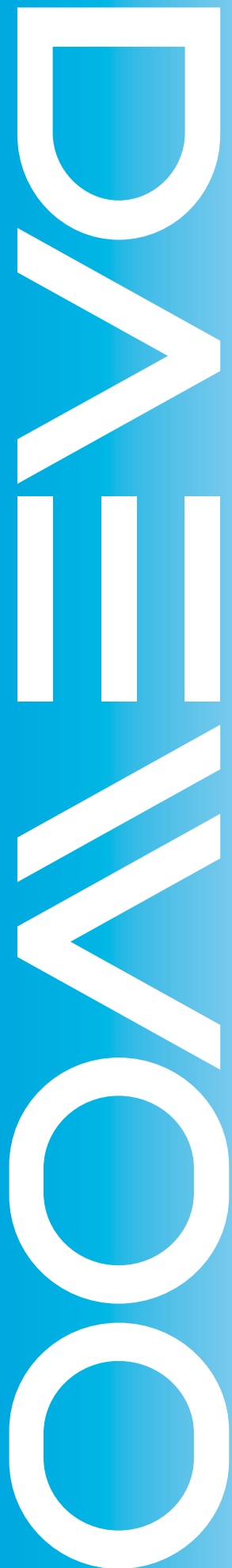


Service Manual

Washing Machine

Model: DWD-HB1411



✓ Caution

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center (<http://svc.dwe.co.kr>).

DAEWOO ELECTRONICS CORP.

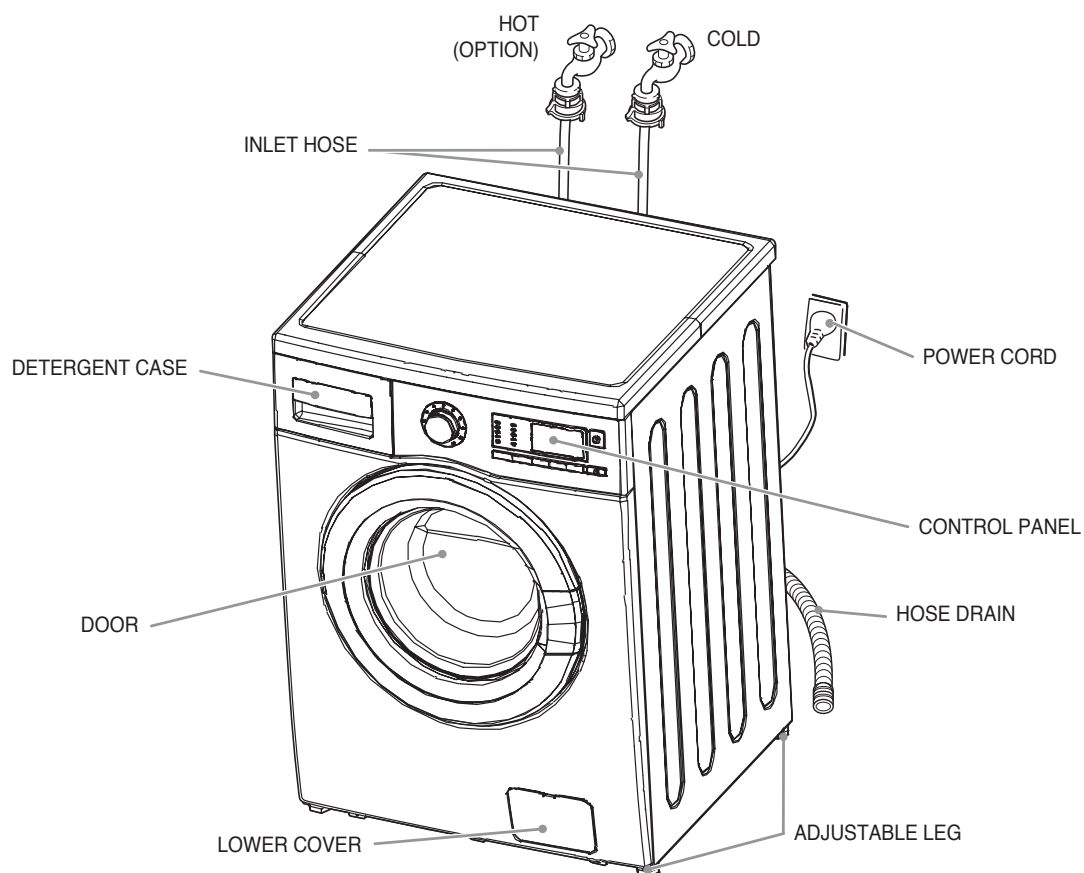
[http : //svc.dwe.co.kr](http://svc.dwe.co.kr)

Nov. 2013

Contents

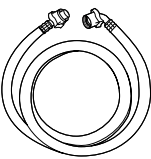
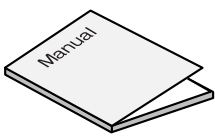

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1. SPECIFICATIONS



MODEL		DWD-HB1411
POWER SOURCE		220-240V, 50/60Hz
DIMENSION (WxDxH)		595 x 634 x 850 MM
WEIGHT		62Kg(NET) / 65Kg(GROSS)
WATER CONSUMPTION		49 ℓ
POWER CONSUMPTION		2200W
MAXIMUM MASS OF TEXTILE	WASH	9 Kg
	SPIN	9 Kg
WASHER TYPE		DRUM TYPE (FRONT LOADING WASHING MACHINE)
OPERATING WATER PRESSURE		0.3 ~ 8kgf/cm ² (29.4 ~ 784kPa)

■ Accessories

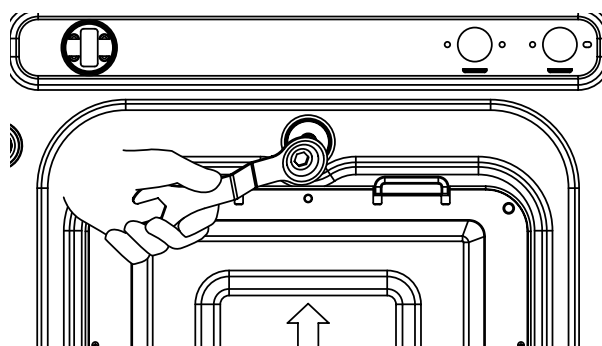
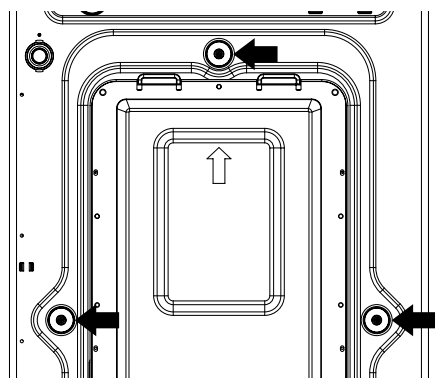
Inlet hose	Manual	Cap holder(3EA)
		

■ Transit bolts

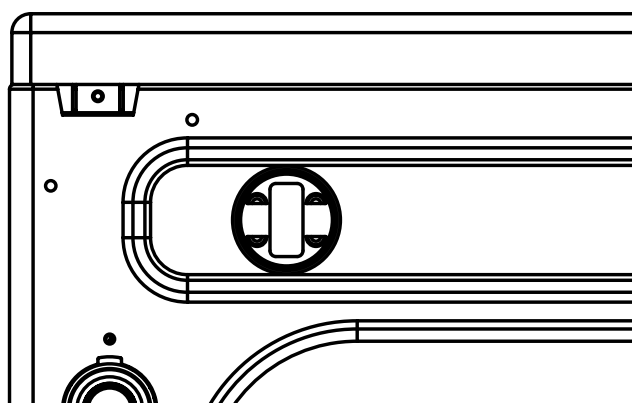
The appliance is fitted with transit bolts to prevent internal damage during transport.

■ Removing transit bolts

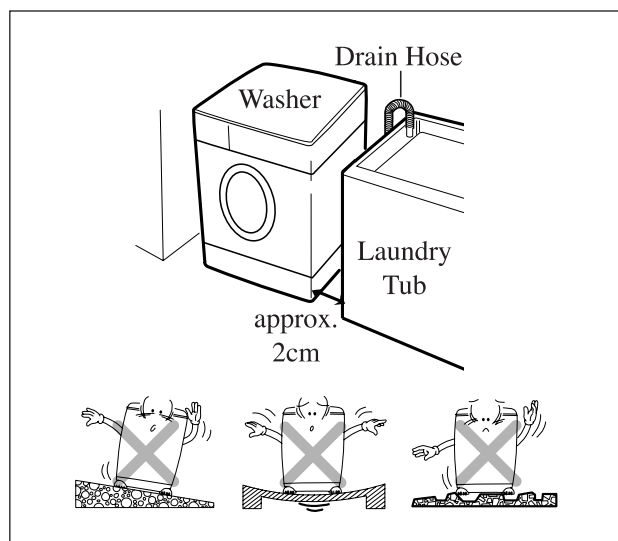
1. To prevent internal damage during transport, the special 3 bolts are locked. Before operating the washer, remove the bolts along with the rubber bungs.
 2. Unscrew the 3 bolts with the spanner supplied, and take out the 3 bolts with the rubber bungs. Keep the 3 bolts and the spanner for future use.
- Whenever the appliance is transported, the transit bolts must be refitted.



3. Close the holes with the caps supplied.



■ Installation place requirement



Level floor :

Allowable slope under entire washer is 1°.

Power outlet :

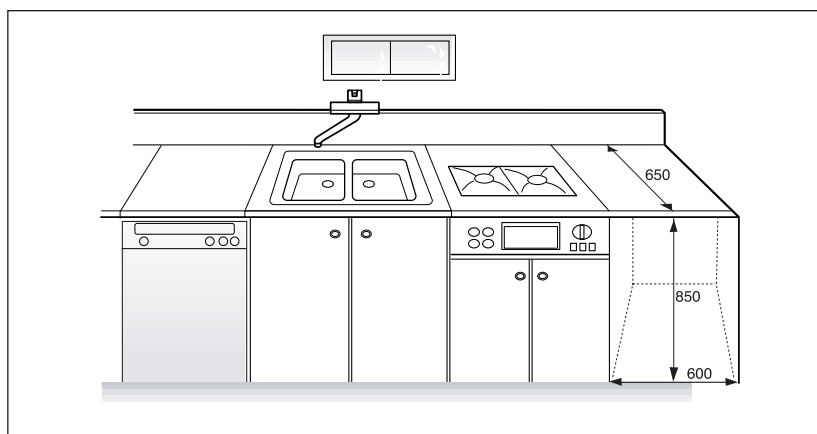
Must be with 1.5 meters of entire side of location of washer. Do not overload the outlet with more than one appliance.

Additional Clearance :

For wall, door and floor modeling is required.
(10cm : rear / 2cm : right & left side)

Do not place or store laundry products on top of washer at any times.

They can damage the finish or controls.



■ BS Plug Safety Details (For U.K. User)

IMPORTANT

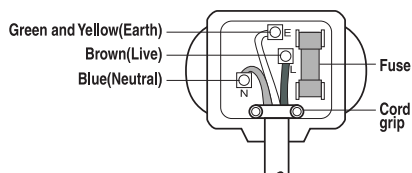
THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

GREEN AND YELLOW : EARTH


BLUE : NEUTRAL

BROWN : LIVE

This appliance must be earthed



As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Green and Yellow must be connected to the terminal in the plug which is marked with the letter E or by the earth symbol  or coloured Green or Green and Yellow.

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Red.

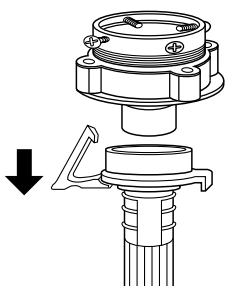
If a 13 amp (BS 1363) plug is used, fit a 13amp BS 1362 fuse.

■ Connecting inlet hose

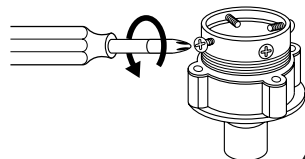
In using only one water tap or in case of only one water inlet valve, connect the inlet hose to the cold water inlet valve.
Option : Be careful not to confuse hot water inlet and cold water inlet.

• • • • FOR ORDINARY TAP

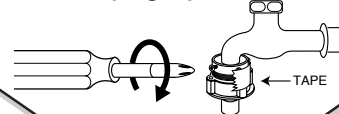
- ① Pull down the collar of the inlet hose to separate it from the water tap adapter.



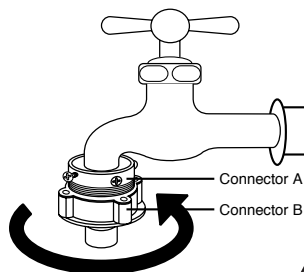
- ② Loosen the four screws properly in order to fit into water tap.



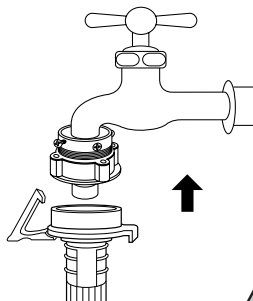
- ③ Fit the water tap adapter into the water tap and tighten the four screws evenly while pushing up the adapter so that the rubber packing can stick to the water tap tightly.



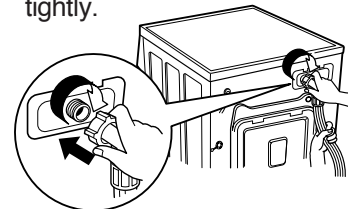
- ④ Remove the tape, and screw connector B into connector A tightly.



- ⑤ Connect the inlet hose to the water tap adapter by pulling down the collar of the hose end.



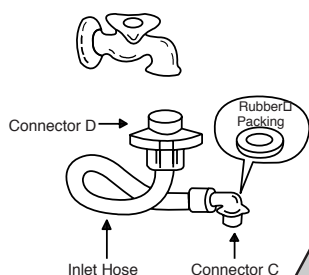
- ⑥ Connect the inlet hose adapter of the hose to the water inlet of the washer by turning it clockwise to be fixed tightly.



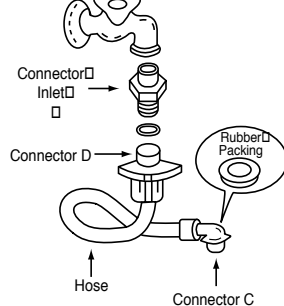
- Please check the rubber packing present inside the inlet hose adapter of the hose.

• • • • FOR SCREW-SHAPED TAP

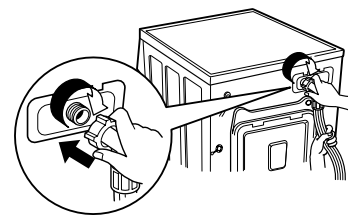
- ① Connect the inlet hose to the water tap adapter by pulling down the collar of the hose end.



- ② Connect the connector- inlet supplied if necessary.

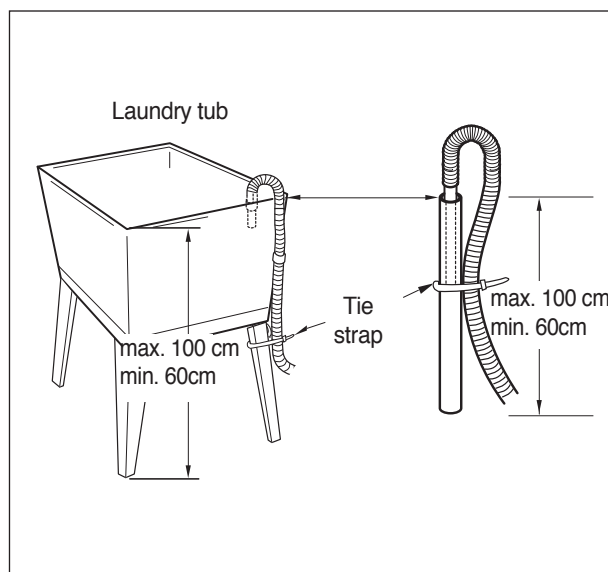
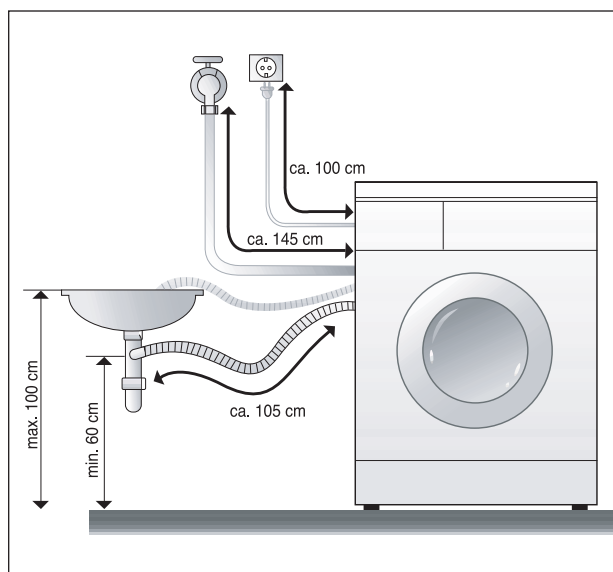


- ③ Connect the inlet hose adapter to the water inlet of the washer and turn it to be fixed.



- Check the packing in the inlet.

■ Installation of drain hose



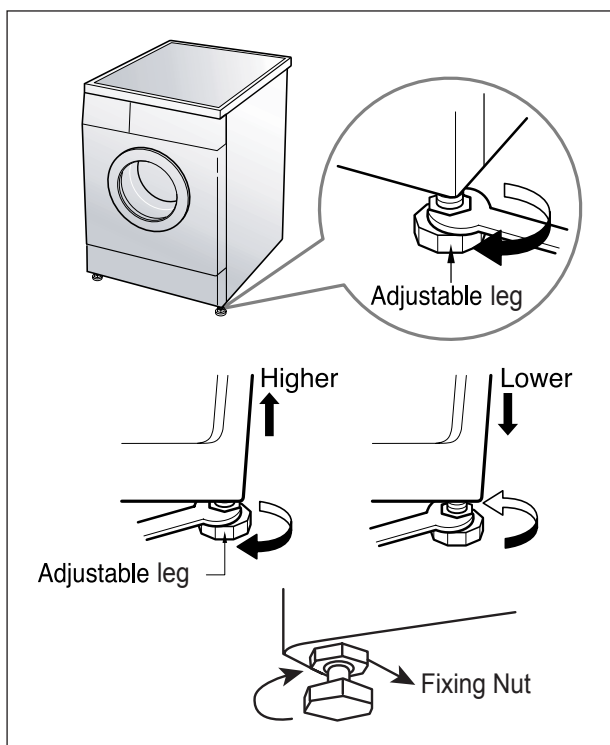
- The drain hose should not be placed higher than 100cm above the floor.
- Proper securing of the drain hose will protect the floor from damage due to water leakage.
- When the drain hose is too long, do not force back in to the washer. This cause abnormal noise.

■ Level adjustment

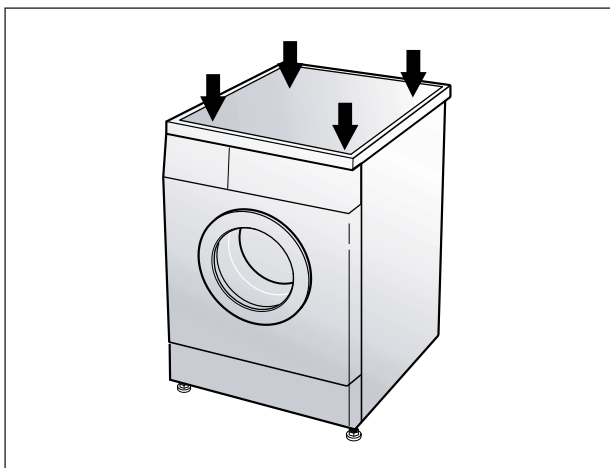


1. The level adjustment of the washing machine prevents excessive noise and vibration. Install the washing machine on a solid and even floor surface, if possible, in a corner of the room.

Note: The wooden floor may cause excessive vibration.



2. If the floor is uneven, adjust the adjustable leg as the following.
(Do not insert pieces of wood etc. under legs.)
 - Please check whether there is any gap between four adjustable legs and the floor.
 - Turn adjustable legs by the enclosed spanner in order to adjust the level of the washing machine.
 - Make it sure that there is no swaying of the washing machine and check that the washing machine is even completely. (use a spirit level)
 - After the level adjustment is finished, turn fixing nuts up tightly so that the washing machine maintains the adjustment.



* Diagonal Check

When pushing down the edges of the washing machine top plate diagonally, the machine should not move up and down at all.

(Please, check both of two directions)

If machine rocks when pushing the machine top plate diagonally, adjust legs again.

3. MAINTENANCE

✱ Before cleaning the washer interior, unplug the electrical power cord avoid electrical shock hazards.

■ Cleaning your washer

1. Exterior

Proper care of your washer can extend its life.

The outside of the machine can be cleaned with warm water and a neutral non abrasive household detergent.

Immediately wipe off any spills. Wipe with damp cloth.

Try not to hit surface with sharp objects.

- Do not use methylated spirits, diluents or similar products.

2. Interior

Dry around the washer door opening, flexible gasket and door glass.

Run washer through a complete cycle using hot water.

Repeat process if necessary.

- Remove hard water deposits using only cleaners labeled as washer safe.

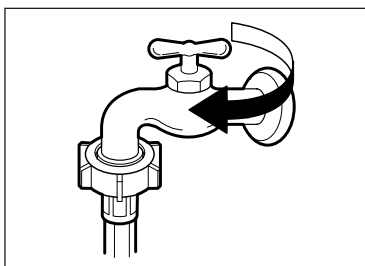
■ Cold condition

If the washer is stored in an area where freezing may occur or moved in freezing temperature, follow these instructions to prevent damage to the washer.

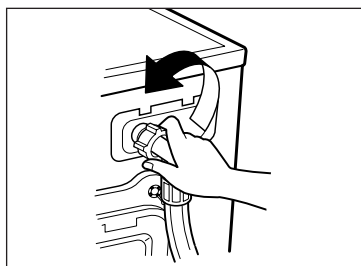
1. Turn off water supply tap.
2. Disconnect hoses from water supply and drain water from hoses.
3. Plug electrical cord into a properly grounded electrical outlet.
4. Add 1gallon(3.8L) of nontoxic recreational vehicle(RV) antifreeze into empty wash drum.
Close the door.
5. Set spin cycle and let washer spin for 1minute to drain out all water.
6. Unplug electrical power cord, dry the drum interior, and close the door.
7. Remove detergent case and dry excessive water from the compartments.
8. Store washer in an upright position.
9. To remove antifreeze from washer after storage, run empty washer through a complete cycle using detergent.
Do not add wash load.

■ Cleaning the water inlet filter

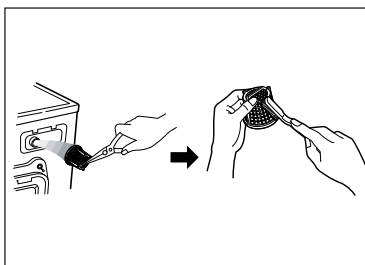
- "IE" error message will blink on the control panel when water does not enter the detergent drawer.
- If your water is very hard or contains traces of lime deposit, the water inlet filter may become clogged.
- It is therefore a good idea to clean it from time to time.



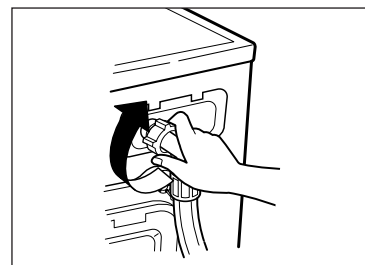
1. Turn off the water tap.



2. Unscrew the water inlet hose.



3. Clean the filter using a hard bristle brush.



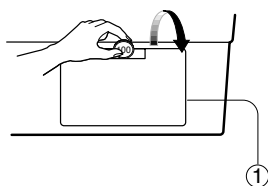
4. Tighten up the inlet hose.

■ Cleaning the drain pump filter

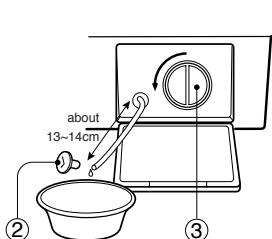
- The drain filter collects threads and small objects left in the laundry.
- Check regularly that the filter is clean to ensure smooth running of your machine.

CAUTION Be careful when draining if the water is hot.

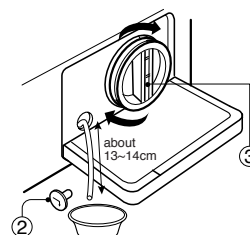
1. Open the lower cover(①) by using a coin. Turn the cap hose(②) to pull out the hose. Pull out the hose maximally. (About 13~14cm.)



2. Unplug the cap hose(②), allowing the water to flow out. At this time use a vessel to prevent water flowing on to the floor. When water does not flow any more, turn the pump filter(③) open to the left.



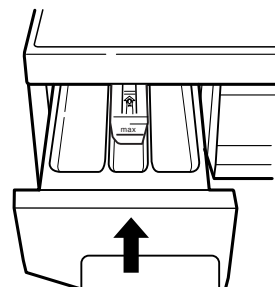
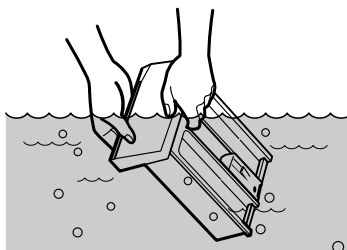
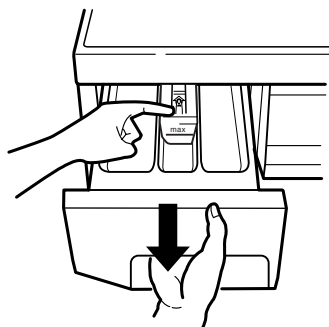
3. Remove any foreign material from the pump filter(③). After cleaning, turn the pump filter clockwise and insert the cap hose(②) to the original place. Close the lower cover.



■ Cleaning the detergent case

✱ After a while detergents and fabric softeners leave a deposit in the detergent case.

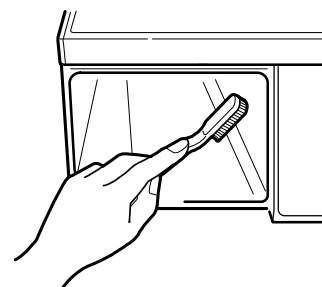
- It should be cleaned from time to time with a jet of running water.
- If necessary it can be removed completely from the machine by pressing the catch downwards and by pulling it out.
- To facilitate cleaning, the upper part of the fabric softener compartment can be removed.



Inlet box recess

✱ Detergent can also accumulate inside the recess which should be cleaned occasionally with an old toothbrush.

- Once you have finished cleaning, replace the detergent case and run a rinse cycle without laundry.



■ Cleaning the washing drum

- If you live in a hard water area, limescale may continuously build up in places where it cannot be seen and thus not easily removed.
- Over time the build up of scale clogs appliances, and if it is not kept in check these may have to be replaced.
- Although the washing drum is made of stainless steel, specks of rust can be caused by small metal articles (paper clips, safety pins) which have been left in the drum.
- The washing drum should be cleaned from time to time.
- If you use descaling agents, dyes or bleaches, make sure they are suitable for washing machine use.
- ✱ Descaler may contain chemicals that may damage part of your washing machine.
- ✱ Remove any spots with a stainless steel cleaning agent.
- ✱ Never use steel wool.

4. DIRECTION FOR DISASSEMBLY

DOOR LOCK SWITCH

1) Open the door and remove the gasket clamp.



2) Remove the gasket from the front cabinet.



3) Remove the door lock switch.



4) Remove two screws, and push the door lock switch to the right direction.



HEATER AND THERMISTOR

1) Remove five screws on the COVER B and separate the COVER B from washing machine.



2) Remove the connectors of the HEATER.



3) Remove the nut using the 10mm hex wrench and remove the earth terminal from the HEATER.



4) Loosen the nut of the HEATER and pull out the HEATER.



BLDC MOTOR

1) Remove the nut using the 17mm hex wrench.



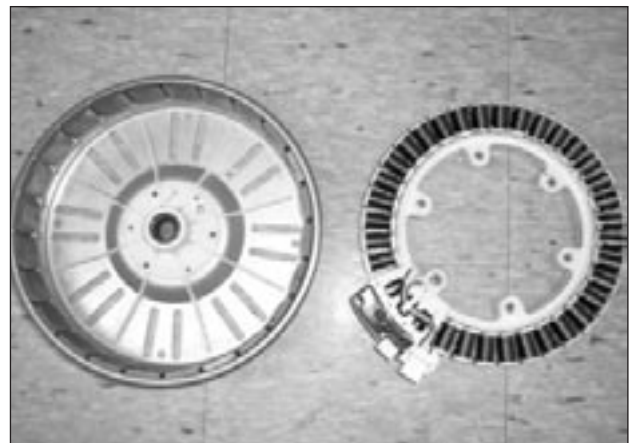
2) Pull out the ROTOR.



3) Remove six screws using the 10mm hex wrench and connectors from the STATOR.



4) Separate the STATOR from the TUB.



DRAIN PUMP

1) Lay the right side of the washer on the floor.



2) Remove connectors.



3) Remove the screws.



4) Remove the drain hose and the hose water supply.

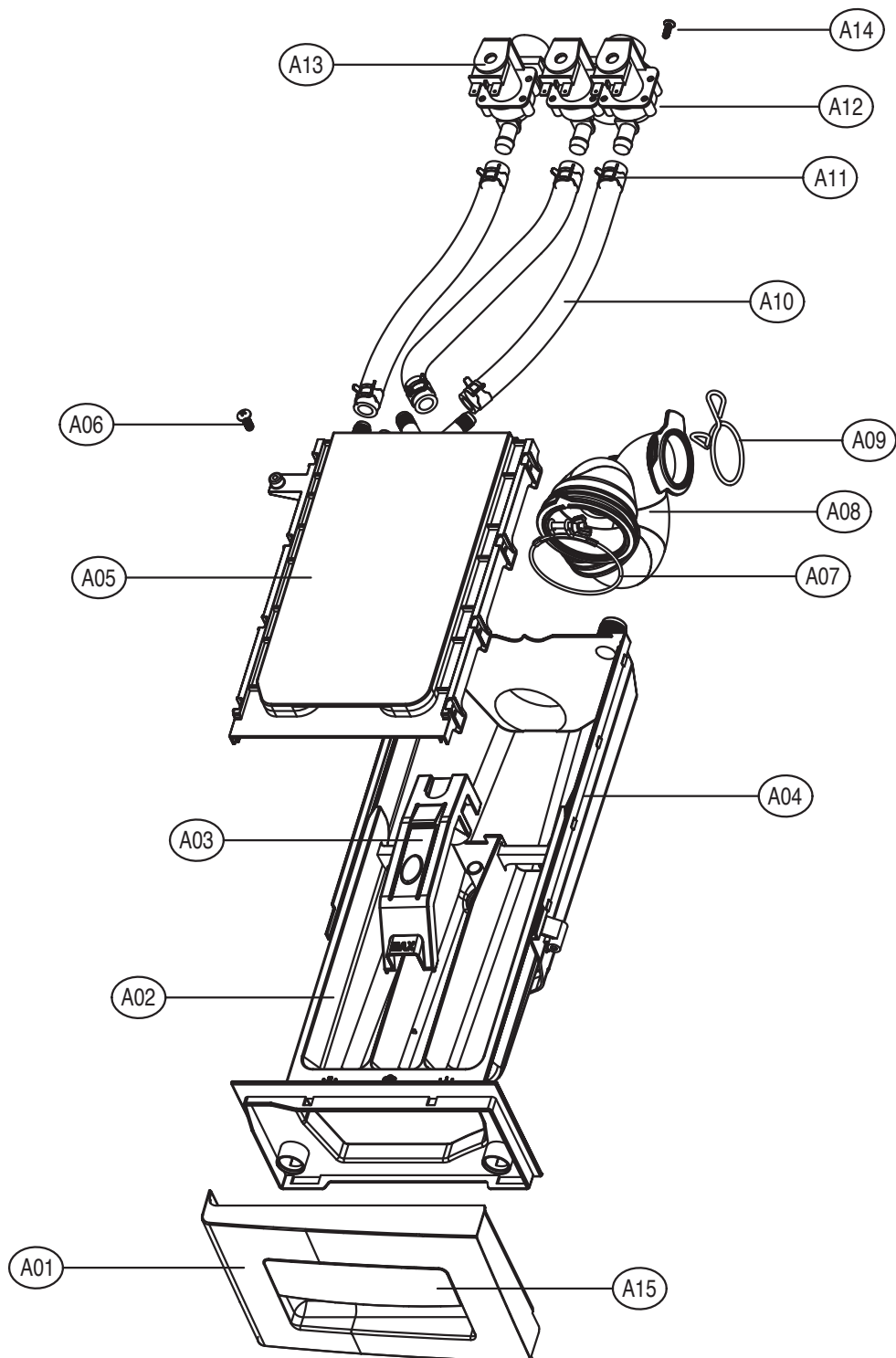


5) Remove the inner drain hose, and remove the drain pump.



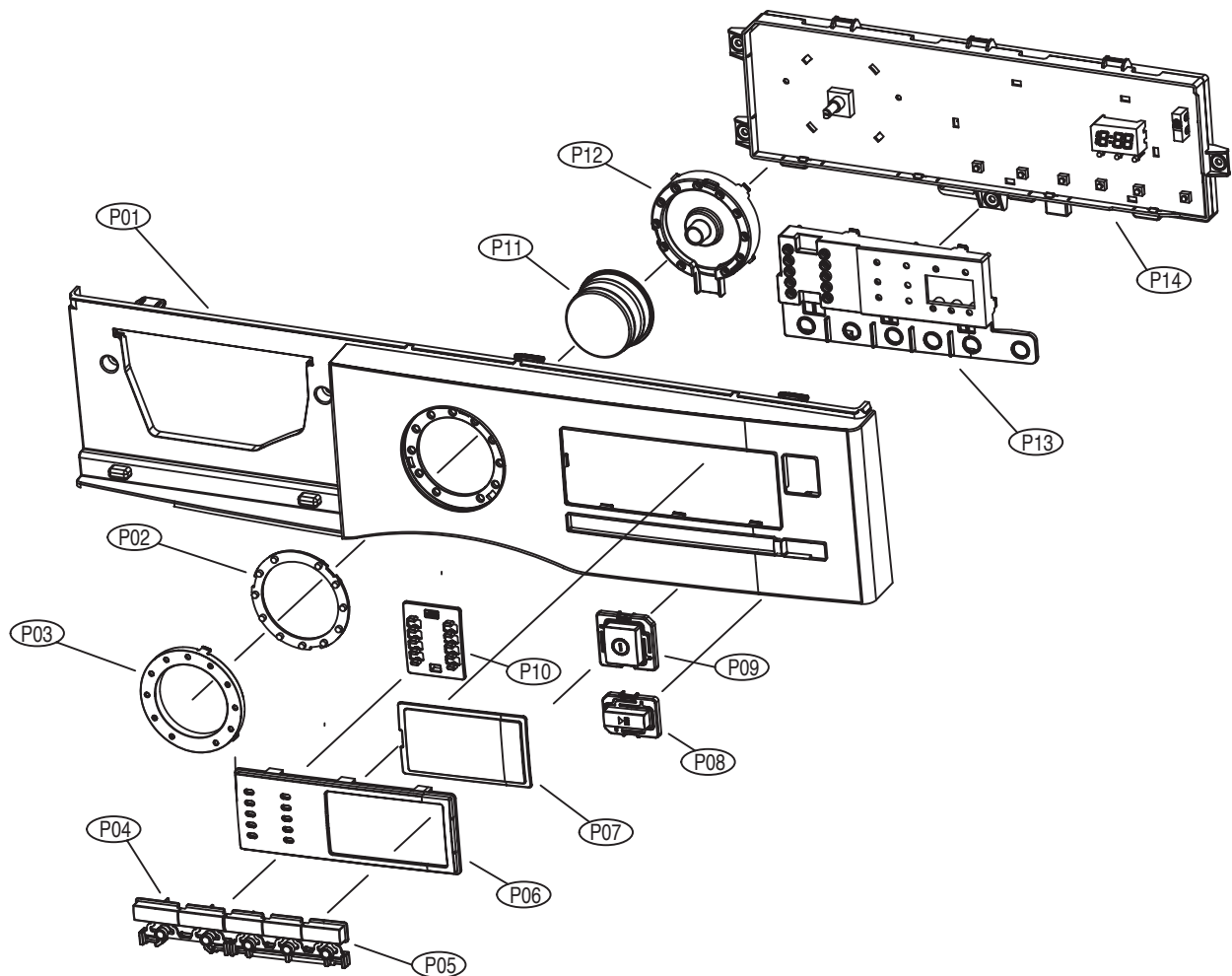
5. EXPLODE VIEW AND PARTS LIST

■ BOX INLET AS



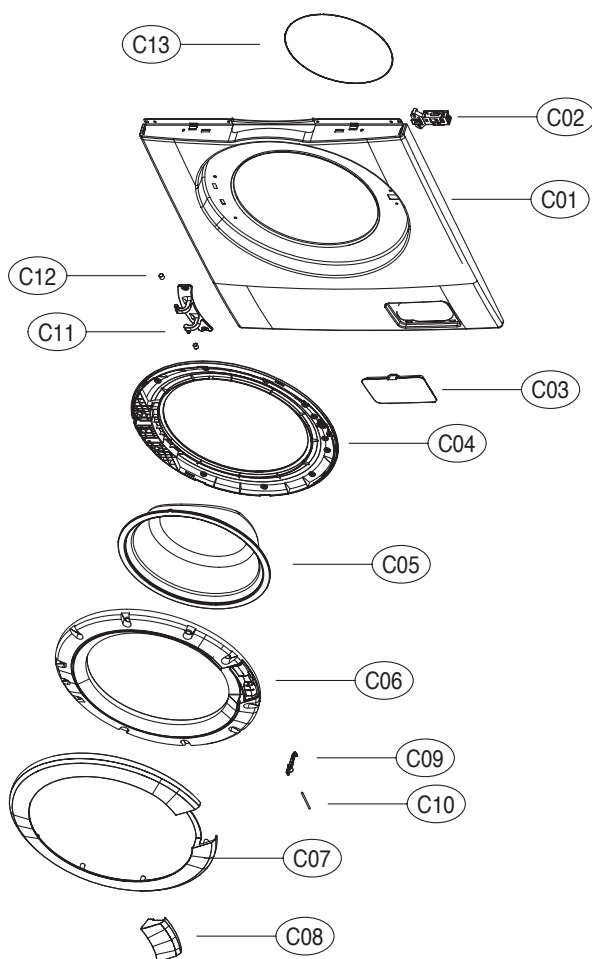
No.	PART NAME	PART CODE	SPECIFICATION	Q'TY	REMARK
A01	HANDLE CASE (CASE HANDLE)	36111T3F01	HIPS, D-H's	1	
A02	CASE DETERGENT	36111T3G00	D-H'S 1ST , PP	1	D-HT1011
A03	CAP SOFTENER	3610916600	PP	1	
A04	BOX INLET	3610526500	PP	1	
A05	NOZZLE AS	3618103300	PP , NOZZLE T	1	
		3618103410	PP , NOZZLE U		
A06	SCREW TAPPING	7122402011	T2S TRS 4x20 MFZN	1	
A08	HOSE INLET	3613267200	EPDM U-TRAP	1	
A09	CLAMP HOSE I	3611201400	HSW3, D2.6, MFZN, ID=38	1	
A10	HOSE WATER SUPPLY	3613270900	EPDM, ID9.5, OD14.5, L=225	2(3)	COLD(+HOT)
A11	CLAMP HOSE	3611205800	100H, ID=13.8 W=10.0 0.9T	4(6)	COLD(+HOT)
A12	VALVE INET	3615414900	220-240V 2-WAY PP/BRACKET	1	COLD VALVE
		3615414910	220-240V 2WAY NYLON VDE		
		3615416821	220-240V.VDE.BITRON.2WAY + DR TECH		COLD VALVE(EU)
A13	VALVE INLET	3615414800	220-240V,50/60Hz,1WAY	1	HOT VALVE
		3615416720	220-240 50/60-1WAY,HOT,BITRON,VDE		HOT VALVE(EU)
A14	SCREW TAPTITE	7272400811	TT3 TRS 4X8 MFZN	2(4)	COLD(+HOT)
A15	DECO CASE HANDLE	36116DWL00	ABS, D-H'S 1ST	1	D-HT1011

PANEL FRONT AS



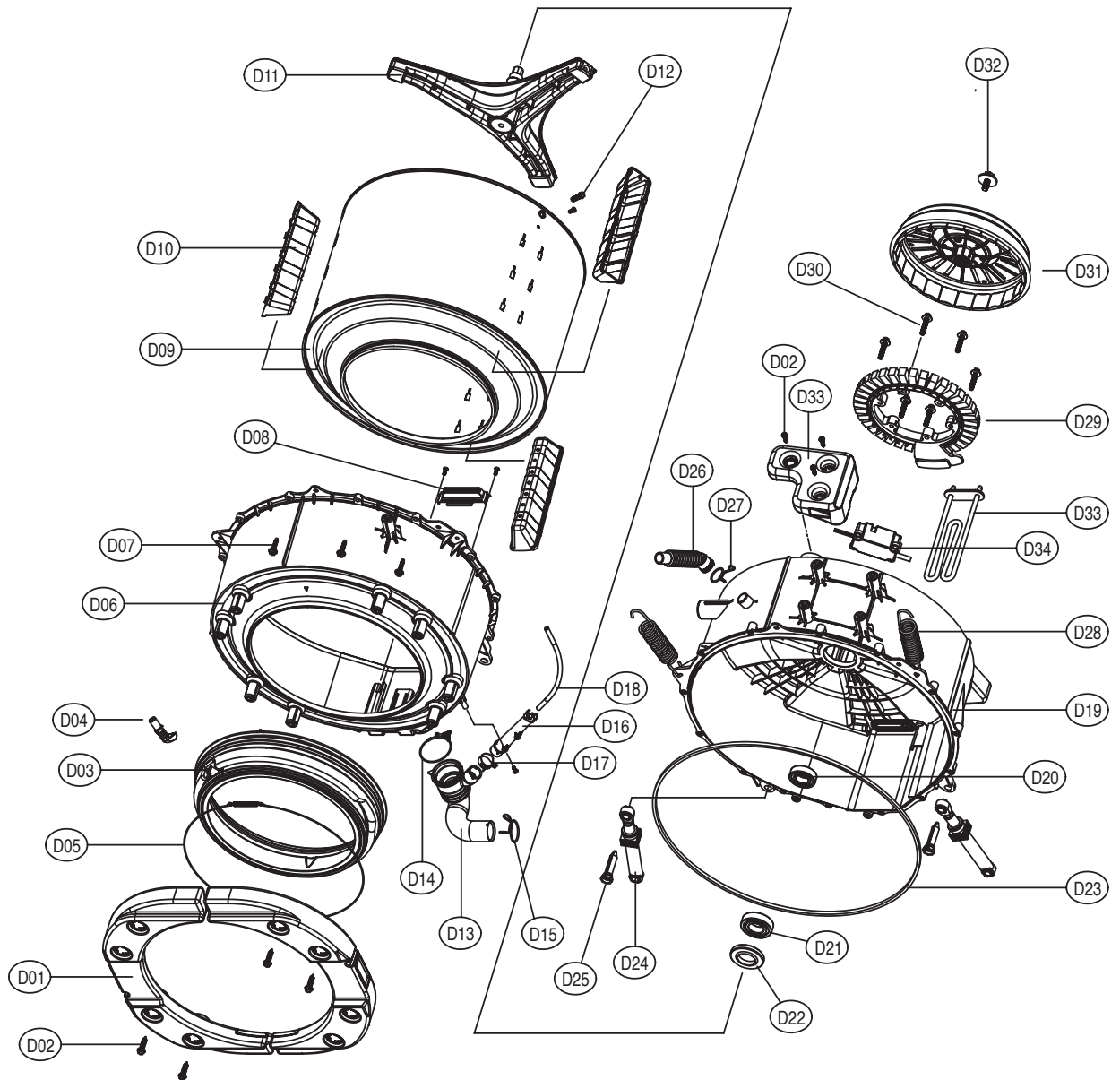
No.	PART NAME	PART CODE	SPECIFICATION	Q'TY	REMARK
P01	PANEL F	36142T4D01	HIPS, D-H's	1	
P02	DECO WINDOW	36116DWM01	ABS, D-H's, For Spray	1	
P03	DECO COURSE	36116DWN01	ABS, D-H's, For Spray	1	
P04	BUTTON OPTION	3616650000	ABS, D-H'S 1ST	1	
P05	BUTTON FUNCTION	3616650100	ABS, D-H'S 1ST	1	
P06	WINDOW COURSE	3615512800	ABS, D-H'S 1ST	1	
P07	WINDOW DISPLAY	3615512600	ABS(TR558), D-H'S 1ST	1	
P08	WINDOW FUNCTION	3615512700	ABS(TR558), D-H'S 1ST	1	
P09	BUTTON START	3616650200	ABS, D-H'S 1ST	1	
P10	BUTTON POWER	3616650300	ABS, D-H'S 1ST	1	
P11	KNOB DIAL	3613409700	ABS, D-H'S 1ST	1	
	DECO KNOB DIAL	36116DWP00	ABS, D-H'S 1ST	1	
P12	HOLDER COURSE	3613065800	HIPS, D-H'S 1ST	1	
P13	HOLDER FUNCTION	3613065700	HIPS, D-H'S 1ST	1	
P14	PCB AS	PRPSSWMJ023	D-HB141	1	

■ CABINET FRONT AS



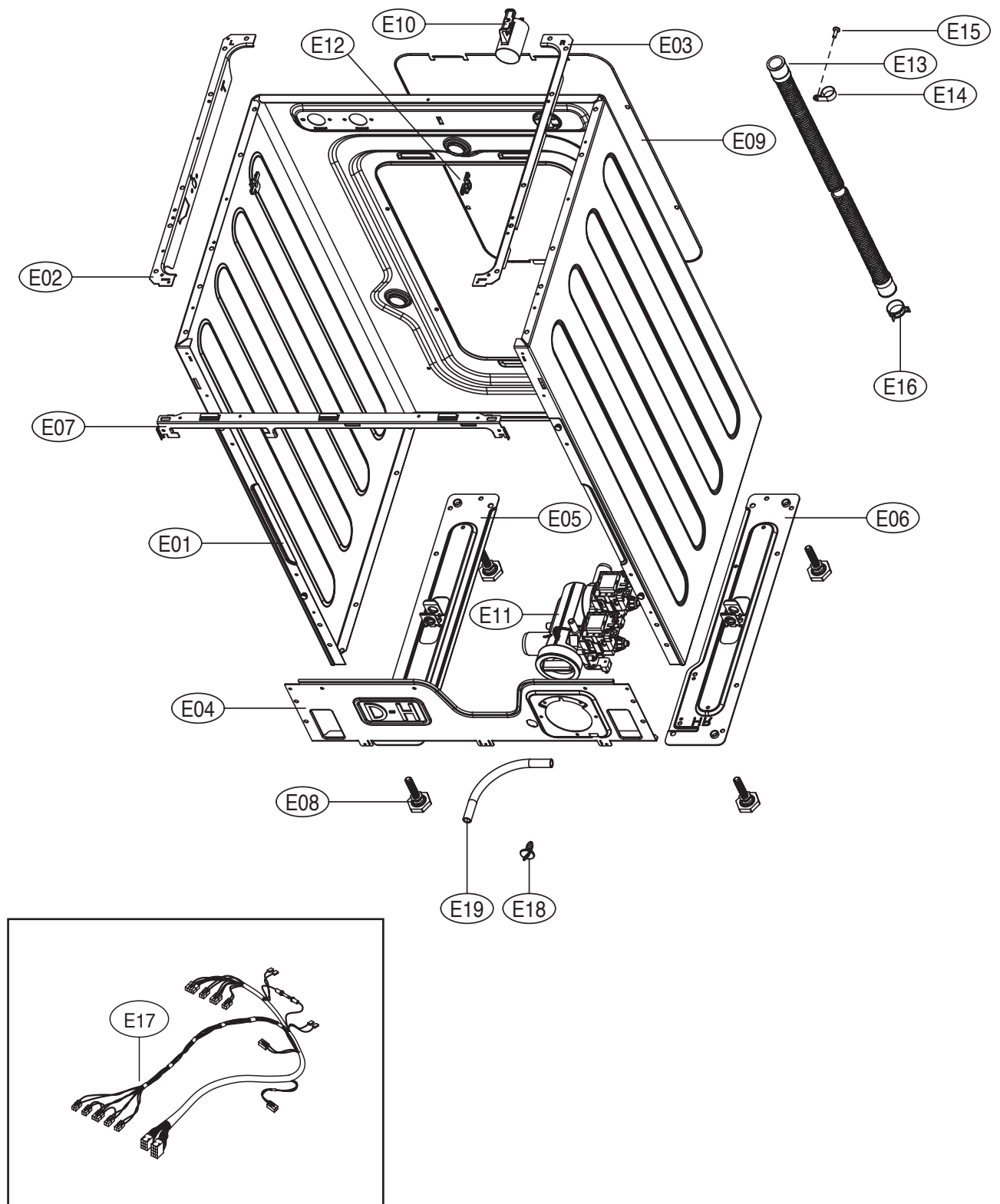
No.	PART NAME	PART CODE	SPECIFICATION	Q'TY	REMARK
C01	CABINET F	361081WE00	SECD 0.7t, D-H's	1	
C02	SWITCH DOOR LOCK	3619047100		1	
	SCREW TAPPING	7122401408	T2S TR4*14 SUS	2	
C03	COVER PUMP	3611433400	ABS, D-H'S	1	
C04	FRAME DOOR I	36122WD600	PP, D-H'S	1	
	SCREW TAPPING	7115402029	T1S FLT4*20 SUS	13	
C05	DOOR GLASS	361A110700	GLASS PI300 M,F	1	
C06	FRAME DOOR O	36122WD700	ABS, D-H'S	1	
C07	DECO FRAME DOOR	36116DWK01	ABS, D-H's, For Gilding	1	
C08	HANDLE DOOR	3612614701	ABS, D-H's, For Gilding	1	
C09	HOOK DOOR	3613101900	ZNDC, D-H'S	1	
C10	PIN HANDLE	3618200210	SUS304, D3, L53	1	
	SPRING HOOK	3615119600	SUS D1.4	1	
C11	HINGE DOOR	3612904700	ALDC, D-H'S	1	
C12	CAP HINGE DOOR	3610916500	POM	1	
	SCREW TAPPING	3616051229	STS430 F/L BOLT(SE) 5*12	2	
	NUT HEX	7S627W50X1		2	
C13	CLAMP DOOR AS	3611204810	HSW3, D=1.4 GS	1	

■ TUB ASS'Y



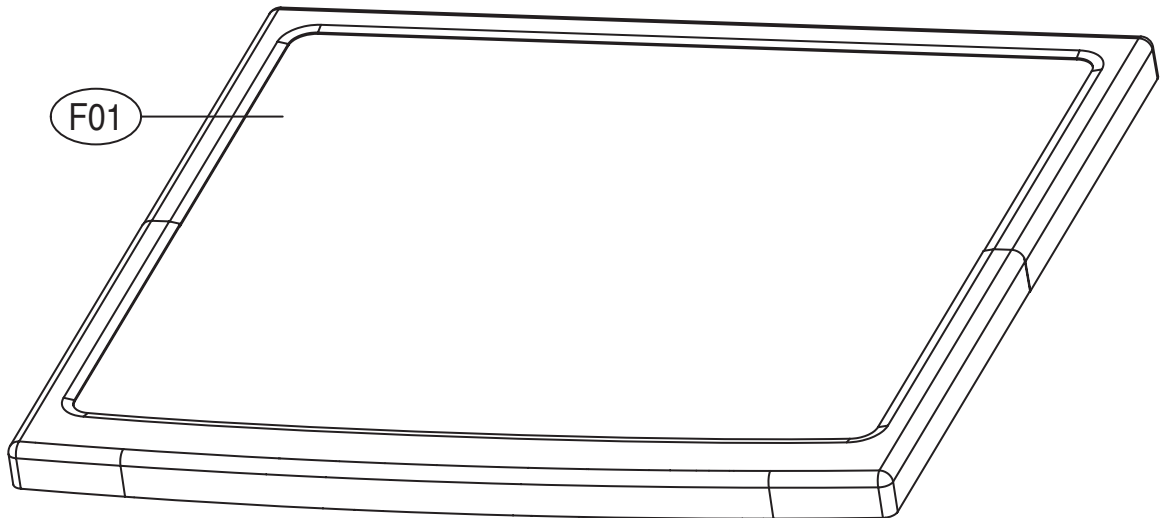
No.	PART NAME	PART CODE	SPECIFICATION	Q'TY	REMARK
-	TUB AS	PRTSSWHB02	D-HB14XXEFA CC 230V	1	
D01	BALANCER WEIGHT F L/R	3616106330	D-FB,FC'S 6.5KG	2	
D02	SPECIAL SCREW	3616029400	SWCH 8.5X30	11	
D03	GASKET	3612327600	EPDM	1	
D04	NOZZLE SHOWER	3618113200	PP	1	
D05	CLAMP GASKET AS	3611204530	HSW3, F'S WIRE L1060	1	
D06	TUB *F	3618821010	FRPP FH7304GM	1	
D07	SPECIAL SCREW	3616029800	SWCH 6.5X30	14	
D08	FIXTURE HEATER	3612007310	SUS 304 0.7T 440X45	1	
D09	DRUM SUB AS	3617004050	D-H, F'S STAR DRUM	1	
D10	LIFTER WASH	361A400400	PP D-F'S NON-NANO	3	
D11	SPIDER AS	361A300510	1400RPM, SERRATION	1	
D12	SPECIAL SCREW	3616029500	SUS430 8*25	3	
D13	HOSE DRAIN	3613267300	EPDM	1	
D14	CLAMP AS	3611203210	ID=61, WIRE+GUIDE+BOLT, GS	1	
D15	CLAMP HOSE	3611201401	HSW3,YW,D2.6,ID36,W44.5	1	
D16	AIR TRAP	361A500101	PP	1	
D17	CLAMP HOSE	3611204700	ID27	1	
D18	HOSE AIR	3613268600	ID=4,OD=8, L=580	1	
D19	TUB REAR AS	36100E2U10	D-FD14	1	
D20	BEARING INNER	3616303100	F,L,E,U,6206Z	1	
D21	BEARING OUTER	3616303200	F,L,E,U,6205Z	1	
D22	WATER SEAL	361A600100	NBR	1	
D23	GASKET TUB	3612321601	EPDM L1600(-0~ +10)	1	
D24	DAMPER FRICTION	361A700121	120N CIMA ST=170-260 DL=197.5 LOW NOISE	2	
D25	DAMPER PIN	361A700200	AKS D=14.5	2	
D26	HOSE VENT	3613267100	EPDM	1	
D27	CLAMP HOSE	3611204700	ID27	1	
D28	SPRING SUSPENSION	3615115310	D6K FD D=3.2,L=164,K=0.477 YELLOW	1	RIGHT
		3615114510	D6K FU,D=3.2 L=158,K=0.554 SILVER COATING	1	LEFT
D29	UNIT STATOR BLDC	36189L621A	AL,DON1000W 18T 36POLE,NMT,PBT	1	
D30	SPECIAL BOLT AS(STATOR)	3616029920	SWCH M8+SILOCK,35MM,DONGSEO	6	
D31	UNIT ROTOR BLDC	36189L6310	DON1000W SR-FERRITE12,18T,NMT	1	
D32	SPECIAL BOLT AS(ROTOR)	3616029620	SWCH 10*30 S/W P/W NON-SEAL LOCK	1	
D33	BALANCER *T	3616112200	PP, D-FB'S NEW 4KG	1	

■ CABINET AS



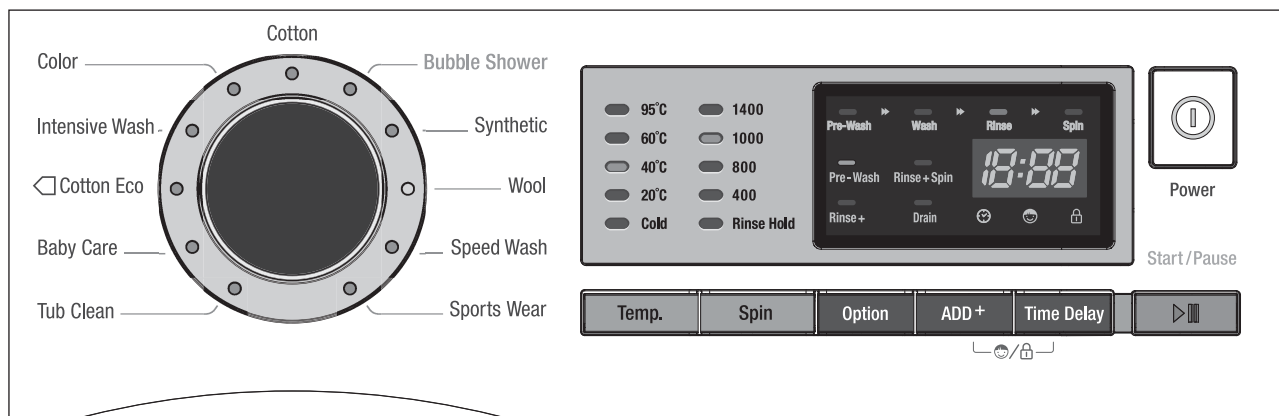
No.	PART NAME	PART CODE	SPECIFICATION	Q'TY	REMARK
E01	CABINET	3610811101	D-F's	1	
E02	FRAME TOP *L	36122056G1	SGCC T1.4 52X500, G/S	1	
E03	FRAME TOP *R	36122057G1	SGCC T1.4 52X500, G/S	1	
E04	FRAME LOWER	36122WD5G0	D-HT'S, SGCC 1.0T, G/S	1	
E05	BASE UNDER *L	36103950G0	D-HT'S, SGCC 1.6T, G/S	1	
E06	BASE UNDER *R	36103951G0	D-HT'S, SGCC 1.6T, G/S	1	
E07	FRAME UPPER	36122058G1	SGCC T1.0 580X55, G/S	1	
E08	LEG ADJUST AS	3617703811	CHINA PARTS, DWD-900W	4	
E09	COVER *B	3611427100	PP	1	
E10	EMI FILTER	3611909320	K25,MIN7MH,X0.47U.Y222. VAR471K.NON FUSE	1	
E11	UNIT DRAIN PUMP AS	3618980000	D-H's PUMP,LELLI,220~240V, 35W ,DPH5 ,WIRE TYPE	1	
E12	STOPPER SPRING	3615202200	POM, DWD-100DR	2	
E13	HOSE DRAIN *O	3613268220	L=1800, STRAIGHT TYPE, BUSHING	1	
E14	CLAMP HOSE	3611206410	NYLON, DA-16N, ID21.9 D-MU80	1	
E15	SCREW TAPPING	7122401411	T2S TRS 4X14 MFZN	1	
E16	CLAMP HOSE	3611204701	DI=26	1	
E17	HARNESS AS	3612796110	D-HD, COLD/PRE VALVE, NON HOT VALVE, BUBBLE PUMP	1	
E18	CAP WATER REMAIN	3610916800	PP	1	
E19	HOSE WATER REMAIN	3613268700	EPDM,ID=8.5, L200	1	




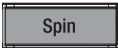

■ PLATE T AS



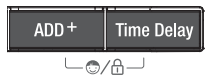
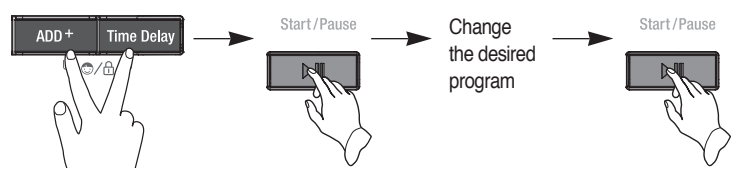
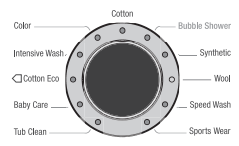


No.	PART NAME	PART CODE	SPECIFICATION	Q'TY	REMARK
F01	PLATE TOP AS	3614543400	D-H'S 1ST	1	
-	SCREW TAPPING	7122401411	T2S TRS 4*14 MFZN	2	

6. FUNCTIONS OF THE CONTROL PANEL



 Power	Power Button Press this button to turn the power ON or OFF.
 Start/Pause	Start/Pause Button This button is use to start wash cycle or stop temporarily. When you want to change program in operating, press this button.
 Temp.	Temperature Button This button can be used to adjust temperature of water according to types of the load to be washed.
 Spin	Spin Speed Button By pressing this button, the spin speed can be chosen. Rinse Hold This function leaves clothes in the machine suspended in the water after a rinse without entering into spin. Spin only If you want only spin, you can operate spin only.
 Option	Option Button By pressing this button, all option functions may be selected. Pre-Wash If the laundry is heavily soiled, Pre-Wash course is effective. Pre-Wash is available in Cotton and Synthetic. Rinse+ By selecting Rinse+ function, the rinse time and the rinse water are increased. Crease Care If you want to prevent crease, select this button with spin speed.

	<p>ADD+ Button</p> <p>By pressing this button, you can decrease pre-set washing time to 10 minutes. Time save is available in Cotton, Cotton Eco and Synthetic.</p>
	<p>Time Delay Button</p> <p>If you want to reserve the finishing time of washing, use this button. If the Time Delay button is pressed, '2:00' is displayed. The maximum delayed time is 12:00 hours and the minimum time is 2:00 hours. Each pressing of the button advances on time delay by one hour.</p>
	<p>Child Lock Button</p> <p>If you want to protect any accident occurring from handling of washer by a child, use this function.</p> <p>Child Lock can be set by pressing 'Time Save' and 'Time Delay' buttons simultaneously during 2~3seconds.</p> <p><i>* When Child Lock is set, no button functions except Power button.</i></p> <p>To cancel Child Lock, press 'Time Save' and 'Time Delay' buttons simultaneously again.</p> <p>To change to the desired program, while in child lock mode.</p> <ol style="list-style-type: none"> 1. Press both 'Time Save' and 'Time Delay' buttons together once again. 2. Press the Start/Pause button. 3. Select the desired program and press the Start/Pause button again. 
	<p>Program Dial</p> <p>When Start/Pause button is pressed, the Cotton program is automatically selected. By turning right the Program Dial, the program is selected in order of 'Cotton ↔ Hand Wash ↔ Delicate ↔ Wool ↔ Quick 30 ↔ Drain ↔ Rinse+Spin ↔ Cotton Eco ↔ Synthetic'.</p>

7. FUNCTIONS OF THE CONTROLLER

Sequence Chart

Division		Progress Time	Synthetic		Intensive	Baby care	Cotton Eco	
			Small	Low	Low	High	Small	Low
PRE WASH	Sensing	20sec.						
	Water Supply	2min.				■		
	Pre Wash	10min.						
		8min.				■		
	Drain	1min.				■		
	B-Spin	1min.				■		
	Middle Spin	3min.				■		
MAIN WASH	Sensing	20sec.	■	■	■	■	■	■
	Water Supply	2min.	■	■	■	■	■	■
	Wash 1 (Heating)	70min.				■		
		35min.				■		■
		30min.				■	■	■
		20min.		■	■	■	■	■
		15min.	■	■	■	■	■	■
	Wash 2	123min.						
		83min.					■	■
		33min.			■	(18 min)	■	■
RINSE		23min.	■	■	■	■	■	■
	Drain	1min.	■	■	■	■	■	■
	B-Spin	1min.	■	■	■	■	■	■
	Middle Spin	4min.	■	■	■	■	■	■
	Water Supply	2min.	■	■	■	■	■	■
	Rinse 1-1	3min.	■	■	■	■	■	■
	Drain	1min.	■	■	■	■	■	■
	B-Spin	1min.	■	■	■	■	■	■
	Middle Spin	4min.	■	■	■	■	■	■
	Water Supply	2min.	■	■	■	■	■	■
	Rinse 1-2	3min.	■	■	■	■	■	■
	Drain	1min.	■	■	■	■	■	■
	B-Spin	1min.	■	■	■	■	■	■
	Middle Spin	4min.	■	■	■	■	■	■
	Water Supply	2min.	■	■	■	■	■	■
	Rinse 2	3min.	■	■	■	■	■	■
	Drain	1min.	■	■	■	■	■	■
	B-Spin	1min.	■	■	■	■	■	■
	Middle Spin	4min.	■	■	■	■	■	■
	Water Supply	2min.	■	■	■	■	■	■
	Rinse 3	3min.	■	■	■	■	■	■
SPIN	Drain	1min.	■	■	■	■	■	■
	B-Spin	1min.	■	■	■	■	■	■
	Main Spin	24min.						
		20min.						
END		7min.	■	■	■	■	■	■
	Untangle	2min.	■	■	■	■	■	■
	End	10sec.	■	■	■	■	■	■
Remained Time Display			1:25	1:30	1:40	2:30	2:25	2:30

NOTE

1. Cotton Eco 코스는 기본적으로 물온도가 60도가 선택되지만 실제로 물온도가 50도가 되면 세탁히터를 OFF 한다.

Division		Progress Time	Wool	Tub Clean	Color	Sports wear	Bubble Shower	Speed Wash	Rinse + Spin
			Small	Low	Small	Low	Small	Small	Low
MAIN WASH	Soak	30min.							
	Water Supply	2min.	■	■	■	■	■	■ (1min.)	
	Wash 1 (Heating)	60min.							
		50min.							
		30min.							
		20min.					■		
		5min.	(20min.)				■	■	
	Wash 2	23min.	■	■	■	■	■		
		13min.	■	■	■	■	■		
		5min.	■	■	■	■	■	■	
RINSE	Drain	1min.	■	■	■	■	■	■	■
	B-Spin	1min.	■	■	■	■	■		■
	Middle Spin	4min.	■	■	■	■	■		■
	Water Supply	2min.	■	■	■	■	■	■ (1min.)	■
	Rinse 1	3min.	■	■	■	■	■	■	■
	Drain	1min.	■	■	■	■	■	■	
	B-Spin	1min.	■	■	■	■	■		
	Middle Spin	4min.	■	■	■	■	■		
	Water Supply	2min.	■	■	■	■	■	■ (1min.)	
	Rinse 2	3min.	■	■	■	■	■	■	
	Drain	1min.					■		
	B-Spin	1min.					■		
	Middle Spin	4min.					■		
	Water Supply	2min.					■		
	Rinse 3	3min.					■		
SPIN	Drain	1min.	■	■	■	■	■	■	■
	B-Spin	1min.	■	■	■	■	■	■	■
	Main Spin	7min.	■	■	■	■	■	■	■
		5min.	■	■	■	■	■	■	■
END	Untangle	2min.	■	■	■	■	■	■	■
	End	10sec.	■	■	■	■	■	■	■
Remained Time Display			56	59	59	49	1:30	33	23

NOTE

1. Speed wash 코스에서는 행굼후 중간탈수를 하지 않고 배수행정만 진행한다.
2. 울, 란제리, 손세탁 코스의 본탈수 기본 RPM은 450RPM이다.

8. FUNCTION OF THE CONVENIENT SERVICE

■ The test mode of the operation

You can check the PCB AS and the operation of the washing machine simply.

• The method to test and operate

- ① Press the Power button.
- ② Press the Option button 3 times while press the Temp button.
At this time, the version is displayed on the Custom LED
- ③ Whenever the Time Delay button is pressed, the washing machine is operated as following.
L_C (Lock Switch Close) → run/OO (The number of running times)
→ E5/OO → E6/OO → E7/OO → E8/OO (The number of the error occurrence)
→ H (Hot Valve) → C (Cold Valve) → P (Pre-Wash Valve)
→ bb (Bubble) → dr (Drain Pump)
→ C:H or C:- (Cold & Hot Option)
→ nPC or PC or etc. (PCB Option) → L_O (Lock Switch Open)
→ L_C → ... (repetition)

■ The check mode of the water level frequency

You can check the water level frequency of the current state and the frequency by the variation of the water level.

• The method to test and operate

- ① Press the Power button.
- ② Press the Time Delay button 3 times while press the Temp button and the Spin button.
- ③ The water level frequency of the current state displays on "18:88 LED".

ex) **5 6 2** = 25.62kHz

: It display three number except the first number of 25.62kHz

- ④ Whenever the Temp button is pressed, the washing machine is operated as following.
Cold Valve Off (Initial state)
→ Cold Valve On
→ Hot Valve On
→ Pre-Wash Valve On
→ Bubble Pump On
→ Drain Pump On
→ ... (repetition)

■ The spinning test mode

You can continually spin the washing machine with constant speed.

• The method to test and operate

- ① Press the Power button.
- ② Press the Time Save button 3 times while press Temp button.
- ③ '400' displays on '18:88 LED'. 400 means the spinning rpm.

You can adjust the spinning rpm by pressing Spin button.

And this value increases by 50 up to 1400.

- ④ When press Start button, the washing machine continually operates with given spinning rpm.

■ The durability test mode

You can repetitively operate the washing machine with one course.

• The method to test and operate

- ① Press the Power button.
- ② Press the Time Delay button 3 times while press Temp button.
- ③ 'd3' displays on '18:88 LED'. You can select the course by using Program Dial, Temp button, Spin button, Option and Time Save button.
- ④ When press Start button, the washing machine repetitively operates with selected course.

9. TROUBLESHOOTING GUIDE

This washing machine is equipped with automatic safety function which detect and diagnose faults at an early stage and react appropriately.

When the machine does not function properly or does not function at all, check the following points.

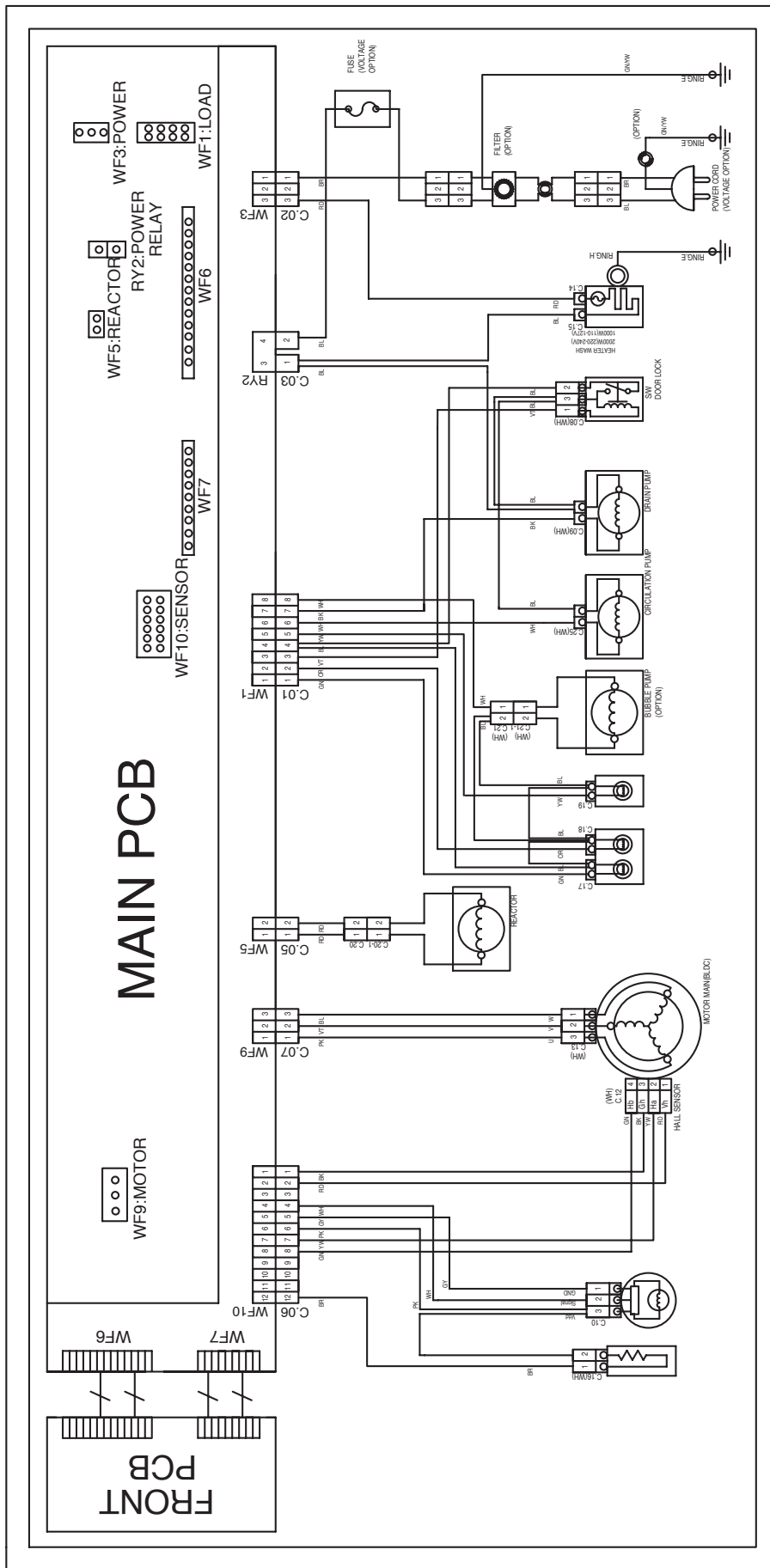
SYMPTOM	CAUSE	SOLUTION
Rattling and clanking noise.	Foreign objects such as coins or safety pins maybe in the drum or pump.	Stop washer and check drum and filter.
Thumping sound.	Heavy wash loads may produce a thumping sound. This is usually normal.	If sound continues, washer is probably out of balance. Stop and redistribute wash load.
Vibrating noise.	Have all the transit bolts and packing been removed?	If not removed during installation, refer to installation guide for removing transit bolts.
	Are all the feet resting firmly on the ground?	Wash load may be unevenly distributed in drum. Stop washer and rearrange wash load.
Water leaks.	Inlet hoses or drain hose are loose at tap or washer.	Check and tighten hose connections.
	House drain pipes are clogged.	Unclog drain pipe. Contact plumber if necessary.
Oversudsing.		Too much detergent or unsuitable detergent may cause excessive foaming which may result in water leaks.
Water does not enter washer or it enters slowly.	Water supply is not adequate in area.	Check another tap in the inlet house.
	Water supply tap is not completely open.	Fully open tap.
	Water inlet hose is kinked.	Straighten hose.
	The filter of the water inlet is clogged.	Check the filter of the water inlet.
Water in the washer does not drain or drains slowly.	Drain hose is kinked or clogged.	Clean and straighten drain hose.
	The drain filter is clogged.	Clean the drain filter.

SYMPTOM	CAUSE	SOLUTION
Washer does not start.	Electronical power cord may not be plugged in or connection may be loose.	Make sure plug fits tightly in wall outlet.
	House fuse blown, circuit breaker tripped, or a power outage has occurred.	Reset circuit breaker or replace fuse. Do not increase fuse capacity. If problem is a circuit overload, have it corrected by a qualified electrician.
	Water supply tap is not turned on.	Turn on water supply tap.
Washer will not spin.	Check that the door is firmly shut.	Close the door and press the Start/Pause button. After pressing the Start/Pause button, it may take a few moments before the clothes washer begins to spin. The door must lock before spin can be achieved.
Door does not open.		Once started, the door can not be opened for safety reasons. Wait two minutes before opening the door to give the electric locking mechanism time to release.
Wash cycle time delayed.		The washing time may vary by the amount of laundry, water pressure, water temperature and other usage conditions. If the imbalance is detected, the wash time shall be increased.
The washer will stop during spinning . Spinning is insufficient.	PFE error due to much detergent and unsuitable detergent.	If PFE error mode was displayed on the control part, in order to solve this problem, first turn off the power of the washing machine, second turn on the power pressing Power button, third press SPIN button and last press Start/Pause button.

MESSAGE	ERROR	CAUSE	SOLUTION
IE	WATER INLET ERROR	The water tap is closed.	Open the water tap.
		The filter of the valve inlet is clogged.	Clean the filter of the valve inlet.
		The valve inlet is an inferior product or broke down.	Change the valve inlet.
		The water level sensor (sensor pressure) is an inferior product or broke down.	Change the water level sensor (sensor pressure).
		The drain motor works during water supply.	Change the drain motor.
		The PCB ASS'Y does not check the water level.	Change the PCB ASS'Y.
OE	DRAIN ERROR	The drain hose is kinked or clogged.	Clean and straighten the drain hose.
		The drain motor is an inferior product.	Change the drain motor.
		The valve inlet works during drain.	Change the valve inlet.
		The water level sensor is an inferior product.	Change the water level sensor.
		The PCB ASS'Y does not check the water level.	Change the PCB ASS'Y.
UE	UNBALANCE ERROR	The laundry is concentrated to one side of the drum during spin.	Rearrange the laundry.
LE	DOOR OPEN ERROR	The Start/Pause button is pressed while the door is opened.	Close the door.
		The switch door lock is an inferior product.	Change the switch door lock.
		The PCB ASS'Y does not check the door lock.	Change the PCB ASS'Y.
E2	OVERFLOW ERROR	The water is supplied continuously due to an inferior valve inlet.	Change the valve inlet.
		The valve inlet is normal, but the water level sensor (sensor pressure) is inferior.	Change the water level sensor (sensor pressure).
		The drain motor does not work. (The drain motor is an inferior product or broke down.)	Change the drain motor.
E4	LEAKAGE ERROR	Water leaks from the tub or the hose drain.	Check the leak of the tub or the hose drain. Then change the tub or the hose drain.
E5	HIGH VOLTAGE ERROR	The laundry is jammed between the gasket and the drum.	Rearrange the laundry.
		The PCB ASS'Y is an inferior product.	Change the PCB ASS'Y.
E6	EMG ERROR	The laundry is jammed between the gasket and the drum.	Rearrange the laundry.
		The motor is an inferior product.	Change the motor.
		The PCB ASS'Y is an inferior product.	Change the PCB ASS'Y.
E8	MOTOR ERROR	The motor is not normally connected.	Check the connector of the motor.
		The motor does not work. (The motor is an inferior product or broke down.)	Change the motor.
E9	SENSOR PRESSURE ERROR	The water level sensor is an inferior product.	Change the water level sensor.
H2	THERMISTOR WASH ERROR	The thermistor wash is an inferior product or broke down.	Change the thermistor wash.
		The thermistor wash is not connected normally.	Check the connector of the thermistor wash.
H4	THERMISTOR WASH OVERHEATING ERROR	The heater worked without the water in the tub.	Check the water level.
		The thermistor wash is an inferior product or broke down.	Change the thermistor wash.

MESSAGE	ERROR	CAUSE	SOLUTION
H5	WATER TEMP. ERROR	The water temp. is over 45°C in delicate & wool course. (The thermistor wash is an inferior product or broke down.)	Change the thermistor wash.
H6	HEATER WASH ERROR	The heater wash dose not work. (The water temp. doesn't rise over 2°C during 15min.)	Change the heater wash.
H8	HEATER WASH OVERHEATING ERROR	The heater worked without the water in the tub.	Check the water level and the heater wash.
lb	IGBT ERROR	The PCB ASS'Y is an inferior product.	Change the PCB ASS'Y.
PFE	PUMP FILTER ERROR	The drain pump filter is clogged.	Clean the drain pump filter.
		The drain pump does not work during spin.	Change the drain pump.
		The large amount of detergent was used.	Use the proper amount of detergent.
		The drain hose is placed higher than 1m above the floor.	Place the drain hose 1m below the floor.

10. WIRING DIAGRAM





DAEWOO ELECTRONICS CORP.

1-2, Jeo-dong 1(il)-ga, Jung-gu, Seoul, Korea

C.P.O. BOX 8003 SEOUL, KOREA

TELEX: DWELEC K28177-8

CABLE: □AEWOOELEC"

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ABOUT THIS MANUAL

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VISION 담당 방 문 수

TEL: 730-0660 FAX: 730-3788