

DAEWOO

Service Manual

Auto Washer

Model : DWF-1094



DAEWOO ELECTRONICS CO., LTD.
OVERSEAS SERVICE DEPT.

1. SPECIFICATIONS

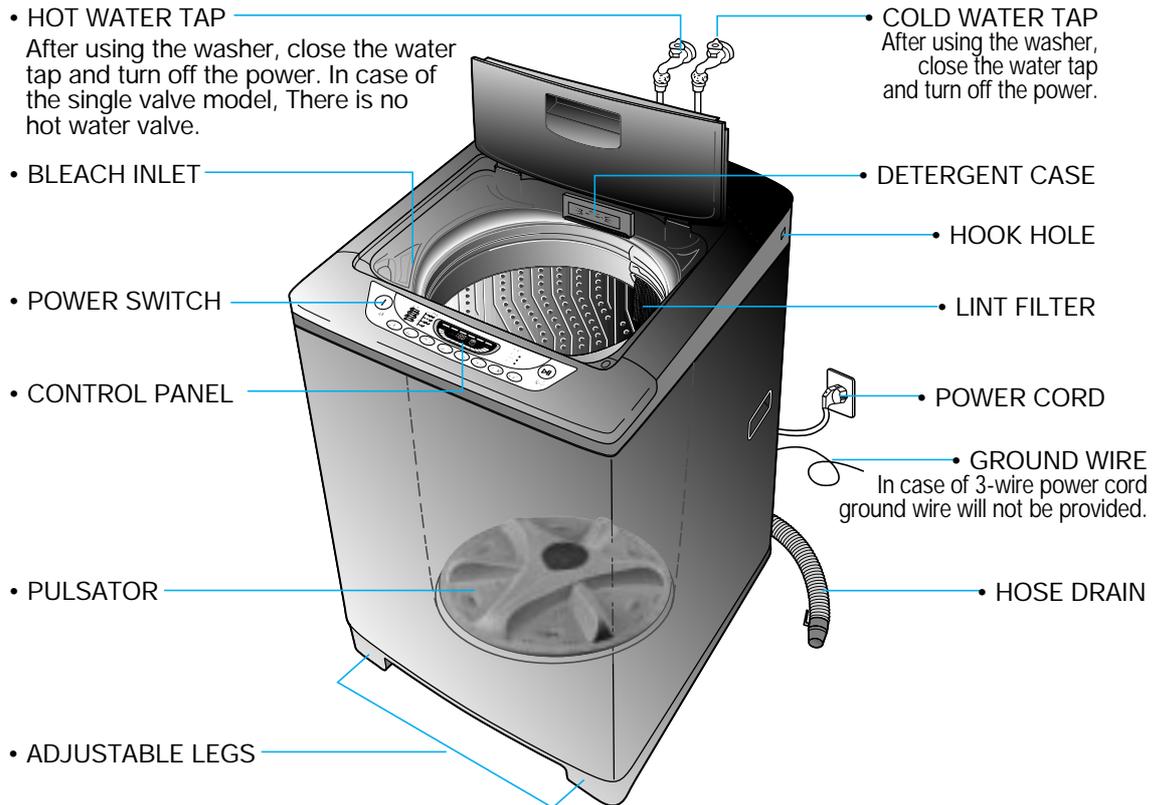
NO.	ITEM	DWF-1094			
1	POWER SOURCE	AVAILABLE IN ALL LOCAL AC VOLTAGE AND CYCLE			
2	POWER CONSUMPTION	50Hz	60Hz		
		480W	550W		
3	MACHINE WEIGHT	NON-PUMP	49Kg (GROSS : 56Kg)		
		PUMP	50Kg (GROSS : 57Kg)		
4	DIMENSION (WXHxD)	630mm X 980mm X 670mm			
5	WASHING COURSE	FULL AUTOMATIC 6 COURSE (FUZZY, MEMORY, BLANKET, SUIT, HEAVY, ECONOMY)			
6	WATER CONSUMPTION	NORMAL 250L			
7	WATER LEVEL SELECTOR	HIGH(93L), ϕ ,(85L)E.SMALL(40L)			
		MEDIUM(77L), ϕ , (70L)			
		LOW(63L), ϕ , (50L)			
8	OPERATING WATER PRESSURE	0.3kgf/cm ² ~8kgf/cm ² (2.94 N/cm ² ~78.4N/cm ²)			
9	REVOLUTION PER MINUTE	60Hz	WASH : 125~140, SPIN : 675~695		
		50Hz	WASH : 120~130, SPIN : 630~640		
		SUIT COURSE	WASH : 65 (60Hz), 55 (50Hz)		
10	PULSATOR	6 WINGS (Ø376mm)			
11	WATER LEVEL CONTROL	ELECTRONICAL SENSOR			
12	ANTI NOISE PLATE	O			
13	GEAR MECHANISM ASS'Y	HELICAL GEAR			
14	LINT FILTER	O			
15	SOFTENER INLET	O			
16	FUNCTION FOR SOAK WASH	O			
17	ALARM SIGNAL	O			
18	RESIDUAL TIME DISPLAY	O			
19	AUTO. WATER SUPPLY	O			
20	NEW WATER FLOW	WATER FLOW FOR ADJUST THE UNBALANCED LOAD			
21	FUNCTION FOR BUBBLE	O			
22	AUTO RE-FEED WATER	O			
23	AUTO POWER OFF	O			

2. STRUCTURE OF THE WASHING MACHINE

The parts and features of your washer are illustrated on this page.
Be come familiar with all parts and features before using your washer.

NOTE

- The drawing in this book may vary from, your washer model. They are designed to show the different features of all models covered by this book, Your model may not include all features.
- Page references are included next to same features.
Refer to those pages for more information about the features.



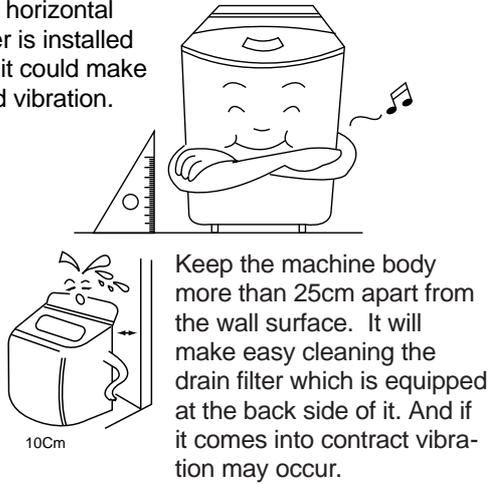
Accessories

DRYTEN	COVER UNDER [OPTION]	WATER TAP ADAPTER	INLET HOSE
HOSE DRAIN O AS [NON-PUMP]	HOSE DRAIN O AS [PUMP]	HOSE DRAIN CLAMP	CONNECTOR INLET [OPTION]

3. DIRECTIONS FOR INSTALLATION AND USE

Installation Place

Install the washer on a horizontal solid floor. If the washer is installed on an unsuitable floor, it could make considerable noise and vibration.

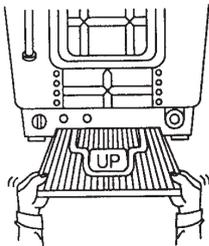


Never install in these places

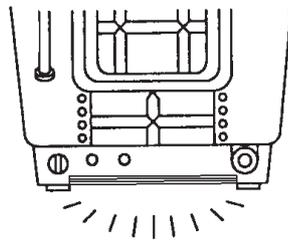
- The place where it would be exposed to direct sunlight.
- The place nearby a heater or heat appliance.
- The place where it would be supposed to be frozen in winter.
- The kitchen with coal gas and a damp place like a bathroom.

Installation Of The Under Base Cover [Option]

1 The packing box opened, there is a noise insulation plate at the bottom of the back (DWF-7094, 8094) or front (DWF-1094).



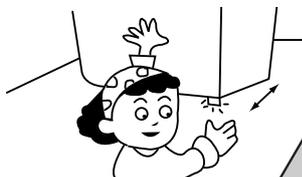
2 Push the noise insulation plate into the end, which decrease the noise made by this washer.



How To Install On An Inclined Place

1 Horizon Setting

After controlling the height by turning the adjustable leg, let the washer put down to the ground.



2 Check the Horizon Status

Check the position of tub above the center of the washer.



NOTES

The openings must not be obstructed by carpeting when the washing machine is installed on a carpeted floor.

§ How to Connect the Inlet Hose

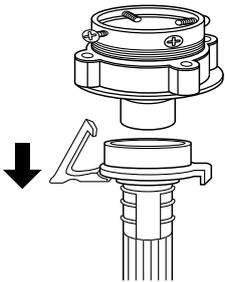
Be careful not to mistake in supplying between the hot(maximum : 50°C) and cold water.

In using only one water tap or in case of attached one water inlet valve, connect the inlet hose to the cold water inlet valve.

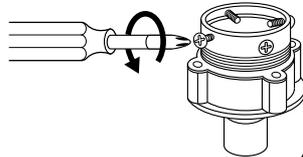
Do not over tighten : this could cause damage to couplings.

•••• FOR ORDINARY TAP

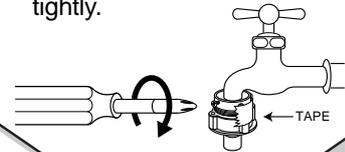
- 1** Pull down the collar of the inlet hose to separate it from the water tap adapter.



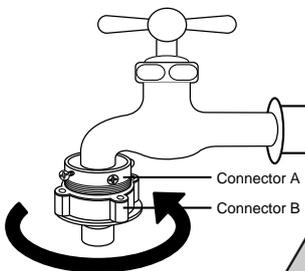
- 2** Loosen the four screws at the water tap adapter, but don't loosen the screws until they are separated from the water tap adapter.



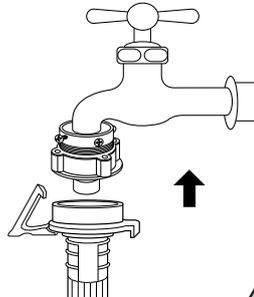
- 3** Connect the water tap adapter to the water tap tighten the four screws evenly while pushing up the adapter so that the rubber packing can stick to the water tap tightly.



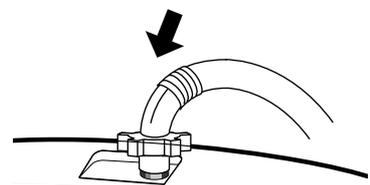
- 4** Remove the tape, and screw connector B into connect A tightly.



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



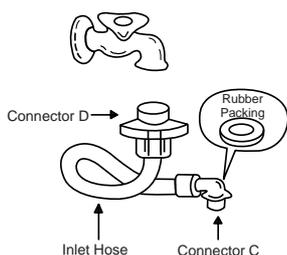
- 6** Connect the inlet hose adapter of the hose to the water inlet of the washer by turning it clockwise to be fixed tightly.



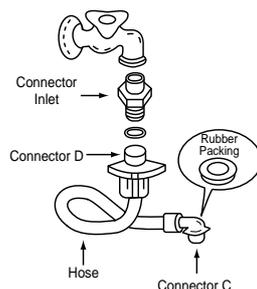
- Please check the rubber packing inside the inlet hose adapter of the hose.

•••• FOR SCREW-SHAPED TAP

- 1** Connect the inlet hose to the water tap by screwing the connector D tightly.



- 2** Connect the connector-inlet supplied if necessary.



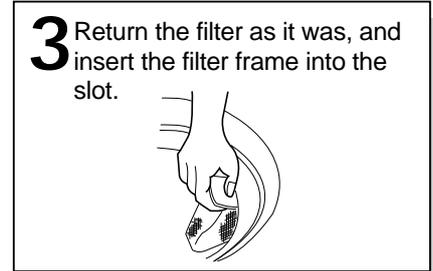
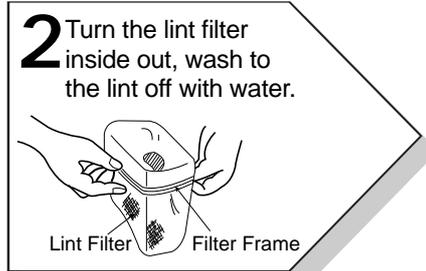
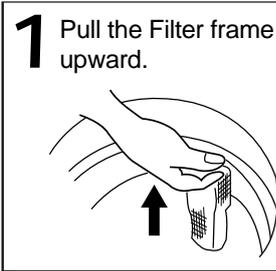
- 3** Insert the inlet hose adapter into the water inlet of a washer and turn it to be fixed.



- Assert the packing in the inlet

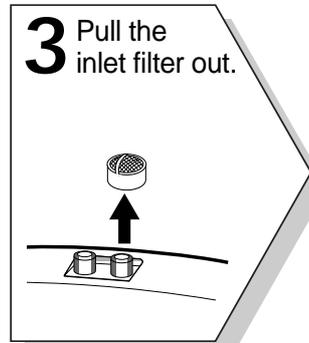
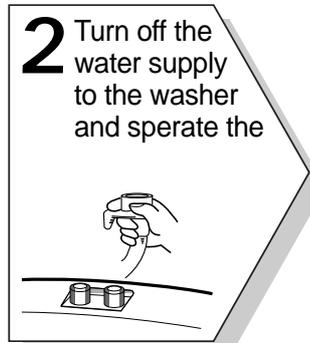
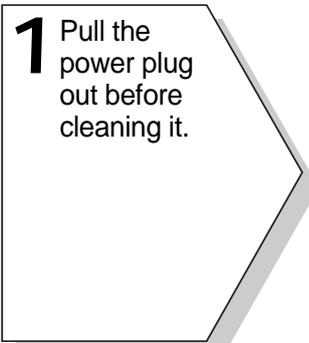
§ How To Clean The Filter

•••• CLEANING THE LINT FILTER



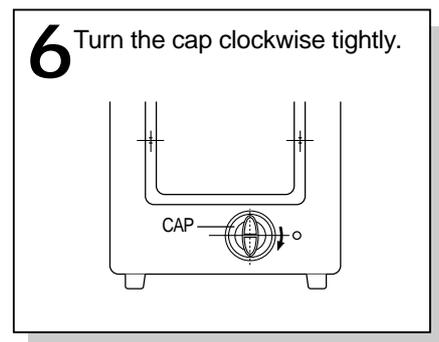
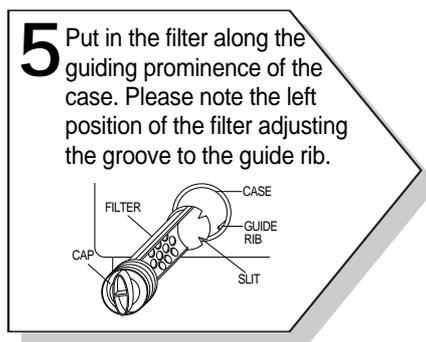
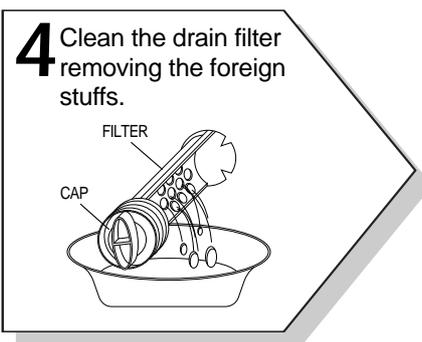
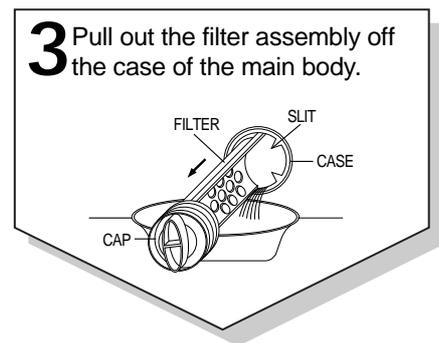
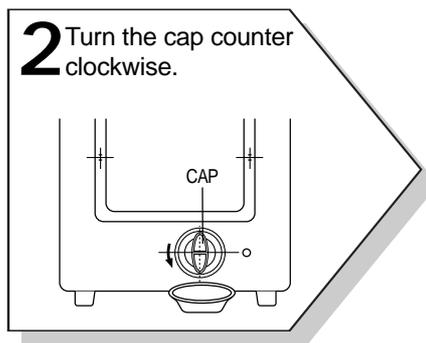
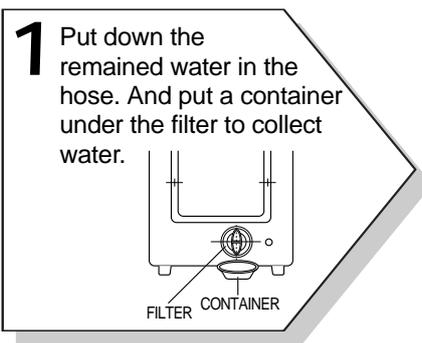
•••• CLEANING THE WATER INLET FILTER

- Clean the filter when water leaks from, the water inlet.



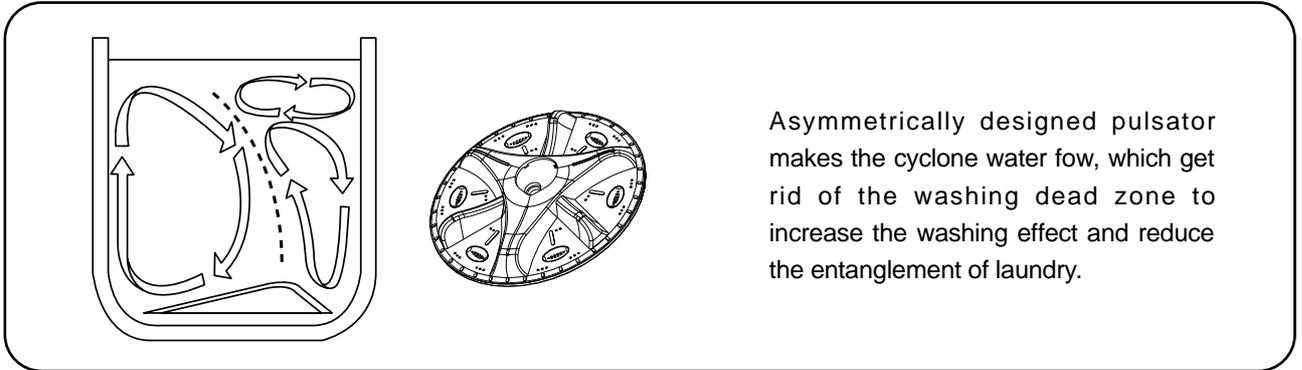
•••• CLEANING THE DRAIN FILTER

- In case "U" shape drain hose, this filter's equipped at the cack side of washer.
- This drain filter is to screen the foreign stuffs such as threads, coins, pins, buttons etc ...
- If the drain filter is not cleaned at proper time (every 10 times of use), Drain problem could be caused.



Pulsator S

When the pulsator is rotated C.W or C.C.W at a high speed, it makes the cyclone water flow from the asymmetrically designed pulsator as shown below.



Asymmetrically designed pulsator makes the cyclone water flow, which get rid of the washing dead zone to increase the washing effect and reduce the entanglement of laundry.

Automatic

This system adjusts the draining time automatically according to the draining condition.

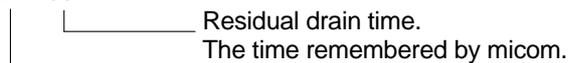
Draining condition	Good draining	The washer begins spin process after drainage.
	Bad draining	Draininig time is prolonged.
	No draining	Program is stopped and gives the alarm.

FUNCTIONAL PRINCIPLE

- ① The micom can remember the time from the begining of drain to reset point when the pressure switch reaches to "OFF" point

Drain Time	Movement of the Program
Less than 15 minutes	Continue draining
More than 15 minutes	Program stops and gives the alarm with EE blinked on display lamp.

- ② In case of continuous draining, residual drain time is determined by micom.
Draining time as a whole = D + 90

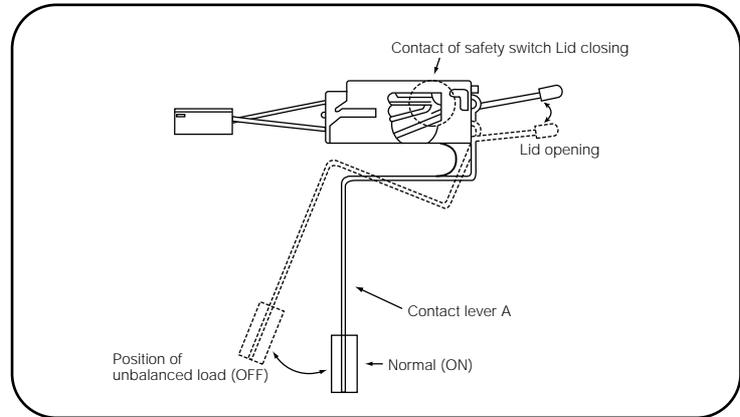


Automatic

This system is to prevent abnormal vibration during intermittent spin and spin process.

FUNCTIONAL PRINCIPLE

- ① When the lid is closed, the safety switch contact is "ON" position.
- ② In case that wash loads get uneven during spin, the outer tub hits the safety switch due to the serious vibration, and the spin process is interrupted.
- ③ In case that P.C.B. ASS'Y gets "OFF" signal from the safety switch, spin process are stopped and rinse process is started automatically by P.C.B. ASS'Y.
- ④ If the safety switch is operated due to the unbalance of the tub, the program is stopped and the alarm is given.



NOTES

The alarm finished when you close the lid after opening it. Check the unbalance of the wash load and the installation condition.

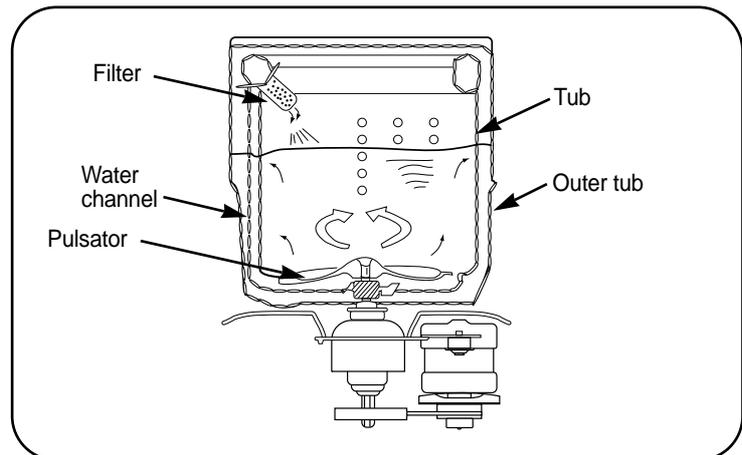
Circulating

CIRCULATING-WATER

The washing and rinsing effects have been improved by adopting the water system in which water in the tub is circulated in a designed pattern.

When the pulsator rotates during the washing or rinsing process, the water below the pulsator vanes creates a water currents as shown in figure.

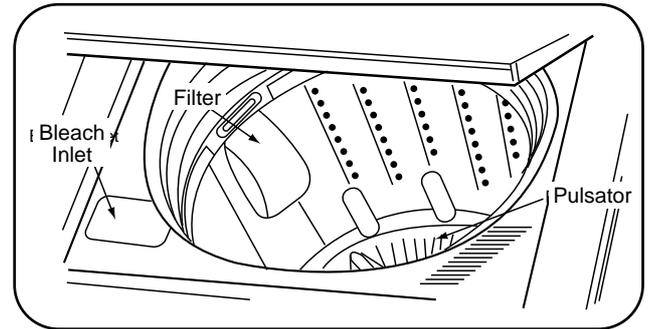
The water is then discharged from the upper part of the tub through the water channel. About 40 L/min. water is circulated at the 'high' water level, standard wash load and standard water currents.



Lint Filter

Much lint may be obtained according to the kind of clothes to be washed and some of the lint may also sticks to the clothes.

To minimize this possibility a lint filter is provided on the upper part of the tub to filter the wash water as it is discharged from the water channel. It is good to use the lint filter during washing.



HOW TO REPLACE LINT FILTER

- ① Pull the filter frame upward.
- ② Turn the lint filter inside out, and wash the lint off with water.
- ③ Return the filter as it was, and fix the filter frame to the slot.

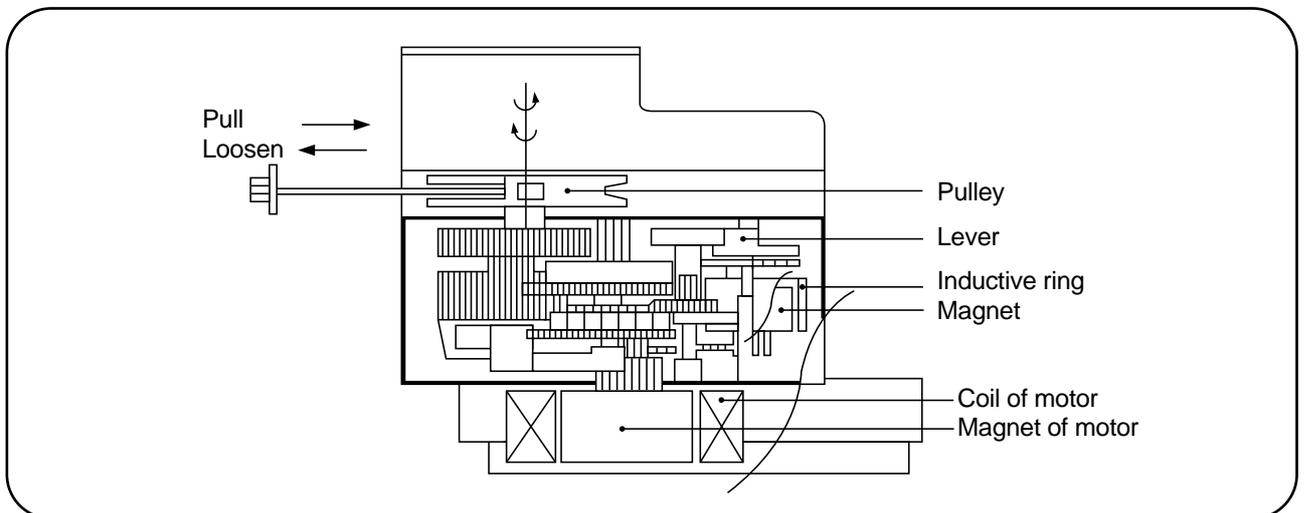
Residual Time

When the START/HOLD button is pressed, the residual time (min.) is displayed on the time indicator, and it will be counted down according to process.

When operation is finished, the TIME INDICATOR will light up .

Drain Motor

STRUCTURE

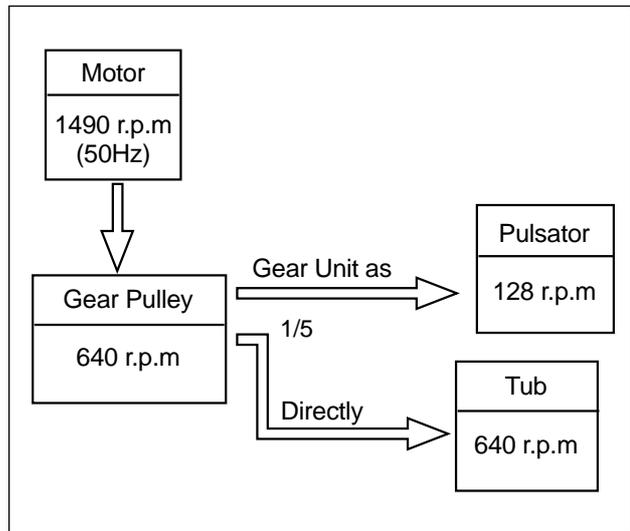
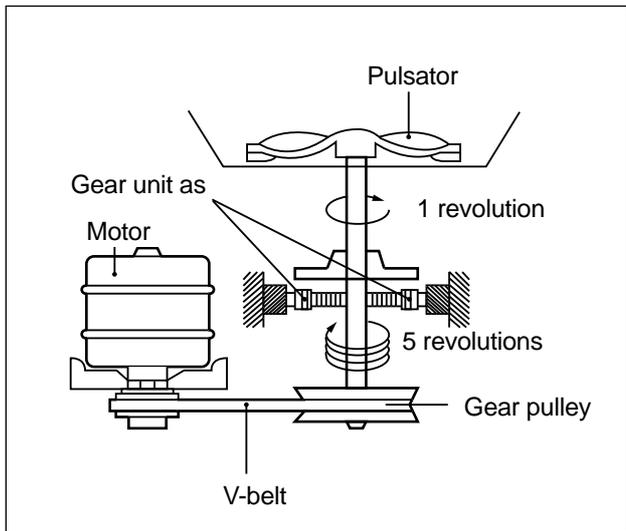
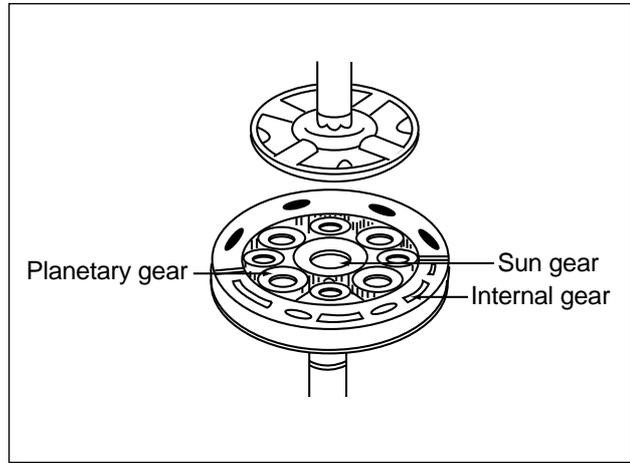
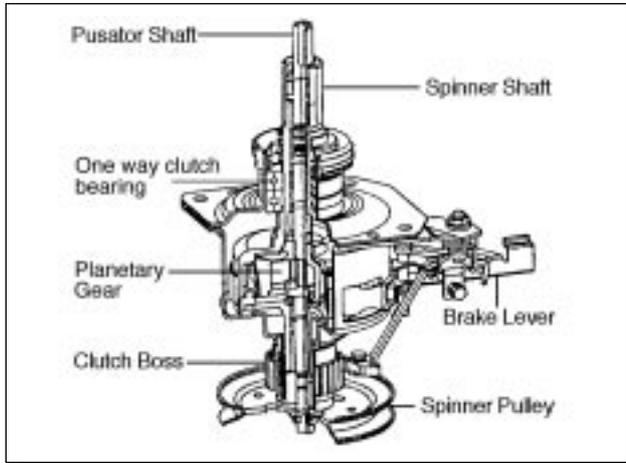


FUNCTIONAL PRINCIPLE

- ① When the DRAIN MOTOR connected to the power source, the DRAIN MOTOR rotates with 900 r.p.m and revolves the pulley by gear assembly for reducing.
- ② When the pulley is rotated, the pulley winds the wire to open the drain valve.
- ③ Therefore, rotation of pulley changed to the linear moving of wire.
- ④ The wire pulls the brake lever of Gear Mechanism Ass'y within 5 seconds.
- ⑤ After the wire pulled, gear assembly is separated from motor and condition of pulling is held by operation of the lever.
- ⑥ When the power is turned off, the drain valve is closed because the wire returns to original position.

Gear Mech

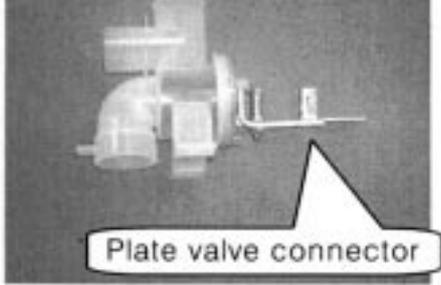
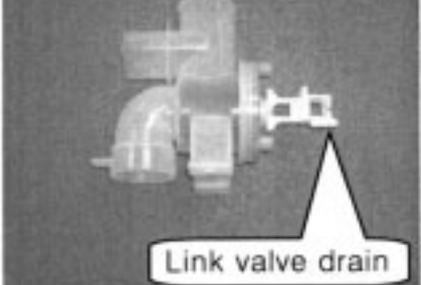
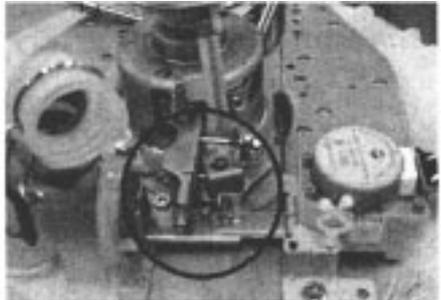
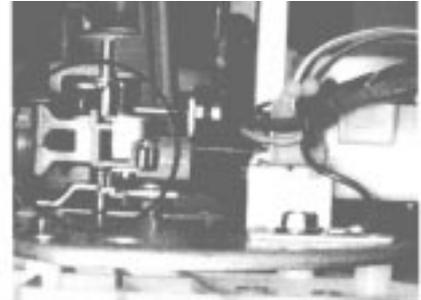
The proper water currents is made by the rotation of pulsator at a low speed to prevent the damage to the small sized clothes.



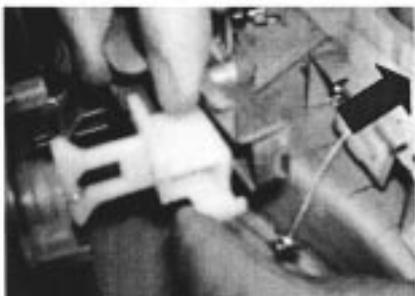
7. TECHNICAL POINT

Valve Drain Assy and Gear Mechanism

We changed the shape of the Lever because of preventing water leakage and noise of G/M.
Please refer to the changing date as following table

	OLD type		NEW type	
Valve Drain Assy				
G/M with Tub O				
Part name	Part Cord	Specification	Part Cord	Specification
Plate valve conn'r	4509k78070	SECC	-	
Link valve drain	-		3617801900	POM
Gear Mechanism	367305900	GM-8094-KS0X0	3617307610	GM-1300-KS6P0
	367305800	GM-1094, KELVAR		
Synchronous Motor	4505D45100	L=56.5/18mm(110-130V/60Hz)	4505E45120	L=64.5/23mm(110-130V/60Hz)
	3966010200	L=56.5/18mm(220-240V/50Hz)	3966010220	L=64.5/23mm(220-240V/50Hz)

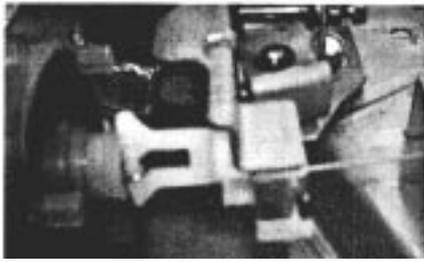
Replacing Process of Synchronous Motor Wire



- replace the New G/M
- replace the Link valve drain from Plate valve connector
- insert the Link v/v drain into the G/M Lever with pulling the Lever toward Synchronous Motor



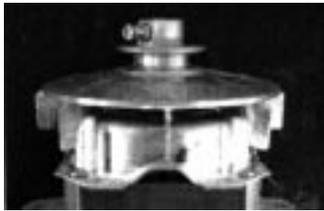
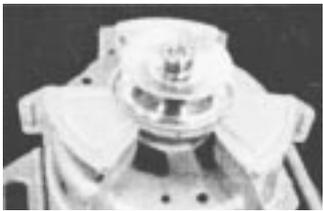
- to assemble the wire of Synchronous Motor to the inside of Link valve drain with pulling the Lever toward Synchronous Motor



– check the assemble condition by moving Lever 2~3 times

Pulley Motor Assy

In case of replacing the Motor from OLD type to NEW type, Daewoo will supply Motor condenser, Pulley motor assy, Motor Cushion (down) together.

Appearance					
Shaft design					
	D cut	M – 8 tapping			
Pulley design					
	Al – diecasting, bolt and nut	press type, washer and net			
Part name	Part Cord	Specification	Part Cord	Specification	
Motor condenser (DWF-8094, 7094)	3964220620	110V/60Hz	3966221101	110-127V/60Hz W1D46CA012	
	3964720110	127V/60Hz			
	3964320160	220V/60Hz		3964321111	220V/60Hz W1D46UA012
	3964010160	220-240V/50Hz		3964311311	220-240V/50Hz W1D46VA012-S
Motor condenser (DWF-1094)	3964220420	110V/60Hz	3964221211	110V/60Hz W1D50CA012-S	
	3964820520	127V/60Hz	3964821311	127V/60Hz W1D50JA012-S	
	3610019720	220V/60Hz	3964321211	220V/60Hz W1D50UA012	
	3964310530	220V/50Hz	3964510411	220V/50Hz W1D50VA012	
	3964610320	240V/50Hz	3964610321	240V/50Hz F33-2C-S	
Pulley motor assy	3618401400	M-TYPE DS=10 DP=48.5 60Hz	3618432000	M-TYPE DS=10 DP=48.5 60Hz	
	3618401420	M-TYPE DS=10 DP=53.0 50Hz	3618431900	M-TYPE DS=10 DP=53.0 50Hz	
Motor cushion down	3611502800	POM, H=18mm	3611502700	POM, H=8.0mm	

Switch Safety Ass'y

Replacing method from OLD type to NEW type.
Please use the "Special connector" which will be supplied by Daewoo.

	OLD type		NEW type	
Appearance				
Structure	lead wire type		terminal type	
Part name	Part Cord	Specification	Part Cord	Specification
Switch safety assy (DWF-8094, 7094)	3619003100	SF-040A	3619003101	SF-030A, CU/T=14mm
	3619003110	SF-040F	3619003111	SF-030S, CU/T=9mm
	3619003130	SF-041A(DWF-8094PM)	3619003131	SF-031A, CU/T=9mm Australia
	3619003120	SF-040Z(DWF-7094PM)	3619003121	SF-030Z, CU/T=14mm Australia
Switch safety assy (DWF-1094)	3619008920	SF-040T	3619008921	SF-030T, CU/T=0.5mm
	3619003190	SF-040A5	3619003191	SF-030T, CU/T=0.5mm Australia

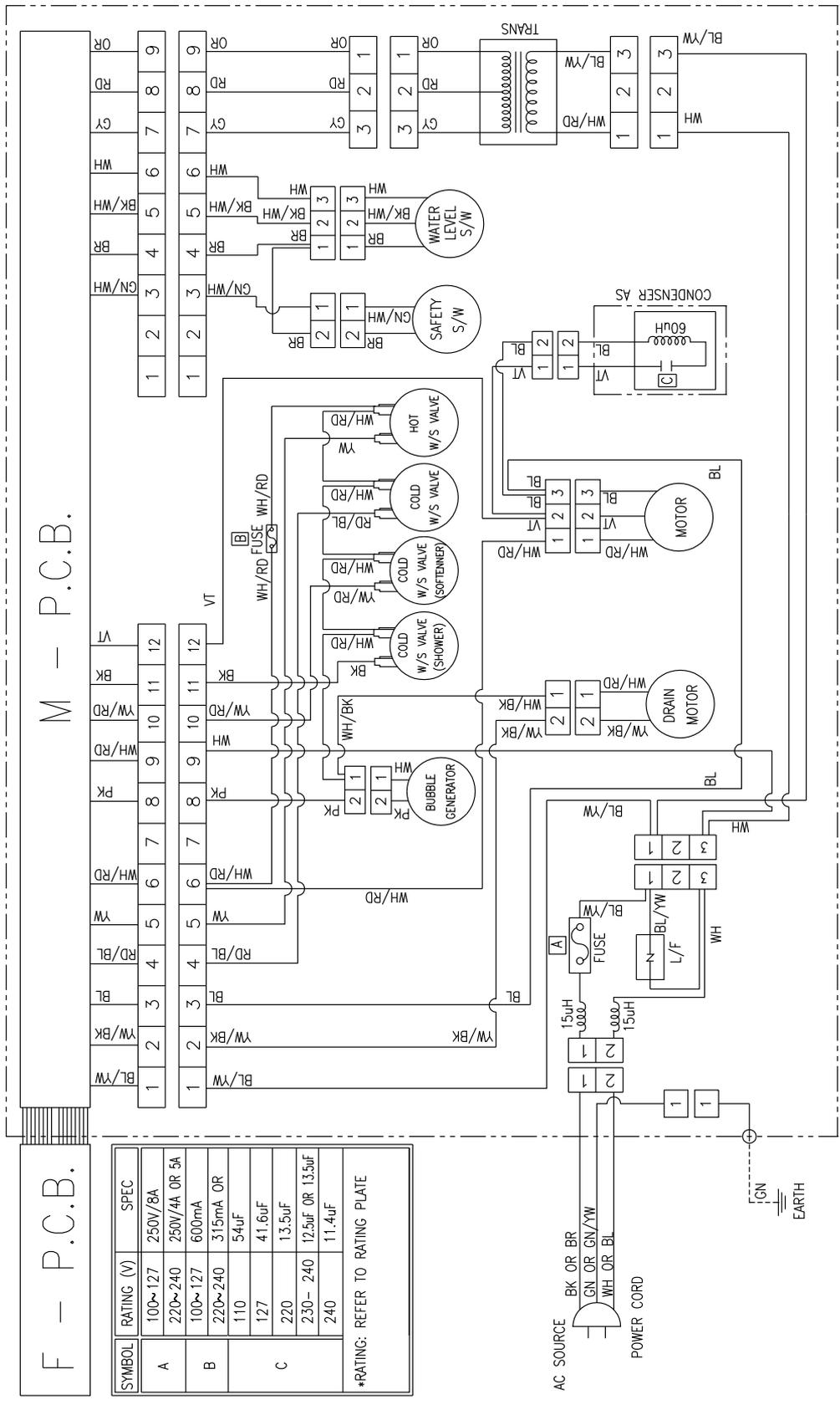
Switch Safety Ass'y

	OLD type		NEW type	
Appearance				
Structure	lead wire type		terminal type	
Part name	Part Cord	Specification	Part Cord	Specification
Sensor pressure assy	3614800960	CDN-D7N	3614801110	D8T, TERMINAL

9. PRESENTATION OF THE P.C.B ASS'Y

Concerning Error Message

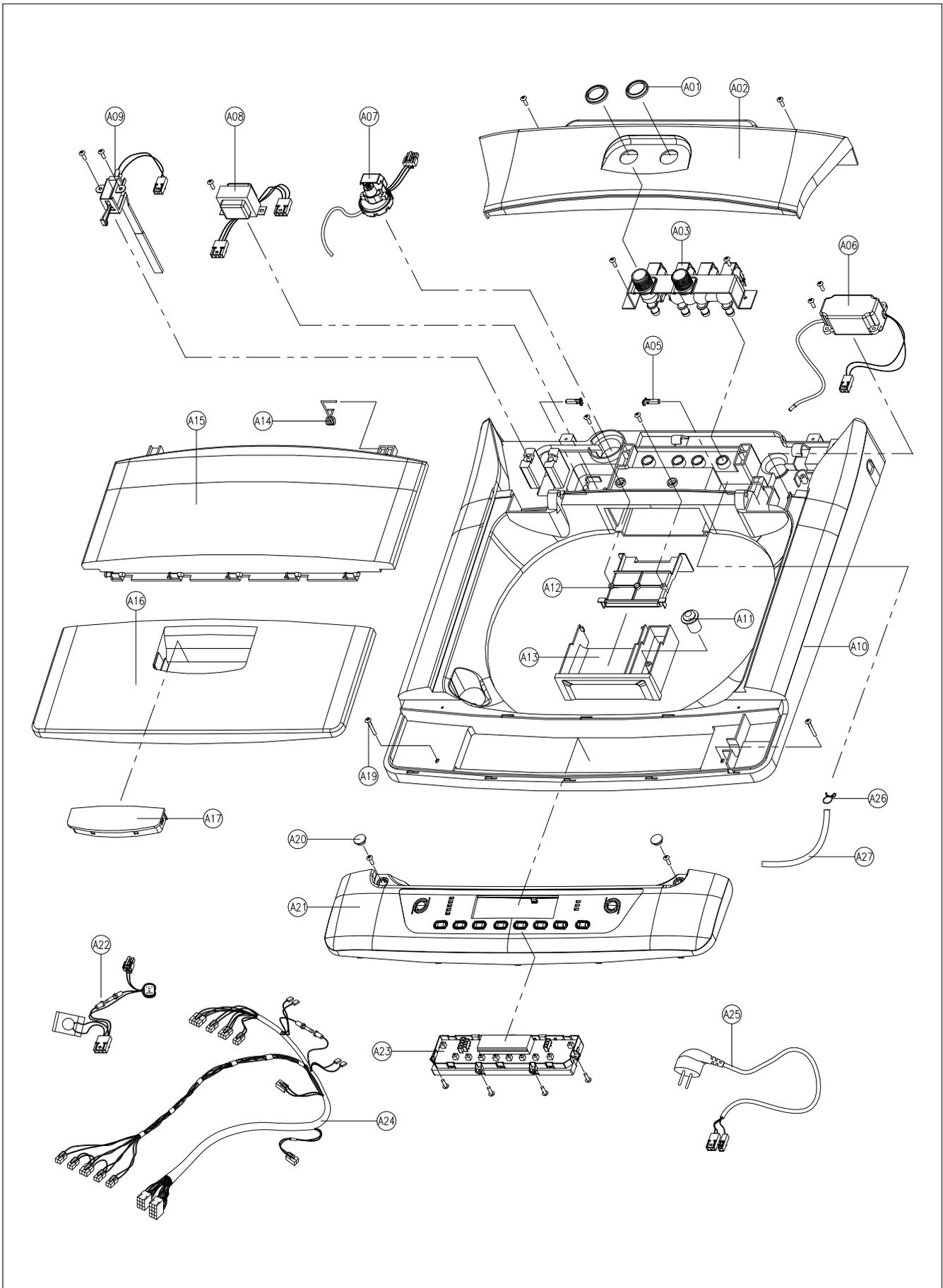
MESSAGE	CAUSE	SOLUTION
	Improper installation of drain hose.	Install drain hose properly.
	The drain hose is blocked up by foreign matter.	Remove foreign matter from drain hose.
	Drain motor is inferior.	Change drain motor.
	The water tap is closed.	Open the water tap.
	The water inlet filter clogged.	Clean the water inlet filter.
	It passes over the 60 minutes, yet it doesn't come to assigned water level.	Check whether or not it comes to the assigned water level.
	Wash loads get uneven during spin.	Re-set wash loads evenly.
	Poor installation of the unit.	Proper installation.
	The lid is opened.	Close the lid.
	The safety switch is inferior.	Change the safety switch.
	The load sensing is inferior. After the load sensing operates about 15 seconds, the message is displayed during 0.5 second and water level is always fixed 'high'.	Change the P.C.B. ASS'Y.
	The water level sensing is inferior.	Check the water level sensor and the contact part of the connector.

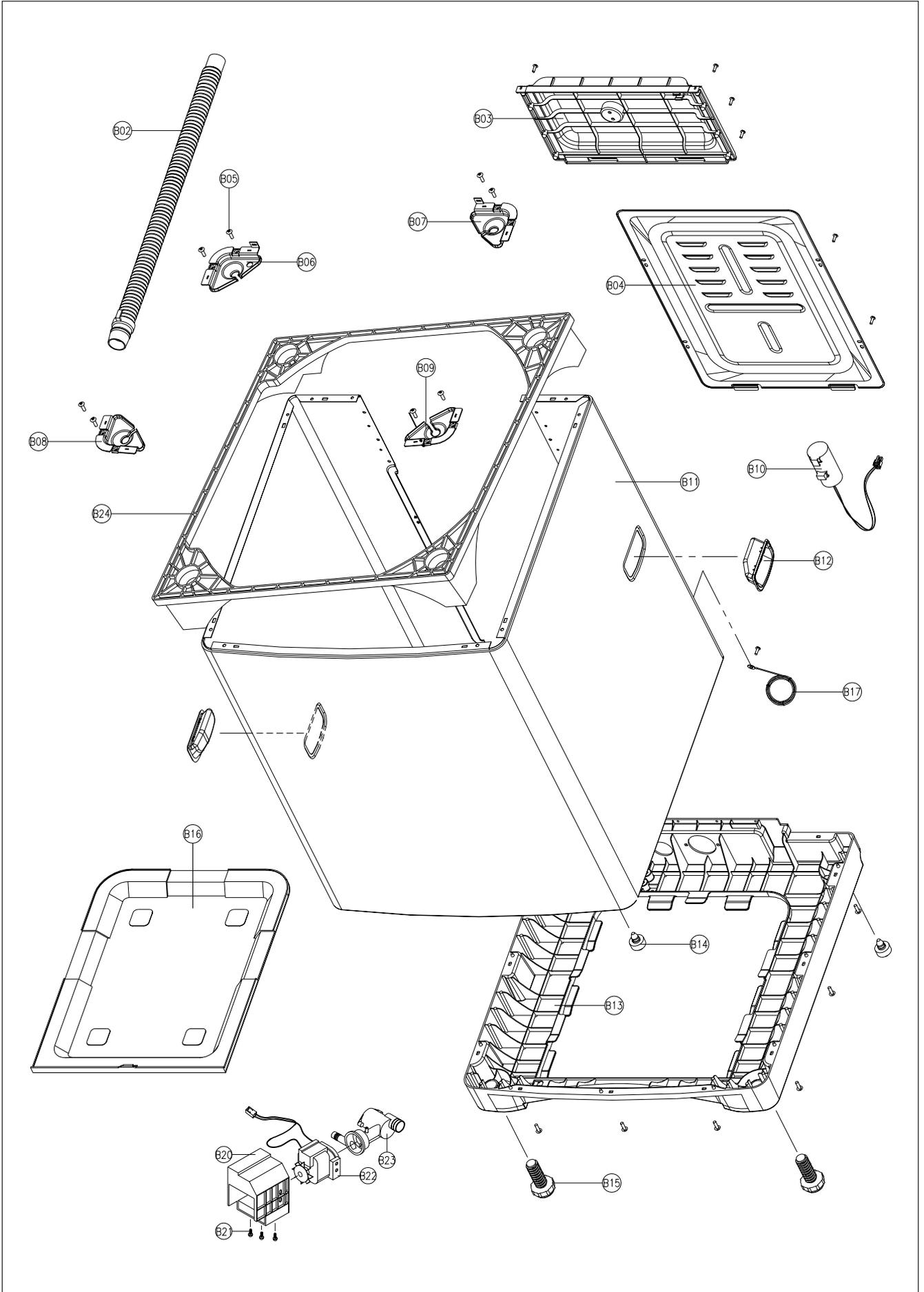


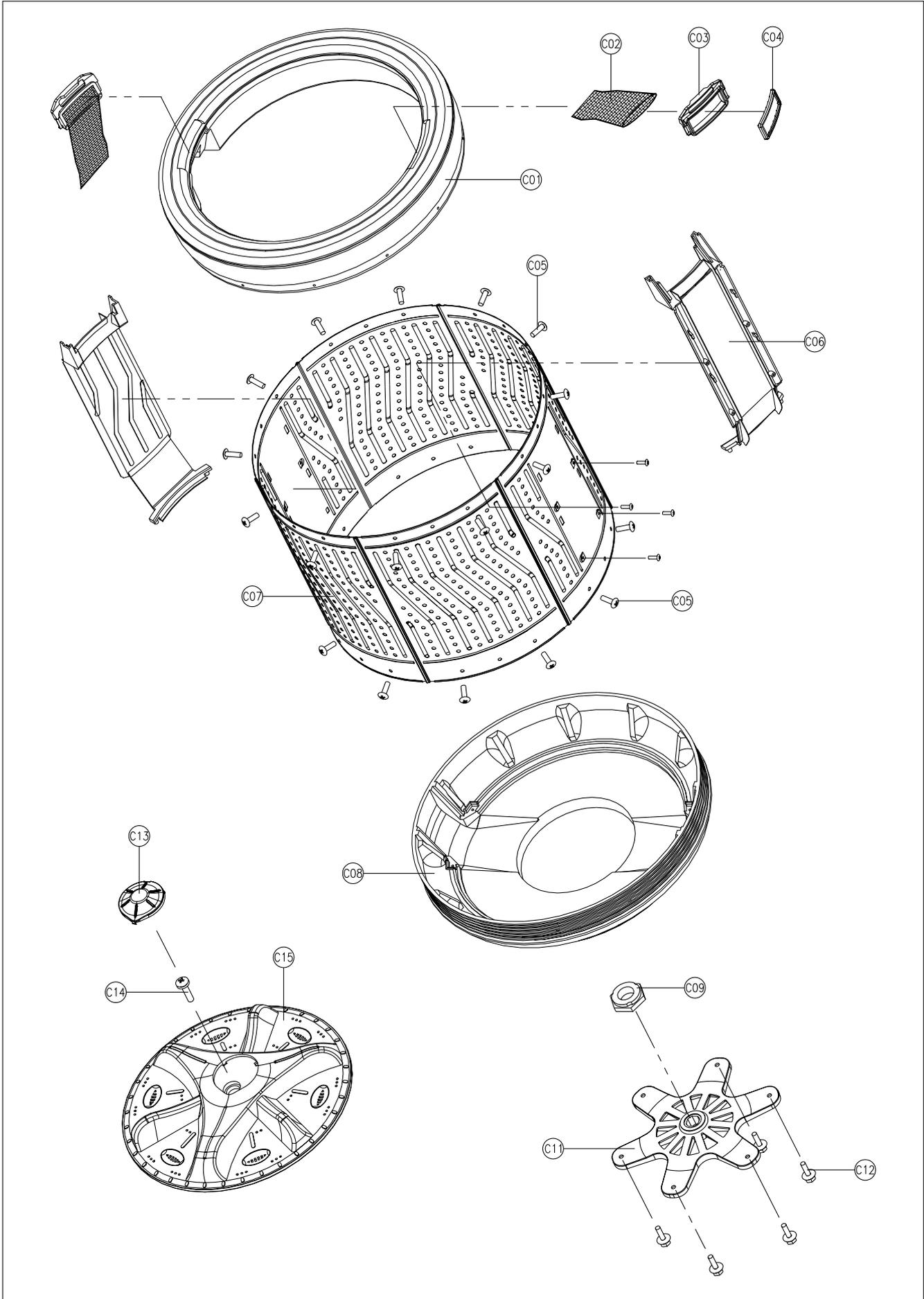
SYMBOL	RATING (V)	SPEC
A	100~127	250V/8A
	220~240	250V/4A OR 5A
B	100~127	600mA
	220~240	315mA OR
C	110	54µF
	127	41.6µF
	220	13.5µF
	230-240	12.5µF OR 13.5µF
	240	11.4µF

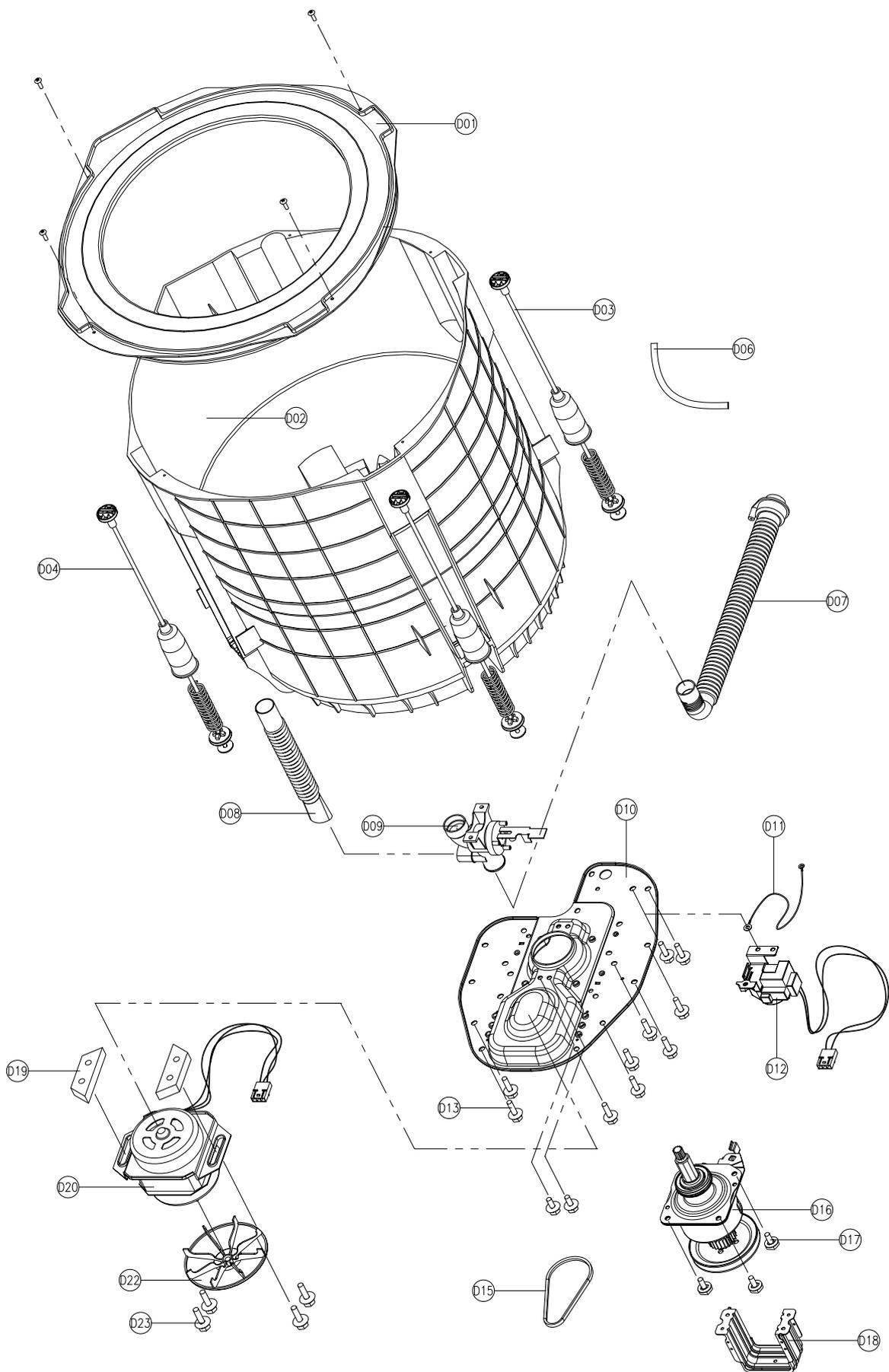
*RATING: REFER TO RATING PLATE

§ Parts Diagram









2. Parts List DWF-1094

NO	PARTS NAME	PARTS CODE	EA	DESCRIPTION	REMARK
A01	GASKET VALVE	3612300110	2	PVC-S	1EA;SINGLE VALVE
A02	PANEL B	3614217610	1	ABS	
A03	VALVE INLET AS (ONLY COLD)	3615405560	1	220V/60Hz	
		3615405571		220-240V/50Hz	
		3615405550		110-130V/60Hz	
	VALVE INLET AS	3615405500	1	220V/60Hz	
		3615405531		220-240V/50Hz	
		3615407500		220-240V/50Hz	
		3615405520		110-130V/60Hz	
	A05	HINGE DOOR	3612902400	2	POLYACETAL
A06	BUBBLE PUMP AS	3618918600	1	AC 110-130V/50,60Hz	HOSE;830mm
		3618919200		AC 220-240V/50,60Hz	HOSE;830mm
A07	SENSOR PRESSURE	3614801110	1	D8T, TERMINAL	
A08	TRANS POWER	5EP1048010	1	T5-V1	AC 110-130V
		5EP1048020		T5-V1F	
		5EP1048030		T5-V2	AC 220-240V
		5EP1048040		T5-V2F	
A09	SWITCH SAFETY AS	3619008921	1	SF-030T, TUBE/T=0.5, #187	
		3619008931		SF-030T, TUBE/T=0.5, #187	AUSTRALIA
A10	PLATE T	3614514510	1	ABS	
A11	CAP SOFTENER	3610907800	1	PP	
A12	NOZZLE DETERGENT	3618101700	1	PP	
A13	CASE DETERGENT	3611114700	1	PP	
A14	SPRING DOOR	3615107410	1	SUS304 D=1.8	
A15	DOOR B	3611717510	1	ABS	
A16	DOOR F	3611717430	1	ABS	
A17	HANDLE DOOR	3612603210	1	ABS	
A18	CUSHION DOOR	3611504100	2	CR	
A19	SCREW TAPPING	7112503011	2	T1 TRS 5x30 MFZN	
A20	CAP	3610907900	2	NBR	
A21	PANEL F	3614217510	1	ABS	
A22	UNIT FUSE FILTER	3618914811	1	AC 250V/5A, FERRITE	
		3618918411		AC 250V/8A, FERRITE	
		3618952011		AC 250V/8A, T-TUBE	TAIWAN
			1		
				DWF-1094CNE/CME	SINGLE VALVE
		PRPSSWZJ01		DWF-1094CTE	
		PRPSSWZU00		DWF-1094PT/PN/PM/PL	PUMP

NO	PARTS NAME	PARTS CODE	EA	DESCRIPTION	REMARK
A24	HARNESS AS	3612726711	1	250V/315mA	SINGLE VALVE
		3612726731		250V/600mA	
		3612726721		250V/315mA	PUMP
		3612726741		250V/600mA	
A25	CORD POWER AS	3611302900	1	3x0.75, 300x2, L=1800	CP-2PIN
		3611302800		A VCTFK 2x0.75 2.3M	F-2PIN
		3611302600		F H05W 3x0.75 2.3M	ITALIAN 3PIN
		3611303300		GTSA-3 3x0.75 GY	ARGENTINE
A26	CLAMP	4500D08180	2	SWC BUBB ID=12.5	
A27	HOSE SHOWER AS	3613223200	1	HOSE+ABSORBER	
B02	HOSE DRAIN O	3613213560	1	EVA, L=950mm	NON-PUMP
	HOSE DRAIN O AS	3613218800	1	PE-LD/EVA, L=1600	PUMP
B03	PLATE UPPER	3614514600	1	PP	
B04	COVER B	3611413600	1	SPG 0.5T	
B05	SCREW TAPPING	7112501411	1	T1TRS 5x14 MFZN	
B06	SUPPORT TUB BL	3615302210	1	SPG T1.4	
B07	SUPPORT TUB BR	3615302310	1	SPG T1.4	
B08	SUPPORT TUB FL	3615302410	1	SPG T1.4	
B09	SUPPORT TUB FR	3615302510	1	SPG T1.4	
B10	ASSY CONDENSER	3618921500	1	54.0µF+60µH, L=470	110V/60Hz
		3618921900		41.6µF+60µH, L=470	127V/60Hz
		3618921000		13.5µF+60µH, L=470	220V/50,60Hz
		3618920800		11.4µF+60µH, L=470	240V/50Hz
B11	CABINET AS	3610808011	1	PAINTING	
B12	HANDLE CABINET	3612603300	2	PP	
B13	BASE U	3610310200	1	PP	
B14	LEG FIX	3617702300	2	THEMAL PLASTIC ELASTOMER	
B16	COVER UNDER	3611402711	1	PP	
B17	HARNESS OUTER	3610068700	1	50/0.18 GREEN	
B20	COVER PUMP	3611405320	1	PP(B360F)PUMP MODEL	PUMP MODEL
		3611405301		UL/CSA(466FWU,HFH-400)	
B21	SCREW TAPPING	7122501611	2	T2 TRS 5x16 MFZN	PUMP MODEL
B22	MOTOR SHADED POLE	3618957310	1	AC110-127V/60Hz	DWF-1094PT/PS
		3618957280		AC 220V/60Hz	DWF-1094PL
		3618957250		AC 220V/50Hz	DWF-1094PN
		3618957220		AC 240V/50Hz	DWF-1094PM
B23	FILTER AS	3611901530	1	DWF-5590DPNF, E-TYPE	PUMP MODEL
C01	BALANCER AS	3616104000	1	DWF-1094	

NO	PARTS NAME	PARTS CODE	EA	DESCRIPTION	REMARK
C02	FILTER	3611903300	2	NYLON, 100x150	FILTER AS ;3611903100
C03	FRAME FILTER	3611903000	2	PP	
C04	HOLDER	3613008900	2	PP	
C05	SPECIAL SCREW	3616003700	24	SUS 5.5x16	
C06	GUIDE FILTER AS	3612504100	2	DWF-1094	
C07	TUB	3618806900	1	SUS430D	
C08	TUB U	3618807001	1	PP, -M/B	
C09	SPECIAL NUT	4507D83080	1	SUS 304	
C11	FLANGE TUB	3617201200	1	10Kg, 3-FOOT	
C12	SPECIAL SCREW	3616007000	3	SCM24H, 6.5x24	
C13	CAP PULSATOR	3610908300	1	PP	
C14	SPECIAL SCREW	3616003720	1	SUS 6x26.5	
C15	PULSATOR AS	3619703500	1	PULSATOR+INSERT	
D01	RING SHOWER AS	3614601700	1	RING T + RING U	
D02	TUB O	3618807100	1	PP JI-370	
D03	SUSPENSION AS(B)	3619802600	2	DWF-1094	WHITE
D04	SUSPENSION AS(F)	3619802500	2	DWF-1094	YELLOW
D06	HOSE	4500D08210	1	ID=4.0, L=360mm	
D07	HOSE DRAIN I AS	3613218500	1	PE-LD, EVA(L=219.5)	NON-PUMP
		3613212100		LDPE+EVA, L=184	PUMP MODEL
D08	HOSE OVERFLOW	3613208901	1	PE-LD L=280mm	NON-PUMP
D09	VALVE DRAIN AS	3615408400	1	100M	NON-PUMP
D10	BASE	3610387400	1	SECEN 2.0t	
D11	HARNESS EARTH INNER	3612757010	1	L=560mm	
D12	MOTOR SYNCHRONOUS	450ED45120	1	AC 110-130V/50,60Hz	ST=23
		3966010220		AC 220-240V/50,60Hz	ST=23
D13	SPECIAL SCREW	3616007000	20	SCM24H, 6.5x24	
D15	BELT V	3616590220	1	M20.5, AGING	60Hz
		3616590230		M21, AGING	50Hz
D16	GEAR MECHANISM	3617307610	1	GM-1300-KS6P0	
D17	BOLT HEX	7341801511	4	6B-1, 8*15, MFZN	
D18	PROTECTOR GEAR	3618301300	1	SBHG1, 1.6T	
D19	CUSHION DOWN	3611502700	2	P.O.M, H=8mm	
D20	MOTOR CONDENSER	3964221211	1	AC 110V/60Hz	W1D50CA012-S
		3964821311		AC 120-127V/60Hz	W1D50JA012-S
		3964321211		AC 220V/60Hz	W1S50UA012
		3964510411		AC 220V/50Hz	W1D50VA012
		3964610321		AC 230-240V/50Hz	F33-2C-S
D22	PULLEY MOTOR AS	3618432000	1	ADC-12, DS=10, DP=48.5	60Hz
		3618431900		ADC-12, DS=10, DP=53.0	50Hz
D23	BOLT HEX	7650804211	2	6B-1 8x42 S.P/W MFZN	

