TYPE	Condenstation	
WEIGHT	45 kg (Gross : 50 kg)	
DIMENSION	595(W) x 850(H) x 600(D)	
STANDARD DRYING CAPACITY	4.1 cu.ft	
CONTROL TYPE	Electronic Control	
POWER SUPPLY	AC 220~240V, 60Hz (16A)	LGEUK:13A, LGEAP:10A
MOTOR	250W	
HEATER	2350W	LGEUK:2350W, LGEAP:1900W
LAMP	20W(125mA)	
DOOR SWITCH	250V(5A)	
THERMOSTAT	240V(25A)	
CONTROL TYPE	Electronic	
DRUM CAPACITY	116 Liter	
SAFETY DEVICES	Thermal Fuse (Motor)	
	Over current protect (Motor)	
	Thermostat	
SENSING TYPE	Micom electronic Control	
	1. Temperature : 2 thermistors	
	2. Humidity : Electrode Sensor	
FILTER	Removable (Double screen)	
DRUM SPEED	54~58 rpm	
REVERSIBLE DOOR	Available	
DRUM	Stainless steel	
DRYER RACK	Available	
CHILD LOCK	Available	
TEMPERTURE CONTROL	Available	High/Low Temp buttons
BUZZER OFF	Available	Default : On
ANTI-CREASE COURSE	Available	Dafault : OFF
TIME DELAY	Available	3~19 hours
DRUM INTERIOR LIGHT	Available	
LED DISPLAY	TIME DISPLAY	
	RUNNING STATUS INDICATOR	
	EMPTY WATER	
	CLEAN FILTER	
	CHILD LOCK	
	TIME LEFT	
	START/PAUSE	

# FEATURES AND LOOK





### Ultra Big Capacity Drum

The LG Dryer has a large capacity.



Drying time is shortened by efficient air flow mechanism and optimized heater.



#### Innovative Noise Reduction

Noise is reduced by optimized design of air flow system and vibration reduction technology.



#### Ease of Use

Large LED display and electronic control.

#### What are Sensor Dry and Manual Dry?

Your dryer provides sensor drying and manual drying programs.

**Sensor Dry** Dryer electronically senses laundry moisture level and it automatically determines operation time based on the dryness of the load and the selected program. At times, you can see sudden increase or decrease of operation time. It happens because a sensor will detect laundry humidity with a certain period. Sudden change of operation time is not a malfunction.

**Manual Dry** Manual Dry allows you to set operation time manually to complete drying. Or use Manual Dry if clothes are still damp after sensor dry cycle is finished. Manual Dry is more effective for heavyweight and bulky items such as king-size bed sheets and thick work clothes.

# Control Panel

TD-C70070E/75E

#### **LED Display**

- Time Display
- Indicator lamps



5

**Program selector** Start/Pause

#### **Additional function buttons**

- High Temp. / Low Temp.
- Buzzer off
- Wrinkle care
- Favourite
- Time Delay



#### **Accessory parts**

 $\bigcirc$ 

1. Drain Hose Assembly



3. Stacking kit Assembly



2. Dryer Rack Assembly(Purchased Seperately)







These are functioning to shorten or lengthen the cycle time by increasing or decreasing temperature.

#### **Buzzer off**

This is about buzzer sound on/off. After power is on and you select cycle, buzzer will sound when you press a certain button on the panel.

If you don't like to hear that sound, just press button. The Buzzer is then turned -off.

#### Wrinkle care

Wrinkle care is functioning to prevent creases and rumples that are formed when the laundry is not unloaded promptly at the end of drying cycle. In this function, the dryer repeatedly runs and pauses to the cycle end. If the door is open during Wrinkle care process, this function is cancelled. But in case of door open during normal operation without selecting Wrinkle care, this function will be remembered and processed.

### 🔵 Favourite

If there is some cycle you would like to make based on your own drying habit, use "Favourite". Once favourite cycle is stored, you can repeatedly use next time before changing the stored setting. For instance, you turn power on and select Extra Dry in Cotton Cycle and Low temp and Anti-Crease in series and then lastly press "Favourite" until the dryer beeps. It's about 3 seconds. That's all you have to do.

The next time, when turning the dryer on and pressing "Favourite" you can see the above options you select displays on the panel.

### ) Time Delay

You can use the Time Delay function to delay the finishing time of drying cycle. Maximum Time Delay is 19 hours.

- 1. Turn the dryer on
- 2. Select cycle
- 3. Set time delay hour
- 4. Press Start/Pause button

### Child Lock

For the safety of your children, press High Temp. and Low Temp. buttons at the same time for about 3 seconds. You can check this function by seeing the dryer display " $\mathcal{L}L$ " on LED window.

### Cycle Selection Table

Electronic Auto Dry Cycles		Standard Program	
Mixed-Fabric cycles			
(Note) press the "Low Temp." button	for heat-sensitive items		
Bed linen and table linen, tracksuits, anorak, blankets	For thick and quilted fabrics which do not need to be ironed.	Very	
shirts, blouses and sportswear	For fabrics which do not need to be ironed.	Normal	
Trousers, dressers, skirts, blouses	For fabrics which do need to be ironed.	Damp	
Cotton/Linen (Whites and coloreds)			
(Note) press the "Low Temp." button	for heat-sensitive items		
Towelling, dressing gowns and bed linen	For thick and quilted fabrics.	Very	
Terry towelling, tea towels, towel, bed linen	For thick and quilted fabrics which do not need to be ironed.	More	
Bath towels, tea towels, underwear, cotton socks	For fabrics which do not need to be ironed.	Normal	
T-shirts, trousers, underwear, work clothes	For fabrics which do need to be ironed lightly, not completely.	Less	
Bed linen, table linen, towels, T-shirts Polo shirts and work clothes	For fabrics which do need to be ironed.	Damp	
Bed linen, table linen, towels For fabrics which do need to be pressed.		Damper	
Manual Dry Cycles for selected length of time			
Bath towels, bath robes, dishclothes, Quilted fabrics made of acrylic	Small clothes & pre-dried laundry Normal Normal fabrics using hot temperature for 20minutes	Warm (20min.)	
	Small clothes & pre-dried laundry Normal fabrics using hot temperature 40minutes	Warm (40min.)	
All fabrics needing freshing, tumbles wi	Cool Air (20min.)		
sweater, delicate, fabrics, sportshoes	For the fabrics you do not want tumble dry.	Rack dry	
Special Fabrics			
Wool	For wool fabrics.	Wool	
Silk, Women's thin clothes, lingerie	For fabrics which are heat-sensitive like synthetic fabrics.	Delicates	

# **A** CAUTION

If the load is less than 1kg, please use "Manual Drying course" Your wool should be used in Wool program and heat-sensitive fabrics including silk, underwears, lingerie should be used in delicates courses.

Otherwise, these clothes can cause undesirable drying results.

Course		HighTomp	LowTomp	Buzzer off	Wrinkle care	l oft Timo	
Course	detail	nignreinp	Lowiemp	Duzzei Uli			
Cotton	Very	0	0	0	0	125	
	More	0	0	0	0	120	
	Normal	0	0	0	0	115	
	Less	0	0	0	0	103	
	Damp	0	0	0	0	97	
	Damper	0	0	0	0	90	
Mixed	Very	0	0	0	0	53	
Fabric	Normal	0	0	0	0	48	
	Damp	0	0	0	0	41	
Timed	Warm(20)	Х	Х	0	0	20	
Drying	Warm(40)	Х	Х	0	0	40	
	Cool-Air(20)	Х	Х	0	0	20	
	Rack Dry(40)	Х	Х	0	Х	40	
Special	Wool	Х	Х	0	0	69	
Fabric	Delicate	Х	Х	0	0	45	

### Level the dryer

0

Adjustable feet



Raise

0

**1.** Levelling the dryer is to prevent undesirable noise and vibration.

When placing your dryer in an solid and level area where water is not dripping and freezing, flammable materials are not stored.

**2.** If the dryer is not properly level, adjust the front levelling legs up and down as necessary.

Turn them clockwise to raise and counterclockwise to lower until the dryer is not wobbling both front-to-back and side-to-side.

\* Diagonal Check

When pushing down the edges of the washing machine, the machine should not move up and down at all. (Please, check both of two directions) If machine rocks when pushing the machine top plate diagonally, adjust the feet again.

### **GROUNDING INSTRUCTION**

Adjustable feet

Adjustable feet

Lower

This appliance must be grounded. In the event of malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for the electric current.

This appliance is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

### WARNING

Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or a service person if you are in doubt as to wether the dryer is properly grounded.

### **Additional Grounding Procedure**

Some local codes may require a separate ground. In such cases, the required accessory ground wire, clamp and screw must be purchased separately.

### Stacking Kit

In order to stack this dryer on LG Washing machine, you must purchase the LG stacking kit that is fitted by LG washing machine top plate size.

1. Place the LG dryer on the LG Washing machine.





2. Unscrew Rear cover in the Base by unscrewing 2 screws.



**3.** After detaching protection sheet of doubleside tape, align stacking kit holes rear cover holes and then attach tape to the washer by pressing hard.



- 4. Assemble a stacking kit as following.
- Screw 2 screws which is unscrewed earlier to assemble dryer rear back and stacking kit.(1)
- Use accessory screws to assemble washer rear cover and stacking kit. (2), 3)
- The procedure for the opposite side will be the same.





The dryer can drain water without delivering to water container. Water is directly pumped out of the dryer.

#### **Front Ventilation Grille**

Vacuum the front ventilation grill 3~4 time a year to make sure there must be no build-up of lints or dirts which cause improper intake air flow.





### **Condensed water Drain-out**

Normally, condensed water is pumped up to water container where water is collected until emptied. Not only using water container, but water can be drained out directly to drain hose especially when dryer is stacked on top of washing machine.

With connecting kit for drain hose, you can simply change water path and water reroute to the drainage facility.

Please follow the below steps.

1. Unscrew cover.



2. Take connecting kit out.



**3.** Separate water container hose from the kit.



**4.** Connect drain hose to the kit.



#### Moisture Sensor?

This device functions to sense the moisture remaining contents of the laundry during operation which means it must be cleaned all the time. The main reason of cleaning this part is to remove the build-up of lime scale on the surface of sensor. Wipe the sensors inside drum (Shown in the picture).



#### **Reverse the door**

The door can be reversed to fit to your own installation conditions. From the factory, the door hinge is located on the right side.

# **CAUTION**

- 1. This work may cause the injury of your hands so you must be careful to handle some sharp devices like tork screwdriver or slotted screwdriver.
- **2.** When the door is revered, the hand sticker on the door also must be replaced.

Do not use a machine screwdriver.

1. Unscrew the bottom hinge of the door first and top hinge. And then place on the blanket to prevent scratches.



2. Remove the door lock cover.



3. Remove the door lock and replace where door lock cover is located.



4. Detach both hinge point covers.



5. Unscrew two door hinges.



6. Replace both hinge point covers where door hinge is located.



7. Replace the door catch to the reverse location.



8. Screw the door hinges.



### **Change the Bulb**

The bulb itself could be very hot when the dryer just finishes its operation. So before changing the bulb, be sure that the inside of the drum is cool down.

**1.** Open the door, put a hand into the drum and grasp a bulb cover.



2. With the bulb cover held by a hand, turn it to the clockwise with a certain amount of the force.



**3.** Seperate the bulb cover from the socket housing.



# 

Power cord must be unplugged before this work to avoid danger of electric shock.

 Remove the current bulb turning it to counter clockwise direction.
 Be careful that it does not fall off.

**5.** Screw in the new bulb in the reverse unscrewing direction.



**6.** With the bulb cover held by a hand, turn it to the counterclockwise with a certain amount of the force, until you listen to "click sound"



Do not need any special tool for this work. All steps can be done manually.

# **COMPONENT TESTING TIPS**

Component	Test procedure	Check result	Remark
1. Thermostat (Manual type)	Measure resistance of Terminal to terminal 1) Open at 170°C (-10/+5°C)	Measure resistance by pressing button When resistance becomes ∞ Resistance value < 5Ω	Safety Thermostat
2. Thermistor (Low temperature )	Measure resistance of terminal	Resistance value : 10KΩ <u>+</u> 5% (at 25°C)	Cover, Front
3. Heater, Thermistor	Measure resistance of Terminal to terminal	Resistance value : Yellow/White : $28.96 \pm 1\Omega$ Blue/White : $56.29 \pm 2\Omega$	
Thermistor	Measure resistance of therminal to terminal	Resistance value : 200KΩ±5% (at 25°C)	Heater
4. Motor	Measure resistance of Terminal to terminal	Resistance value : White/Blue : $24.8 \pm 2.5\Omega$ Blue/Red : $21.5 \pm 2.0\Omega$	
6. Pump	Measure resistance of Terminal to terminal	Resistance value : 205±10Ω	

Component	Test procedure	Check result	Remark
7. Door S/W	Measure resistance of the Following terminal 1) Door switch knob : open (1 Terminal : "COM"- "NC" (1-3) (2 Terminal : "COM"- "NO" (1-2) 2)Door switch push : Push (1 Terminal : "COM"- "NC" (1-3) (2 Terminal : "COM"- "NO" (1-2)	<ol> <li>1 Resistance value &lt; 1Ω</li> <li>2 Resistance value ÷ ∞</li> <li>1 Resistance value ÷ ∞</li> <li>2 Resistance value &lt; 1Ω</li> </ol>	The state that knob is Pressed is opposite to open condition
8. Lamp holder	Measure resistance of terminal	Resistance value : 80Ω~100Ω AC 230V, 20W	



ELECTRIC DRYER WIRING DIAGRAM

- 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 Door open may trp 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

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- Unit must be in Standby (unit plugged in, display off)
   Press " POWER" while pressing "Buzzer off" and "Wrinkle care" simultaneously.

No. of Button pressing	Checkpoints	Display
None	Check LED lamps	
1 time	<ul><li>Motor run clockwise</li><li>Humidity data</li></ul>	Moisture Pulse count(normal:1 ~ Increase)
2 times	<ul><li>Motor run clockwise</li><li>Humidity data</li></ul>	Moisture Pulse Width time(100ms) (normal:1~Increase)
3 times	<ul><li>Motor run clockwire</li><li>Heat 1750W On</li></ul>	Temp sensed by low temp thermistor(located under door)
4 times	<ul> <li>Motor run clockwise</li> <li>Heat 1750W on, Heat 750W On</li> </ul>	Temp sensed by High temp thermistor(located in base)
5 times	Motor On	
6 times	Motor run counterclock wise	
7 times	• End	

#### **Data Display**

-Tested under normal operation mode.

- Press the <sup>[</sup>Low Temp.] and <sup>[</sup>Time Down] button as follows.

No. of Button pressing	Display
1 time	None
2 times	Temp sensed by low temp thermistor (located under door)
3 times	Temp sensed by High temp thermistor (located in base)



### Test 1 : ELECTRIC SUPPLY & CONTROL CHECK

Trouble Symptom : No power to the dryer or the controller



powered and display button is properly working, Check RLY1,RLY2, RLY3, WH1 in the controller. **DIAGOSTIC TEST** 

### Test 2 DOOR SWITCH / LAMP CHECK

Trouble Symptom : Malfunction of lamp operation and door switch No operation of pump motor Displays "  $d\xi$  " in case of the door closed. The door must be closed and start.

Measurement condition : Check if they are working while being connected to power supply.



#### Test 3 Motor check

Trouble Symptom : Motor malfunction, Occurrence of the "Clean filter" repeatedly



# DIAGOSTIC TEST

#### Test 4 Heater check

()

Trouble Symptom : Motor malfunction, ventilation error

Trouble Symptom : Heater is not working. Drying failure. The designated temperature is not reached.

Measurement condition : ① Power cord is unplugged.

![](_page_23_Figure_5.jpeg)

#### Test 5 Pump check

Trouble Symptom : Check if pump is out of order. " Empty water" signals.

Measurement condition : Power cord is unplugged. Check the hose blocked with foreign body or twist.

![](_page_24_Figure_4.jpeg)

### Test 6 Thermister check

Trouble Symptom : Poor drying performance(over-drying or no drying). Abnormal thermistor operation.

Measurement condition : Power cord is unplugged.

![](_page_25_Figure_4.jpeg)

Dryer	Resis	stance	Dryer	Resis	tance	
Temperature	TH-Heater	TH-Drum	Temperature	TH1	TH2	Remark
10°C ↓		19~111kΩ	40~50°C	113~75kΩ	5~4kΩ	
20~30°C	250~180kΩ	11~8kΩ	50~60°C	75~50kΩ	4~2.5kΩ	
30~40°C	180~113kΩ	8~5kΩ	60°C ↑	50kΩ↓	2.5kΩ ↓	

#### Test 6 Moisture sensor check

Trouble Symptom : Drying Failure

Measurement condition : Power cord is unplugged.

![](_page_26_Figure_4.jpeg)

![](_page_27_Picture_2.jpeg)

![](_page_27_Figure_3.jpeg)

![](_page_27_Picture_4.jpeg)

![](_page_27_Picture_5.jpeg)

1. Disassemble top plate by unscrewing 2 screws on the rear of the dryer.

- 2. Disassemble Safety Cover by unscrewing 2 screws on the top of the dryer.
- 3. After pulling drawer assembly out, unscrew 1 screw.

4. Untie Keeping wire and then connector(2ea) disassemble from MAIN PCB

# Note

1. Assemble wires at the HOOK surely when you reassemble.

![](_page_27_Picture_12.jpeg)

![](_page_28_Picture_1.jpeg)

![](_page_28_Picture_2.jpeg)

![](_page_28_Picture_3.jpeg)

![](_page_28_Picture_4.jpeg)

- 1. After releasing 4 hooks of control panel assembly, separate connectors from PWB assembly for disassembling control panel assembly.
- 2-1. Disassemble door assembly by unscrewing 2 screws.
- 2-2. Disassemble lower cover by releasing hook.
- 2-3. After releasing 2 levers, disassemble safety cover.

3. Disassemble 3 screws.

4.Disassemble the case with a Philips driver by releasing hook.

# **DIASSEMBLY INSTRUCTIONS**

![](_page_29_Picture_2.jpeg)

![](_page_29_Picture_3.jpeg)

![](_page_29_Picture_4.jpeg)

1. Disassemble grille by releasing 3 hooks.

 Disassemble cabinet cover by releasing 9 screws.

3. Disassemble cabinet by unscrewing 2 at the top and 3 at the rear (left and right are the same)

TOP FRAME

90°

![](_page_30_Picture_1.jpeg)

90

1. Disassemble Harness by unscrewing 2 Earth screws and disassemble connectors.

2. Disassemble Main PWB from TOP FRAME by rotating after unscrewing 2 screws.

- HOLDER
- 3. Disassemble Holder and Spring by pressing down and pulling the low hook of holder.

![](_page_30_Picture_6.jpeg)

![](_page_31_Picture_1.jpeg)

 Disassemble Blower cover by unscrewing 2 screws.
 (Note : Make sure that hook is properly fit after assembling Cover Base Wrong assembly will cause abnormal noise.)

![](_page_31_Picture_4.jpeg)

2. Disassemble Motor Supporter from Base by rotating after unscrewing 2 screws.

3. Disassemble Air Guide.

# Note !

noise.

Assembly direction of Air Guide should be same as belows. Wrong assembly will cause abnormal

![](_page_31_Figure_9.jpeg)

![](_page_32_Picture_1.jpeg)

![](_page_32_Figure_2.jpeg)

![](_page_32_Figure_3.jpeg)

1. Disassemble Harness of Motor

2. Disassemble Duct and Cover Protect by unscrewing.

# Note !

"\*" marked 3 screws on the lower position of Duct are only used for molding parts. Be careful of not using them for other holes. Otherwise, the holes will be exposed to water leak.

 Disassemble Power cord by unscrewing 1 Earth screw after unscrewing 2 screws.

![](_page_33_Picture_1.jpeg)

11

1. Disassemble Nut by grasping the edge of left motor shaft at the same time.

![](_page_33_Picture_3.jpeg)

2. Disassemble Heater Housing by detaching inner Connector harness and unscrewing.

![](_page_33_Picture_5.jpeg)

3. Disassemble Heater by unscrewing 2 screws.

![](_page_34_Picture_1.jpeg)

1. Disassemble Frame Top by unscrewing 4 screws. (Left and right are same)

![](_page_34_Picture_3.jpeg)

COVER, FRONT

2. Unscrew 4 screws at the left and right.

3. Unscrew 1 screw at the front.

![](_page_35_Picture_1.jpeg)

![](_page_35_Picture_2.jpeg)

![](_page_35_Picture_3.jpeg)

1. Disassemble Cover Front by pulling the top area out.

2. Disassemble Hose from hose holder at the base.

3. Disassemble Dispenser by unscrewing.

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![](_page_36_Picture_1.jpeg)

1. Disassemble Back cover from the Base by unscrewing 2 screws.

![](_page_36_Picture_3.jpeg)

2. Disassemble Drum

![](_page_37_Picture_1.jpeg)

![](_page_37_Picture_2.jpeg)

![](_page_37_Figure_3.jpeg)

1. Disassemble Safety Cover by unscrewing 3 screws.

2. Disassemble Motor.

3. Disassemble Drain Pump by Unscrewing 2 screws.

![](_page_38_Picture_1.jpeg)

![](_page_39_Figure_1.jpeg)

![](_page_40_Figure_1.jpeg)

![](_page_41_Picture_1.jpeg)