

Dishwasher

Service Handbook

Page 1

Service Handbook LDF6920 + V1 090603
 Service Handbook LDF6920 + V5 100525

Model : 24" Built In Dishwasher

Customer Model	Factory Model	Suffix

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Written by Jhe Hyouk Lee
 LG Dishwasher June 4, 2009

1. Test Mode

※ Please perform the **LOAD TEST** using **TEST MODE** to find a cause of problem first.

1. UNIT must be in standby (Power supplied display off)
2. Press **POWER** while pressing **Upper Only** and **Delay Start** button simultaneously.
3. Press **Delay Start** button to advance through diagnostics.

BUTTON	The number of pushing button	Display	Load and Checking points		Door open/closed	Remark
			Load	LED lighting		
Upper Only + Delay Start + Power Button	1 TIME	Program Version		All LEDs are lighting	Either	
Delay Start	1 TIME	Soil Level	Soil Sensor		Either	See Test 1
	2 TIME	32	Wash Motor		Closed	See Test 2
	3 TIME	33	Drain Pump		Either	See Test 3
	4 TIME	Frequency	Inlet Valve	Air guide	Closed	See Test 4
	5 TIME	35	Dispenser		Closed	See Test 5
	6 TIME	36	Heater (for 10 sec)		Closed	See Test 6
	7 TIME	37	Fan		Closed	See Test 7
	8 TIME	38		Child Lock + Rinse Aid		
	9 TIME	Temp.(℃)	Thermistor	Sanitart-Extra	Either	See Test 8
	10 TIME	3A	Lower Nozzle (Vario valve)	Power Scrub + Normal + Delicate	Closed	See Test 8
	11 TIME	3b	Upper Nozzle (Vario valve)	Rinse Only + Upper Only	Closed	
	12 TIME	3c	Wash-Drain-Water Supply	Rinse Aid	Closed	
	13 TIME		Auto-Off		Closed	

■ How to check the water level during a cycle.

Press the **Power Scrub** and **Delay Start** buttons simultaneously.
 The normal water level reading is about **270~290**.

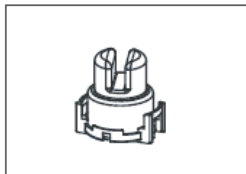
■ How to check the water temperature in the tub during a cycle

Press the **Power Scrub** and **Rinse** buttons simultaneously.
 The display will show the temperature in degrees Celsius.
 If the heater is on, the displayed temperature should rise.

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

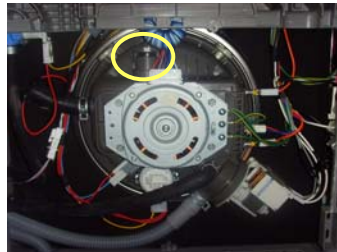
1. Test Mode

Test 1. Soil Sensor

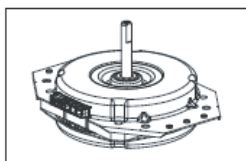


Soil level is displayed in 3 seconds.
If the figure is "0", check the wiring connections.
Sensor can only be tested by PCB in diagnostic test mode.

If we disconnect the wire plug,
Only Auto1(Strong) program is running



Test 2. Motor Test



※ CAUTION

Do not run the MAIN MOTOR for more than 10 seconds without water in the sump as motor water seal damage could result.

- If the motor does not run,
- Check the door is tightly closed.
 - Check door switch operation.
 - Check wiring connections or PCB.
 - Check that chopper blade is not locked by a foreign objects.
 - Check wash motor.

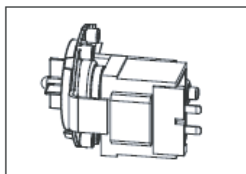
If you hear grinding noise,

- Check Blade.
- Refer to the **SUMP Assemble & Disassemble** and **SUMP EXPLODE VIEW** to check chopper blade.
(See page 3~4)
- If you find the debris, remove it.

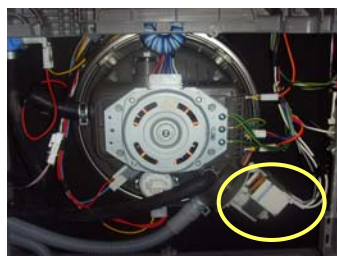
Washing motor problem



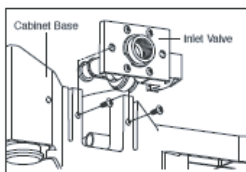
Test 3. Drain Pump Test



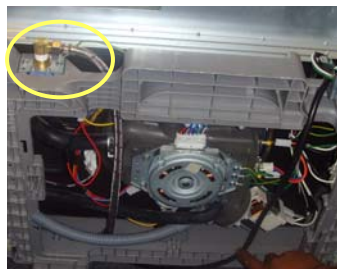
- If the pump does not run,
- Check wiring connections or PCB.
 - Check for 120 VAC to pump.
 - Disconnect wires and check pump motor resistance (20~40 Ω)
 - If the problem is noise, remove the drain pump and check for blockage or foreign objects.



Test 4. Inlet Valve Test (Water Supply Test)



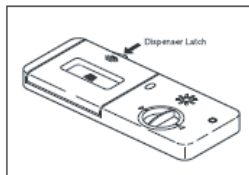
- Check water faucet is open and that there is water to the valve.
- Check for 120 VAC to the valve.
- Disconnect the wires and check the valve resistance (950~1300 Ω).
- During fill in the test mode, the digits in the display should increase.
Water should shut off at about 285.
- If the water flow is normal but display does not change, check the wiring and connectors to the hall sensor.
- Disconnect the wires and check the hall sensor.



1. Test Mode

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Test 5. Dispenser Test



The lid of the dispenser must be closed for this test.

Enter the **ACTIVATING THE DIAGNOSTIC TEST MODE**(see page 1 of the Tech Sheet(2/2)) and advance to step 5 (35 in display). Wait at least 1 minute and check that the door has opened. If the door fails to open, check wiring and connectors to the dispenser.

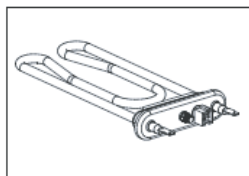
Open the door



Remove the door



Test 6. Heater Test (temp. check)

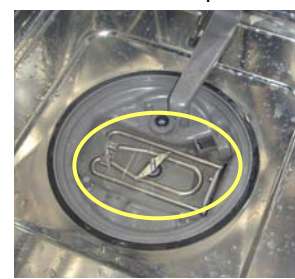


- The heater is activated in test mode for 10 seconds only.
- Check wiring and connections.
- Check for 120 VAC to heater.
- Disconnect wires and check heater resistance (10.8~13.2 Ω).
- For 10 seconds check the power or current by using probe (8A ~ 10A)
 - remove junction cover
 - contact the probes to Black, White harness wire.

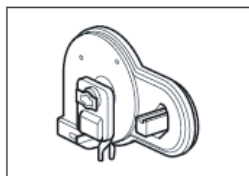
Bottom area



In the sump



Test 7. Fan and Wax Motor Test



- Check that the fan motor rotates freely. (Soft noise & vibration)
- Check wiring and connections.
- Check for 120 VAC to motor.
- Disconnect wires and check fan motor resistance (108.3~119.7 Ω at T=20 $^{\circ}$ C).

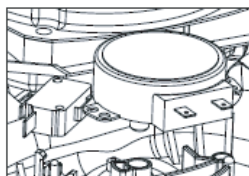
Remove the door



Opposite side



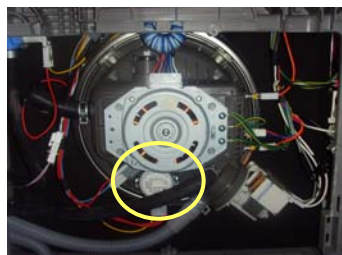
Test 8. Vario Valve Motor Test



If the vario valve has not advanced to the indicated position in the test mode, the control will beep twice. The valve should change within 10 seconds. If the display cannot be advanced from 3A, 3b or 3C after about 10 seconds, the valve is not switching.

- Disassemble sump and check the Vario Valve for obstructions. Refer to the **SUMP Assemble & Disassemble** and **SUMP EXPLODE VIEW**(See page 3~4)

- Check the resistance of vario motor
- Check the loose fitting of micro s/w
- Check heavy soil remain around the valve




In the sump



2. Error Mode

Page 5

ERROR MESSAGE	POSSIBLE CAUSE FOR ERROR OCCURRENCE	REMEDY
INLET ERROR  displayed Condition Not reached to the normal water level in spite of 10 min. water supply	<ul style="list-style-type: none"> • The Water Supply Tap is closed. • The Water Supply is shut off. • The Inlet Hose is kinked. • The Water Pressure is very low. (below 10 psi) • Inlet Valve is OK? • The filter of Inlet Valve is clogged by impure water. • The Hall sensor is OK? • The Impeller of Air Guide is bound. 	<ul style="list-style-type: none"> • Take action on Water Supply device. • Measure the electric resistance of Inlet Valve. (950-1300 Ω) • Clean the filter of Inlet Valve. • Check the frequency of Inlet Water by the Test Mode. • Replace the Air Braker.

▪ Micros switch loose connection (next page)

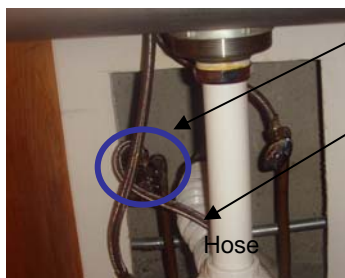
Check the water supply system (Parts , sensor , environment) by TEST MODE – 4 (Page 1), Test 4 (Page2)

→ If there is water flow in & can see the frequency raise : No problem

→ No water flow in or no frequency raise

: Problem in water supply system or environment

1) Water supply tap is closed or no water supply CIC

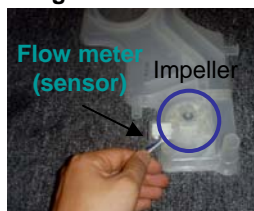


• Check the water tap is closed
→ Open
• Check that water supply is ok in this water tap (Remove water hose, open the water tap a little bit and check the water supply) If not
→ Change water supply source

4) If water supply is ok (open the door, we can check) but no frequency raise.

- Water supply pressure is very low (below 0.3 bar)

Air guide



The water pressure is too low to rotate a impeller for checking Water flow

→ Open the water tap fully
→ Change the water supply source which is high water pressure

✓ 2) Water supply shut off CIC

• Check the status of other water tap
(Water supply is ok or not)

- Air guide problem

• Impeller is stuck so not rotate → Change Air guide (Disassemble the air guide & blow, can check rotation)
• Flow meter (sensor) can not check the impeller rotation
→ Change Air guide or Flow meter

3) Water supply hose kinked → Make not kinked



5) Inlet valve problem (No water supply, No frequency)

-Loose connection of electric harness wire → Reconnecting

-Inlet valve filter clogged
→ Remove filter and clean the filter & valve assemble the filter

-Bad inlet valve
→ Check the resistance (short or cut = 0 or infinite) & replacement

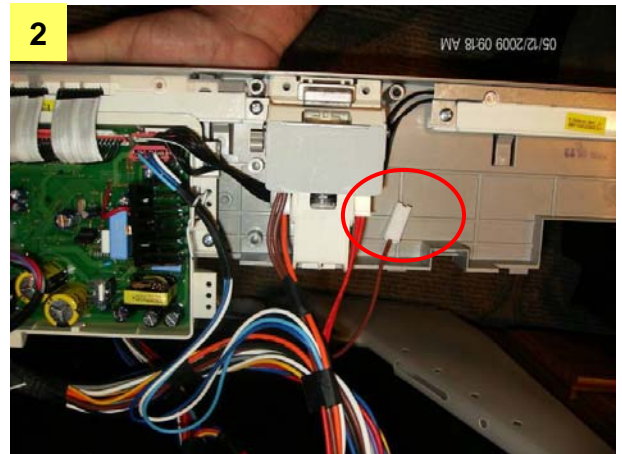
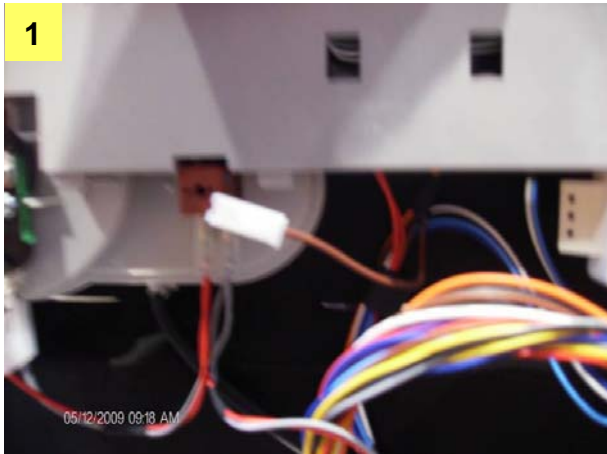


2. Error Mode

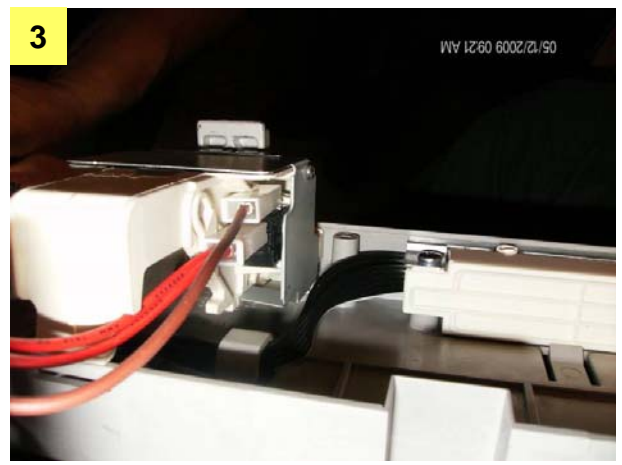
Page 6

6) Micros switch loose connection

What was seen when the panel was removed This is a better view of the disconnected wire




The unit is now responding to SC test normally The connector was reinserted back into place



2. Error Mode

Page 7

<p>DRAIN ERROR</p> <p></p> <p>displayed</p> <p>Condition</p> <p>Not fully drained out in spite of 5 min. drain operation</p>	<ul style="list-style-type: none"> • The Drain Hose kinked or blocked. • Wiring connection is OK? • The drain outlet of sump is blocked. • The Drain Pump/Motor or circuit is troubled. • Garbage disposal plug block the drain flow (Installation) • too long extension hose (6ft) • Float hinge stuck (Wrong sensing) can happen in Serial no : 501 ~ 706 • Drain pressure drop from the gap in drain cover ,can happen serial no : 612~711 	<ul style="list-style-type: none"> • Remove the cause of kink or block. • Check the wiring connection. • Measure the electric resistance of Drain Motor. (20-40 Ω) • Replace the Drain Motor or repair the Circuit. • Make a hole at connection area of disposal ~ drain hose • Shorten extension hose less than 6ft • Replace the float assembly or cut 1mm at float guide • Change sump assembly Product (S/NO: 901~)
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Check the water drain system (Parts , sensor , environment) by TEST MODE – 3 (Page 1), Test 3 (Page2)

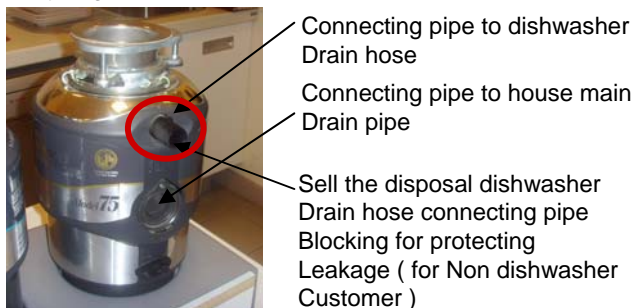
→ If there is water drain & can hear the drain pump operation : No problem

→ Water remain in the tub or can't hear the drain pump operation : Problem

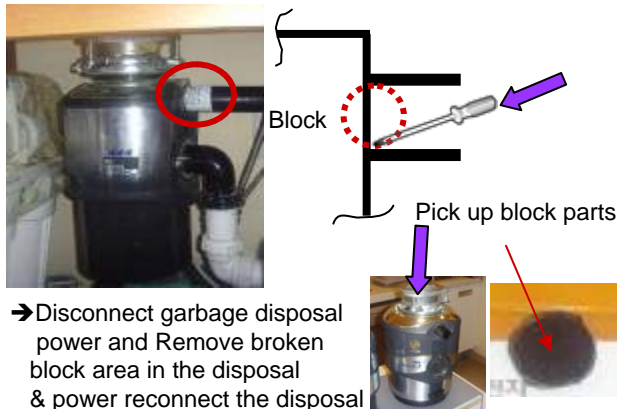
✓ 1) Water remain in the Tub after installation [Installation]

.Can hear the drain pump operation, but not drain

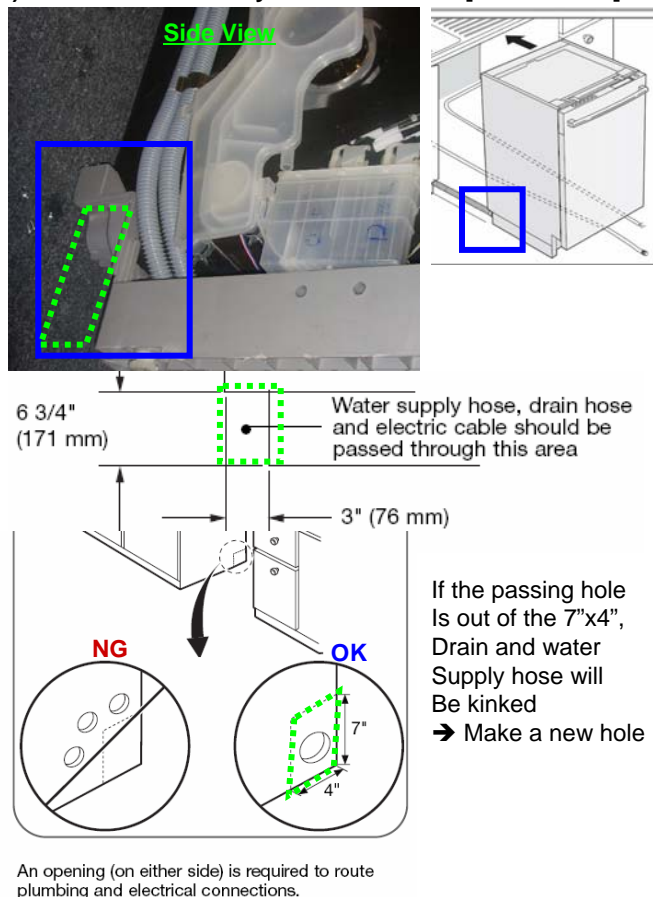
→ Check the garbage disposal ~ drain hose connecting by finger or drive (+ or -)



→ If the connecting area was block, make a hole for drain by using – drive & small hammer – circle direction



2) Drain hose kinked by bad installation [Installation]



2. Error Mode

Page 8

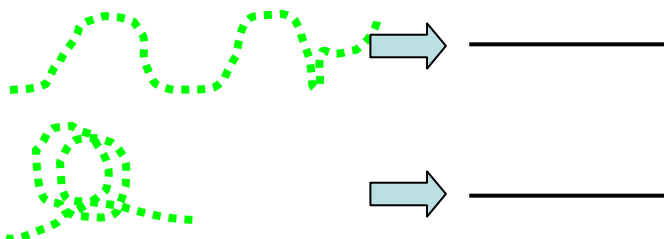
3) Too long extension hose (over 6ft, installation)

- .If the length of extension hose is longer than 6ft,
Can not drain water properly
→ Make the length of extension hose shorter than 6ft

Sink pipe



Dishwasher



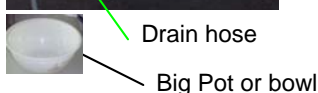
4) Drain pump problem

(If not 1), 2), 3) check the drain pump)

- Disconnect drain hose form sink pipe or garbage disposal
or Air-gap & release the drain hose to big pots ,
Prepare towel for protect floor wet from drain hose

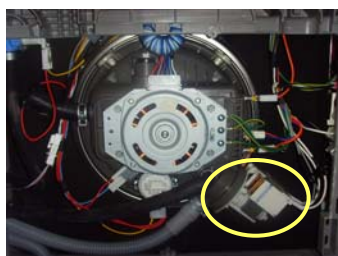
Disconnect

Release drain hose



- Run the drain pump by test mode – 3 ,or run the any course
& Check the water drain (If there is no operation noise
or not drain)
→ Replace the drain pump, be careful the assemble direction
and 3 points of fastening 3 screws

[Reference Assembly of drain pump ----- Page -----]

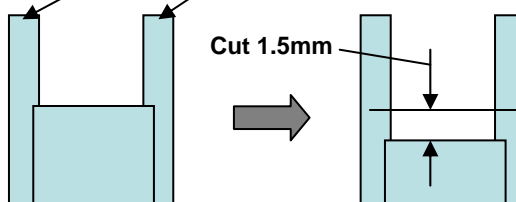
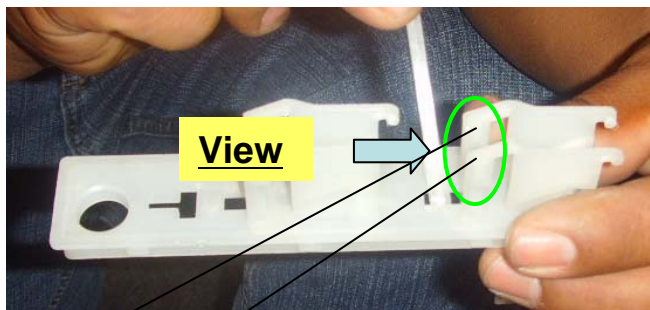
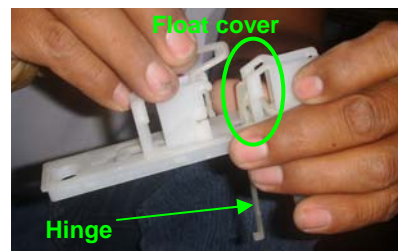


5) Float hinge stuck [S/no : 501 ~ 706, especially 704~706]

Symptom : There is no water in the Tub (Drain ok)
But OE happen sometimes
(Sensing error of water drain)

- Replace the Float assembly (float cover) or
cut 1.5 mm at hinge guide area in float cover ,
but we should pull dishwasher from sink cabinet.

Left side



2. Error Mode

Page 9

6) Drain pressure drop from the gap in drain cover ,can happen serial no : 612~711

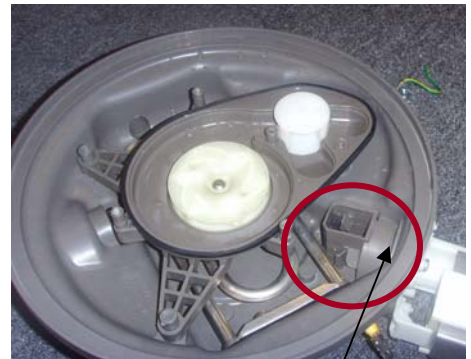
- . Drain pump operation (No problem)
- . We can see some water is drain to drain hose, sometimes Not OE error but too much water remain
- . But after drain process, there is too much water remain in the sump assembly (800cc ~ 1000 cc)



Water remain near by sump filter hole



→ Replace sump assembly (S/no: 901~, production date is from 2009.1 ~)



If the Gap between drain pump case ~ drain cover
Is too much, drain pressure would be drop down.
So not drain, too much water remain in sump

→ New (No gap : S/no 901~)

2. Error Mode

Page 10

<p>LEAKAGE ERROR</p> <p>E1</p> <p>displayed</p> <p>Condition</p> <p>The excessive RPM of Washing Motor happened during Wash cycle due to water leakage.</p>	<ul style="list-style-type: none"> • <u>Water leakage in Hose connections.</u> • <u>Water is leaked by damages.</u> • The Motor Water Seal leakage of Sump assembly. • <u>The height of Drain Hose connection (sink-Drain Hose) is not over 20".</u> • Impeller of the Washing Pump is worn away. 	<ul style="list-style-type: none"> • Replace the connections of Hose. • Check the point of damages and repair or replace the related parts. • Read the Installation Instructions and fix it to the recommended Height. • Replace the Impeller of the Washing Pump.
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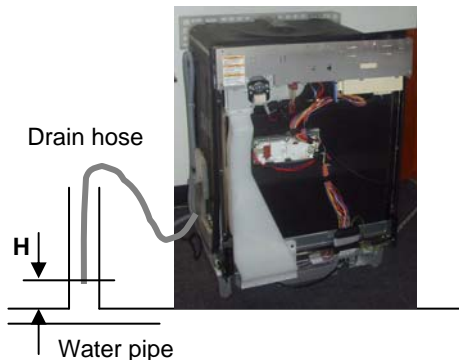
E1 means that there is not enough or very little water in the tub (dishwasher)
→ Generally a lot of leakage or water drain out by siphon effect can display E1

✓ 1) Water automatic drain out by siphon effect [Installation]

→ Check the drain hose, If the end of drain hose location was below than 10"(250mm) or deep into the water pipe, the water can be drain out automatically and make air sucking noise [S/no 901~, we improved this issue by applying siphon protect, but not perfect]



Lie drain hose on the floor
 → Hose position is below than 10"(250mm)



Change the end of drain hose position Over 10" (250mm) and fixing

2) Logistic damage (Inner area broken or leakage)

→ Check the damage or leaking in Tub or Bottom sump area.
 : If the parts are broken, replace the parts, but tub damage, we can't repair

→ Check sump after service, miss hose connecting
 : Reconnecting hose



2. Error Mode

<p>EXCESS ERROR</p> <p>FE</p> <p>displayed Condition</p> <p>Excessive water is supplied than normal water level. (Automatically drain Pump operated.)</p>	<ul style="list-style-type: none"> • The Inlet Valve is troubled. • The Controller is troubled. 	<ul style="list-style-type: none"> • Replace the Inlet Valve. • Repair or replace the Controller.
--	---	---

FE means that water supply can't stop so there is excessive water in the tub
If the over flow float s/w is on and off 10 times, display FE error

→ **Generally inlet valve and dirty water supply (tiny particle or steel powder) problem**
So ask the customer lock the water tap connecting to D/W, and dispatch service

✓ 1) Water condition

Check that there is much steel stain powder or other dirty material in water pipe especially new house or after remodeling
 This tiny material can block a small hole in inlet valve, if then even though no power supply to inlet valve, the water supply is going on infinite until locking water tap.

→ Disassemble water supply connection between water supply hose & water tap

Open the water tap fully, and hold on for 1 minute or until you can see clean water, and assemble again.

→ Disassemble water supply hose with inlet valve

Open the water tap fully, and hold on for 1 minute or until you can see clean water, and assemble again

→ Next : Clean or replace inlet valve [Next step]



2) Clean or replace inlet valve (Recommend replace inlet valve)



OR




Remove filter in inlet valve

Wash inlet valve

Replace inlet valve

2. Error Mode

Page 12

HEATER ERROR  displayed Condition The water is not heated or the temperature in the Tub is overheated to over 194°F	<ul style="list-style-type: none"> • The Circuit of Heater is troubled. • The Thermistor is troubled. • The Heater is shorted. • The Relay Circuit is troubled. 	<ul style="list-style-type: none"> • Repair the Circuit of Heater. • Replace the Thermistor. • Replace the Heater. • Repair the Relay Circuit.
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HE can be displayed if the circuit of heater has problems (short or cut off)

→ Not heating [S/no 812~ , HE error can be displayed]

→ Before s/no 812, Even though heater has some problem, the main board can not display HE error, so you can check the heater status by checking power supply at test mode [6] for 10 seconds or measure the heater resistance directly.

1) Customer Environment

If the temperature of water supply is very hot (higher than 140F(60℃)) or rated voltage is low Depending on surrounding condition,

dishwasher **will display HE error code intermittently**

and stop without drain, even though there is no defect in heater assembly.

Replace the PCB Main board without exception (Refer to the Service Bulletin)

2) Heater problem

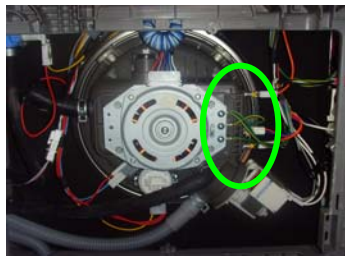
Check power supply at test mode[6] for 10 seconds or heater resistance

If the Heater is open, HE error will occur every cycle.

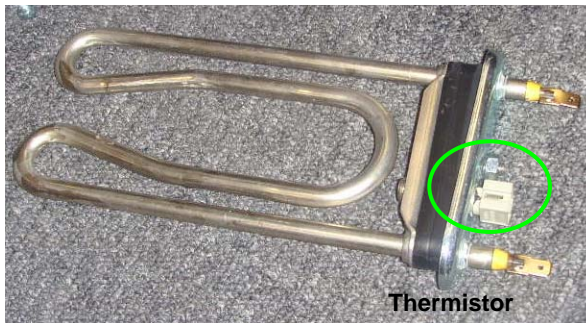
→ Replace the heater assembly or Sump assembly



Pull D/W from sink cabinet and Replace the heater assembly



Heater assembly



Thermistor



Heater assemble area
In Sump assembly

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

2. Error Mode

<p>THERMAL ERROR</p> <p>tE</p> <p>displayed</p> <p>Condition</p> <p>The resistance of thermistor not normally out put.</p>	<ul style="list-style-type: none"> • The Inlet Water Temperature is very high. (over 194°F) • Wiring connection is OK? • The Thermistor is OK? 	<p>Check the temperature. (Test Mode)</p> <p>1) if the temperature is displayed,</p> <p>① adjust the Inlet Water Temperature to 120°F.</p> <p>2) if the temperature is not displayed,</p> <p>① check the wiring connection.</p> <p>② check the electric resistance of Thermistor. (11~14k Ω at 77°F)</p> <p>③ Replace the PCB.</p>
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tE means that Main board doesn't check the resistor of thermistor in heater assembly

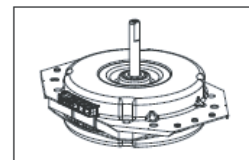


★ if only thermistor has problem, change heater assembly.
not replace only thermistor

2. Error Mode

Page 14

<p>MOTOR ERROR</p> <p>LE</p> <p>displayed</p> <p>Condition</p> <p>The Motor is working abnormally.</p>	<ul style="list-style-type: none"> • Wiring connection is OK? • The Impeller of Washing Pump is locked. • The rotor of Washing Motor is locked. • The Blade is locked. 	<ul style="list-style-type: none"> • Check the wiring connection. • Replace the cause of restriction. • Replace the Washing Motor. • Replace the PCB.
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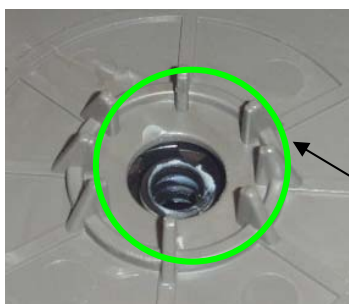
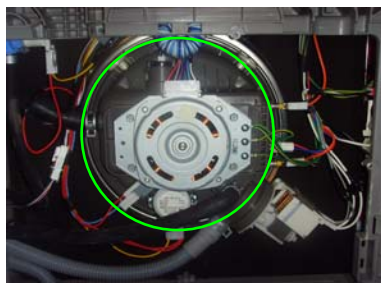


※ CAUTION
Do not run the MAIN MOTOR for more than 10 seconds without water in the sump as motor water seal damage could result.

LE means that the main board can not sense the rotation of washing motor
We can check the washing motor operation by using Test mode "2" in page 2 , Test 2 in page 3
※ Be careful, water supply must be done before running washing motor to protect water seal

1) In test mode , washing motor doesn't rotate

→ Change washing motor

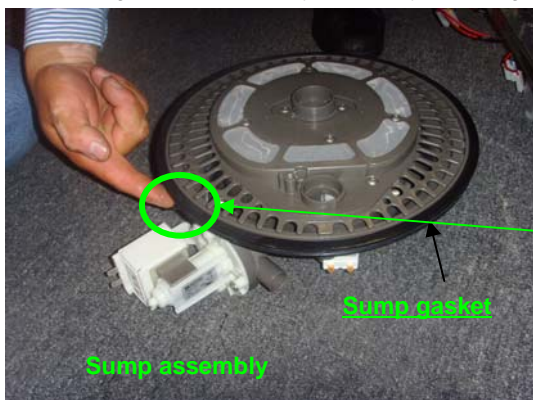


After remove bad washing motor ,
You must check the water seal condition.
If it's not good! Change sump assembly

! You must see the white grease is in Water seal

2) In test mode , washing motor doesn't rotate

→ Change sump assembly [Not only Washing motor but also Water seal have problems]



! Must use new sump gasket for perfect sealing
Don't use the gasket in old sump assembly, when you change sump assembly

! Must add some lubricant liquid to out area of sump gasket for better replacement (hand wash liquid detergent or ...)

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

2. Error Mode

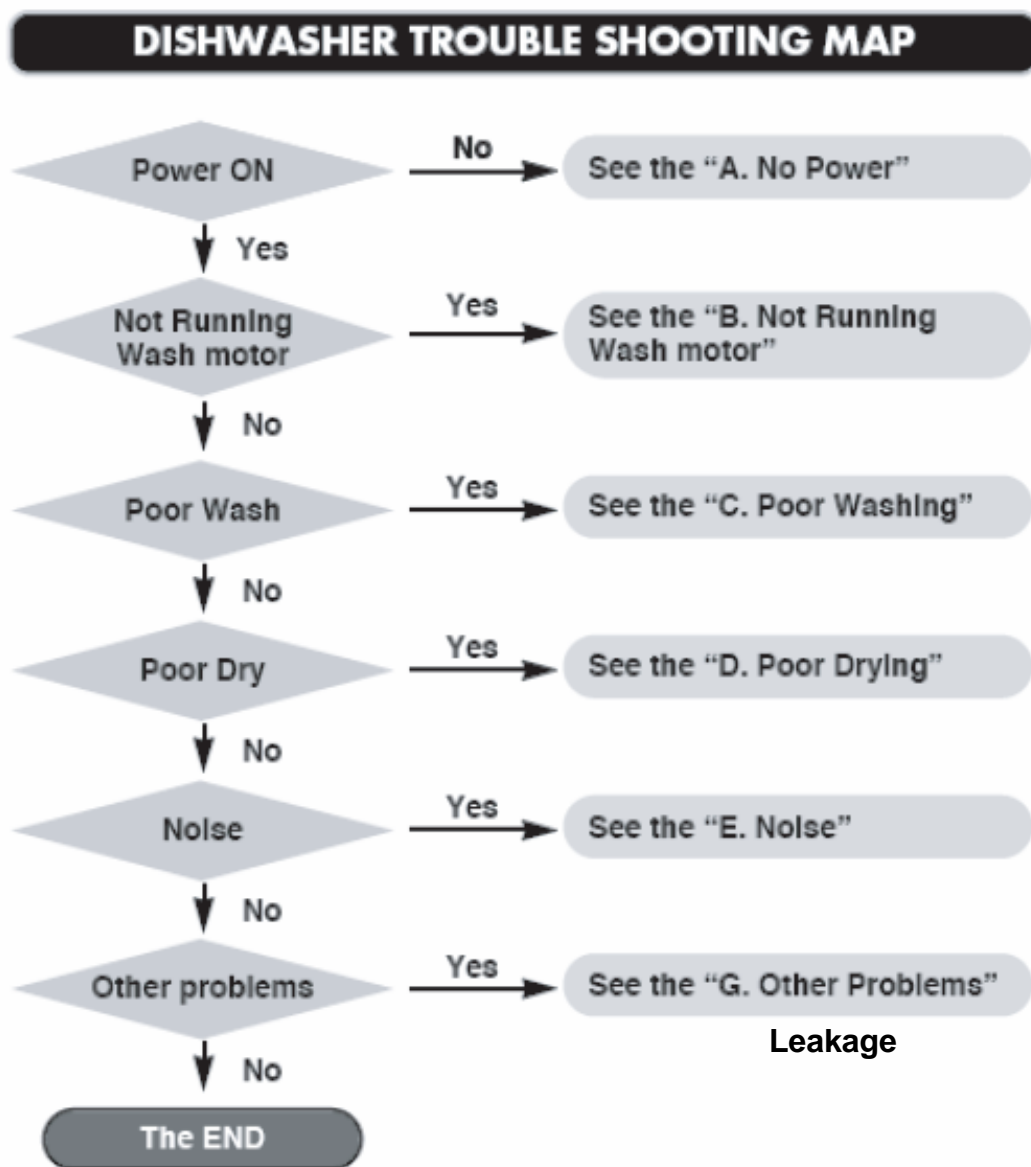
Page 15

PF : This message **is not a error message**,
Just display the reason of stop washing is because of
not dishwasher but sudden power failure
(There was power supply stop in the dishwasher)

➔ Open and close the door
or Power off and run D/W again.

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide



3. Trouble shooting guide

A. No Power

The Power connection is correctly connected.

NO

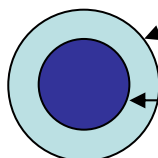
- Re-connect the Power connection.
- Check the electricity is failed or not.
- Check the electric outlet

<1> Re- connect the power connection



Loose connection Under or over sized wire nuts (melting)

※ Wire spec : UL AWG16



Insulator diameter : Φ 3.12mm
(0.123 inch)

Electric conductor diameter : Φ 1.49mm
(0.059inch)

<2> Check the electricity is failed or not

BK



WH



Green/yellow



Check power supply

<3> Check the electric outlet

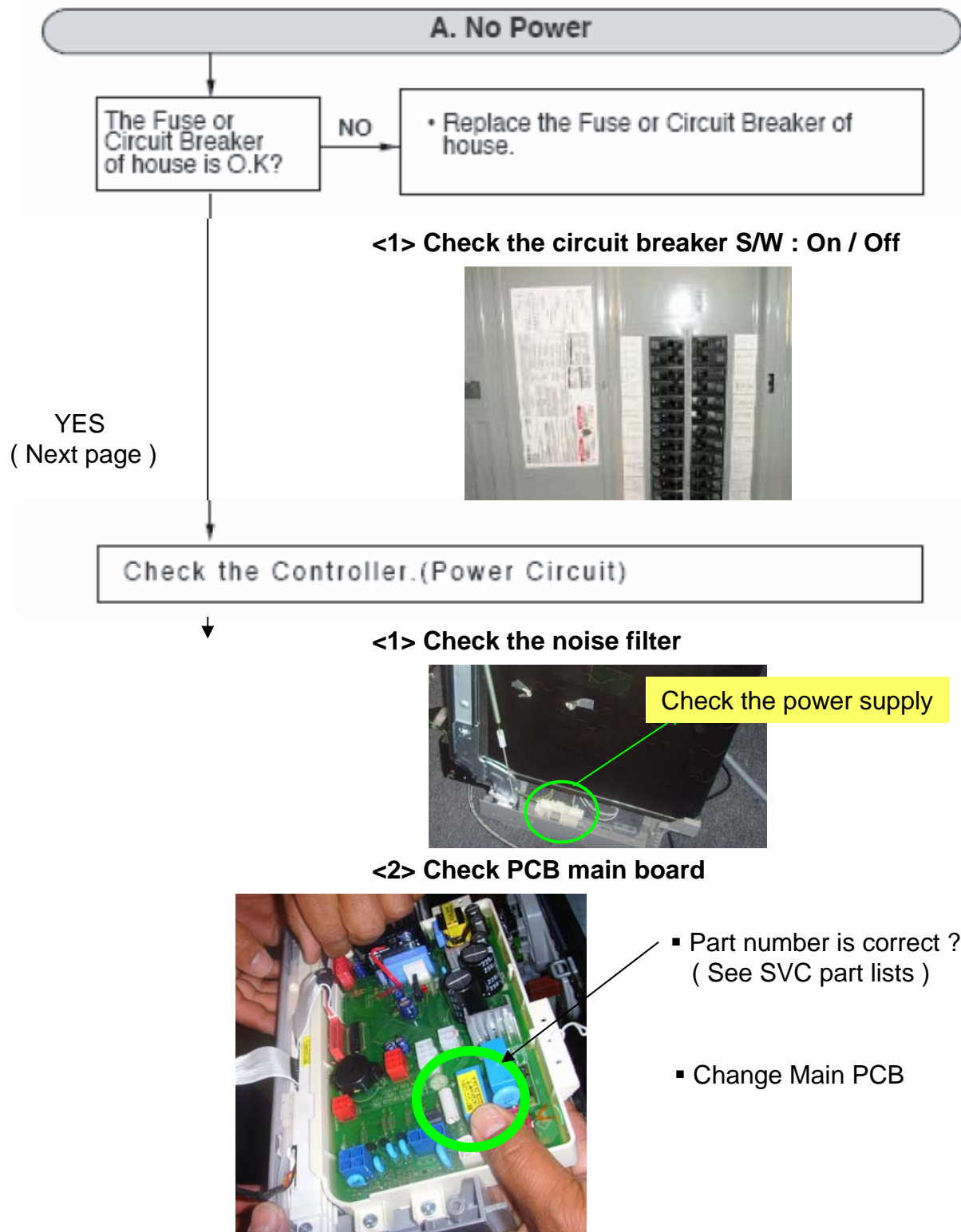


Check power supply

YES
(Next page)

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

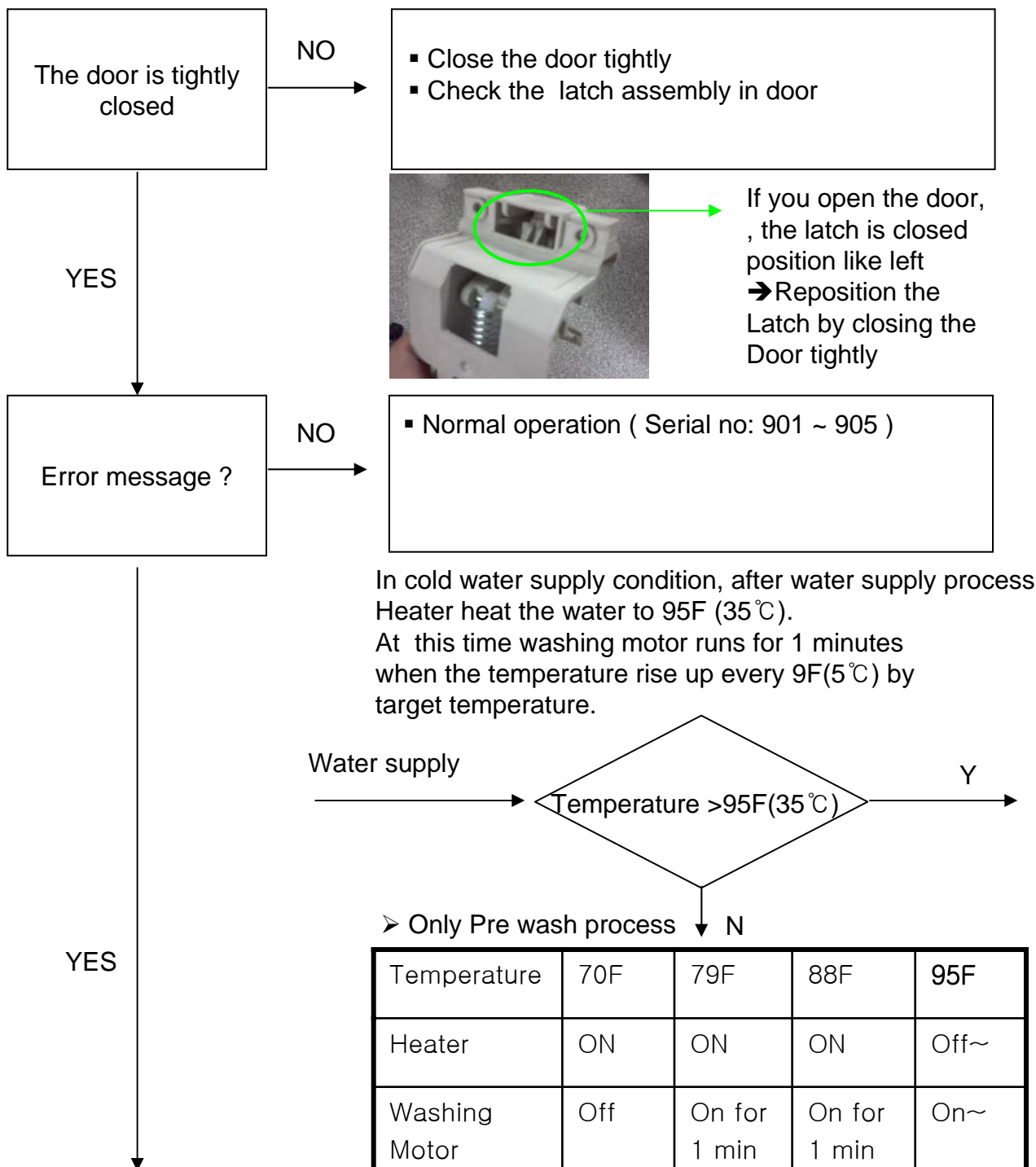
3. Trouble shooting guide



Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

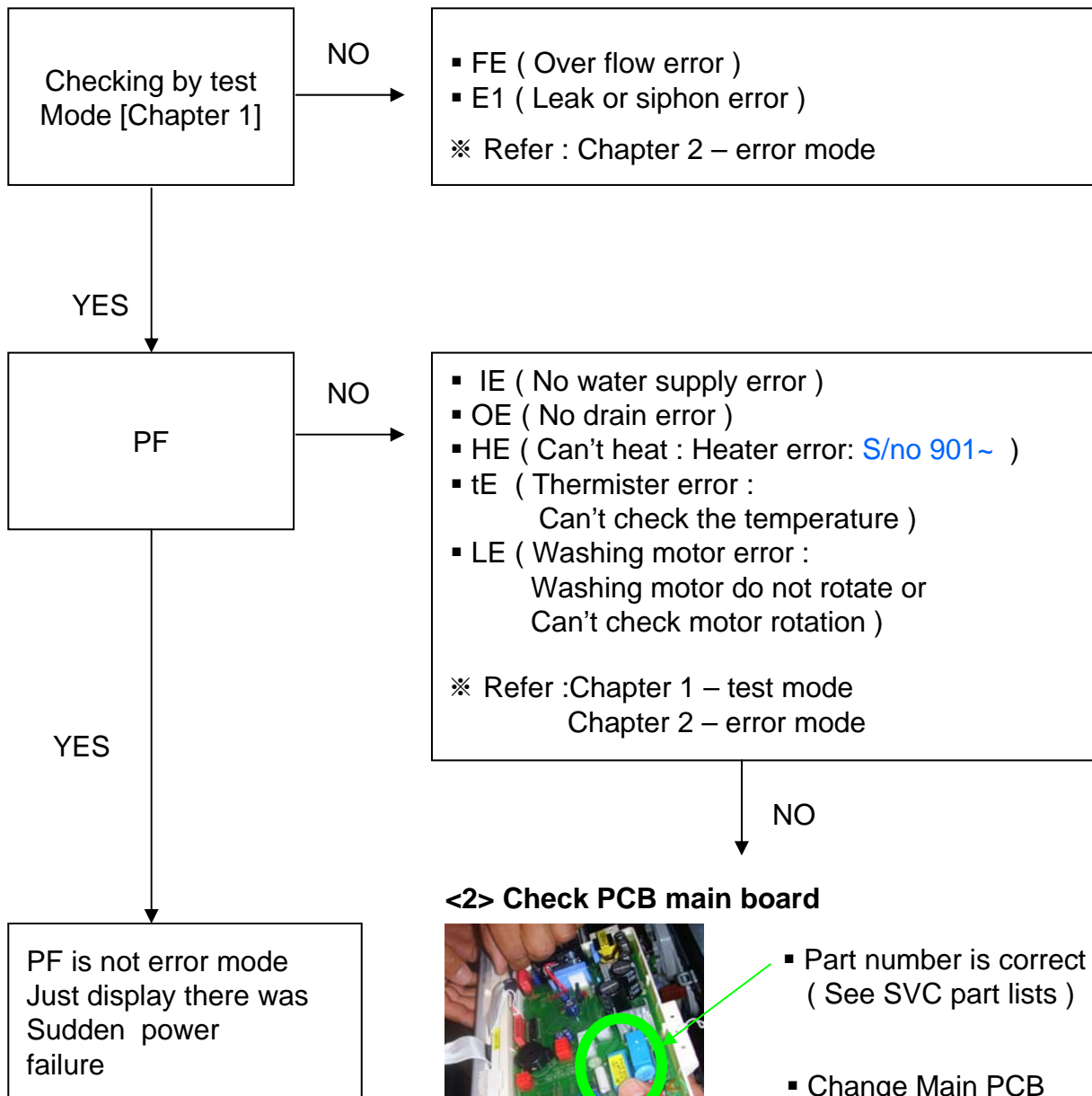
B. Not Running Wash Motor



Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

B. Not Running Wash Motor



Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide(5/13)

C. Poor wash

**Soil spot or
white spot
(Hard water)**

White
spot

CIC

- Hard water condition
 - . White spot on glasses, cups, tub
 - . White powder residue on cups or ...
 - . Cloudy glasses



Soil Spot
[Not washing]

Hard water is from the water supply, not the unit. If hard water is causing white film or powder in unit .

- 1) Install a water softener can solve the problem clearly.
- 2) – A Run a cycle with an **EXTRA RINSE option** to minimize the effect of hard water

* ~ S/no:906: Choose Extra rinse option → + 1 rinse process in cycle
S/no:907~ : Choose Extra rinse option → + 3 rinse process in cycle

* In Lab test +0 default : Score 0 / 5
+1 rinse process : Score 3.5 / 5
+3 rinse process : Score 4.5 / 5 in Very high hardness condition (400ppm)

- 2) – B **Don't put too much soap into dishwasher.**

Put 0.7~ 1 ounce detergent into dishwasher : OK

Put over 1.4 ounces detergent into dishwasher : Not good
(if the customer choose EXTRA RINSE OPTION)

Use glass magic to minimize the side effect of hard water

Glass magic has 20% of Phosphorus (the material of water softener)

- ➔ Put **2 Tea spoons glass magic into the tub before starting**
- ➔ Put 0.7 ~ 1 ounce detergent into the dispenser
- ➔ Run a cycle with an EXTRA RINSE option

Use White Vinegal

- 1) Remove all dishes and silverware from the dishwasher.
- 2) Only the racks should remain in the tub
- 3) **Place about 1 cup (200ml ~ 500ml) of white vinegar into the Lower rack**
(Don't pour the vinegar to the bottom area)

Run a "Normal" cycle and select "Extra Rinse" and

"Sanitary", then close the door. **Do NOT USE ANY DETERGENT**

3. Trouble shooting guide

C. Poor wash

Checking by
Test mode
OK / Not

OK

- ✓ ■ Heater problem
 - Not heating water (short)
 - ➔ Change heater or sump assembly
- ✓ ■ Vario valve problem (901~ some improvement)
 - Vario valve in sump is stuck by hard soils or sands
 - Vario motor has problem
 - Electric wire connection problem
 - Wrong assemble the vario system
 - ➔ Change vario valve & vario motor
 - ➔ Change sump assembly (Product:901~)
- Dispenser problem
 - Can't put detergent in main washing process



Not

➔ Check 3 items by using "Test mode" in Chapter 1 and change parts

Soil sensing
Problem due to
Cold water or wrong
sensing

check

In mechanical there are no problem in test mode, the problems are on the sensing system

1) Turbidity (soil) sensor problem :

- . Sensing the hard soil level as low soil level
- . Set the program auto 3
- [Hard soil ➔ auto1, Medium soil ➔ auto2
- Low soil ➔ auto3]
- . The performance may be bad

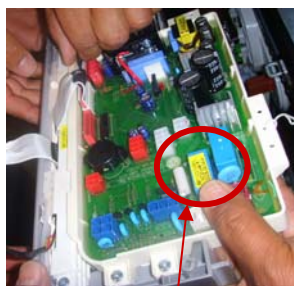
2) Cold water supply, hard dried soil problem

- . In cold water supply condition, the amount of soil which are dropping into water is very less than hot water condition.

So the soil sensor is sensing the hard soil as low soil level

- . Set the program auto3

※ if disconnect soil sensor plug: always auto1 setting (refer : page 3 in test mode)



Can know
Part number and
Program version

➔ After s/no 901~, improved the soil sensor and sensing logic : Change soil sensor and Main PCB (Version 6~)

See Appendix # Sensing in SVC Bulletin

➔ Recommend "Power scrub" course

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

C. Poor wash

Detergent

Check

- Not dishwasher detergent but automatic dishwasher Detergent for proper soap detergent

→ Check the detergent box labeling

Spray arm

Check

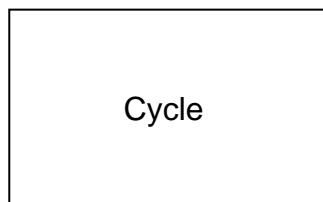
- Low spray arm's holes for washing filter is blocked
- Upper spray arm is stuck by hard soil or sand so very difficult to rotate
- ✓ ▪ Top small spray arm is stuck by hard soil or sand so very difficult to rotate
- Spray arms were stuck by cup or cooking tools



Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

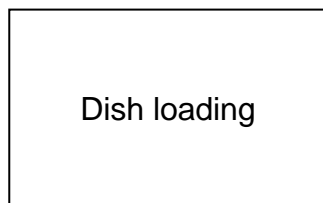
C. Poor wash



Check

- Recommend the customer choose “ Power scrub”
If there is no problem in dishwasher and the customer choose “ Power scrub” cycle, it's very difficult to see poor washing result

➔ Recommend “ Power scrub” course



Check

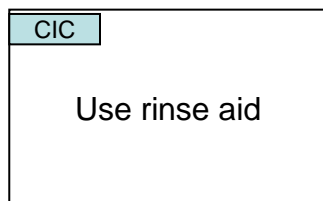
- Recommend the dish loading method in owner's manual
(Generally the washing performance in lower rack is better than in upper rack setting)

➔ Rearrange the dish loading

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

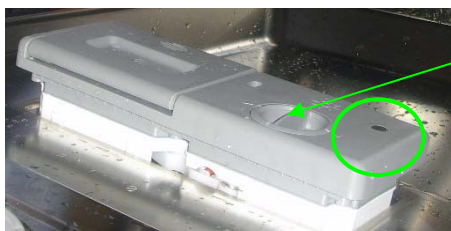
3. Trouble shooting guide

D. Poor drying



No

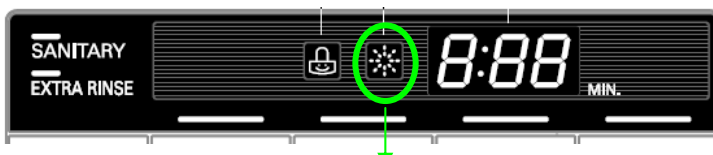
- Recommend the customer use "Rinse aid" for good drying performance
- Check the quantity of rinse aid in dispenser by using indicator in control panel or circle glass window on dispenser (Dark: rinse aid is in the chamber, clean: Empty)
- The function of rinse aid in drying system
 - . Reduce the surface tension of water so the water drop on dishes or cups can be spread not into a ball → very easy condition for evaporation
- If the customer don't use rinse aid, it's impossible good drying performance and water spot on glass and dishes.




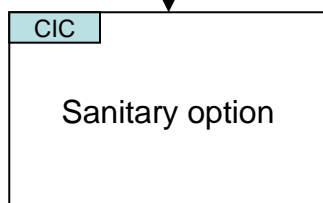
Chamber for
rinse aid

Circle glass window :

- Clean : means that empty (no rinse aid)



- Rinse Aid(): Refill with rinse aid when Lamp turns on.



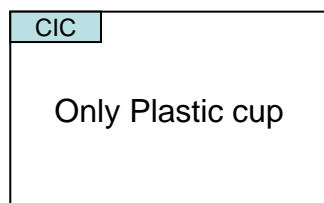
No

- Recommend the customer choose sanitary option for better drying
(in hot rinse process: temperature 149F → 162F)
- In drying mechanism, high water temperature can make high efficiency in drying performance
- After cycle , you can see very hot dishes and not water dropping on the rack

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

D. Poor drying



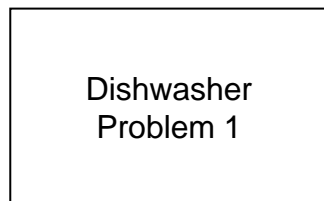
check

- Bad performance in plastic cups
 - Recommend the customer choose "Sanitary option for better drying.
 - In plastic cup , it's very difficult for drying because of the characteristic in plastic.
Plastic is some oily , so the function of rinse aid (reduce water surface tension) can not effect on plastic. (water can not be spread).
 - Plastic is high resistance of heat capacity
(This is the reason why we use the handle of the fan and pot as plastic), after cycle dishes are very hot but plastic cups are warm.
so this characteristic can make very difficult for good drying result

➔ In normal case (no problem in dishwasher)

- . Use rinse aid
- . Choose sanitary option
- . Open the door a little bit after cycle for remove moisture in the tub

Upper do upper 3 actions can make good drying



- Blower fan problem
- can't remove moisture in the tub because of fan problem



In test mode (Chapter 1)
We can check the operation.

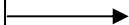
➔ Change blower assembly

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

D. Poor drying

Dishwasher
Problem 2



- Heater problem
 - can't heat the water to high temperature
 - Not heating water (short)
- from serial number 901 ~, the unit display the HE error message, if there is heater problem. but before s/no 901 (s/no: ~ 812), there was no function of displaying HE error message
 ➔ S/no (~812) we can check the heater by using test mode in Chapter 1

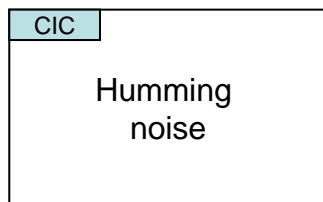
➔ Check the heater status (short or ..) by test mode in chapter 1 and change the heater or sump assembly



Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

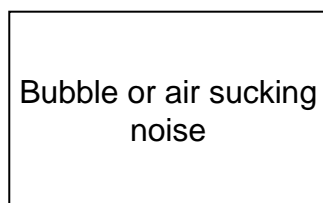
E. Noise



check

- When the washing motor start, the R.P.M is changing from 0 to over 3,000 for 20 seconds. at that time, we can hear the humming noise Uhng ~ (low decibel) to Uhng (high decibel) This is normal, after 20 seconds there will be no humming noise.

- We can hear another type of humming noise every two minutes.
Vario valve (decide the water spray direction from lower nozzle to upper nozzle) rotates every two minutes. At that time water flow can be changed and make some humming noise.
But this is normal in LG dishwasher.



- If the customer use not automatic dishwasher detergent but dishwasher detergent (for hand washing) it can make bubble and sound like air sucking.
➔ Remove bubbles and drain again & again.

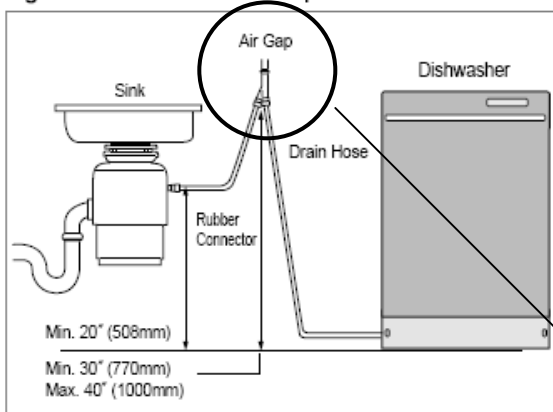
Hand wash detergent

- ➔ If the customer put hand washer detergent into rinse aid chamber
Replace the dispenser.
It's impossible to remove it from the dispenser .

Rinse aid chamber



Fig. F: Connection to Air Gap.



- If the position of the end of drain hose is below than 20cm (8"), the water in the tub can drain out automatically and making air sucking noise.
➔ Reposition the drain hose, place the end of drain hose over 40cm (16") or apply air gap

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

E. Noise

Grinding
noise

check

- If there are some abnormal and hard soils in the sump, this can make grinding & high pitch noise by interference with chopper blade.
- ➔ Remove sump cover & pump casing
- ➔ Find out hard soils or debris
- ➔ Reassemble the sump cover

Sump : don't need remove sump assembly from the unit to remove sump cover

Sump cover



SUMP



Remove sump cover



Remove pump casing
& find out hard soils

Whistle
noise

- In washing cycle, the whistle noise is continue
- ➔ This means that there is some problem in water seal.
- ➔ Change sump assembly



! You must see the white grease is in Water seal

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

F. Leakage

To solve the leakage problem, Remove the door and inspect where leakage happen?

Vent leakage

check

- if we can see the water leakage at the end of vent, change blower assembly (s/no: 809~) or make a hole bigger $\Phi 5.5$

Reason : Hard water residue block the rubber hose pipe



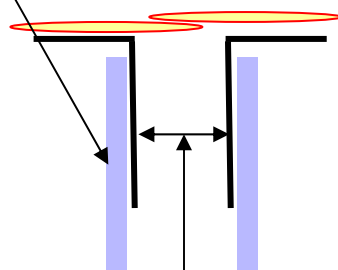
Leakage



Rubber hose



White film block the hole



Solution : make a hole bigger $\Phi 5.5$



※ S/no: 803 ~ 808, the hole size was $\Phi 4\text{mm}$, S/no 809 ~ size has been $\Phi 5\text{mm}$

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

F. Leakage

To solve the leakage problem, Remove the door and inspect where leakage happen?

Vent leakage

check

- if we can see the water leakage at the end of vent, check the rubber hose position and reposition the rubber hose.

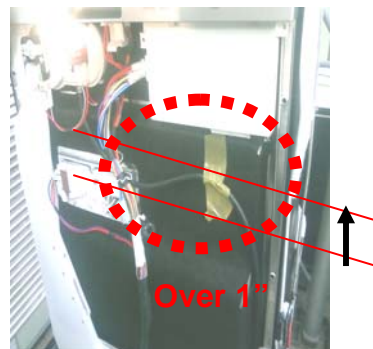


Leakage

Reason : If the rubber hose position is like below & Right, this can make a leakage



OK



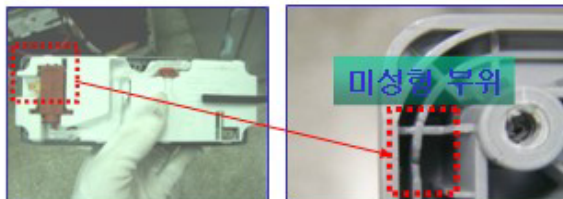
NG

Solution : Reposition the rubber hose from right to like left picture

Dispenser leakage

- if we can see the water leakage between dispenser & door liner, Replace the dispenser

Reason : Bad shape in sealing area



Solution : Replace the dispenser

Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

3. Trouble shooting guide

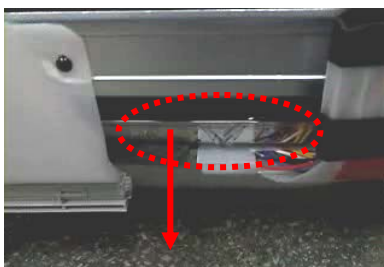
F. Leakage

To solve the leakage problem, Remove the door and inspect where leakage happen?

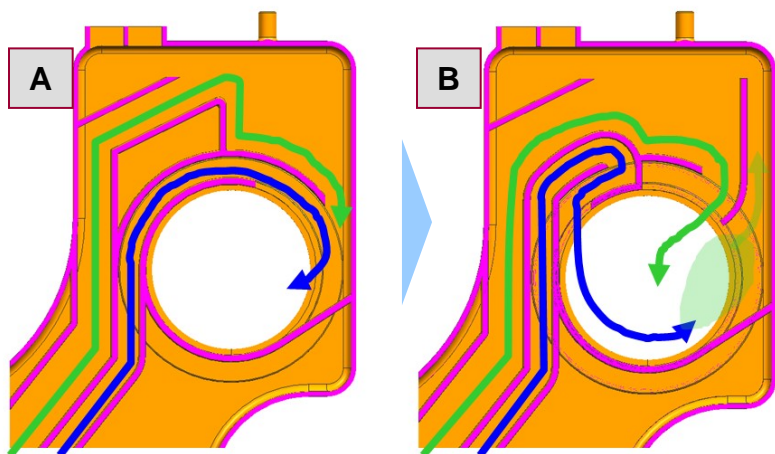
Door leakage

- If a lot of water leakage below the door not vent, especially hot water condition, Change air guide assembly to protect leakage revival

Reason : High air pressure in the tub .

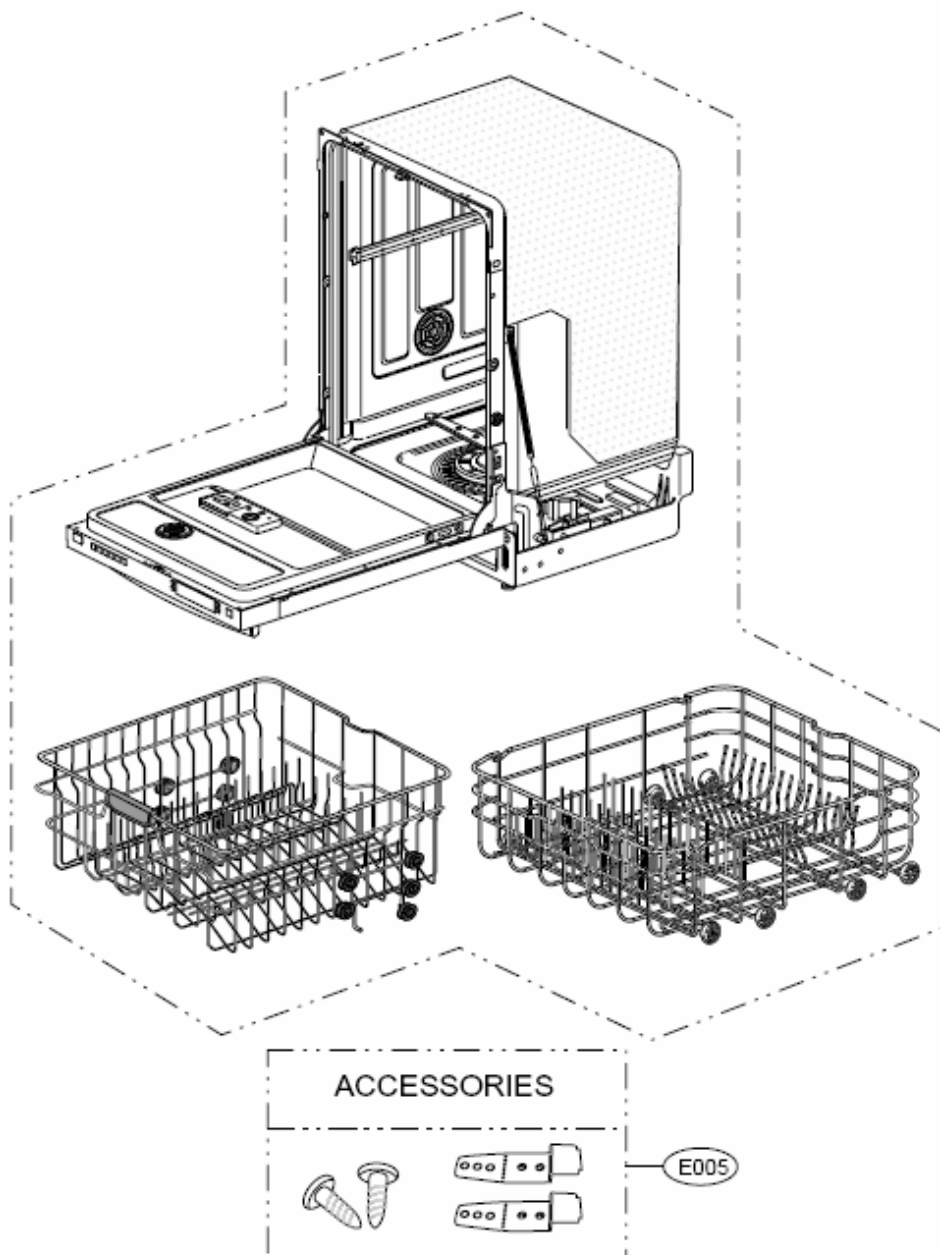


Solution : Exchange air guide assembly
A → B (S/no: 902~)

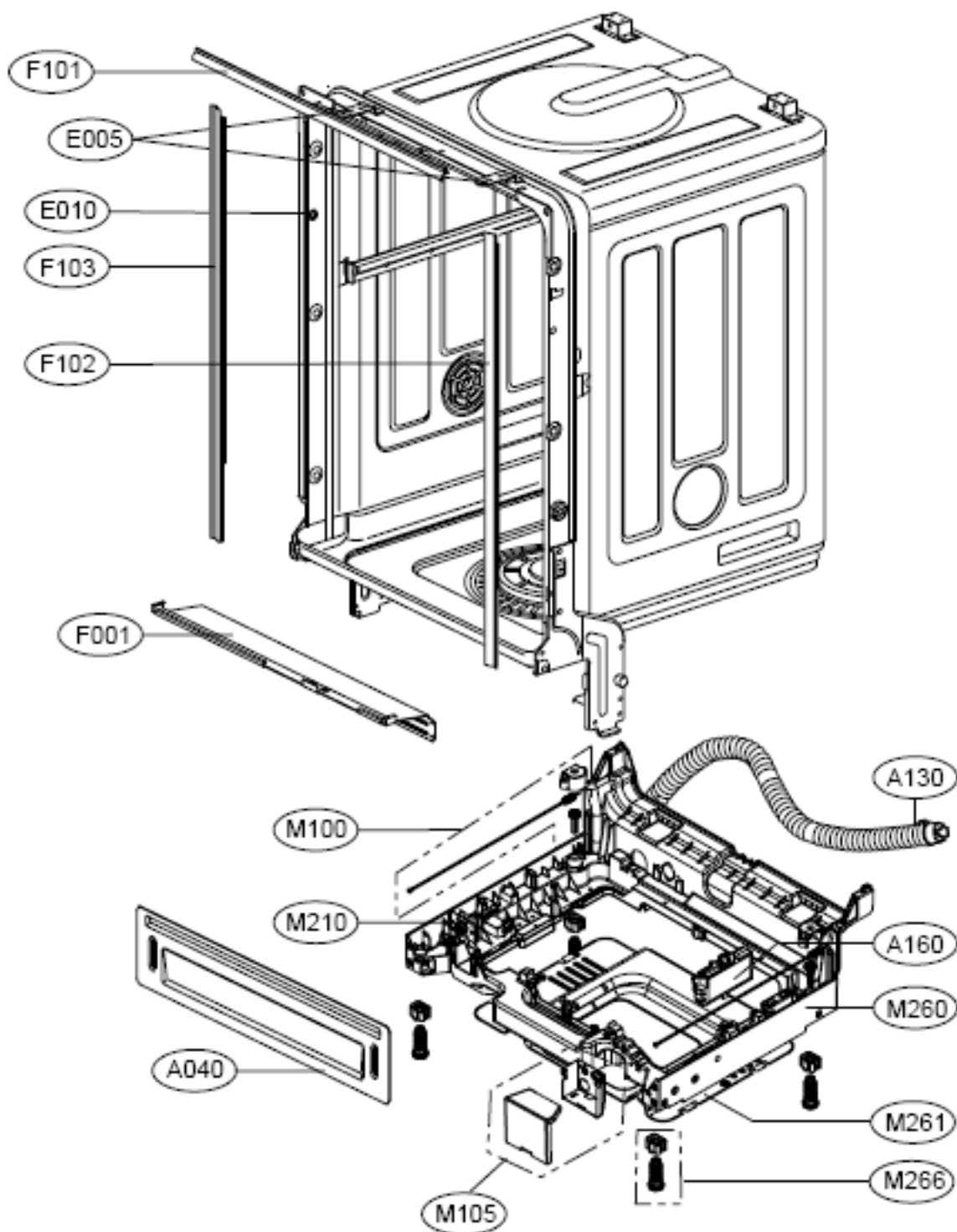


Customer Model	Factory Model	Suffix
LDF6920XX	D1608	

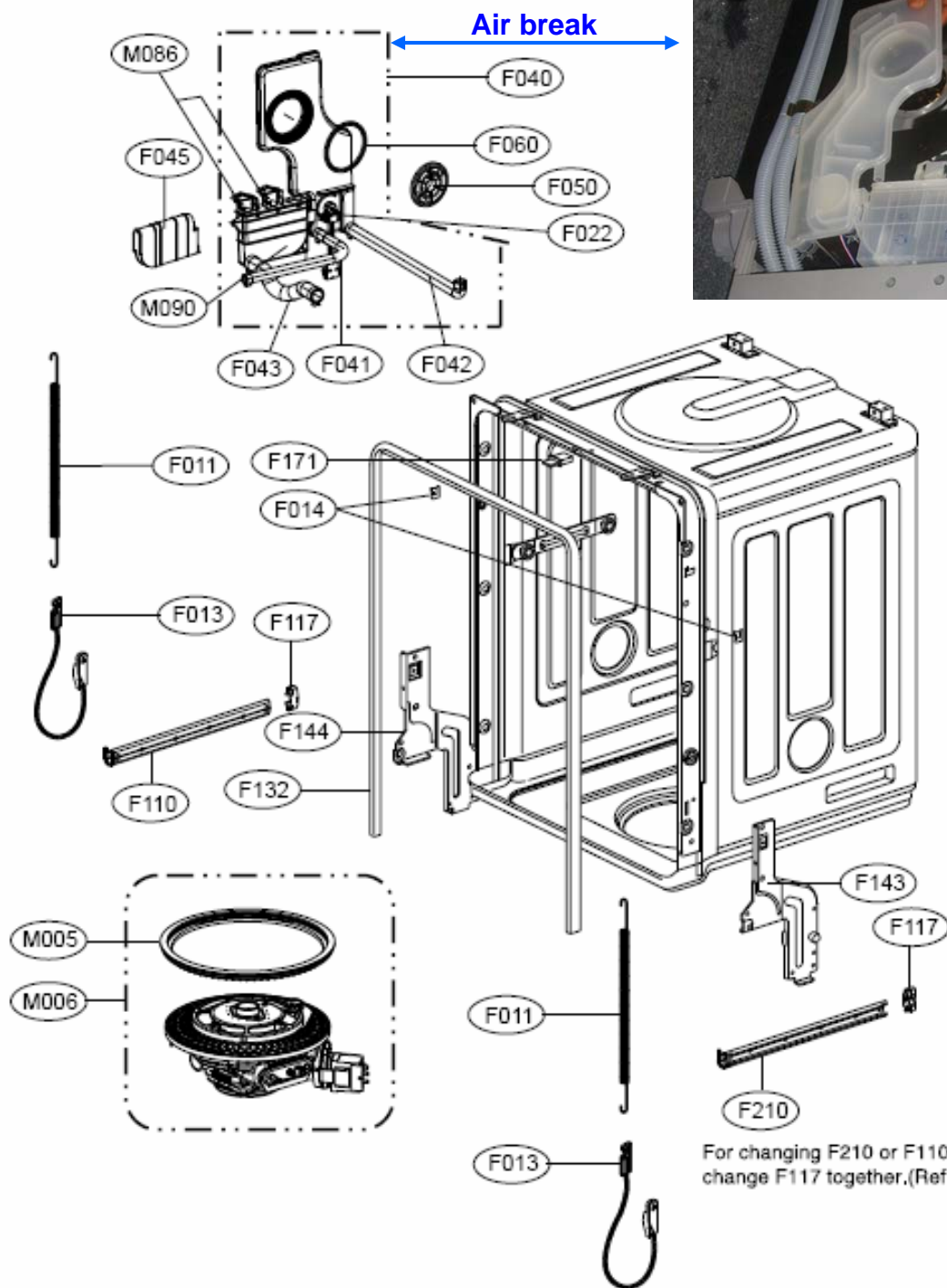
4. Exploded view



4. Exploded view

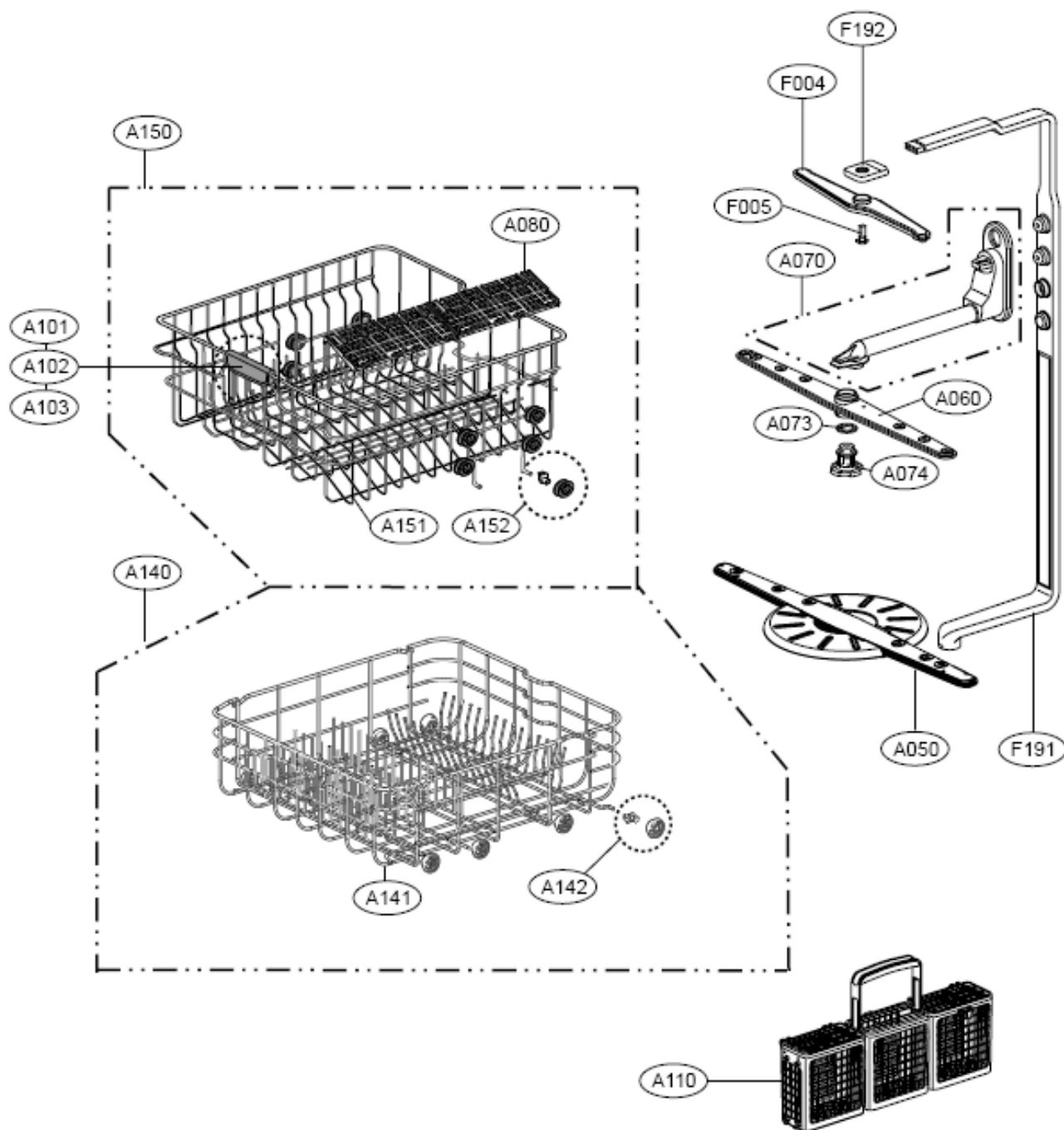


4. Exploded view

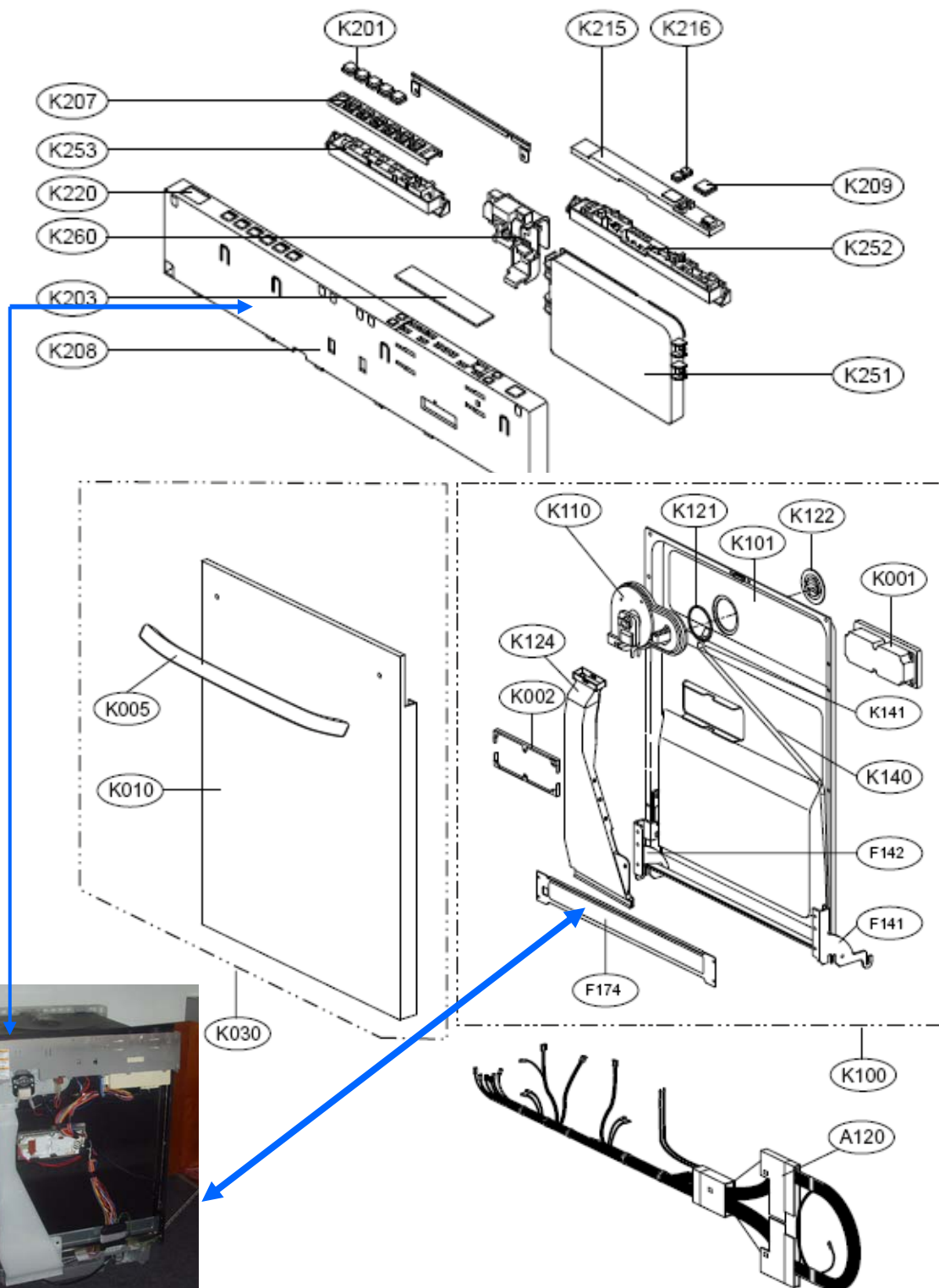


For changing F210 or F110, you must change F117 together.(Ref 32page)

4. Exploded view



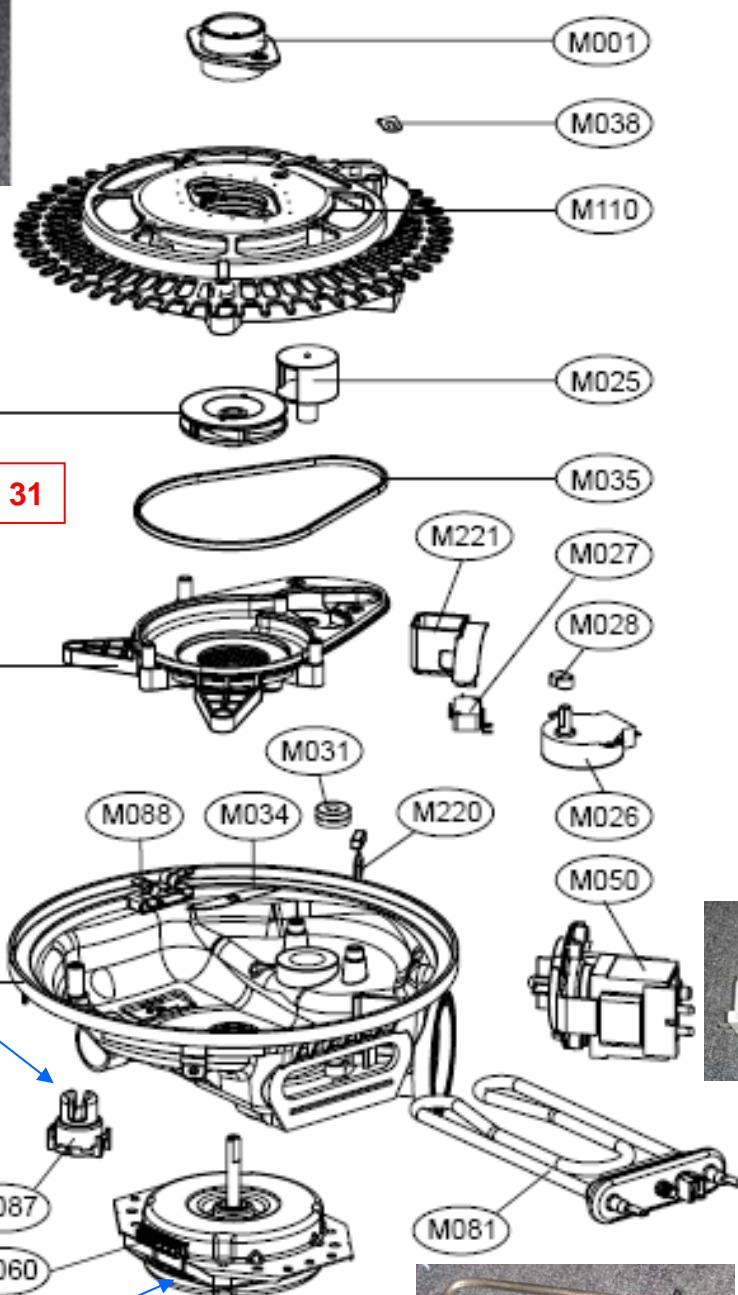
4. Exploded view



4. Exploded view



* Sump gasket : Refer to Page 31



SERVICE BULLETIN-1

Installation improvement

Date of issue: 17 Oct 2008

Buyer Model : LDS5811XX,LDS5811XX/01,LDS5811XX/02, LDF7811XX,LDF7811XX/01, LDF7810XX, LDF7810XX/01, LDF6810XX,LDF6810XX/01,LDF6810XX/02, LDF8812XX,LDF8812XX/01, LDF9810XX, LDF9810XX/01, LDS4821XX, LDF6920XX, LDF8922XX, LDF7920XX, LDF7932XX

LGE Model : LD-6090XX,LD-6100XX,LD-6105XX,LD-6106XX,LD-6300XX,LD-6310XX,LD-6311XX
D1401XX,D1607XX,D1608XX,D1613XX

Buyer Name: LGECI, LGEUS

Effective Date: 01 Oct 2008

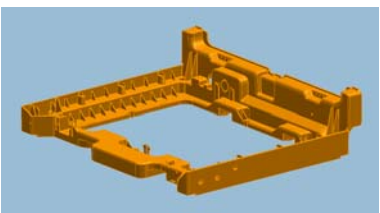
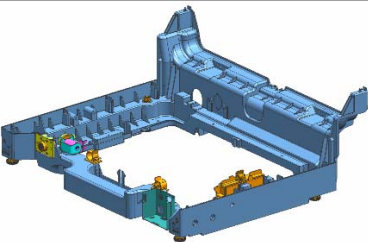
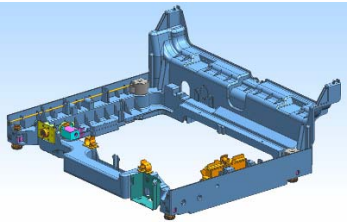
Applicable Serial No: 501KWXXXXX ~

Subject: Parts change for Installation convenience.

1.Phenomenon : Changes to base affecting installation

2.Reason : Changes have been made to the base in order to make installation faster and easier.

3.Major Changed parts

Old base	New base	New Base → Modify
3040ED1003A	MAM34326301	MAM34326301
501KW***** ~ 609KW*****	610KW***** ~ 809KW*****	810KW***** ~
		

※ **Remark :** All changes have been made to the base. See the exploded view and chart for part numbers and compatibility.

* Interchangeability Code	Alphabetic Code		Numeral Code	
	A	Interchangeable: Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1	To improve performance
	B	Old parts can be substituted for new parts :Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
			5	Addition
			6	Deletion
			7	Correction

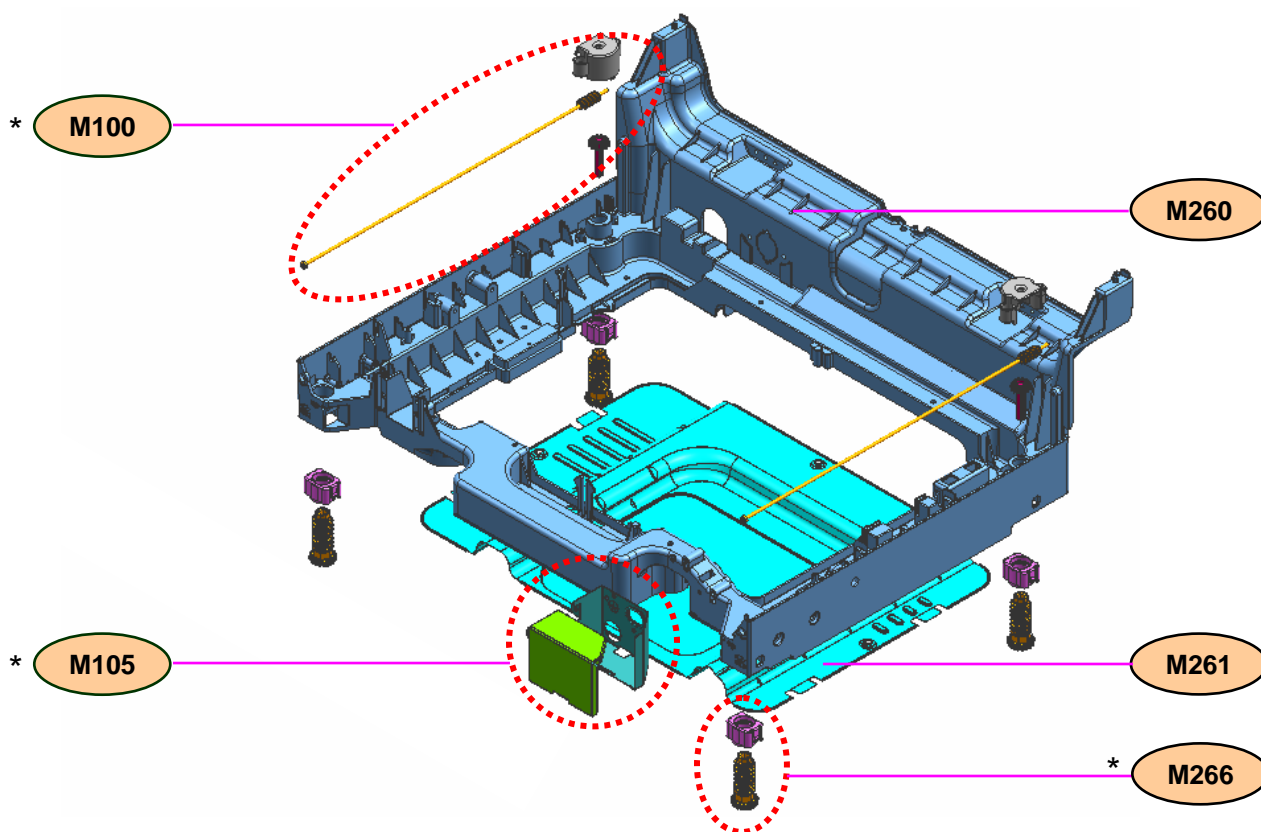
Y. J. Lee

Y.J Lee
Dish Washer Engineering
Design Department.

4.SVC Method:

Service procedures for models with the new base are not affected by these changes. The only difference is in the removal for service and reinstallation of the product after service. Parts of the base are not interchangeable between old and new style bases. If any old style base parts must be replaced, refer to the chart on the next page and order ALL the parts listed for the old style base.

(Applied date: 01.Oct.2008)





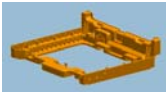
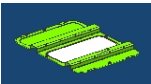

* Interchangeability Code	Alphabetic Code		Numeral Code	
	A	Interchangeable: Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1	To improve performance
	B	Old parts can be substituted for new parts :Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
			5	Addition
			6	Deletion
			7	Correction

Y. J. Lee
Y.J Lee
Dish Washer Engineering
Design Department.

SERVICE BULLETIN-1

Installation improvement

Serial No. : **501KWxxxxx ~ 609KWxxxxx**

Location Number	Old base part number	Use these service part numbers
M100		—
M105	Case (3110DD3002A) 	* Parts Assembly (AGM72098101) Base cover Asm (ACQ31707201) * Parts Assembly (AGM72573101) Side cabinet-R (3090ED1001D/E/F) Side cabinet-L (3090ED1002D/E/F)
	Cover Asm (3551DD3001A) 	
M260	Base (3040ED1003A) 	* Parts Assembly (AGM72098101) Base cover Asm(ACQ31707201) * Parts Assembly (AGM72573101) Side cabinet-R(3090ED1001D/E/F) Side cabinet-L (3090ED1002D/E/F)
M261	Base cover Asm (3551DD1002A) 	* Parts Assembly (AGM72098101) Base cover Asm(ACQ31707201) * Parts Assembly (AGM72573101) Side cabinet-R(3090ED1001D/E/F) Side cabinet-L (3090ED1002D/E/F)
M266	Leg (4778DD3001A) 	* Parts Assembly (AGM72461901) (NOTE: Nut is not used on old bases)

* Parts Assembly (only for SVC) : refer to the next page for details

NOTE ; If the LOC#M105 , LOC# M260, LOC#M261 must be replaced on older models, order all the parts listed in the table above.

* Interchangeability Code	Alphabetic Code	Numeral Code
A	Interchangeable: Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1 To improve performance
B	Old parts can be substituted for new parts :Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2 To improve productivity
C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3 To improve reliability
D	Not interchangeable : New parts can be used in new products only.	4 Change of material or dimension
		5 Addition
		6 Deletion
		7 Correction




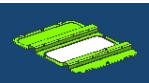

Y. J. Lee

Y.J Lee
Dish Washer Engineering
Design Department.

SERVICE BULLETIN-1

Installation improvement

Serial No. : **610KWxxxxx ~ 809KWxxxxx**

Location Number	Old base part number	Use these service part numbers
M100		—
M105	Case (3110DD3002A) 	* Parts Assembly (AGM72098101) Base cover Asm (ACQ31707201) * Parts Assembly (AGM72573101)
	Cover Asm (3551DD3001A) 	
M260	Base (MAM34326301) 	* Parts Assembly (AGM72098101) Base cover Asm(ACQ31707201) * Parts Assembly (AGM72573101)
M261	Base cover Asm (MCK34326401) 	* Parts Assembly (AGM72098101) Base cover Asm(ACQ31707201) * Parts Assembly (AGM72573101)
M266	Leg (4778DD3001A) 	* Parts Assembly (AGM72461901) (NOTE: Nut is not used on old bases)

* Parts Assembly (only for SVC) : refer to the next page for details

NOTE ; If the LOC#M105 , LOC# M260, LOC#M261 must be replaced on older models, order all the parts listed in the table above.

* Interchangeability Code	Alphabetic Code	Numeral Code
A	Interchangeable : Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1 To improve performance
B	Old parts can be substituted for new parts :Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2 To improve productivity
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D	Not interchangeable : New parts can be used in new products only.	4 Change of material or dimension
		5 Addition
		6 Deletion
		7 Correction


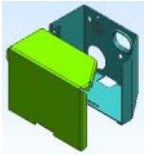
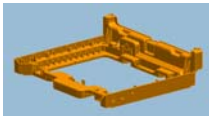
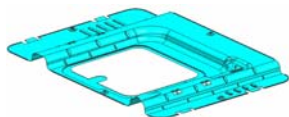

Y. J. Lee

Y.J Lee
Dish Washer Engineering
Design Department.

SERVICE BULLETIN-1

Installation improvement

Serial No. : **810KWxxxxx** ~

Location Number	Old base part number	Use these service part numbers
M100	Parts Assembly (AGM72461801) 	* Parts Assembly (AGM72461801)
M105	Parts Assembly (AGM72573101) 	* Parts Assembly (AGM72573101)
M260	Base (MAM34326301) 	* Parts Assembly (AGM72098101)
M261	Base cover Asm (ACQ31707201) 	Base cover Asm(ACQ31707201)
M266	Parts Assembly (AGM72461901) 	* Parts Assembly (AGM72461901) (NOTE: Nut is not used on old bases)

* Parts Assembly (only for SVC) : refer to the next page for details

NOTE ; If the LOC#M105 , LOC# M260, LOC#M261 must be replaced on older models, order all the parts listed in the table above.

* Interchangeability Code	Alphabetic Code	Numeral Code
A	Interchangeable: Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1 To improve performance
B	Old parts can be substituted for new parts :Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2 To improve productivity
C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3 To improve reliability
D	Not interchangeable : New parts can be used in new products only.	4 Change of material or dimension
		5 Addition
		6 Deletion
		7 Correction


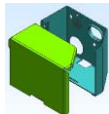
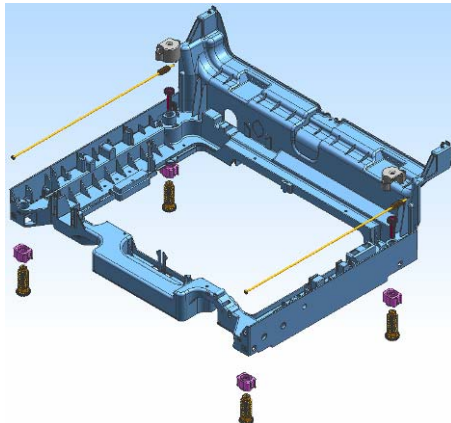

Y. J. Lee

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Dish Washer Engineering
Design Department.


SERVICE BULLETIN-1

Installation improvement

* Parts Assembly (only for SVC)

M100	Parts Assembly AGM72461801	<table><tr><td>Shaft Assem bly</td><td>1</td></tr><tr><td>Ho lder(Bracket)</td><td>1</td></tr><tr><td>Leg(C oup ler)</td><td>1</td></tr></table>	Shaft Assem bly	1	Ho lder(Bracket)	1	Leg(C oup ler)	1							
Shaft Assem bly	1														
Ho lder(Bracket)	1														
Leg(C oup ler)	1														
M105	Parts Assembly AGM72573101	<table><tr><td>Case</td><td>1</td></tr><tr><td>Cover Assem bly</td><td>1</td></tr></table>	Case	1	Cover Assem bly	1									
Case	1														
Cover Assem bly	1														
M260	Parts Assembly AGM72098101	<table><tr><td>Base</td><td>1</td></tr><tr><td>Leg</td><td>4</td></tr><tr><td>Nut</td><td>4</td></tr><tr><td>Shaft Assem bly</td><td>2</td></tr><tr><td>Ho lder(Bracket)</td><td>2</td></tr><tr><td>Leg(C oup ler)</td><td>2</td></tr></table>	Base	1	Leg	4	Nut	4	Shaft Assem bly	2	Ho lder(Bracket)	2	Leg(C oup ler)	2	
Base	1														
Leg	4														
Nut	4														
Shaft Assem bly	2														
Ho lder(Bracket)	2														
Leg(C oup ler)	2														
M266	Parts Assembly AGM72461901	<table><tr><td>Leg</td><td>1</td></tr><tr><td>Nut</td><td>1</td></tr></table>	Leg	1	Nut	1									
Leg	1														
Nut	1														

Base cover Asm

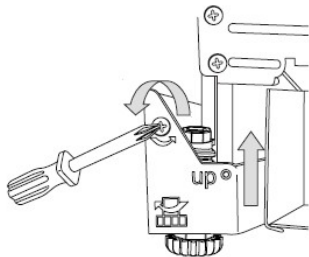
M261	Base cover Asm ACQ31707201	Cover, base	1	
		Damper, damping	1	
		Label, caution	1	

* Interchangeability Code	Alphabetic Code		Numeral Code	
	A	Interchangeable: Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1	To improve performance
	B	Old parts can be substituted for new parts :Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
			5	Addition
			6	Deletion
			7	Correction

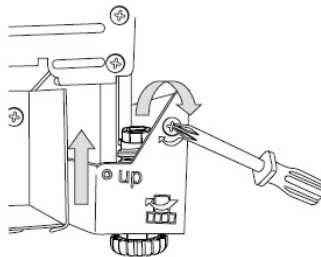
Y. J. Lee
Y.J Lee
Dish Washer Engineering
Design Department.

5.How to adjust leg

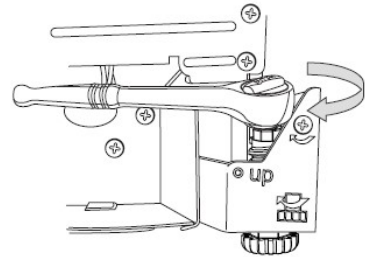
How to adjust leg



- Left side – turn the adjusting screw **counterclockwise** to lower the leg and raise the rear of the d/w.



- Right side – turn the adjusting screw **clockwise** to lower the leg and raise the rear of the d/w.



- Front feet can be adjusted from the top using a 1/4" square drive wrench.

NOTE ;

When you adjust the rear legs, use care to turn the adjusters in the proper direction.

These adjusters may be damaged by being driven in reverse at the upper stops.

Turning the adjusters the wrong way when the leg is fully retracted will produce a loud snapping sound to alert you that it has reached the upper limit.

If you use an electric screwdriver, keep the torque setting as low as possible to reduce the possibility of damage to the adjusting mechanism.

In the event that a rear adjuster is damaged, you can adjust the leg manually as before by removing the broken adjusters.

* Interchangeability Code	Alphabetic Code		Numeral Code	
	A	Interchangeable: Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1	To improve performance
	B	Old parts can be substituted for new parts :Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
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			5	Addition
			6	Deletion
			7	Correction

Y. J. Lee

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Dish Washer Engineering
Design Department.

Drain hose with siphon protector

LG Electronics Inc.

Date of issue: 12. November. 2008

Buyer Model : LDS5811XX,LDF7811XX,LDF7810XX,LDF7920XX,LDF6810XX,LDF8812XX,LDF8922XX
LDF9810XX,LDS4821XX,LDF6920XX,LDF7932XX,LDF9932XX

LGE Model : LD-6090XX,LD-6100XX,LD-6105XX,LD-6106XX,LD-6300XX,LD-6310XX,LD-6311XX
D1401XX,D1607XX,D1608XX,D1613XX,D1412XX

Buyer Name : EUS / ECI

Effective Date : 12. November. 2008

Applicable Serial No. : 811##### ~

SUBJECT : New Drain Hose
1.Phenomenon : Siphon break added to drain hose

2.Reason : Siphon break added to prevent siphoning water from tub

※. **Service Caution :** When replacing the sump heater you should also replace the drain hose with the added siphon break.

3.Changed parts

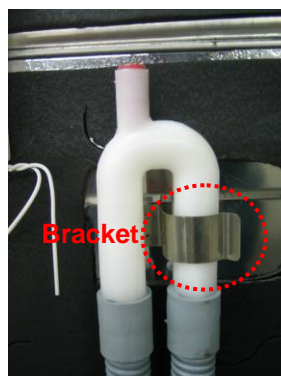
LOC No. and Description	BEFORE (S/N : 501KW#####~810#####)	AFTER (S/N :811##### ~)
A130 Drain hose	AEM30700301 	AEM69493801 

*Interchangeability Code	Alphabetic Code		Numeral Code		G. H. Hwang Research Engineer Dishwasher Gr. Washing Machine Lab LG Electronics DAC
	A	Interchangeable : Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1	To improve performance	
	B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity	
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability	
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension	
			5	Addition	
			6	Deletion	
			7	Correction	

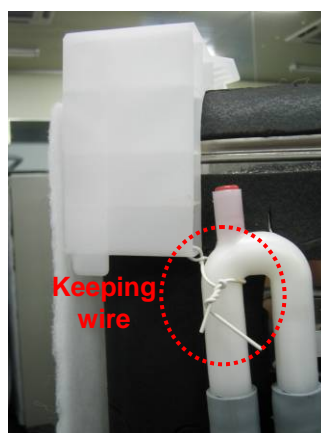
Drain hose with siphon protector

※ When replacing the old style drain hose with the new style drain hose follow the steps below.

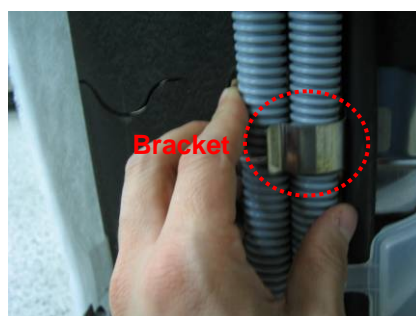
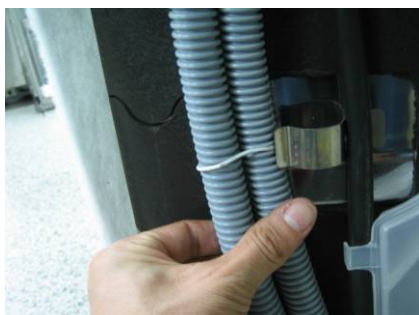
- 1) There are 2 methods of mounting the siphon break. For bracket installation follow step “a”. For wire tie installation follow step “b”.
 - a) Insert the right side of the siphon break under the bracket as shown below.



- b) Use the existing wire tie from the previous hose to support the siphon break and hose

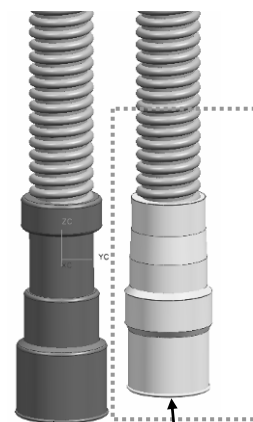
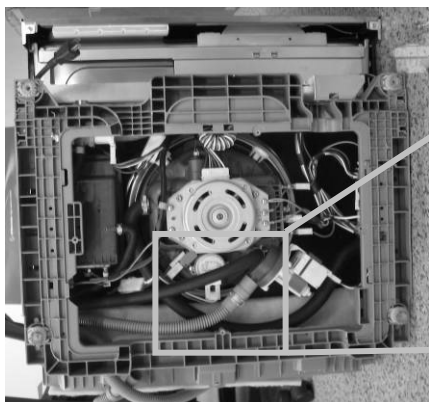


- 2) Insert the drain hose into the lower bracket.



Drain hose with siphon protector

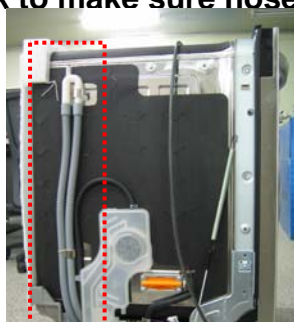
- 3) Attach the drain hose to the drain hose outlet on the sump using the clamp provided. Clamp is included with the new hose.



Outlet end
(longer hose)

Pump End
(shorter hose)

- 4) Feed outlet end of long hose through the hole in the back of the base and attach bracket holder. Check to make sure hose is not kinked or twisted.



- 5) Reinstall the dishwasher as described in the installation manual.

Hinge spring & wire about door drop

LG Electronics Inc.

Date of issue: 4. February. 2009

Buyer Model : LDF8812ST, LDF8812ST/01, LDF8922ST, LDF78****, LDF78****/01, LDF6810**, LDF6810**/01, LDF6810**/02, LDF6920**, LDS5811**, LDS5811**/01, LDS5811**/02, LDS4821**

LGE Model : LD-63**, LD-63**1, LD-63**2, LD-61**, LD-61**1, D1608**, LD-6090**, LD-6090**1, LD-6090**2, D1607**

Buyer Name : EUS / ECI

Effective Date : 4. February. 2009

Applicable Serial No. : 501KWXXXX ~

SUBJECT : Change of Spring Hinge & Connector Assy.

※ **Symptom :** When a user open or close the door, the door can be stayed at any position that a user want to stop. If the door doesn't stop and falls by itself, than the SPRING, HINGE or the CONNECTOR ASSMBLY should be changed.

1. **Phenomenon :** Change of Spring Hinge & Connector Assy.

2. **Reason :** Improve the Door System of the Fully-type Dishwasher

3. **Changed parts ; for the Fully Type Dishwasher**

Location Number	When replacing these Parts	Old base part number	Use these part numbers for SVC	
			Fully Model (LDF8812ST, LDF8812ST/01, LDF8922ST, LDF6810**, LDF6810**/01, LDF6810**/02, LDF6920**, LDF78****, LDF78****/01)	
			Serial No. : 501~ 812KWxxxxx	Serial No. : 901KWxxxxx ~
F011	SPRING, HINGE	4970ED4004A	4970ED4004G(SPRING) 4933DD3001B(CONNECTOR)	4970ED4004G
F013	CONNECTOR ASSEMBLY	4933DD3001A	4970ED4004G(SPRING) 4933DD3001B(CONNECTOR)	4933DD3001B

▪ **Note :** The SPRING, HINGE[4970ED4004G] and the CONNECTOR ASSEMBLY[4933DD3001B] should be applied all together for a fully type dishwasher.

▪ **Note :** Serial No. 501~ 812KWxxxxx ;

If you need to repair the SPRING HINGE, the CONNECTOR ASSEMBLY must be changed together.

Or if you need to repair the CONNECTOR ASSEMBLY, the SPRING HINGE must be changed together.

*Interchangeability Code	Alphabetic Code		Numeral Code		Y. J. Cha Research Engineer Dishwasher Gr. Washing Machine Lab LG Electronics DAC
	A	Interchangeable : Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1	To improve performance	
	B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity	
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability	
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension	
			5	Addition	
			6	Deletion	
			7	Correction	

Hinge spring & wire about door drop

LG Electronics Inc.

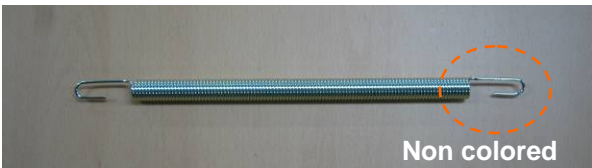
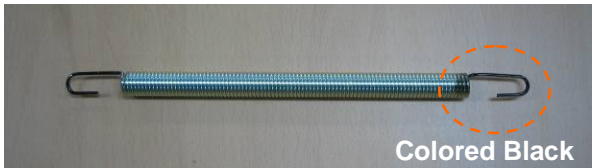


Date of issue: 4. February. 2009

4.Changed parts ; for the Semi Type Dishwasher

Location Number		Semi Model (LDS5811**, LDS5811**/01, LDS5811**/02, LDS4821**)	
		Before : 501~ 812KWxxxxx	After : 901KWxxxxx ~
F013	CONNECTOR ASSEMBLY	4933DD3001A	4933DD3001B

- **Note** : The **CONNECTOR ASSEMBLY[4933DD3001B]** should be applied for every semi type dishwasher.
- **Note** : **Serial No. 501~ 812KWxxxxx** ;
If you need to repair a CONNECTOR ASSEMBLY, apply the **4933DD3001B**.

5.Pictures of parts

SPRING, HINGE	
4970ED4004A	4970ED4004G
 Non colored	 Colored Black
CONNECTOR ASSEMBLY	
4933DD3001A	4933DD3001B
 White	 Black

*Interchangeability Code	Alphabetic Code		Numeral Code	
	A	Interchangeable : Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1	To improve performance
	B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
			5	Addition
			6	Deletion
			7	Correction

Y. J. Cha

Research Engineer
Dishwasher Gr.
Washing Machine Lab
LG Electronics DAC

Vent to prevent condensation

LG Electronics Inc.

Date of issue: 10. February. 2009

Buyer Model : LDS5811BB,LDF7811BB,LDF7810BB,LDF7920BB,LDF6810BB,
LDS4821BB,LDF6920BB

LGE Model : LD-6090BB,LD-6100BB,LD-6105BB,LD-6106BB,LD-6300BB,
D1607BB,D1608BB

Buyer Name : EUS / ECI

Effective Date : 1. January. 2009

Applicable Serial No. : S/N : 712KWxxxxx~812xxxxxxx

In Production- 901xxxxx ~

SUBJECT : New vent assembly for drying – To reduce moisture on the floor during dry cycle

1.Problem : moisture build up on floor
as a result from the drying cycle

2.Solution : Redesigned vent to prevent
condensation build up on floor.

3.Changed parts



LOC No. and Description	BEFORE (S/N : 712KW#####~812#####)	AFTER (S/N : 901##### ~)
K124 Vent	MJZ39902101 	Order Part as needed by color: ▪ Black door -MJZ61841503 Black Light gray / White / Black 

Alphabetic Code

Numeral Code

- | | |
|----------|---|
| A | Interchangeable : Old and new parts can be used in products as the bulletin regardless of manufacturing date. |
| B | Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only. |
| C | New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date. |
| D | Not interchangeable : New parts can be used in new products only. |

- | | |
|----------|---------------------------------|
| 1 | To improve performance |
| 2 | To improve productivity |
| 3 | To improve reliability |
| 4 | Change of material or dimension |
| 5 | Addition |
| 6 | Deletion |
| 7 | Correction |

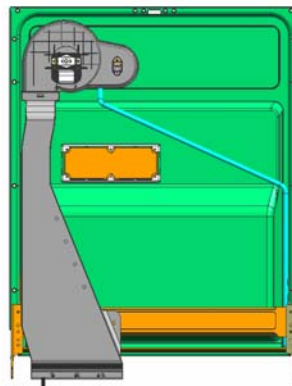
G. H. Hwang

Research Engineer
Dishwasher Gr.
Washing Machine Lab
LG Electronics DAC

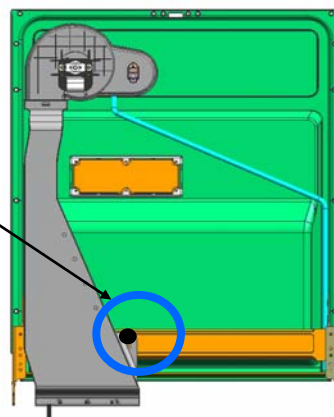
Vent to prevent condensation

※ To replace vent, follow the steps below.

a) Remove front door by unfasten 6 screws



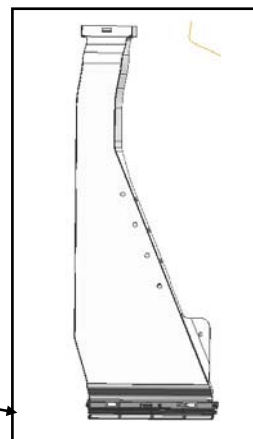
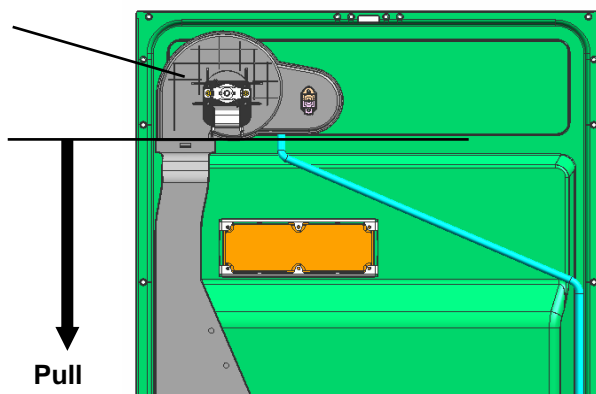
b) remove screw securing vent



c) Remove old vent from blower assembly by pulling down.

Note: Only the vent should be removed, motor assembly is fixed and it should not need to be removed for this process.

Fixed



d) Install new vent and reassemble in reverse order



LG Electronics Inc.

SERVICE BULLETIN-5

Page:2/2

HE ERROR

Date of issue: 4. November. 2009

Buyer Model : LDS4821**, LDF 7920**, LDF7932**, LDF9932**, LDS5811**, LDF9810**`

LGE Model : D1607**, LD-6106**, D1613**, D1412, LD-6090**, D1401**

Buyer Name : ECI

Effective Date : 4. November . 2009

Applicable Serial No. :Refer to the below

SUBJECT : PCB replacement SVC to correct 'HE' error code

Background

1) During the production date specified below, programming errors have been identified that cause the units to display an 'HE' error code. New boards have been developed to correct this problem.

Resolution:

On the affected models, **within the specified serial range**, replace the main PCB board.

This will resolve the issue.

Note: As this is a programming error we advise to replace the board on these units even if the initial call is not due to an 'HE' error, this will prevent the issue from occurring in the future.

Buyer Model	Before/After	Main PCB (P/N)	Bulletin issue date(Ver. 1)	Applicable Serial No	Program(PCB, Main) History
LDS4821 **	Before	EBR33469402	09.7.27	901KW#####~ 906KW#####	S/no 907~ modification was completed during production.
	After	EBR33469404			
LDF7920 **	Before	6871DD1006L	09.9.23	901KW#####~ 907KW#####	S/no 908~ modification was completed during production.
	After	6871DD1006S			
LDF7932 **	Before	EBR38144402	09.7.27	901KW#####~ 906KW#####	S/no 907~ modification was completed during production.
	After	EBR38144404			
LDF9932 **	Before	EBR38144403	09.7.27	901KW#####~ 906KW#####	S/no 907~ modification was completed during production.
	After	EBR38144405			
LDS5811 **	Before	6871DD1006K	09.12.31 (expected)	901KW#####~ 911KW#####	S/no 912~ modification was completed during production.
	After	6871DD1006T			
LDF9810 **	Before	EBR38144401	09.12.8	901KW#####~ 909KW#####	S/no 910~ modification was completed during production.
	After	EBR38144406			

SERVICE BULLETIN

DISHWASHER

LG Electronics Inc.

Date of issue: 29. Dec. 2009

Buyer Model : LDF8812ST, LDF9*****, LDF7*****, LDF6810**, LDF6920**, LDS4821**

LGE Model : LD-63**, LD-61**, LD-6090**, D1607**, D1608**, D1613**, D1412**

Buyer Name : EUS / ECI

Effective Date : 28th. Dec. 2009

Applicable Serial No. : 811KWXXXX ~

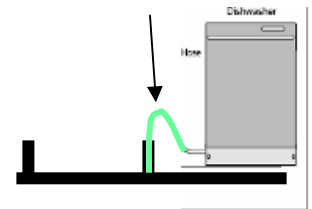
SUBJECT : Change of Drain Hose Assy for prevention of air sucking noise due to siphoning water

1. Phenomenon : Air sucking noise

Siphon effect makes water drain out

2. Reason :

- Prevent leakage from drain hose
- Prevent air sucking noise due to siphoning water.
- Prevent heater damage due to siphoning water



Wrong Installation

3.Changed parts

Location Number	When replacing these parts	Use these part numbers for SVC	
		Serial No. : 811~ 907KWxxxxx	Serial No. : 908KWxxxxx ~
		LDF8*****, LDF9****ST, LDF6*****, LDF7932** LDF6920**, LDS48****	LDF8*****, LDF9****ST, LDF6*****, LDF7932** LDF6920**, LDS48****
A130	Drain Hose Asm (P/N : AEM69493801) (P/N : AEM30700301)	AEM69493803(Drain Hose Asm) & 4975DD1001* (Guide Asm, Loc # : F040)	AEM69493803 (Drain Hose Asm)
A130	Drain Hose Asm (P/N : AEM69493802)	AEM69493804(Drain hose Asm) & 4975DD1001* (Guide Asm, Loc # : F040)	AEM69493804 (Drain Hose Asm)

*Interchangeability Code

Alphabetic Code		Numeral Code	
A	Interchangeable : Old and new parts can be used in products as the bulletin regardless of manufacturing date.	1	To improve performance
B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
		5	Addition
		6	Deletion
		7	Correction

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Appendix #1

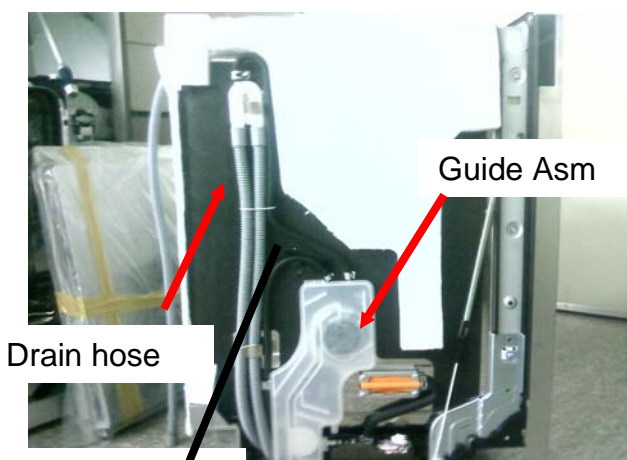
▪ **Note :** Serial No. 811~ 907KWxxxxx ;

If you need to repair the Drain Hose Asm, The drain hose Asm& Guide Asm (Loc# : F040) must be changed together. Otherwise it might make leakage from the Drain Hose Asm.

Name	Old P/N	New P/N
Drain hose Asm	AEM69493801	AEM69493803
Drain hose asm	AEM69493802	AEM69493804



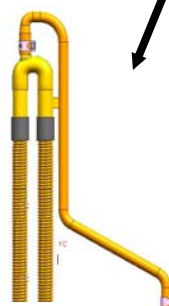
Before



Drain hose

Guide Asm

After



This additional hose must be connected in Guide Asm (4975DD1001*, Loc # : F040) as shown below.

3) clamp the drain hose into Guide Asm .
It prevents leakage from drain hose



SERVICE BULLETIN

DISHWASHER

LG Electronics Inc.

Date of issue: 15. Jan. 2010

Buyer Model : LDF6920WW/BB

LGE Model : D1608WB/BB

Buyer Name : EUS

Effective Date : 28th. Dec. 2009

Applicable Serial No. : 804KW##### ~906KW#####

SUBJECT : Change of Main PCB for prevention of air sucking noise due to water siphoning

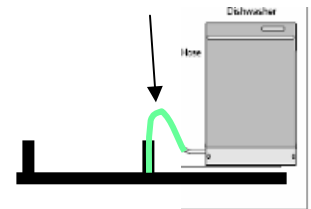
1. Phenomenon : Air sucking noise

Siphon effect makes water drain out

- Sometimes makes sucking noise after operating for 20~30 min.

2. Reason :

- To prevent air sucking noise due to water siphoning.



Incorrect Installation

3. Background

- If dishwasher is installed incorrectly, like the picture, it makes an air sucking noise. This is because it is programmed for partial draining.

3. Resolution

Replace all PCB Main boards without exception (New part number is **6871DD1006Q**.)

Correct improper installation.

★ A drain hose for siphon protection was upgraded 1st Jan, 2009 (Refer to the appendix #1)

※ You can use the New PCB (6871DD1006Q) in all cases

※ Don't use the old PCB (6871DD1006N) in any case

Part Description (Loc)	Before	After
PCB Main (K 251)	6871DD1006N	6871DD1006Q

*Interchangeability Code	Alphabetic Code		Numeral Code	
	A	Interchangeable : Old and new parts can be used in products as per the bulletin regardless of manufacturing date.	1	To improve performance
	B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
			5	Addition
			6	Deletion
			7	Correction

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LG Electronics DAC

SERVICE BULLETIN

DISHWASHER

LG Electronics Inc.

Date of issue: 15. Jan. 2010

Buyer Model : LDF6920ST

LGE Model : D1608TB

Buyer Name : EUS

Effective Date : 28th. Dec. 2009

Applicable Serial No. : 804KW##### ~906KW#####

SUBJECT : Change of Main PCB for prevention of air sucking noise due to water siphoning

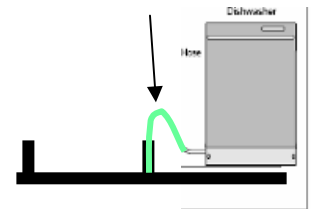
1. Phenomenon : Air sucking noise

Siphon effect makes water drain out

- Sometimes makes sucking noise after operating for 20~30 min.

2. Reason :

- To prevent air sucking noise due to water siphoning.



Incorrect Installation

3. Background

- If dishwasher is installed incorrectly, like the picture, it makes an air sucking noise. This is because it is programmed for partial draining.

3. Resolution

Replace all PCB Main boards without exception (New part number is **6871DD1006R**.)

Correct improper installation.

★ A drain hose for siphon protection was upgraded 1st Jan, 2009 (Refer to the appendix #1)

※ You can use the New PCB (6871DD1006R) in all cases

※ Don't use the old PCB (6871DD1006P) in any case

Part Description (Loc)	Before	After
PCB Main (K 251)	6871DD1006P	6871DD1006R

*Interchangeability Code	Alphabetic Code		Numeral Code	
	A	Interchangeable : Old and new parts can be used in products as per the bulletin regardless of manufacturing date.	1	To improve performance
	B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
			5	Addition
			6	Deletion
			7	Correction

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SERVICE BULLETIN

DISHWASHER

LG Electronics Inc.

Date of issue: 15. Jan. 2010

Buyer Model : LDS4821**

LGE Model : D1607**

Buyer Name : EUS / ECI

Effective Date : 28th. Dec. 2009

Applicable Serial No. : 804KW##### ~906KW#####

SUBJECT : Change of Main PCB for prevention of air sucking noise due to water siphoning

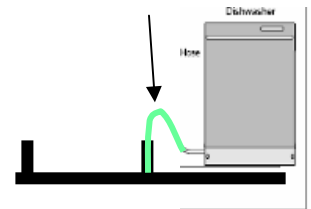
1. Phenomenon : Air sucking noise

Siphon effect makes water drain out

- Sometimes makes sucking noise after operating for 20~30 min.

2. Reason :

- To prevent air sucking noise due to water siphoning.



Incorrect Installation

3. Background

- If dishwasher is installed incorrectly, like the picture, it makes an air sucking noise. This is because it is programmed for partial draining.

3. Resolution

Replace all PCB Main boards without exception (New part number is EBR 33469404.)

Correct improper installation.

★ A drain hose for siphon protection was upgraded 1st Jan, 2009 (Refer to the appendix #1)

※ You can use the New PCB (EBR 33469404) in all cases

※ Don't use the old PCB (EBR 33466402) in any case

Part Description (Loc)	Before	After
PCB Main (K 251)	EBR 33469402	EBR 33469404

*Interchangeability Code	Alphabetic Code		Numeral Code	
	A	Interchangeable : Old and new parts can be used in products as per the bulletin regardless of manufacturing date.	1	To improve performance
	B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
	C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
	D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
			5	Addition
			6	Deletion
			7	Correction

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Service Bulletin

LG Electronics Inc.

Date of issue: 31 Mar 2010

Buyer Model :	DWV1608xx	LDF6810xx	LDF6920xx	LDF7810xx	LDF7811xx	LDF7920xx
	LDF7932xx	LDF8812xx	LDF8922xx	LDF9810xx	LDF9932xx	LDS4821xx
	LDS5811xx	LDS5811xx	LDS5811xx	LSDF795xx	LSDF995xx	
LGE Model :	D1401xx	D1412xx	D1414xx	D1607xx	D1608xx	D1613xx
	D1616x	LD-6090xxx	LD-6100xxx	LD-6105xxx	LD-6106xx	LD-6300xxx
	LD-6310xxx	LD-6311xx				

Buyer Name : EUS / ECI	Effective Date : 16. March. 2010
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Applicable Serial No. : 10300001 ~

SUBJECT : Improvement of installation (Worm Gear Strip)
--

Symptom Details

○ Issue:

- Rear leg worm gears stop working after multiple adjustments.

○ Reason:

- The strength of the gear is too weak for lifting the product multiple times (Mold: Nylon POM)

Improvement:

- .Changed gear material from Nylon POM to Zinc Alloy (Improved Strength)
- . Changed the shape of the parts (Improved Strength)

Additional Modification to base on all models needed from 810KWxx~ 102KWxx:

- . To use new parts on the old base some modification to the base is needed (see page 3 - Appendix.2)

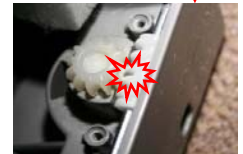
Parts Chart:

P/N	Old (810KWxxx~102KWxxx)	New (~103KWxxx)	LOC.
AGM72461801	4371DD2001B	4470DD4001B	M100
	MEG58373101	MEG58373101	
	MFA57912301	MFA57912302	

Compatibility

- . Old parts can be used on new base.
- . New parts can be used on old base with a slight modification to the base. See Appendix 2

	Old Products (810KWxxx~102KWxxx)	New Products (~103KWxxx)
AGM72461801(Old)	O	O
AGM72461801(New)	X	O











*Interchangeability Code

Alphabetic Code		Numeral Code	
A	Interchangeable : Old and new parts can be used in products as per the bulletin regardless of manufacturing date.	1	To improve performance
B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.	2	To improve productivity
C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.	3	To improve reliability
D	Not interchangeable : New parts can be used in new products only.	4	Change of material or dimension
		5	Addition
		6	Deletion
		7	Correction

T.H. Cho

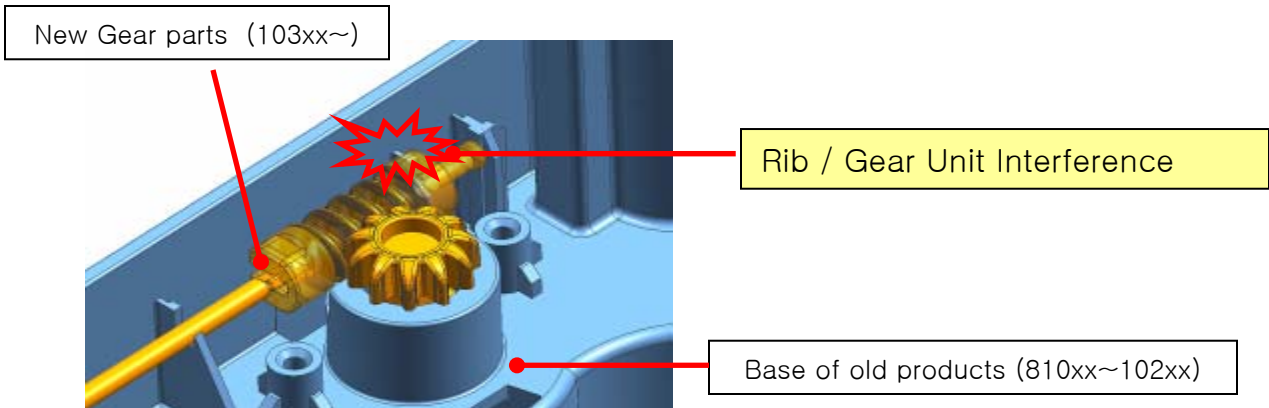
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Dishwasher Gr.
Washing Machine Lab
LG Electronics DAC

Appendix A. Part detail

P/N		Old (.810kWxxx~102kWxxx)		New (~103kWxxx)	
AGM72461801	 <p>810xxx~102xx</p> <p>102xx~</p>	4371DD2001B		4470DD4001B	
				4370DD2001D	
		MEG58373101		MEG58373101	
		MFA57912301		MFA57912302	

Appendix B. SVC Method

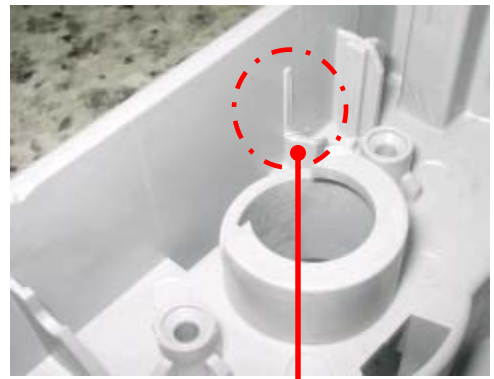
Compatibility of new worm gear system with old base



To use the new worm gear parts on the old base you will need to modify old base to allow for clearance.



Before:
Remove rib



After:
Rib removed

- Put gloves on to prevent injury
- Using a utility knife, remove the rib located on the back side of the rear foot hole (as illustrated above).
- Note: If replacing both rear feet worm gears the rib will need to be removed from both sides.

Appendix C. SVC Model

No.	Factory Model	Factory Suffix	Customer Model	No.	Factory Model	Factory Suffix	Customer Model
1	D1401TB	ASTEECI	LDF9810ST	43	LD-6090WB2	ABWEECI	LDS5811WW
2	D1401TB	ASTEEUS	LDF9810ST	44	LD-6090WB2	ABWEEUS	LDS5811WW
3	D1401TB1	ASTEECI	LDF9810TB	45	LD-6100BB	ABPEEUS	LDF7811BB
4	D1401TB1	ASTEEUS	LDF9810ST	46	LD-6100BB1	ABPEEUS	LDF7811BB
5	D1412TB	ASTEECI	LDF9932ST	47	LD-6100TB	ASTEEUS	LDF7811ST
6	D1412TB	ASTEEUS	LDF9932ST	48	LD-6100TB1	ASTEEUS	LDF7811ST
7	D1414TB	ASTEEUS	LSDF995ST	49	LD-6100WB	ABWEEUS	LDF7811WW
8	D1607BB	ABPEEUS	LDS4821BB	50	LD-6100WB1	ABWEEUS	LDF7811WW
9	D1607BB	ABPEECI	LDS4821BB	51	LD-6105BB	ABPEECI	LDF7810BB
10	D1607TB	ASTEECI	LDS4821ST	52	LD-6105BB	ABPEEUS	LDF7810BB
11	D1607TB	ASTEEUS	LDS4821ST	53	LD-6105BB1	ABPEEUS	LDF7810BB
12	D1607WB	ABWEECI	LDS4821WW	54	LD-6105BB1	ABPEECI	LDF7810BB
13	D1607WB	ABWEEUS	LDS4821WW	55	LD-6105TB	ASTEECI	LDF7810ST
14	D1608BB	ABPEECI	LDF6920BB	56	LD-6105TB	ASTEEUS	LDF7810ST
15	D1608BB	ABPEEUS	LDF6920BB	57	LD-6105TB1	ASTEEUS	LDF7810ST
16	D1608TB	ASTEEUS	LDF6920ST	58	LD-6105WB	ABWEEUS	LDF7810WW
17	D1608TB	ASTEECI	LDF6920ST	59	LD-6105WB1	ABWEEUS	LDF7810WW
18	D1608TB	ASTFLMS	DWV1608TB	60	LD-6106BB	ABPEECI	LDF7920BB
19	D1608WB	ABWEECI	LDF6920WW	61	LD-6106TB	ASTEECI	LDF7920ST
20	D1608WB	ABWEEUS	LDF6920WW	62	LD-6106WB	ABWEECI	LDF7920WW
21	D1608WB	ABWEEUS	LDF6920WW	63	LD-6300BB	ABPEEUS	LDF6810BB
22	D1613BB	ABPEEUS	LDF7932BB	64	LD-6300BB	ABPEECI	LDF6810BB
23	D1613TB	ASTEEUS	LDF7932ST	65	LD-6300BB1	ABPEECI	LDF6810BB
24	D1613TB	ASTEECI	LDF7932ST	66	LD-6300BB1	ABPEEUS	LDF6810BB
25	D1613WB	ABWEEUS	LDF7932WW	67	LD-6300BB2	ABPEECI	LDF6810BB
26	D1616TB	ASTEEUS	LSDF795ST	68	LD-6300BB2	ABPEEUS	LDF6810BB
27	LD-6090BB	ABPEECI	LDS5811BB	69	LD-6300TB	ASTEEUS	LDF6810ST
28	LD-6090BB	ABPEEUS	LDS5811BB	70	LD-6300TB1	ASTEEUS	LDF6810ST
29	LD-6090BB1	ABPEEUS	LDS5811BB	71	LD-6300TB1	ASTEECI	LDF6810ST
30	LD-6090BB1	ABPEECI	LDS5811BB	72	LD-6300TB2	ASTEECI	LDF6810ST
31	LD-6090BB2	ABPEEUS	LDS5811BB	73	LD-6300TB2	ASTEEUS	LDF6810ST
32	LD-6090BB2	ABPEECI	LDS5811BB	74	LD-6300WB	ABWEEUS	LDF6810WW
33	LD-6090TB	ASTEECI	LDS5811ST	75	LD-6300WB	ABWEECI	LDF6810WW
34	LD-6090TB	ASTEEUS	LDS5811ST	76	LD-6300WB1	ABWEEUS	LDF6810WW
35	LD-6090TB1	ASTEEUS	LDS5811ST	77	LD-6300WB1	ABWEECI	LDF6810WW
36	LD-6090TB1	ASTEECI	LDF6810ST	78	LD-6300WB2	ABWEEUS	LDF6810WW
37	LD-6090TB2	ASTEEUS	LDS5811ST	79	LD-6300WB2	ABWEECI	LDF6810ST
38	LD-6090TB2	ASTEECI	LDS5811ST	80	LD-6310TB	ASTEECI	LDF8812ST
39	LD-6090WB	ABWEECI	LDS5811WW	81	LD-6310TB	ASTEEUS	LDF8812ST
40	LD-6090WB	ABWEEUS	LDS5811WW	82	LD-6310TB1	ASTEECI	LDF8812ST
41	LD-6090WB1	ABWEECI	LDS5811WW	83	LD-6310TB1	ASTEEUS	LDF8812ST
42	LD-6090WB1	ABWEEUS	LDS5811WW	84	LD-6311TB	ASTEECI	LDF8922ST

Service Bulletin

LG Electronics Inc.

Date of issue: 20. May, 2010

Buyer Model : LDS4821WW/BB/ST, LDF6920WW/BB/ST, LDF7920WW/BB/ST
LDF7932WW/BB/ST, LDF9932ST, LSDF795ST

LGE Model : D1607xx, D1608xx, LD-6106xx, D1613xx, D1412TB, D1616TB

Buyer Name : EUS / ECI

Effective Date : 16. Apr, 2010

Applicable Serial No. : 003KWxx00001 ~ 004KWxx (Some Products produced in Mar & April, 2010)

SUBJECT : Poor washing performance caused by the defect filter Asm

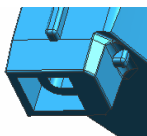
Symptom Details

◆ **Issue:** Poor washing.

◆ **Reason:** Poor washing was caused by removing the guide rib in the filter assembly.



Guide rib



Filter assembly

Improvement:

-Only if there is no guide rib in the filter assembly,

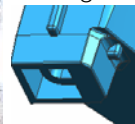
Change to a filter assy (good part) with a guide rib.

You don't need to change filter assembly, if there is a guide rib in the filter.

-When you do SVC , you must **adjust twisted check valve with your finger to correct it** in sump assembly. If not, poor washing will continue.

1) Change to a filter assembly with a guide rib

Wrong Part Without guide rib



Good Part With guide rib



2) Must adjust twisted check valve with finger to correct it
If not, poor washing will continue.

Sump

Twisted check valve

Correct check valve



Check valve



Parts Chart:

Part number	Before (003KWxx~004KWxx)	After (004KWxx~)	Loc. No
ADQ32598202 (Same parts, divided by Parts supplier contract)	ADQ32598202 Wrong Part was discarded for SVC part.	ADQ32598202	M110

Compatibility

- Only new part(Good part) can be used. Discard the defective filter asm.

*Interchangeability Code

Alphabetic Code

A	Interchangeable : Old and new parts can be used in products as per the bulletin regardless of manufacturing date.
B	Old parts can be substituted for new : Old parts can be used in products regardless of manufacture date. New parts can be used in new products only.
C	New parts can be substituted for old parts : Only new parts can be used in products regardless of manufacture date.
D	Not interchangeable : New parts can be used in new products only.




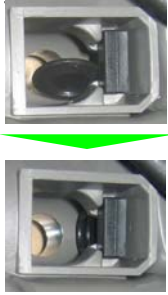



Numeral Code

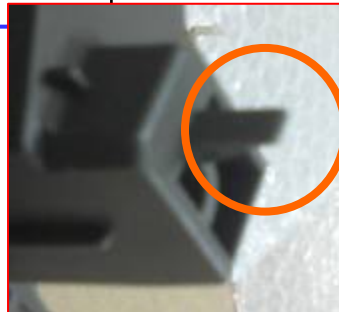
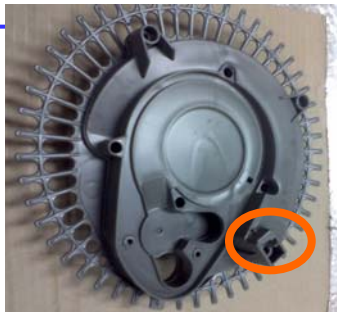
1	To improve performance
2	To improve productivity
3	To improve reliability
4	Change of material or dimension
5	Addition
6	Deletion
7	Correction

J.H. Lee

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LG Electronics DAC

Appendix A. Caution in service

No	(Picture)	Detail	(Caution)
1	  	<p>Remove filter from sump.</p> <p>Fix O-ring correctly (To prevent twisting in the O-ring)</p> <p>During assembly, put soapy water on the O-ring)</p>	<p>Must check fixing Status of check valve with</p> 
2	 	<p>Assemble a filter assembly to Sump by fasten 9 screws in order</p>	<p>Fastening screws must be done in</p> 
Must check your service part is correct (It must have guide Rib like below)			



Appendix B. EAI Applicable Serial No. List(1/4)

※ In the list, It is included with some units having good filter Asm.

You don't need to change filter assembly, if there is a guide rib in the filter Asm.

※ 003KW**XXXX is same as 003KWXXXX and 004KW**XXXX is same as 004KWXXXX

	LDS4821BB	LDS4821BB	LDS4821BB	LDS4821BB		LDS4821ST	LDS4821ST
1	003KW00150	003KW00425	003KW00475	003KW00525	1	003KW00781	003KW00907
2	003KW00152	003KW00426	003KW00476	003KW00526	2	003KW00840	003KW00908
3	003KW00165	003KW00427	003KW00477	003KW00527	3	003KW00841	003KW00909
4	003KW00166	003KW00428	003KW00478	003KW00528	4	003KW00842	003KW00910
5	003KW00167	003KW00429	003KW00479	003KW00529	5	003KW00843	003KW00911
6	003KW00168	003KW00430	003KW00480	003KW00530	6	003KW00844	003KW00912
7	003KW00175	003KW00431	003KW00481	003KW00531	7	003KW00845	003KW00913
8	003KW00176	003KW00432	003KW00482	003KW00532	8	003KW00846	003KW00914
9	003KW00241	003KW00433	003KW00483	003KW00533	9	003KW00847	003KW00915
10	003KW00242	003KW00434	003KW00484	003KW00534	10	003KW00848	003KW00916
11	003KW00244	003KW00435	003KW00485	003KW00535	11	003KW00849	003KW00917
12	003KW00257	003KW00436	003KW00486	003KW00536	12	003KW00850	003KW00918
13	003KW00258	003KW00437	003KW00487	003KW00537	13	003KW00851	003KW00919
14	003KW00259	003KW00438	003KW00488	003KW00538	14	003KW00852	003KW00920
15	003KW00260	003KW00439	003KW00489	003KW00539	15	003KW00853	003KW00921
16	003KW00265	003KW00440	003KW00490	003KW00540	16	003KW00855	003KW00922
17	003KW00267	003KW00441	003KW00491	003KW00541	17	003KW00856	003KW00923
18	003KW00268	003KW00442	003KW00492	003KW00542	18	003KW00857	003KW00924
19	003KW00275	003KW00443	003KW00493	003KW00543	19	003KW00858	003KW00925
20	003KW00276	003KW00444	003KW00494	003KW00544	20	003KW00859	003KW00926
21	003KW00277	003KW00445	003KW00495	003KW00545	21	003KW00860	003KW00927
22	003KW00278	003KW00446	003KW00496	003KW00546	22	003KW00861	003KW00928
23	003KW00279	003KW00447	003KW00497	003KW00547	23	003KW00862	003KW00929
24	003KW00280	003KW00448	003KW00498	003KW00548	24	003KW00863	003KW00930
25	003KW00305	003KW00449	003KW00499	003KW00549	25	003KW00864	003KW00931
26	003KW00306	003KW00450	003KW00500	003KW00550	26	003KW00865	003KW00932
27	003KW00308	003KW00451	003KW00501	003KW00551	27	003KW00866	003KW00933
28	003KW00323	003KW00452	003KW00502	003KW00552	28	003KW00867	003KW00934
29	003KW00327	003KW00453	003KW00503	003KW00553	29	003KW00868	003KW00935
30	003KW00333	003KW00454	003KW00504	003KW00554	30	003KW00869	003KW00936
31	003KW00334	003KW00455	003KW00505	003KW00555	31	003KW00870	003KW00937
32	003KW00339	003KW00456	003KW00506	003KW00556	32	003KW00871	003KW00938
33	003KW00340	003KW00457	003KW00507	003KW00557	33	003KW00888	003KW00939
34	003KW00343	003KW00458	003KW00508	003KW00558	34	003KW00889	003KW00940
35	003KW00344	003KW00459	003KW00509	003KW00559	35	003KW00890	003KW00941
36	003KW00345	003KW00460	003KW00510	003KW00560	36	003KW00891	003KW00942
37	003KW00348	003KW00461	003KW00511		37	003KW00892	003KW00943
38	003KW00352	003KW00462	003KW00512		38	003KW00893	003KW00944
39	003KW00405	003KW00463	003KW00513		39	003KW00894	003KW00945
40	003KW00406	003KW00464	003KW00514		40	003KW00895	003KW00946
41	003KW00407	003KW00465	003KW00515		41	003KW00896	003KW00947
42	003KW00408	003KW00466	003KW00516		42	003KW00897	003KW00948
43	003KW00409	003KW00467	003KW00517		43	003KW00898	003KW00949
44	003KW00410	003KW00468	003KW00518		44	003KW00899	003KW00950
45	003KW00413	003KW00469	003KW00519		45	003KW00900	003KW00951
46	003KW00414	003KW00470	003KW00520		46	003KW00901	003KW00952
47	003KW00421	003KW00471	003KW00521		47	003KW00902	003KW00953
48	003KW00422	003KW00472	003KW00522		48	003KW00903	003KW00954
49	003KW00423	003KW00473	003KW00523		49	003KW00904	003KW00955
50	003KW00424	003KW00474	003KW00524		50	003KW00905	003KW00956

Appendix B. EAI Applicable Serial No. List(2/4)

※ In the list, It is included with some units having good filter Asm.

You don't need to change filter assembly, if there is a guide rib in the filter Asm.

※ 003KW**XXXX is same as 003KWXXXX and 004KW**XXXX is same as 004KWXXXX

	LDS4821ST	LDS4821ST	LDS4821ST	LDS4821ST		LDS4821WWW	LDS4821WWW
1	003KW00957	003KW01035	003KW01085	003KW01533	1	003KW00001	003KW00053
2	003KW00958	003KW01036	003KW01086	003KW01534	2	003KW00002	003KW00054
3	003KW00959	003KW01037	003KW01087	003KW01537	3	003KW00003	003KW00057
4	003KW00960	003KW01038	003KW01098	003KW01538	4	003KW00004	003KW00058
5	003KW00961	003KW01039	003KW01102	003KW01539	5	003KW00005	003KW00059
6	003KW00962	003KW01040	003KW01115	003KW01540	6	003KW00006	003KW00060
7	003KW00963	003KW01041	003KW01118	003KW01579	7	003KW00007	003KW00063
8	003KW00964	003KW01042	003KW01119	003KW01978	8	003KW00008	003KW00064
9	003KW00965	003KW01043	003KW01121	003KW01979	9	003KW00009	003KW00065
10	003KW00966	003KW01044	003KW01401	003KW01980	10	003KW00010	003KW00066
11	003KW00967	003KW01045	003KW01402	003KW01986	11	003KW00011	003KW00067
12	003KW00968	003KW01046	003KW01403	003KW01988	12	003KW00012	003KW00068
13	003KW00969	003KW01047	003KW01404	003KW01990	13	003KW00013	003KW00069
14	003KW00970	003KW01048	003KW01405	003KW01992	14	003KW00014	003KW00070
15	003KW00971	003KW01049	003KW01406	003KW02002	15	003KW00015	003KW00071
16	003KW00972	003KW01050	003KW01407	003KW02009	16	003KW00016	003KW00072
17	003KW00973	003KW01051	003KW01408	003KW02013	17	003KW00017	003KW00073
18	003KW00974	003KW01052	003KW01426	003KW02026	18	003KW00018	003KW00074
19	003KW00975	003KW01053	003KW01430	003KW02027	19	003KW00019	003KW00077
20	003KW00976	003KW01054	003KW01437	003KW02028	20	003KW00020	003KW00078
21	003KW00977	003KW01055	003KW01438	003KW02030	21	003KW00021	003KW00079
22	003KW00978	003KW01056	003KW01445	003KW02031	22	003KW00022	003KW00080
23	003KW00979	003KW01057	003KW01446	003KW02032	23	003KW00023	003KW00081
24	003KW00980	003KW01058	003KW01449	003KW02059	24	003KW00024	003KW00082
25	003KW00981	003KW01059	003KW01450	003KW02063	25	003KW00025	003KW00083
26	003KW00982	003KW01060	003KW01451	003KW02065	26	003KW00026	003KW00084
27	003KW00983	003KW01061	003KW01452	003KW02066	27	003KW00027	003KW00085
28	003KW00984	003KW01062	003KW01473	003KW02067	28	003KW00028	003KW00086
29	003KW00985	003KW01063	003KW01474	003KW02068	29	003KW00029	003KW00087
30	003KW00986	003KW01064	003KW01475	003KW02079	30	003KW00030	003KW00088
31	003KW00987	003KW01065	003KW01476		31	003KW00031	003KW00089
32	003KW00988	003KW01066	003KW01477		32	003KW00032	003KW00090
33	003KW00989	003KW01067	003KW01478		33	003KW00033	003KW00091
34	003KW00990	003KW01068	003KW01479		34	003KW00034	003KW00092
35	003KW00991	003KW01069	003KW01480		35	003KW00035	003KW00093
36	003KW00992	003KW01070	003KW01481		36	003KW00036	003KW00094
37	003KW00993	003KW01071	003KW01483		37	003KW00037	003KW00095
38	003KW00995	003KW01072	003KW01484		38	003KW00038	003KW00096
39	003KW00996	003KW01073	003KW01485		39	003KW00039	003KW00097
40	003KW00997	003KW01074	003KW01486		40	003KW00040	003KW00098
41	003KW00999	003KW01075	003KW01497		41	003KW00042	003KW00099
42	003KW01009	003KW01076	003KW01498		42	003KW00043	003KW00100
43	003KW01011	003KW01077	003KW01499		43	003KW00045	003KW00101
44	003KW01013	003KW01078	003KW01500		44	003KW00046	003KW00102
45	003KW01015	003KW01079	003KW01525		45	003KW00047	003KW00103
46	003KW01024	003KW01080	003KW01526		46	003KW00048	003KW00104
47	003KW01028	003KW01081	003KW01527		47	003KW00049	003KW00105
48	003KW01029	003KW01082	003KW01528		48	003KW00050	003KW00106
49	003KW01032	003KW01083	003KW01529		49	003KW00051	003KW00107
50	003KW01033	003KW01084	003KW01530		50	003KW00052	003KW00108

Appendix B. EAI Applicable Serial No. List(3/4)

※ In the list, It is included with some units having good filter Asm.

You don't need to change filter assembly, if there is a guide rib in the filter Asm.

※ 003KW**XXXX is same as 003KWXXXX and 004KW**XXXX is same as 004KWXXXX

	LDS4821WW	LDF6920BB		LDF6920ST	LDF6920ST	LDF6920ST	LDF6920ST
1	003KW00109	003KW00287	1	003KW00141	003KW00191	003KW00241	003KW00351
2	003KW00110	003KW00325	2	003KW00142	003KW00192	003KW00242	003KW00352
3	003KW00111	003KW00328	3	003KW00143	003KW00193	003KW00243	003KW00401
4	003KW00112	003KW00331	4	003KW00144	003KW00194	003KW00244	003KW00402
5	003KW00113	003KW00332	5	003KW00145	003KW00195	003KW00245	003KW00403
6	003KW00114	003KW00335	6	003KW00146	003KW00196	003KW00246	003KW00404
7	003KW00115	003KW00336	7	003KW00147	003KW00197	003KW00247	003KW00405
8	003KW00116	003KW00383	8	003KW00148	003KW00198	003KW00248	003KW00406
9	003KW00119	003KW00420	9	003KW00149	003KW00199	003KW00249	003KW00407
10	003KW00120		10	003KW00150	003KW00200	003KW00250	003KW00408
11	003KW00121		11	003KW00151	003KW00201	003KW00251	003KW00437
12	003KW00122		12	003KW00152	003KW00202	003KW00252	003KW00441
13	003KW00123		13	003KW00153	003KW00203	003KW00253	003KW00445
14	003KW00124		14	003KW00154	003KW00204	003KW00254	003KW00446
15	003KW00125		15	003KW00155	003KW00205	003KW00255	003KW00447
16	003KW00126		16	003KW00156	003KW00206	003KW00256	003KW00448
17	003KW00127		17	003KW00157	003KW00207	003KW00257	003KW00449
18	003KW00128		18	003KW00158	003KW00208	003KW00258	003KW00450
19	003KW00129		19	003KW00159	003KW00209	003KW00259	003KW00451
20	003KW00130		20	003KW00160	003KW00210	003KW00260	003KW00452
21	003KW00131		21	003KW00161	003KW00211	003KW00261	003KW00453
22	003KW00132		22	003KW00162	003KW00212	003KW00262	003KW00454
23	003KW00133		23	003KW00163	003KW00213	003KW00263	003KW00462
24	003KW00134		24	003KW00164	003KW00214	003KW00264	003KW00464
25	003KW00135		25	003KW00165	003KW00215	003KW00265	003KW00466
26	003KW00136		26	003KW00166	003KW00216	003KW00266	003KW00468
27	003KW00137		27	003KW00167	003KW00217	003KW00267	003KW00469
28	003KW00138		28	003KW00168	003KW00218	003KW00268	003KW00470
29	003KW00139		29	003KW00169	003KW00219	003KW00269	003KW00472
30	003KW00140		30	003KW00170	003KW00220	003KW00270	003KW00473
31	003KW00488		31	003KW00171	003KW00221	003KW00271	003KW00474
32	003KW00522		32	003KW00172	003KW00222	003KW00272	003KW00475
33	003KW00524		33	003KW00173	003KW00223	003KW00273	003KW00476
34	003KW00525		34	003KW00174	003KW00224	003KW00274	003KW00493
35	003KW00527		35	003KW00175	003KW00225	003KW00275	003KW00495
36	003KW00529		36	003KW00176	003KW00226	003KW00276	003KW00501
37	003KW00531		37	003KW00177	003KW00227	003KW00277	003KW00503
38	003KW00533		38	003KW00178	003KW00228	003KW00278	003KW00505
39	003KW00535		39	003KW00179	003KW00229	003KW00279	003KW00507
40	003KW00559		40	003KW00180	003KW00230	003KW00280	003KW00517
41	003KW00587		41	003KW00181	003KW00231	003KW00285	003KW00518
42			42	003KW00182	003KW00232	003KW00286	003KW00519
43			43	003KW00183	003KW00233	003KW00287	003KW00520
44			44	003KW00184	003KW00234	003KW00288	003KW00524
45			45	003KW00185	003KW00235	003KW00345	003KW00532
46			46	003KW00186	003KW00236	003KW00346	003KW00534
47			47	003KW00187	003KW00237	003KW00347	003KW00536
48			48	003KW00188	003KW00238	003KW00348	003KW00537
49			49	003KW00189	003KW00239	003KW00349	003KW00538
50			50	003KW00190	003KW00240	003KW00350	003KW00539

Appendix B. EAI Applicable Serial No. List(4/4)

※ In the list, It is included with some units having good filter Asm.

You don't need to change filter assembly, if there is a guide rib in the filter Asm.

※ 003KW**XXXX is same as 003KWXXXX and 004KW**XXXX is same as 004KWXXXX

	LDF6920ST	LDF6920ST		LDF7932ST	LDF7932ST	LDF7932ST	LDF7932ST
1	003KW00540	003KW00925	1	003KW00329	003KW00481	003KW00531	003KW00590
2	003KW00541	003KW00930	2	003KW00372	003KW00482	003KW00532	003KW00591
3	003KW00542	003KW00931	3	003KW00373	003KW00483	003KW00533	003KW00592
4	003KW00543	003KW00953	4	003KW00374	003KW00484	003KW00534	003KW00595
5	003KW00544	003KW00955	5	003KW00376	003KW00485	003KW00535	003KW00596
6	003KW00546	003KW00957	6	003KW00380	003KW00486	003KW00536	003KW00599
7	003KW00548	003KW00959	7	003KW00384	003KW00487	003KW00537	003KW00746
8	003KW00557	003KW00981	8	003KW00436	003KW00488	003KW00539	003KW00748
9	003KW00558	003KW00983	9	003KW00437	003KW00489	003KW00540	003KW00773
10	003KW00559	003KW00984	10	003KW00438	003KW00490	003KW00541	003KW00795
11	003KW00560	003KW00986	11	003KW00439	003KW00491	003KW00542	003KW00802
12	003KW00579	003KW00990	12	003KW00440	003KW00492	003KW00543	003KW00812
13	003KW00581	003KW00992	13	003KW00443	003KW00493	003KW00544	003KW00828
14	003KW00582	003KW01043	14	003KW00444	003KW00494	003KW00545	003KW00832
15	003KW00583	003KW01045	15	003KW00445	003KW00495	003KW00547	003KW00866
16	003KW00584	003KW01062	16	003KW00446	003KW00496	003KW00548	003KW01098
17	003KW00590	003KW01063	17	003KW00447	003KW00497	003KW00549	
18	003KW00591	003KW01064	18	003KW00448	003KW00498	003KW00550	
19	003KW00592	003KW01065	19	003KW00449	003KW00499	003KW00551	
20	003KW00595	003KW01066	20	003KW00450	003KW00500	003KW00552	
21	003KW00596	003KW01067	21	003KW00451	003KW00501	003KW00553	
22	003KW00597	003KW01068	22	003KW00452	003KW00502	003KW00554	
23	003KW00598	003KW01081	23	003KW00453	003KW00503	003KW00556	
24	003KW00599	003KW01082	24	003KW00454	003KW00504	003KW00557	
25	003KW00600	003KW01083	25	003KW00455	003KW00505	003KW00558	
26	003KW00605	003KW01084	26	003KW00456	003KW00506	003KW00559	
27	003KW00657	003KW01126	27	003KW00457	003KW00507	003KW00561	
28	003KW00658	003KW01134	28	003KW00458	003KW00508	003KW00562	
29	003KW00667	003KW01157	29	003KW00459	003KW00509	003KW00563	
30	003KW00668	003KW01233	30	003KW00460	003KW00510	003KW00564	
31	003KW00675		31	003KW00461	003KW00511	003KW00565	
32	003KW00676		32	003KW00462	003KW00512	003KW00566	
33	003KW00677		33	003KW00463	003KW00513	003KW00567	
34	003KW00678		34	003KW00464	003KW00514	003KW00568	
35	003KW00679		35	003KW00465	003KW00515	003KW00569	
36	003KW00680		36	003KW00466	003KW00516	003KW00570	
37	003KW00683		37	003KW00467	003KW00517	003KW00571	
38	003KW00684		38	003KW00468	003KW00518	003KW00572	
39	003KW00864		39	003KW00469	003KW00519	003KW00573	
40	003KW00866		40	003KW00470	003KW00520	003KW00574	
41	003KW00868		41	003KW00471	003KW00521	003KW00575	
42	003KW00896		42	003KW00472	003KW00522	003KW00576	
43	003KW00898		43	003KW00473	003KW00523	003KW00577	
44	003KW00900		44	003KW00474	003KW00524	003KW00578	
45	003KW00902		45	003KW00475	003KW00525	003KW00579	
46	003KW00914		46	003KW00476	003KW00526	003KW00580	
47	003KW00915		47	003KW00477	003KW00527	003KW00581	
48	003KW00920		48	003KW00478	003KW00528	003KW00582	
49	003KW00921		49	003KW00479	003KW00529	003KW00587	
50	003KW00924		50	003KW00480	003KW00530	003KW00588	

Appendix C. ECI Applicable Serial No. List(1/1)

※ In the list, It is included with some units having good filter Asm.

You don't need to change filter assembly, if there is a guide rib in the filter Asm.

※ 003KW**XXXX is same as 003KWXXXX and 004KW**XXXX is same as 004KWXXXX

	LDS4821BB	LDS4821ST	LDS4821WW	LDF7920BB	LDF7920ST	LDF7932ST	LDF7932ST
1	003KW00046	003KW00145	003KW00006	003KW00007	003KW00430	003KW00003	004KW00001
2	003KW00050	003KW00636	003KW00008	003KW00043	003KW00441	003KW00054	004KW00002
3		003KW00673	003KW00009	003KW00044	003KW00442	003KW00055	004KW00003
4		004KW00011	003KW00010	003KW00045	003KW00443	003KW00056	004KW00004
5		004KW00017	003KW00013	003KW00046	003KW00444	003KW00057	004KW00005
6		004KW00018	003KW00014	003KW00047	003KW00446	003KW00058	004KW00006
7		004KW00021	003KW00015	003KW00048	003KW00450	003KW00059	004KW00007
8		004KW00022	003KW00016	003KW00049	003KW00453	003KW00060	004KW00008
9		004KW00023	003KW00017	003KW00050	003KW00454	003KW00061	004KW00009
10		004KW00024	003KW00018	003KW00051	003KW00457	003KW00062	004KW00010
11		004KW00027	003KW00019	003KW00052	003KW00459	003KW00063	004KW00011
12		004KW00029	003KW00020	003KW00053	003KW00460	003KW00064	004KW00012
13		004KW00035	003KW00021	003KW00054	003KW00469	003KW00065	004KW00013
14		004KW00073	003KW00022	003KW00055	003KW00470	003KW00074	004KW00014
15		004KW00075	003KW00023	003KW00056	003KW00471	003KW00075	004KW00015
16		004KW00077	003KW00024	003KW00057	003KW00472	003KW00076	004KW00016
17		004KW00079	003KW00027	003KW00058	003KW00473	003KW00077	004KW00017
18			003KW00028	003KW00059	003KW00474	003KW00078	004KW00018
19			003KW00045	003KW00060	003KW00475	003KW00079	004KW00019
20			003KW00046	003KW00061	003KW00476	003KW00080	004KW00020
21			003KW00047	003KW00062	003KW00485	003KW00081	004KW00021
22			003KW00048	003KW00063	003KW00486	003KW00082	004KW00022
23			003KW00057	003KW00064	003KW00487	003KW00083	004KW00023
24			003KW00060	003KW00065	003KW00489	003KW00084	004KW00024
25			003KW00061	003KW00066	003KW00490	003KW00085	004KW00025
26			003KW00063	003KW00067	003KW00491	003KW00086	004KW00026
27			003KW00064	003KW00068	003KW00493	003KW00087	004KW00027
28			003KW00067	003KW00069	003KW00495	003KW00088	004KW00028
29			003KW00071	003KW00070	003KW00496	003KW00089	004KW00029
30			003KW00076	003KW00071	003KW00497	003KW00090	004KW00030
31			003KW00081	003KW00072	003KW00498	003KW00091	004KW00031
32			003KW00082	003KW00073	003KW00499	003KW00092	004KW00032
33			003KW00083	003KW00074	003KW00500	003KW00093	004KW00033
34			003KW00084	003KW00075	003KW00503	003KW00094	004KW00034
35			003KW00085	003KW00076	003KW00504	003KW00095	004KW00035
36			003KW00086	003KW00077	003KW00506	003KW00096	004KW00036
37			003KW00090	003KW00078	003KW00507	003KW00097	004KW00037
38			003KW00093	003KW00079	003KW00511	003KW00120	004KW00038
39			003KW00094	003KW00080	003KW00515	003KW00129	004KW00039
40			003KW00096	003KW00081	003KW00517	003KW00137	004KW00040
41			003KW00097	003KW00082	003KW00518	003KW00138	004KW00041
42			003KW00101	003KW00083	003KW00519	003KW00139	004KW00042
43			003KW00107	003KW00084	003KW00520		
44			003KW00108		003KW00521		
45			003KW00125		003KW00522		
46			003KW00126		003KW00523		
47			003KW00129		003KW00524		
48			003KW00132		003KW00547		
49			003KW00136		003KW01025		
50			003KW00137		003KW01122		
51			003KW00138		003KW01142		
52			003KW00139		003KW01143		
53			003KW00466		003KW01160		
54			003KW00470		003KW01168		
55			003KW00471				
56			003KW00472				
57			003KW00473				
58			003KW00477				
59			003KW00541				
60			003KW00542				
61			003KW00543				
62			003KW00544				