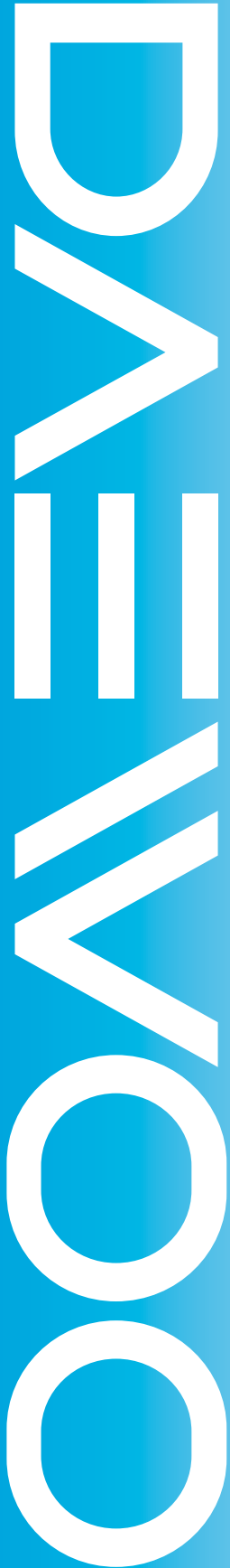


S/M No. : CUD121DC01

Service Manual

Drum Washing Machine

Model: DWC-UD121DC



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>).

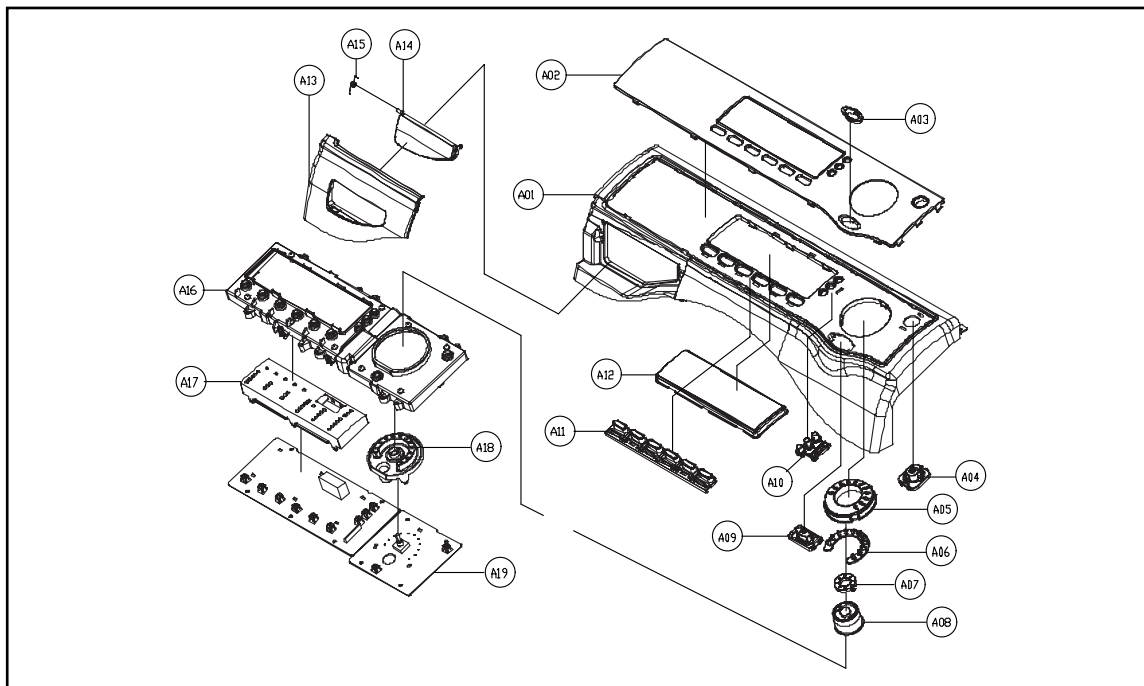
DAEWOO 
ELECTRONICS

Apr. 2008

5. PARTS LIST BY ASS'Y

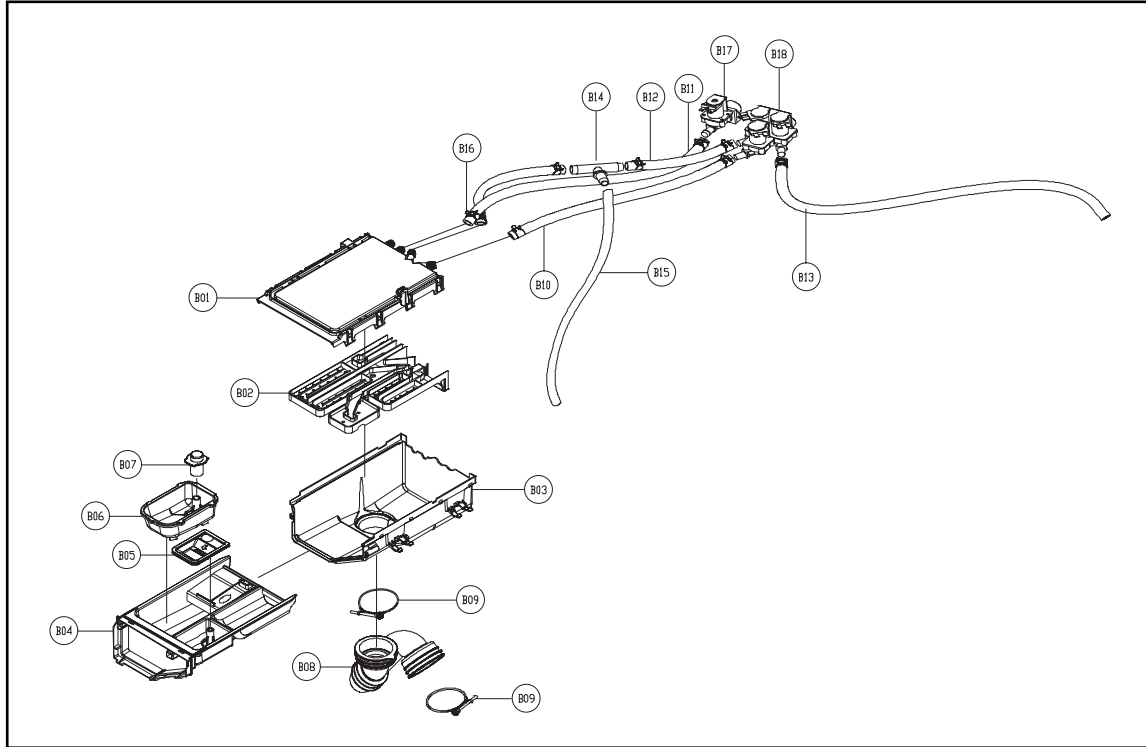
1. PANEL F AS

① T125's series



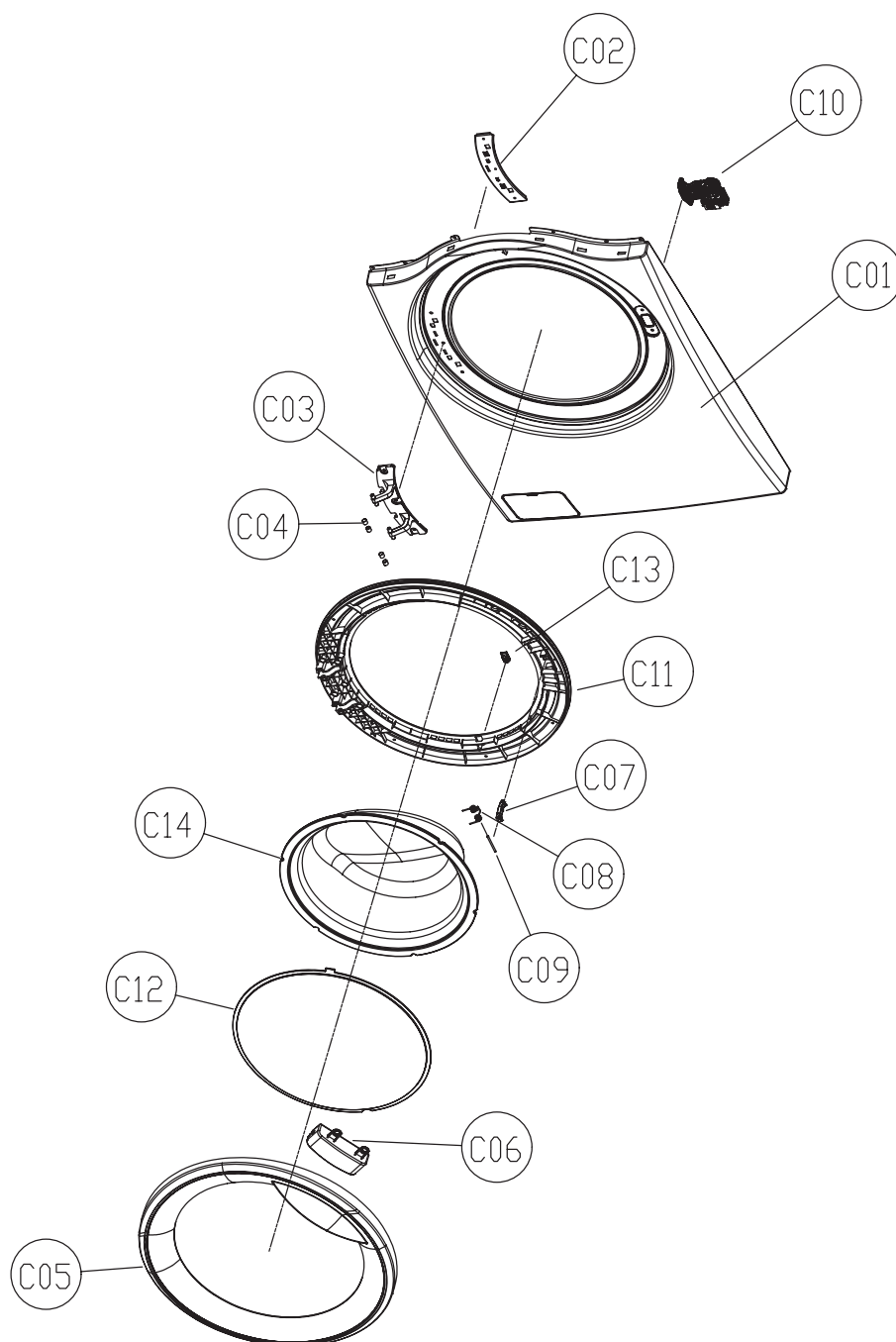
No.	PARTS NAME	CODE	SPECIFICATIONS	Q'TY	REMARK
A01	PANEL F OUTER	PEDIR PANEL F AS	ABS	1	PANEL F AS: 36142T1221
A02	PANEL F INNER	PEDIR PANEL F AS	ABS	1	
A03	DECORATOR START	NO DISPONIBLE	ABS	1	
A04	BUTTON POWER	3616637100	ABS	1	
A05	DECORATOR COURSE	3611686200	ABS	1	
A06	WINDOW COURSE	NO DISPONIBLE	Trans parency ABS	1	
A07	BUTTON DIAL IN	3616637300	ABS	1	
A08	BUTTON DIAL OUT	3616637500	Trans parency	1	
A09	BUTTON START	3616637600	ABS	1	
A10	BUTTON RES	3616637200	ABS	1	
A11	BUTTON FUNCTION	3616637700	ABS	1	
A12	WINDOW DISPLAY	3615505600	Trans parency ABS	1	
A13	CASE HANDLE	PEDIR CASE □ DETERGENT AS	ABS	1	CASE DETERGEN AS: □ 36111T1210
A14	HANDLE CAP	PEDIR CASE □ DETERGENT AS	ABS	1	
A15	SPRING CASE HANDLE	3615116000	SUS 304, D=0.6	1	
A16	PCB AS □	PRPSSW2D31	HIPS	1	
A17			ABS	1	
A18			ABS	1	
A19			DWD-T120R FRONT PCB ASSY	1	

2. INLET BOX AS



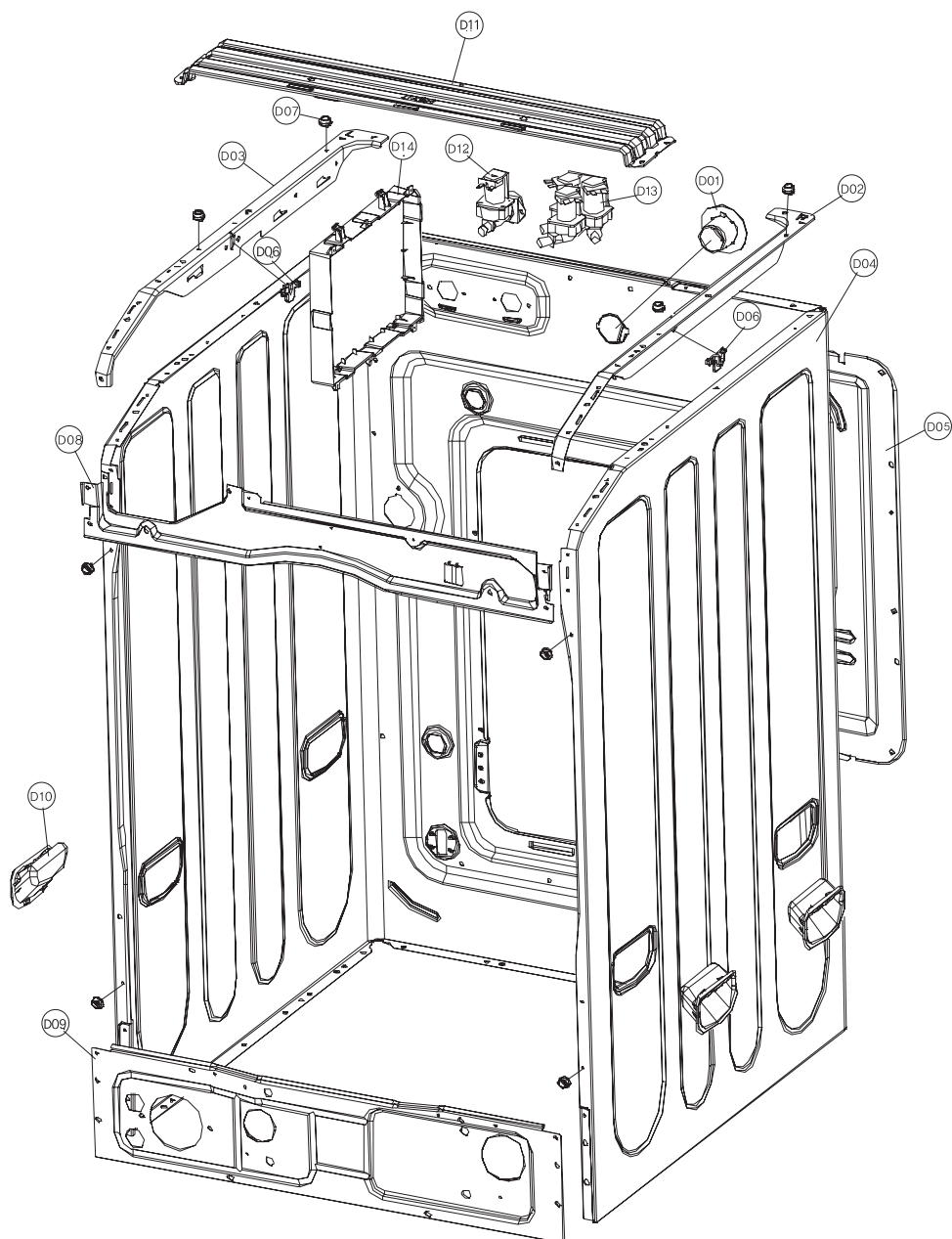
No.	PARTS NAME	CODE	SPECIFICATIONS	Q'TY	REMARK
B01	PEDIR INLET BOX AS		PP	1	INLET BOX AS: 3617505721
B02	PEDIR INLET BOX AS		PP	1	
B03	PEDIR INLET BOX AS		PP	1	
B04	CASE DETERGENT	3611146400	PP	1	CASE DETERGEN AS: 3611117210
B05	CAP SOFTENER	3610918300	PP	1	
B06	PEDIR CASE LIQUID AS		PP	1	CASE LIQUID AS: 3611148100
B07	PEDIR CASE LIQUID AS		PP	1	
B08	HOSE INLET	3613272000	EPDM, "U" TRAP	1	
B09	CLAMP AS	3611203200	ID=60, WIRE+GUIDE+BOLT+NUT	2	
B10	HOSE WATER SUPPLY	3613270900	EPDM ID9.5 OD14.5, L=320mm	1	Combo
			EPDM ID9.5 OD14.5, L=370mm	1	Wash
B11	NO DISPONIBLE PARA ESTE MODELO				
B12	HOSE WATER SUPPLY	3613270900	EPDM ID9.5 OD14.5, L=170x2	2	
B13	HOSE WATER SUPPLY	3613270900	EPDM ID9.5 OD14.5, L=460mm	1	
B14	PIPE JOINT(HOSE INLET)	3614413300	PP	1	
B15	HOSE WATER SUPPLY	3613270930	EPDM ID8.5 OD12.5, L=530mm	1	
B16	CLAMP HOSE	3611205800	100H, ID=13.8 W=10.0 0.9T	8	
B17	NO DISPONIBLE PARA ESTE MODELO				
B18	VALVE INLET	3615415060	100~130V	3-WAY	1

3. CABINET F ASSY



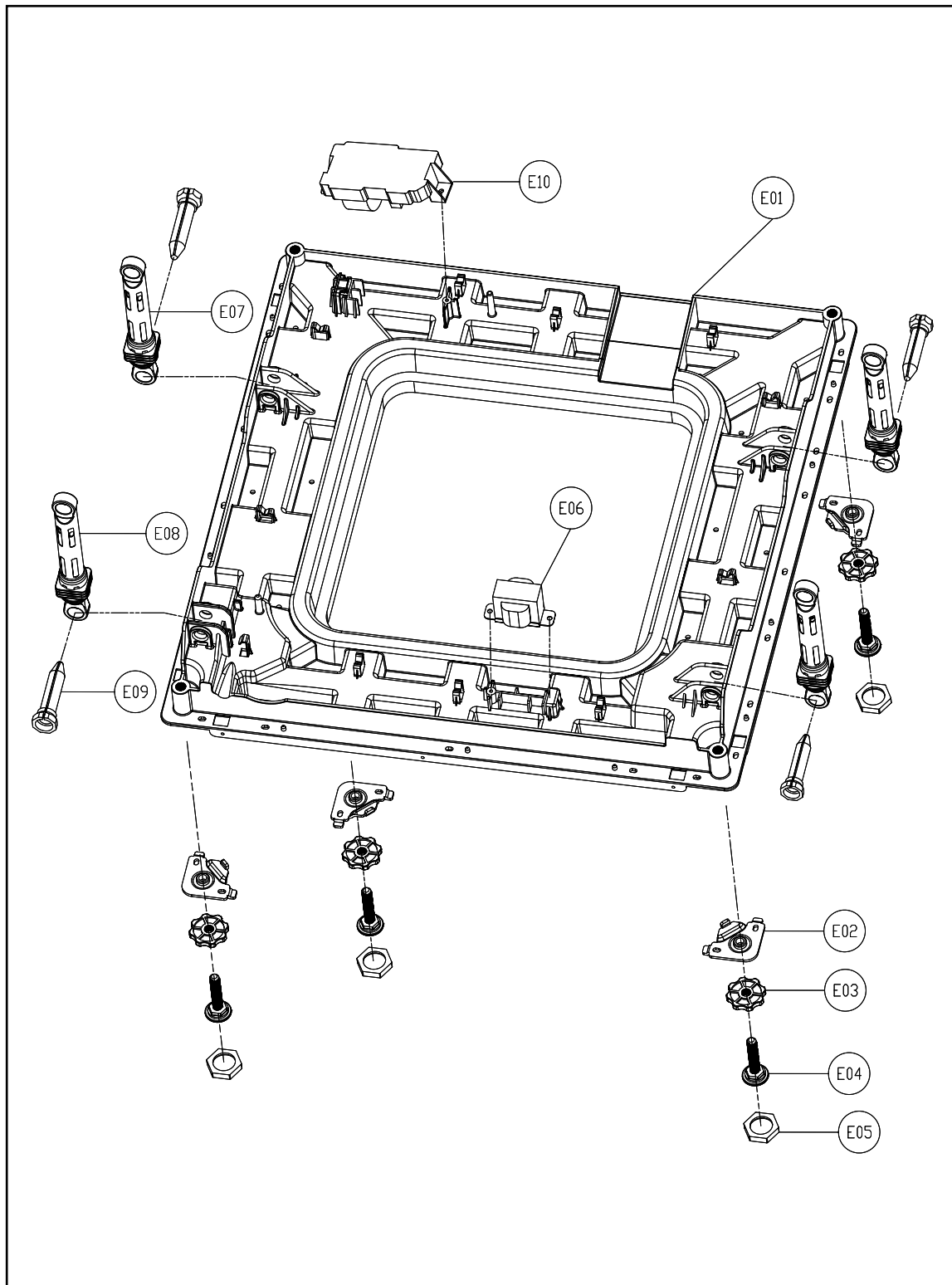
No.	PARTS NAME	CODE	SPECIFICATIONS	Q'TY	REMARK
C01	CABINET F	NO DISPONIBLE	SECD 0.8 t	1	
C02	PLATE HINGE SUPPORT	NO DISPONIBLE	SPG 0.8 t	1	
C03	HINGE DOOR	3612903800	AL	1	
C04	CAP HINGE DOOR	NO DISPONIBLE	POM	4	
C05	FRAME DOOR O	3612209905	ABS, CR	1	DOOR AS: 3610DRT100
C06	HANDLE COVER	3612611500	ABS	1	
C07	HOOK DOOR	3613100900	ZNDC	1	
C08	SPRING HOOK	3615115400	SUS304	1	
C09	HOOK SHAFT	3613101000	SUS, D=3.0	1	
C10	SWITCH DOOR LOCK	3619047200	DL-S1 250V 16A	1	
C11	FRAME DOOR I	3612209800	PP	1	
C12	PROTECTOR GLASS	NO DISPONIBLE	PC	1	
C13	STOPPER DOOR	NO DISPONIBLE	ABS	1	
C14	DOOR GLASS	361A110600	GLASS	1	

4. CABINET ASSY



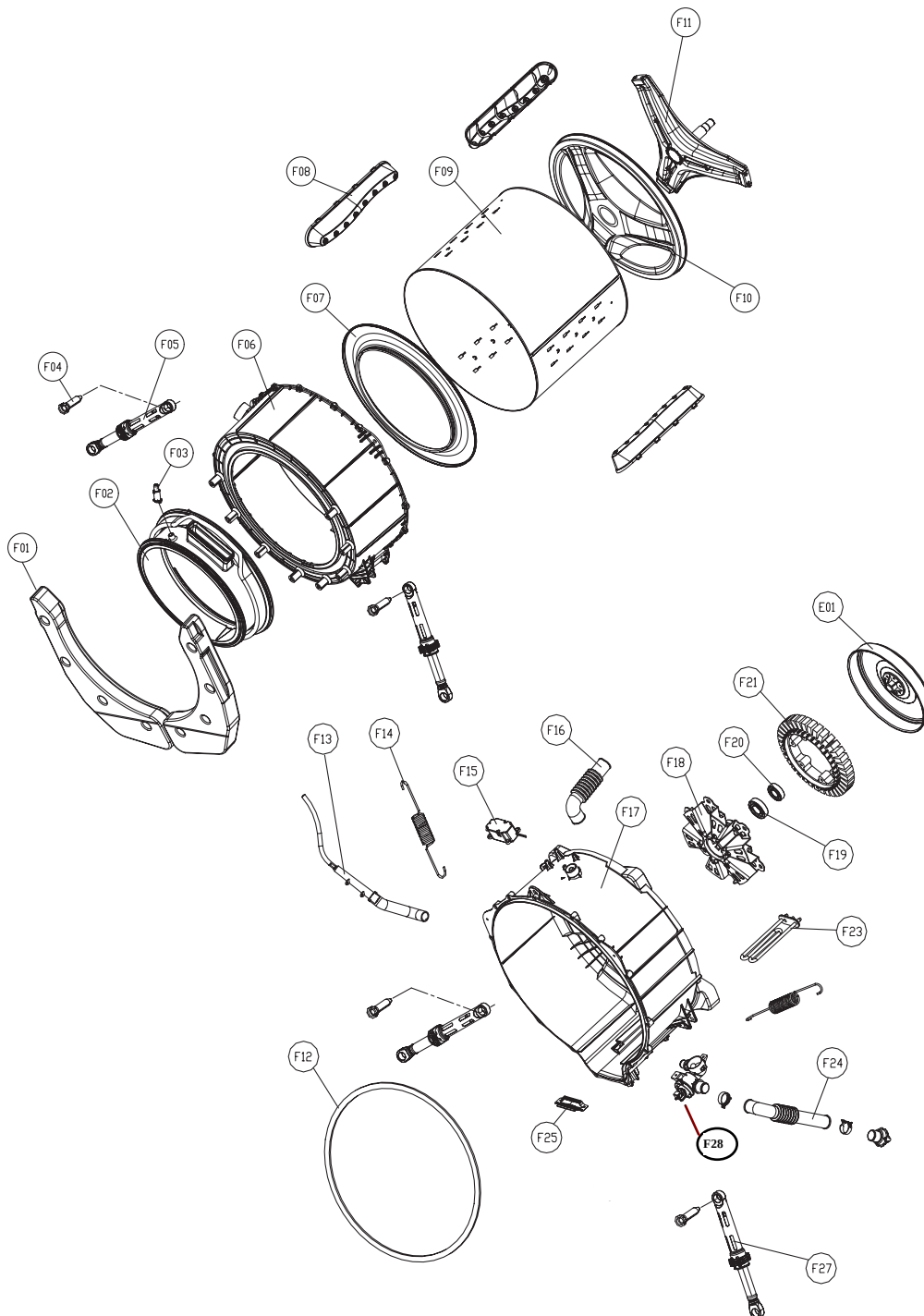
No.	PARTS NAME	CODE	SPECIFICATIONS	Q'TY	REMARK
D01	NOZZLE AIR	NO DISPONIBLE	PP, DWD-100DR	1	
D02	FRAME TOP R	NO DISPONIBLE	GI 1.6 t	1	
D03	FRAME TOP L	NO DISPONIBLE	GI 1.6 t	1	
D04	CABINET	NO DISPONIBLE	SGCC 0.8 t	1	
D05	COVER BACK AS	3611425540	COVER BACK + PAD CABINET	1	
D06	STOPPER SPRING	3615202200	POM, DWD-100DR	2	
D07	FIXTURE PLATE	NO DISPONIBLE	POM, 130RP	8	
D08	FRAME UPPER	NO DISPONIBLE	SBHG, 1.2 t	1	
D09	FRAME LOWER	NO DISPONIBLE	SBHG, 1.2 t	1	
D10	HANDLE CABINET	NO DISPONIBLE	PP, DWD-100DR	4	
D11	FRAME COVER	NO DISPONIBLE	SBHG, 1.2 t	1	
D12	NO DISPONIBLE PARA ESTE MODELO.				
D13	VALVE INLET	3615415060	220~240V,3WAY,RINSE GUIDE,PP/BRACKET	1	
D14	PCB MAIN AS	PRPSSW2D41	HIPS, DWD-T110R	1	

5. BASE U AS



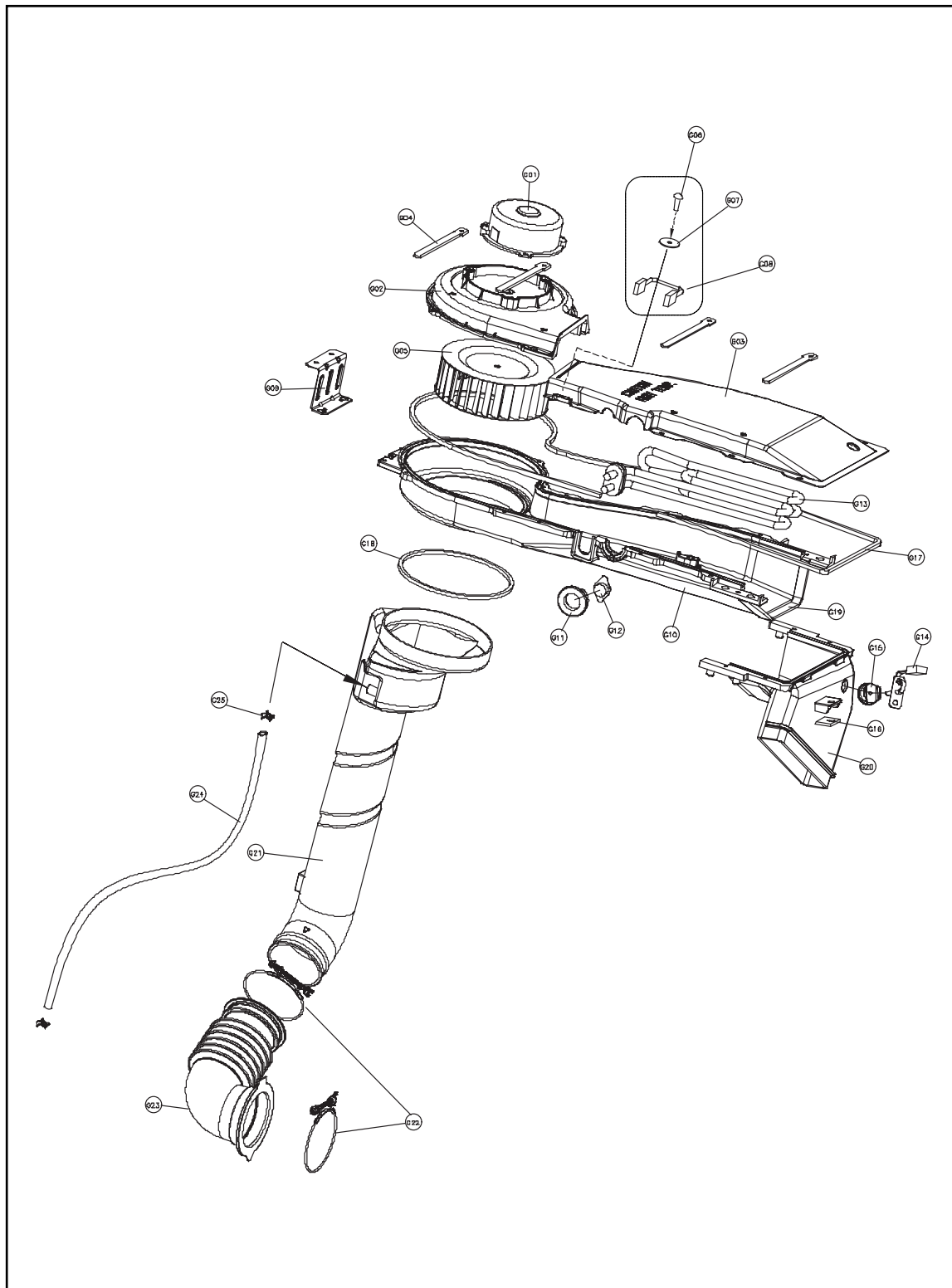
No.	PARTS NAME	CODE	SPECIFICATIONS	Q'TY	REMARK
E01	BASE U	NO DISPONIBLE	PP, DWD-T120R	1	
E02	SUPPORTER LEG	NO DISPONIBLE	PO+, 3.0T	4	
E03	FIXTURE LEG	PEDIR □ LEG ADJUST AS	ABS, DWD-100DR	4	LEG ADJUST AS: □ 3617703600□ E03+E04+E05
E04	SPECIAL BOLT	PEDIR □ LEG ADJUST AS	10 X 1.25, 51MM	4	
E05	FOOT	PEDIR □ LEG ADJUST AS	BUTYL, DWD-100DR	4	
E06	REACTOR	52G043J003	DWD-100DR, 4A	1	
E07	DAMPER FRICTION	361A700150	110N AKS ST=170-260 DL=197.5 LOW NOISE	2	
E08	DAMPER FRICTION	361A700110	70N AKS ST=170-260 DL=197.5 LOW NOISE	2	
E09	DAMPER PIN	361A700200	AKS D=14.5	4	
E10	EMI FILTER(K19B)	3611908770	DWLF-K19(B110),X0.47U.Y1000P.VAR471K.NON FUSE	1	

6. TUB ASSY



No.	PARTS NAME	CODE	SPECIFICATIONS	Q'TY	REMARK
F01	BALANCER WEIGHT	NO DISPONIBLE	DWD-T120R	1	
F02	GASKET DRY	PEDIR □ GASKET AS	EPDM	1	GASKET AS: □ 36100T1200
F03	NOZZLE SHOWER	3618104000	PP, DWD-100DR	1	
F04	DAMPER PIN	361A700200	AKS D=14.5	4	
F05	DAMPER FRICTION	361A700110	AKS, 70N	2	
F06	TUB FRONT	3618829800	FRPP, DWD-T120R	1	
F07	DRUM FRONT	PEDIR DRUM AS	SUS, 0.5T	1	DRUM AS: 36100E2L60
F08	LIFTER WASH	361A400600	PP NANO-SILVER	3	
F09	DRUM CENTER	PEDIR DRUM AS	SUS, 0.6T	1	
F10	DRUM REAR	PEDIR DRUM AS	SUS, 0.6T	1	
F11	SPIDER AS	361A300200	SPIDER(ALDC)+SHAFT(S45C)	1	
F12	GASKET TUB	3612324300	L=1810	1	
F13	AIR TRAP AS	3610AAR120	DWD-T120R	1	
F14	SPRING SUSPENSION	3615115800	DWD-T120R	2	
F15	UNIT BUBBLE PUMP	36189L4150	230V	1	
F16	HOSE AIR	3613266300	EPDM	1	
F17	TUB REAR	PEDIR TUB REAR □ AS	FRPP, DWD-T120R	1	TUB REAR AS: □ 361882T120
F18	BEARING HOUSING	PEDIR TUB REAR □ AS	ALDC	1	
F19	BEARING INNER	3616303100	6206Z	1	
F20	BEARING OUTER	3616303200	6205Z	1	
F21	UNIT STATOR BLDC	36189L4830	36SLOT	1	
E01	UNIT ROTOR BLDC	36189L4900	MAGNET24	1	
F23	HEATER WASH	3612802410	230V 2000W	1	
F24	HOSE DRAIN I AS	3613272500	EPDM	1	
F25	FIXTURE HEATER	NO DISPONIBLE	SUS0.7T	1	
F26	THERMISTOR WASH	361AAAAB10	TERMISTOR RESISTENCIA DE CALENTAMIENTO	1	
F27	DAMPER FRICTION	361A700150	AKS	2	
F28	UNIT DRAIN PUMP AS	36189L4F00	220-240V / 50Hz	1	

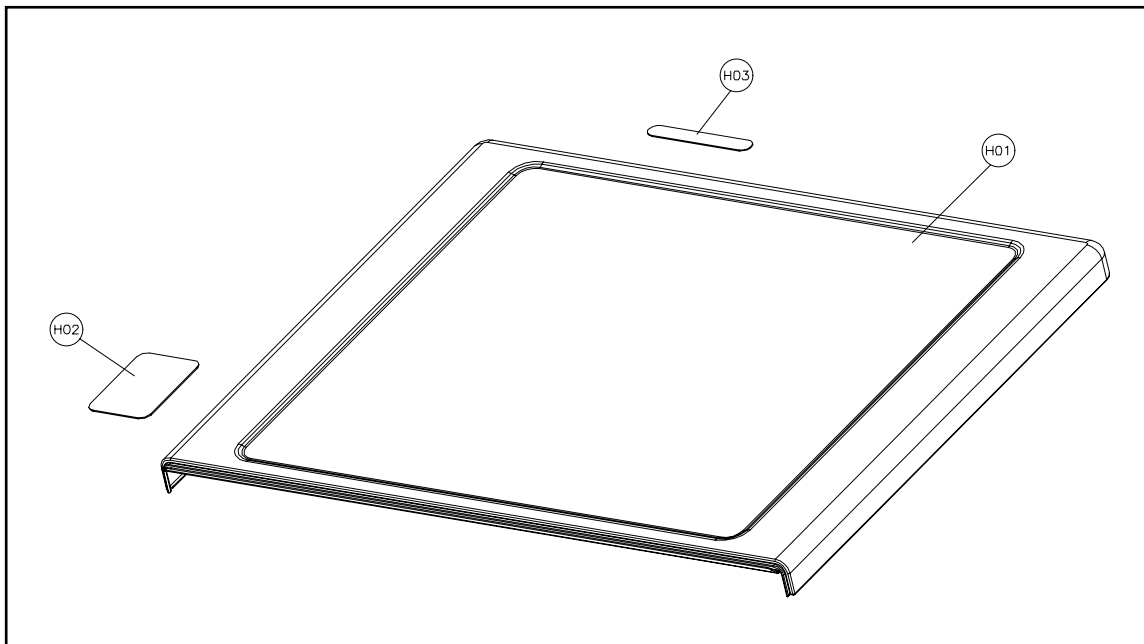
7. DUCT B AS + DUCT PIPE AS



No.	PARTS NAME	CODE	SPECIFICATIONS	Q'TY	REMARK
G01	UNIT FAN MOTOR	36189L3Z20	ISM-7780 6DWVA 24V.	1	DUCT B AS: 3610DUTA34
G02	COVER DUCT	NO DISPONIBLE	ALDC	1	
G03	DUCT B UPPER	NO DISPONIBLE	ALCOST 0.5T	1	
G04	CLAMP CORD	NO DISPONIBLE	DABE-2, A=9, B=5,3, L=105	3	
G05	FAN AS	3611885900	DI33 FAN	1	
G06	SCREW TAPPING	NO DISPONIBLE	T2S TRS 4x8	1	
G07	SPECIAL SCREW AS	NO DISPONIBLE	TAPTITE P, TRS 4*16, WASHER	1	
G08	FUSE TEMPERATURE	361A800120	128℃(G4A0115C) 15A 250V	1	
G09	FRAME HEATER FRANGE	NO DISPONIBLE	SBHG 1.2t	1	
G10	DUCT B LOWER	NO DISPONIBLE	AL, 3t	1	
G11	PACKING THERMOSTAT	3614009900	SILICON	1	
G12	SWITCH THERMOSTAT	3619046500	ON 120℃ OFF 150℃ 230V	1	
G13	HEATER DRY	3612801400	230V	2100W	1

G14	THERMISTOR DRY	361AAAAC30	R40=26.065kΩ, R90=4.4278kΩ	1	
G15	PACKING RUBBER	3614009800	SILICON	1	
G16	CUSHION DRY	NO DISPONIBLE	NBR, 20 x20 x 3T	2	
G17	GASKET SEAL A	NO DISPONIBLE	EPDM FOAM, DIA=5, L=1335	1	
G18	GASKET SEAL B	NO DISPONIBLE	EPDM FOAM, L=412, 4.9 x 4.4 x 4.8	1	
G19	GASKET INLET	3612323800	EVA, 10 x 211 x 1T	1	
G20	DUCT GUIDE	361A202300	AL, 3T	1	
G21	DUCT AS	361A200850	T120R	1	
G22	CLAMP AS(DUCT)	NO DISPONIBLE	DUCT	2	
G23	BELLOWS DUCT	3616403000	EPDM	1	
G24	HOSE WATER SUPPLY	NO DISPONIBLE	T120R	1	
G25	CLAMP SPRING	3611203800	ID=15.5, T=0.6, B=10	2	

8. PLATE TOP ASSY



No.	PARTS NAME	CODE	SPECIFICATIONS	Q'TY	REMARK
H01	PLATE TOP	PEDIR □ PLATE T AS	SECC 1.2T	1	PLATE T AS : 3614531931
H02	LABEL CAUTION	NO DISPONIBLE	PVC, SILK	1	
H03	LABEL INSTALL	NO DISPONIBLE	ART+OPP, WATER VALVE STICKER	1	

5. TEST MODE

5-1. Testing Mode

PCB and other electronic parts will be tested without water supply whether they are normal or not.

1) Process

press power button --> press "SPIN" button 3 times with pressing "WASH" button --> 'L d' will be shown on LED -->

Whenever pressing "TEMP" button 1 time, below process will be occurred.

MICOM Ver. --> L C (Lock Closed) --> run (count) --> b1, b2, b3, b4, b5, b6, b7

--> F (Fan Motor) --> H (Hot V/V)

--> C (Cold V/V) --> P (prewashing V/V) --> d (dry V/V) --> bb (bubble)

--> dr (drain motor) --> L O (Lock S/W Open)

2) More details

1 When turn on 'LOCK' signal, all process is conducting normaly.

2 When working starts, the PCB displays all the sensor conditions.

3 In this case, BLDC Motor is not tested. In order to test it, select spin or rinse.

5-2. Continous testing mode

1) Process

after pressing "WASH", "RINSE", "SPIN" button simultaneously, press "POWER" button.

ALL LED On --> SPIN button --> ALL LED off

--> L C (Lock Close) --> r (Motor right) --> L (Motor Left)

--> F (Fan Motor) --> H (Hot V/V) --> C (Cold V/V) --> b (Pre whsh V/V) --> d (dry V/V)

--> bb (bubble) --> h1 (Wash heater) --> h2 (Dry heater) --> dr (Drain motor On)

--> L O (Lock S/W Open)

2) More tails

1 LED test can be done with all LED On.

2 All sensor conditions will be shown on PCB during processing.

6-1. Error Display

6-1. IE (Input Error) - Error in water supply

1) Conditions of Occurrence

- ① In case the designated water level is not reached in 5 minutes during water supply or re-supply

2) All LEDs are turned off and 'IE' blinks in 18:88 display.

3) Error buzzer alarm is sounded for 10 seconds per every 10 minutes.

4) Error display is cleared when turning off/ on power.

6-2. OE (Output Error) - Error in drainage

1) Conditions of Occurrence

- ① In case water level does not reach reset point in 10 minutes after drainage starts

2) All LEDs are turned off and 'OE' blinks in 18:88 display.

3) Error buzzer alarm is sounded for 10 seconds per every 10 minutes.

4) Error display is cleared when turning off/ on power.

6-3. UE (Unbalance Error)

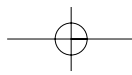
1) Conditions of Occurrence

- ① In case main spin-drying is not reached within 20 cycles of balance spin-drying
- ② In case balance spin-drying fails during interim spin-drying, UE occurs as the cycle moves to the next process.

2) All LEDs are turned off and 'UE' blinks in 18:88 display.

3) Error buzzer alarm is sounded for 10 seconds per every 10 minutes.

4) Error mode is cleared by opening door and organizing the laundry in spin-dry chamber, closing door and pressing start/ temporary stop button. Then, spin-drying begins again.



6-4. LE (Lock Error) - Door opening error

1) Conditions of Occurrence

- ① When intending to begin cycle by pressing start/ temporary stop button while door is opened

2) All LEDs are turned off and 'LE' blinks in 18:88 display.

3) Error buzzer alarm is sounded for 10 seconds per every 10 minutes.

4) Error display is cleared when turning off/ on power.

6-5. E1 - Water level detection error

1) Conditions of Occurrence

- ① In case water level is below reset or overflow is detected in line test mode

2) Water supply motor is kept on until water level falls below reset.

3) All LEDs are turned off and 'E1' blinks in 18:88 display.

4) Error buzzer alarm is sounded for 10 seconds per every 10 minutes.

5) Error display is cleared when turning off/ on power.

6-6. E2 - Overflow error

1) Conditions of Occurrence

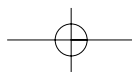
- ① In case water level in water tank is above overflow level due to continuous operation of water supply valve

2) Water supply motor is kept on until water level falls below reset.

3) All LEDs are turned off and 'E2' blinks in 18:88 display.

4) Error buzzer alarm is sounded for 10 seconds per every 10 minutes.

5) Error display is cleared when turning off/ on power.



6-7. E4 - Water leakage during washing

1) Conditions of Occurrence

- ① In case water level falls below re-supply even after 15 times of re-supply prior to finishing of water heating

2) All LEDs are turned off and 'E4' blinks in 18:88 display.

3) Error buzzer alarm is sounded for 10 seconds per every 10 minutes.

4) Error display is cleared when turning off/ on power.

6-8. E9 - Abnormalities in water level sensor

1) Conditions of Occurrence

- ① In case water level frequency is of 15KHz or lower and 30KHz or higher during cycle due to abnormalities in water level sensor, etc.

2) All LEDs are turned off and 'E9' blinks in 18:88 display.

3) Error buzzer alarm is sounded for 10 seconds per every 10 minutes.

4) Error display is cleared when turning off/ on power.

6-9. Motor-related Error

1) E5 (DC-Link High Voltage) Error

- ① In case DC-link voltage to IPM increases to 450V or higher
- ② Motor operation is stopped and 'E5' is shown in display window.
- ③ Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ④ Error display is cleared when turning off/ on power.

2) E6 (EMG) Error

- ① In case current detected with EMG port is of 20A or higher
- ② Motor operation is stopped and 'E6' is shown in display window.
- ③ Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ④ Error display is cleared when turning off/ on power.

3) E7 (Direction) Error

- ① In case signal of Hall IC is different from the predicted signal according to direction of rotation
- ② Motor operation is stopped and 'E7' is shown in display window.
- ③ Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ④ Error display is cleared when turning off/ on power.

4) E8 (Initial Operation Fail) Error

- ① In case input signal of Hall IC is abnormal due to problems in motor connection, etc.
- ② Motor operation is stopped and 'E8' is shown in display window.
- ③ Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ④ Error display is cleared when turning off/ on power.

6-10. Error in Temperature Sensor

1) H2 Error - Washing temperature sensor open/ short

- ① In case washing temperature sensor is defective or not connected
- ② Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ③ Error display is cleared when turning off/ on power.

2) H4 Error - Washing temperature sensor overheating

- ① In case temperature detected by washing temperature sensor is 95℃ or higher
- ② Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ③ Error display is cleared when turning off/ on power.

3) H5 Error - Water temperature error in wool/ delicate course

- ① In case water temperature in wool/ delicate course is 45℃ or higher
- ② Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ③ Error display is cleared when turning off/ on power.

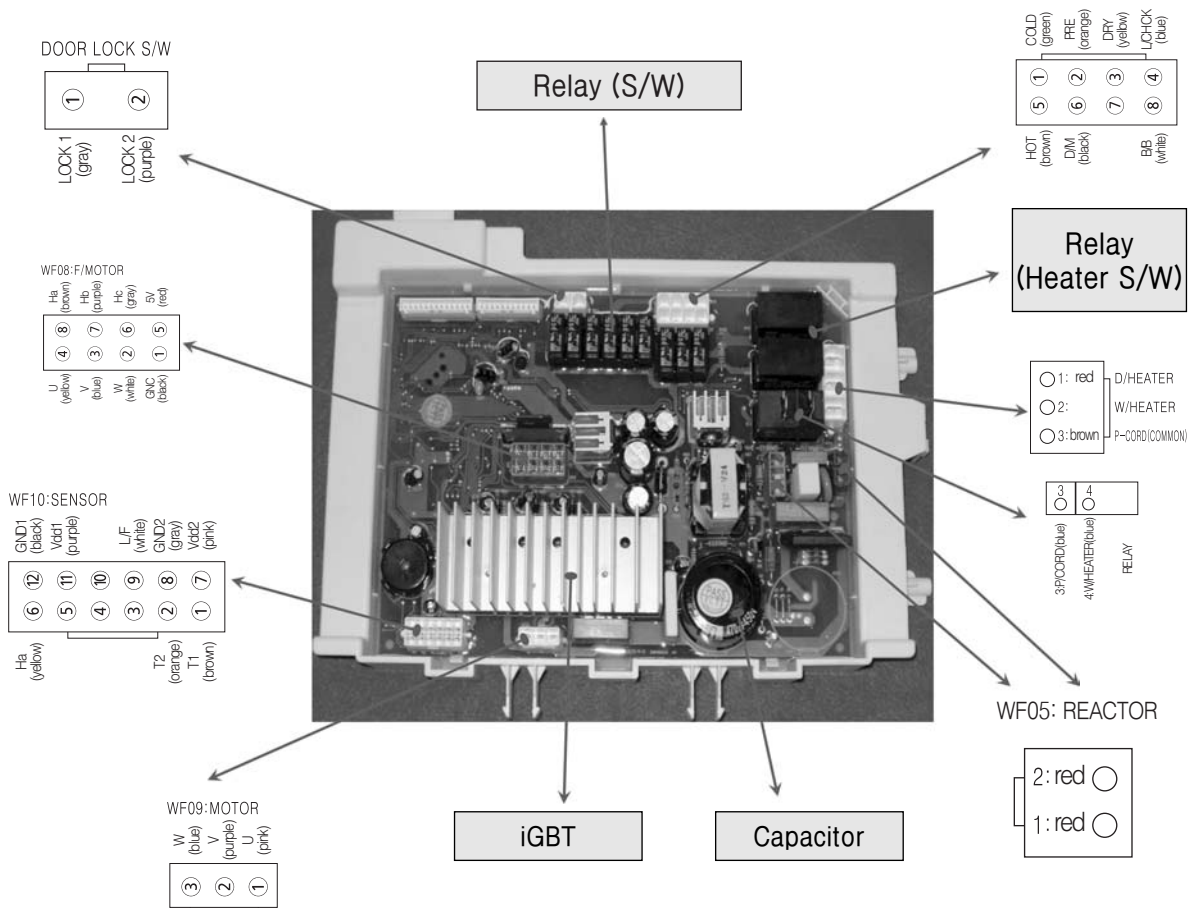
4) H6 Error - Abnormality in washing heater

- ① Within 15 minutes after heater operation begins;
In case standard temperature is of 42℃ or lower: If temperature does not increase by 2℃ or more In
case standard temperature is higher than 42℃: If temperature does not increase by 1℃ or more
- ② If temperature falls below standard temperature by 2℃ or more due to re-supply of water, etc.,
standard temperature is reset as the current temperature and error check time of 15 minutes is reset.
- ③ Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ④ Error display is cleared when turning off/ on power.

5) H8 Error - Washing heater overheating

- ① In case washing heater temperature increases by 5℃ or more within 30 seconds when there is no
water in tank, etc.
- ② Error buzzer alarm is sounded for 10 seconds per every 10 minutes.
- ③ Error display is cleared when turning off/ on power.

1. PCB PIN



5) TROUBLE SHOOTING OF DRY SYSTEM

◆ HEATER DRY

Function : heating the air during dry

- FAILURE MODE : * "H7" - The air cannot be heated to 10°C during 2 min.
- CHECKING METHOD : * Check the resistance of heater coil and replace with new one.

◆ Thermistor

Function : sensing the air temperature.

- FAILURE MODE : * The air cannot be heated even though water is supplied.
 - * "H1" - shot or cut-off
 - * "H3" - air temp. is reached over 150°C
- CHECKING METHOD : * Check the resistance of thermistor, replace with new one.

◆ FUSE TEMPERATURE

function : protecting from the fire hazard or overheating, if the temp., rises over 128°C, power supply will be cut-off.

- Pictures



- FAILURE MODE : Dry is not performed.
- CHECKING METHOD : Check if fuse is short, and replace with new one.

◆ SWITCH THERMOSTAT(BIMETAL)

function : control the duct temperature, if the temp reached over 150°C, all power supply will be cut. and if the temp go down 120°C the power will be ON.

protecting overheating by cutting off heater power supply if the temperature rises over 150°C, and reoperating heater by connecting heater power supply if the temperature falls under 120°C.

• OPERATING TEMPERATURE

OPEN TEMPERATURE(OFF)	150°C ± 5°C
CLOSE TEMPERATURE(ON)	120°C ± 5°C

• PICTURE



◆ UNIT FAN MOTOR

function : circulating the inside air during dry process.

• SPEC

ITEMS		SPEC
RATING VOLTAGE		24V
RPM	MOTOR	3700 ± 10%
	DUCT FAN AS	1900 ± 10%
ROTAING DIRECTION		CW

• PICTURE



• FAILURE MODE : * E3 shown : FAN MOTOR cannot work.

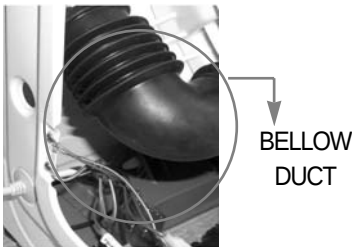
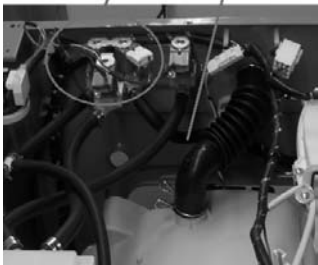
• CHECKING METHOD : Check the FAN MOTOR is short, and replace with new one.

6) LACK OF DRY PERFORMANCE

• Situation : after drying, the clothes still get wet.

- cause) ➤ The laundry amount is more than the recommendation capacity 7.0kg.
 ➤ Condensing cold water is not supplied.
 ➤ Clogging Bellows Duct results in poor air circulation.

checking method)

part name	checking point	checking results	jurge	repair method
BELLOWS DUCT		clogging bellows duct	heater was overheated owing to poor air circulation	clean the bellow duct
VALVE INLET +Condensing HOSE		no water supply from inlet valve	VALVE INLET connector slipped out	connect normally
			VALVE INLET broken	replace valve inlet
			ill-connection of condensing hose to duct pipe	connect normally

• Situation after drying, the clothes was soaked and hot.

- cause) ➤ The dry is done from bad spin performance because of unbalance.
 ➤ no spin was done before the dry had started.

• Situation : PCB shows "H1" or "H3".

- cause) ➤ Thermistor is broken.
 ➤ Thermistor is short or cut-off.

countermeasures) ➤ replace the Thermistor.

• Situation : PCB shows "H7".

cause) ⚡ Dry heater is cut-off.
 ⚡ Fuse temp. is cut-off.

repaire method) ⚡ replace the Dry heater.
 ⚡ replace the Fuse temp.

checking point	part name	checking results	repaire method
	HEATER	dry Heater is short or cut-off.	replace the dry Heater.
	SENSOR TEMP.	Thermistor is short or cut-off.	replace the Thermistor.
	FUSE TEMP.	FUSE TEMPERATURE is cut-off.	replace the FUSE TEMPERATURE.

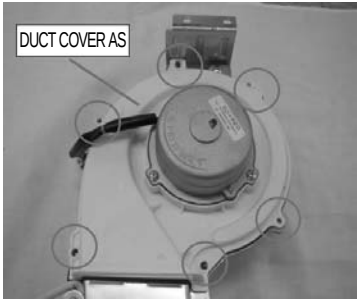
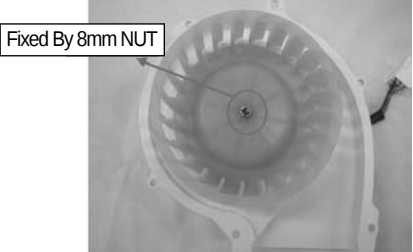
• situation : PCB shows "E3".

cause)

☞ FAN MOTOR can not work.

countermeasures)

☞ Replace the Fan Motor.

part name	checking results	repair method	disassemble process of Fan Motor
FAN MOTOR	fan motor failure	replace fan motor	① Disassemble Duct Cover As from Duct B As (Screw 4EA)  ② Disassemble FAN AS From Duct Cover As (Fixed by 8mm NUT)  ③ Disassemble the FAN MOTOR(SCREW 3EA)

Remarks) control times of each parts during dry process

parts	Control time
MOTOR	15 sec On, 5sec Off
DRAIN MOTOR	Continous working
FAN MOTOR	Continous working
DRY HEATER	95°C On, 105°C Off
INLET VALVE	30sec On, 5sec Off

Washing Heater Temp. Sensor Table

R25 : 11.981K Ω $\pm$ 4.04%R80 : 1.704K Ω $\pm$ 3%B25/100 : 3760K $\pm$ 1%

TEMP	MIN	NORMAL	MAX	TEMP	MIN	NORMAL	MAX	TEMP	MIN	NORMAL	MAX	TEMP	MIN	NORMAL	MAX
℃	K Ω	K Ω	K Ω	℃	K Ω	K Ω	K Ω	℃	K Ω	K Ω	K Ω	℃	K Ω	K Ω	K Ω
-40	282.914	298.650	314.387	0	34.352	35.975	37.599	40	6.403	6.653	6.903	81	1.603	1.653	1.703
-39	266.642	281.416	296.191	1	32.776	34.318	35.861	41	6.169	6.409	6.648	82	1.555	1.603	1.652
-38	251.432	265.311	279.190	2	31.284	32.749	34.214	42	5.946	6.176	6.405	83	1.508	1.556	1.603
-37	237.208	250.252	263.296	3	29.869	31.262	32.655	43	5.732	5.952	6.172	84	1.463	1.510	1.556
-36	223.900	236.165	248.430	4	28.528	29.852	31.177	44	5.527	5.738	5.949	85	1.419	1.464	1.509
-35	211.440	222.978	234.516	5	27.256	28.516	29.776	45	5.320	5.523	5.725	86	1.377	1.421	1.465
-34	199.683	210.537	221.392	6	26.044	27.242	28.440	46	5.131	5.325	5.518	87	1.336	1.379	1.422
-33	188.669	198.885	209.101	7	24.893	26.033	27.174	47	4.949	5.135	5.321	88	1.297	1.339	1.381
-32	178.347	187.967	197.587	8	23.801	24.887	25.972	48	4.774	4.953	5.131	89	1.259	1.300	1.342
-31	168.668	177.731	186.793	9	22.764	23.798	24.831	49	4.607	4.778	4.950	90	1.222	1.262	1.302
-30	159.588	168.129	176.670	10	21.780	22.764	23.748	50	4.443	4.608	4.772	91	1.186	1.226	1.265
-29	150.999	159.049	167.099	11	20.836	21.773	22.710	51	4.289	4.447	4.605	92	1.152	1.191	1.229
-28	142.937	150.527	158.117	12	19.939	20.832	21.725	52	4.141	4.292	4.444	93	1.119	1.157	1.194
-27	135.366	142.526	149.685	13	19.087	19.938	20.788	53	3.999	4.144	4.290	94	1.087	1.124	1.161
-26	128.253	135.009	141.766	14	18.277	19.088	19.899	54	3.862	4.002	4.142	95	1.057	1.093	1.129
-25	121.566	127.945	134.324	15	17.506	18.279	19.052	55	3.722	3.856	3.990	96	1.027	1.063	1.098
-24	115.230	121.252	127.274	16	16.770	17.507	18.244	56	3.595	3.723	3.852	97	0.999	1.033	1.067
-23	109.271	114.959	120.647	17	16.069	16.772	17.475	57	3.473	3.596	3.720	98	0.971	1.005	1.038
-22	103.665	109.039	114.413	18	15.402	16.072	16.743	58	3.355	3.474	3.593	99	0.944	0.977	1.010
-21	98.387	103.467	108.547	19	14.767	15.407	16.046	59	3.243	3.357	3.471	100	0.918	0.950	0.982
-20	93.416	98.220	103.024	20	14.162	14.773	15.383	60	3.133	3.243	3.353	101	0.893	0.924	0.955
-19	88.603	93.141	97.679	21	13.576	14.158	14.741	61	3.029	3.135	3.240	102	0.868	0.899	0.930
-18	84.072	88.361	92.649	22	13.018	13.574	14.130	62	2.929	3.030	3.132	103	0.845	0.875	0.905
-17	79.806	83.860	87.914	23	12.486	13.017	13.548	63	2.833	2.930	3.028	104	0.822	0.851	0.881
-16	75.788	79.622	83.456	24	11.980	12.487	12.993	64	2.740	2.834	2.928	105	0.799	0.827	0.856
-15	72.000	75.628	79.255	25	11.497	11.981	12.465	65	2.654	2.744	2.835	106	0.777	0.805	0.833
-14	68.408	71.840	75.272	26	11.037	11.499	11.962	66	2.569	2.656	2.743	107	0.756	0.784	0.811
-13	65.021	68.270	71.518	27	10.598	11.040	11.482	67	2.487	2.571	2.654	108	0.736	0.763	0.790
-12	61.825	64.902	67.978	28	10.179	10.601	11.024	68	2.408	2.489	2.569	109	0.716	0.743	0.769
-11	58.810	61.724	64.637	29	9.780	10.183	10.587	69	2.333	2.410	2.487	110	0.697	0.723	0.749
-10	55.963	58.724	61.485	30	9.400	9.786	10.172	70	2.258	2.332	2.407	111	0.679	0.704	0.729
-9	53.214	55.829	58.443	31	9.036	9.405	9.775	71	2.187	2.259	2.331	112	0.661	0.686	0.710
-8	50.620	53.097	55.573	32	8.688	9.042	9.395	72	2.119	2.188	2.257	113	0.644	0.668	0.692
-7	48.171	50.517	52.864	33	8.356	8.695	9.033	73	2.054	2.120	2.187	114	0.627	0.651	0.674
-6	45.857	48.081	50.305	34	8.039	8.363	8.686	74	1.991	2.055	2.119	115	0.610	0.634	0.657
-5	43.670	45.779	47.889	35	7.737	8.047	8.357	75	1.928	1.990	2.051	116	0.595	0.617	0.640
-4	41.594	43.594	45.594	36	7.448	7.744	8.041	76	1.869	1.928	1.988	117	0.579	0.602	0.624
-3	39.630	41.528	43.425	37	7.170	7.455	7.739	77	1.812	1.869	1.927	118	0.565	0.586	0.608
-2	37.773	39.574	41.375	38	6.905	7.178	7.450	78	1.758	1.813	1.868	119	0.550	0.572	0.593
-1	36.016	37.725	39.435	39	6.652	6.912	7.173	79	1.705	1.758	1.811	120	0.536	0.557	0.578

Day Heater Temp. Sensor TableR40 : 26.065K Ω $\pm$ 3%R100 : 3.3K Ω $\pm$ 11.1%B40/100 : 4025K $\pm$ 2%

T(°C)	Rmin	Rcent	Rmax	T(°C)	Rmin	Rcent	Rmax	T(°C)	Rmin	Rcent	Rmax
0	142.55	162.21	184.12	56	12.980	14.066	15.203	112	2.211	2.343	2.477
1	135.55	154.09	174.72	57	12.520	13.557	14.643	113	2.149	2.279	2.411
2	128.93	146.41	165.85	58	12.078	13.069	14.105	114	2.090	2.217	2.347
3	122.68	139.17	157.48	59	11.655	12.601	13.591	115	2.032	2.158	2.285
4	116.76	132.32	149.59	60	11.248	12.153	13.097	116	1.977	2.100	2.225
5	111.17	125.86	142.13	61	10.857	11.722	12.624	117	1.923	2.043	2.166
6	105.87	119.74	135.09	62	10.483	11.309	12.171	118	1.870	1.989	2.110
7	100.86	113.96	128.45	63	10.123	10.913	11.736	119	1.820	1.936	2.055
8	96.12	108.50	122.16	64	9.777	10.533	11.319	120	1.771	1.885	2.002
9	91.62	103.32	116.22	65	9.445	10.168	10.919	121	1.723	1.836	1.950
10	87.37	98.43	110.61	66	9.125	9.817	10.535	122	1.678	1.788	1.900
11	83.33	93.79	105.30	67	8.818	9.481	10.167	123	1.633	1.741	1.852
12	79.51	89.40	100.27	68	8.524	9.157	9.813	124	1.590	1.696	1.805
13	75.88	85.24	95.51	69	8.240	8.846	9.474	125	1.548	1.652	1.759
14	72.44	81.30	91.01	70	7.967	8.548	9.148	126	1.508	1.610	1.715
15	69.17	77.56	86.74	71	7.705	8.261	8.834	127	1.468	1.569	1.672
16	66.07	74.01	82.70	72	7.452	7.985	8.533	128	1.430	1.529	1.630
17	63.13	70.65	78.87	73	7.210	7.719	8.244	129	1.393	1.490	1.590
18	60.34	67.46	75.24	74	6.976	7.464	7.966	130	1.357	1.453	1.550
19	57.68	64.43	71.80	75	6.751	7.218	7.699	131	1.323	1.416	1.512
20	55.16	61.56	68.53	76	6.534	6.982	7.442	132	1.289	1.381	1.475
21	52.76	58.83	65.43	77	6.326	6.755	7.195	133	1.256	1.346	1.439
22	50.48	56.24	62.49	78	6.125	6.536	6.957	134	1.225	1.313	1.404
23	48.31	53.77	59.70	79	5.931	6.325	6.729	135	1.194	1.281	1.370
24	46.25	51.43	57.05	80	5.745	6.123	6.509	136	1.164	1.249	1.337
25	44.28	49.20	54.53	81	5.565	5.927	6.297	137	1.135	1.219	1.305
26	42.41	47.08	52.13	82	5.392	5.739	6.093	138	1.107	1.189	1.274
27	40.63	45.07	49.86	83	5.225	5.558	5.897	139	1.080	1.160	1.244
28	38.94	43.15	47.69	84	5.064	5.383	5.708	140	1.053	1.132	1.215
29	37.32	41.32	45.64	85	4.909	5.215	5.526	141	1.027	1.105	1.186
30	35.78	39.58	43.68	86	4.759	5.053	5.351	142	1.002	1.079	1.158
31	34.31	37.93	41.82	87	4.615	4.896	5.182	143	0.978	1.053	1.131
32	32.91	36.35	40.04	88	4.476	4.746	5.019	144	0.954	1.028	1.105
33	31.58	34.85	38.36	89	4.341	4.600	4.862	145	0.931	1.004	1.080
34	30.31	33.41	36.75	90	4.212	4.460	4.711	146	0.909	0.980	1.055
35	29.09	32.05	35.22	91	4.086	4.325	4.566	147	0.887	0.958	1.031
36	27.93	30.75	33.76	92	3.965	4.194	4.425	148	0.866	0.935	1.007
37	26.83	29.50	32.37	93	3.849	4.068	4.289	149	0.846	0.914	0.984
38	25.77	28.32	31.04	94	3.736	3.947	4.159	150	0.826	0.893	0.962
39	24.76	27.19	29.77	95	3.627	3.829	4.033				
40	23.80	26.11	28.57	96	3.522	3.716	3.911				
41	22.87	25.07	27.42	97	3.420	3.606	3.793				
42	21.99	24.09	26.32	98	3.322	3.501	3.680				
43	21.15	23.15	25.27	99	3.227	3.399	3.571				
44	20.34	22.25	24.27	100	3.135	3.300	3.465				
45	19.57	21.39	23.31	101	3.043	3.205	3.367				
46	18.84	20.57	22.40	102	2.954	3.113	3.272				
47	18.13	19.78	21.53	103	2.867	3.024	3.180				
48	17.46	19.03	20.69	104	2.784	2.937	3.092				
49	16.81	18.31	19.90	105	2.704	2.854	3.006				
50	16.19	17.62	19.13	106	2.626	2.774	2.923				
51	15.60	16.96	18.40	107	2.551	2.696	2.842				
52	15.03	16.33	17.71	108	2.478	2.621	2.764				
53	14.48	15.73	17.04	109	2.408	2.548	2.689				
54	13.96	15.15	16.40	110	2.340	2.477	2.616				
55	13.46	14.60	15.79	111	2.274	2.409	2.546				

8. WIRING DIAGRAM

