DAEWOO

Service Manual

Auto Washer

Model : DWF-6020

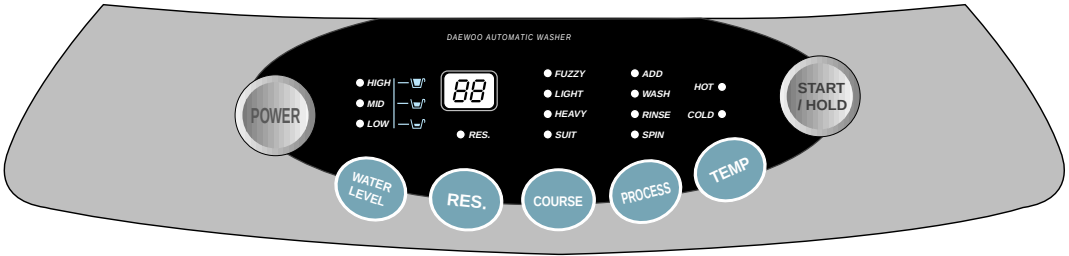
DAEWOO ELECTRONICS CO., LTD.
OVERSEAS SERVICE DEPT.

Service Manual

DAEWOO ELECTRONICS CO., LTD.

1. SPECIFICATIONS

NO.	ITEM		DWF-6020							
1	POWER SOURCE		AVAILABLE IN ALL LOCAL AC VOLTAGE							
2	POWER CONSUMPTION	50Hz	250W							
		60Hz	270W							
3	MACHINE WEIGHT	NET	33							
		GROSS	37							
4	DIMENSION (WXHXD)		532X887X542							
5	MATERIAL OF INTERNAL TUB		STAINLESS STEEL							
6	WASHING COURSE		FULL AUTOMATIC 4 COURCE (FUZZY, LIGHT, HEAVY, WOOL/SUIT)							
7	WATER LEVEL SELECTOR		HIGH(55ℓ), MID(45ℓ), LOW(31ℓ)							
8	OPERATING WATER PRESSURE		0.3kgf/cm^2~8kgf/cm^2 (2.94 N/cm^2~78.4N/cm^2)							
9	MAXIMUM MASS OF TEXTILE		6,0 k							
10	REVOLUTION PER MINUTE	WASH	125~145(50Hz), 130~150(60Hz)							
		SPIN	710~725(50Hz), 760~785(60Hz)							
		SUIT	50(50Hz), 60(60Hz)							
11	DIRECTION INLET VALVE		BACKWARD	UPWARD						
12	WATER CONSUMPTION		APPROX. 130ℓ/CYCLE							
13	PULSATOR		PROVIDED WITH 6 SPOUTING HOLES FOR POWERFUL UPWARD WATER STREAM							
14	WATER LEVEL CONTROL		ELECTRONICAL SENSOR							
15	ANTI NOISE PLATE		OPTION							
16	GEAR MECHANISM ASS'Y		SPUR GEAR							
17	LINT FILTER		O							
18	SOFTENER INLET		O							
19	ALARM SIGNAL		O							
20	AUTO. WATER SUPPLY		O							
21	FUNCTION FOR BUBBLE		OPTION							
22	AUTO RE-FEED WATER		O							
23	AUTO POWER OFF		O							


DAEWOO AUTOMATIC WASHER
POWER
HIGH
MID
LOW
88
RES.
FUZZY
LIGHT
HEAVY
SUIT
ADD
WASH
RINSE
SPIN
HOT
COLD
START / HOLD
WATER LEVEL
RES.
COURSE
PROCESS
TEMP

	**Power Switch** • Press this button to turn the power ON or OFF.
	**Water Level Selector** • This button is used to select the water level you want.
	**Reservation Button** • If you want to reserve the finishing time of washing, use this button. As this button is pressed, digit in display increases by 1 hour at one press. • If current time is 8:00 am and you expect washing will be completed around 5:00 pm, press this nine times in order to display '9'.
	**Course Selector** • This button is used to select the washing course according to the type of wash loads. • Either WOOL or SUIT course is adopted to your washing machine.
	**Program Button** • With this button, you can create new programs by combinations of process.
	**Temperature Selector (Optional)** • If your washer is connected to two water taps for cold water and hot water, you can select them. Without operation, cold water would be selected automatically.
	**Start/Hold** • With this button, you can make your washer proceed your program, or stop temporarilly. And you can also release the temporary stop by pressing this.

§ Reserved Washing

1 Set your program as the above procedure, remaining last step. • Press the course selection button. • Press the procedure selection button. • But WOOL/SUIT course can not reservation.	2 Press reservation button until the digital monitor displays the finishing time you want. 	3 Press Start/Hold to start. 

§ Partial Selection Among Wash, Rinse or Spin

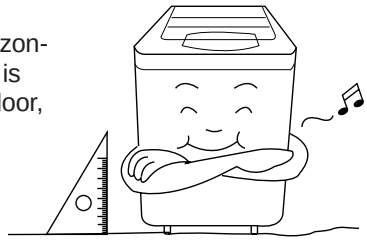
step 1. Press power switch.
step 2. Press program button until the indicating lamps make the combinations you want.
If only spin lamp is turned on, that means you will operate your washer for spin only.
If rinse and spin lamp are turned on, that means you will operate your washer for rinse and spin.
If add lamp is turned on with other porcess lamps, that means the time of the corresponding porcess will increase by 1~2 minutes, that is, if add is on with wash, rinse and spin, the time of each precess will increase by 1~2 minutes. (Wash: add 2 min., Rinse: add 1 min., Spin: add 1 min.)
step 3. Press water level selector as your decision.
step 4. Press Start/Hold to start.

1 Processing the Power Switch	2 Selecting Water level	3 Selecting Course		4 Pressing the Start/Hold Switch	
	§ *HIGH* § *MID* § *LOW* 	§ *ADD* § *WASH* § *RINSE* § *SPIN* 	Wash & Rinse & Spin	§ *ADD* § *WASH* § *RINSE* § *SPIN*	 End of Washing It is Informed by buzzer.
			Only Spin	§ *ADD* § *WASH* § *RINSE* § *SPIN*	
			Add & Wash	§ *ADD* § *WASH* § *RINSE* § *SPIN*	
			Add & RInse & Spin	§ *ADD* § *WASH* § *RINSE* § *SPIN*	
			Add & Spin	§ *ADD* § *WASH* § *RINSE* § *SPIN*	
			Add & Wash & Rinse & Spin	§ *ADD* § *WASH* § *RINSE* § *SPIN*	
			Only Wash	§ *ADD* § *WASH* § *RINSE* § *SPIN*	
			Rinse & Spin	§ *ADD* § *WASH* § *RINSE* § *SPIN*	

5. DIRECTIONS FOR INSTALLATION AND USE

Installing Place

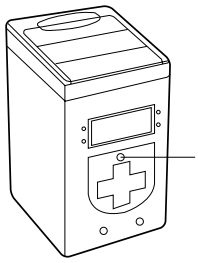
Install the washer on a horizontal solid floor. If the washer is installed on an unsuitable floor, it could make considerable noise and vibration.

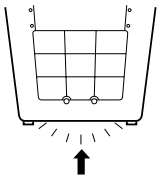


Keep the machine body more than 25cm apart from the wall surface. It will make easy cleaning the drain filter which is equipped at the back side of it. And if it comes into contract vibration may occur.

Never install in these places

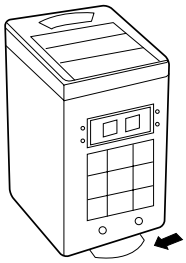
- ¡ The place where it would be exposed to direct sunlight.
- ¡ The place nearby a heater or heat appliance.
- ¡ The place where it would be supposed to be frozen in winter.
- ¡ The kitchen with coal gas and a damp place like a bathroom.



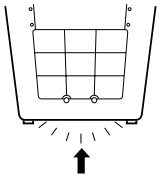


-DWF-6020

1 There is under-base cover in the tub of the washer. Put out and draw it in its proper site. (See picture)



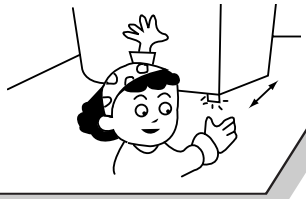
2 Push the under-base cover into the end, which decrease the noise made by this washer.



§ How To Install On An Inclined Place

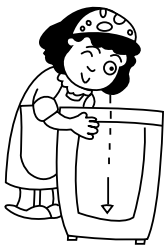
1 Horizon Setting

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.

Feature of the Washing Machine

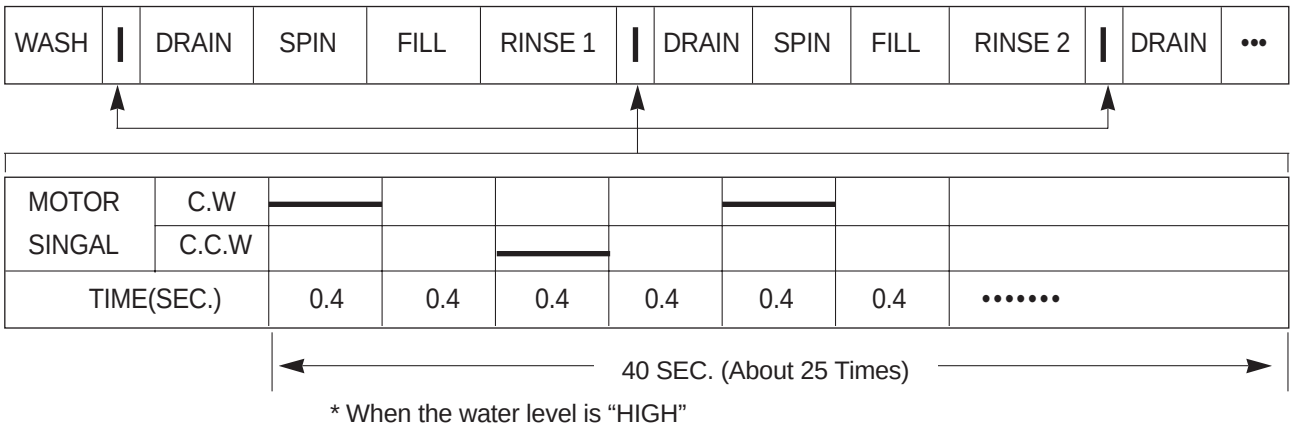
1 The first air bubble washing system in the world.
2 Quiet washing through the innovational low-noise design.
3 The wash effectiveness is much more enhanced because of the air bubble washing system.
4 The laundry detergent dissolves well in water because of the air bubble washing system.
5 The adoption of the water currents to adjust the unbalanced load.
6 One-touch operation system.

Water Current to Adjust the Unbalanced Load

It is a function to prevent eccentricity of the clothes after wash by rotating pulsator C.W and C.C.W for 35 seconds.(But, the SUIT course have no operation of the water currents to adjust the unbalnced load.)

EFFECT
It reduces vibration and noise effectively while spinning.

WATER FLOW



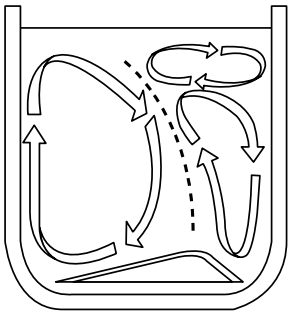
* When the water level is “HIGH”

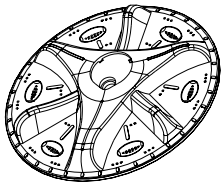
Automatic Water Supply System For Blanket Wash

The water level would be lowered because the blanket absorbs water at the beginning of washing. Therefore, after 60 seconds, the operation is interrupted to check the water level, and then the water is supplied again until the selected water level is reached.

Pulsator System

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 Drainning time Adjustment

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 10 minutes	Continue draining
More than 10 minutes	Program stops and gives the alarm with **dE** blinked on display lamp.

2 In case of continuous draining, residual drain time is determined by micom.
Draining time as a whole = D + 30

- D: Residual drain time.
- 30: The time remembered by micom.

Softener Dispenser

This is the device to dispense the softener automatically by centrifugal force.
This is installed inside the auto-balancer.

FUNCTIONAL PRINCIPLE

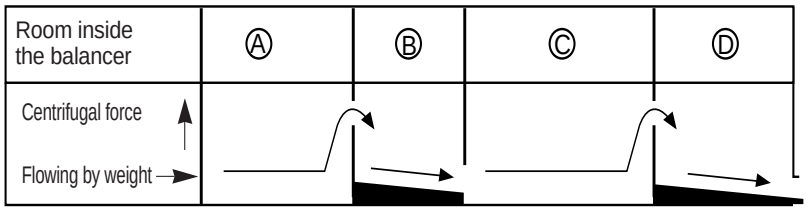
1 Softener stays in room (A) when poured into softener inlet.
2 Softener moves from (A) to (B) by centrifugal force during intermittent spin process.
3 Softener flows from (B) to (C) during rinse process next to intermittent spin.
4 Softener moves from (C) to (D) by centrigfugal force during second intermittent spin.

After spin process is finished, the softener is added into the tub through softener outlet.

FLOW OF THE SOFTENER

	Wash	Intermittent Spin	Hold	Intermittent Spin	Rinse	Spin
Normal	Centrifugal force		Flow in	Centrifugal force	Flow in	
Course	(A) →	(B) →	(C) →	(D) →		—

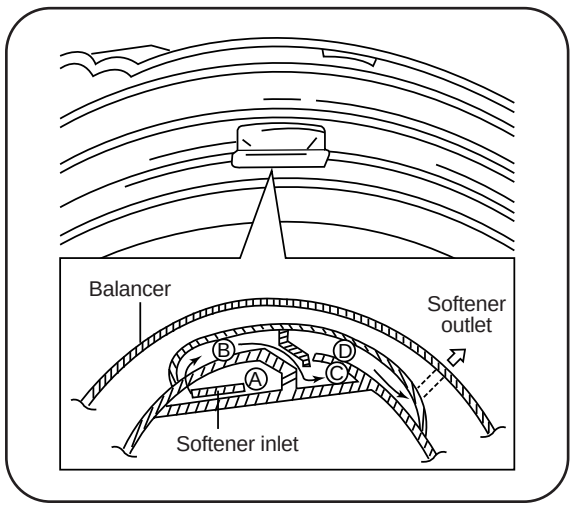
FLOW OF THE SOFTENER INSIDE OF THE BALANCER



NOTES Softener moves into the next room when r.p.m of the tub is more than 100 r.p.m.

HOW TO CHECK MOVEMENT

Pour a reasonable amount of “MILK” into softener dispenser and operate the washer with no load. In final rinse cycle, make sure that the milk is added into the tub through softener outlet.

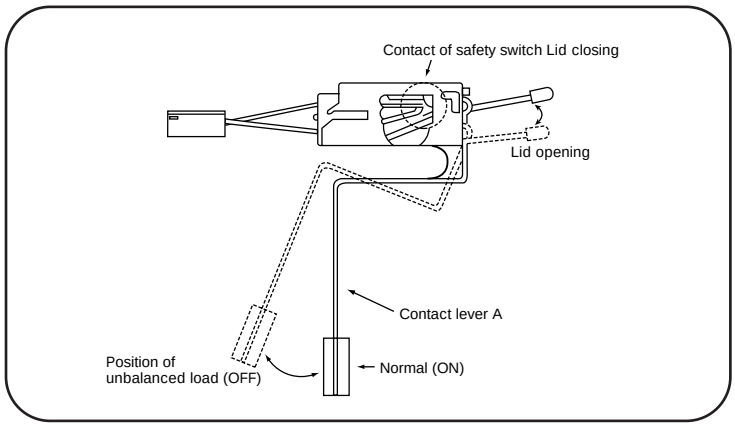


Automatic Unbalance Adjustment

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.



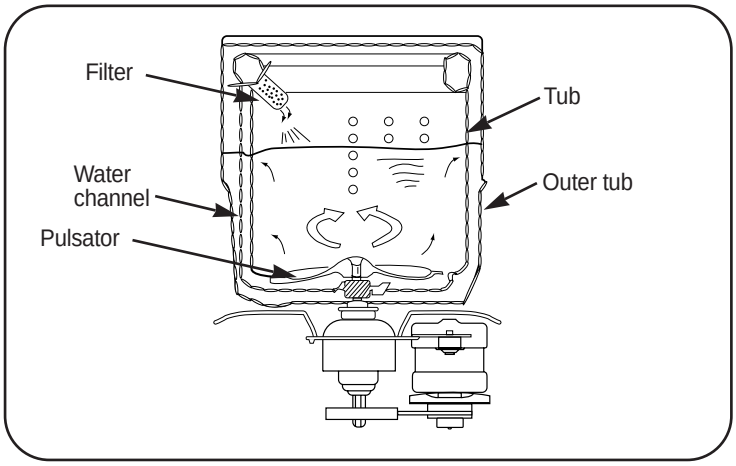
NOTES

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

Circulating-Water Course and Lint Filter

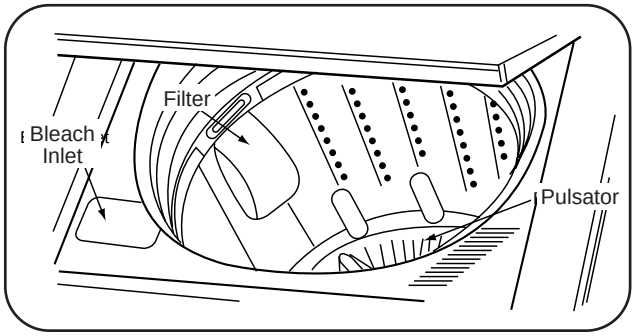
CIRCULATING-WATER

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

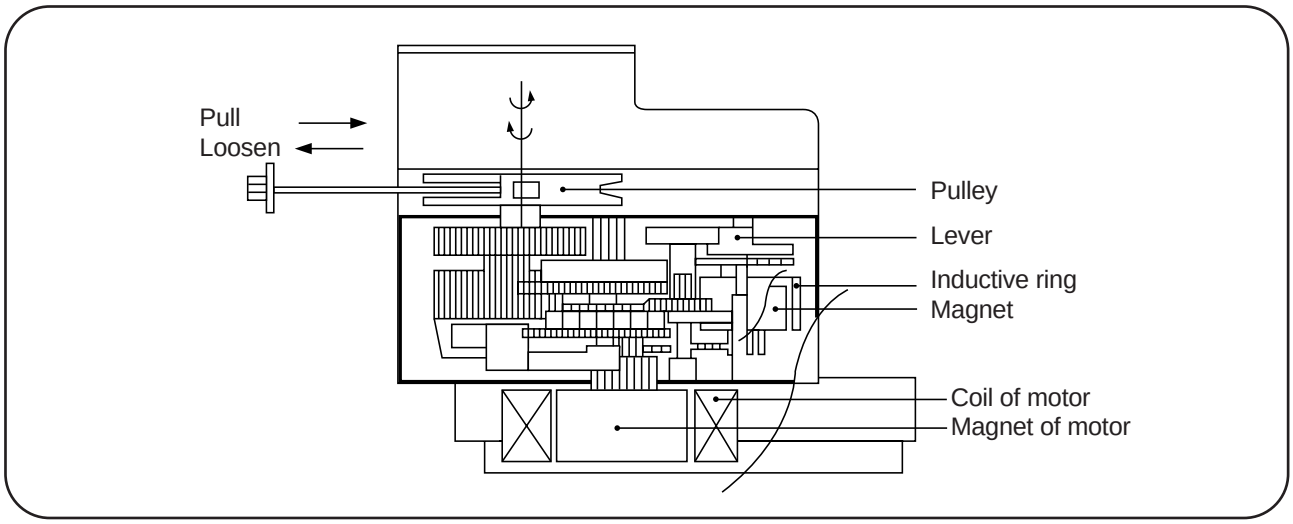
1 Pull the filter frame upward.
2 Turn the lint filter inside out, and wash the lint off with water.
3 Return the filter as it was, and fix the filter frame to the slot.

Residual Time Display

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 0 .

Drain Motor

STRUCTURE

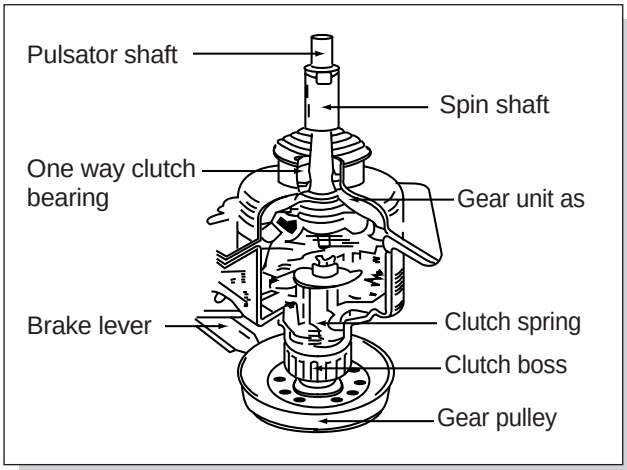


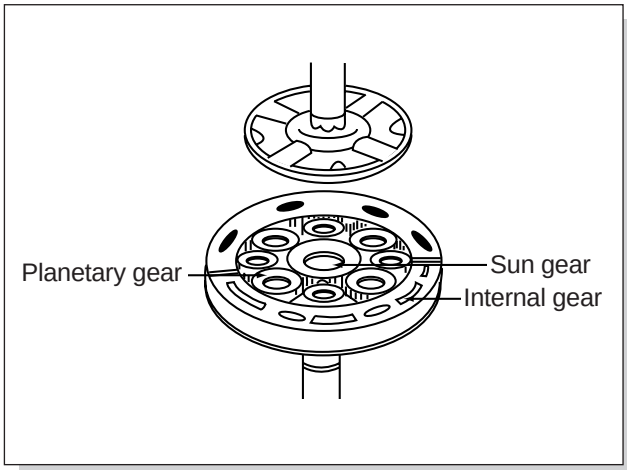
FUNCTIONAL PRINCIPLE

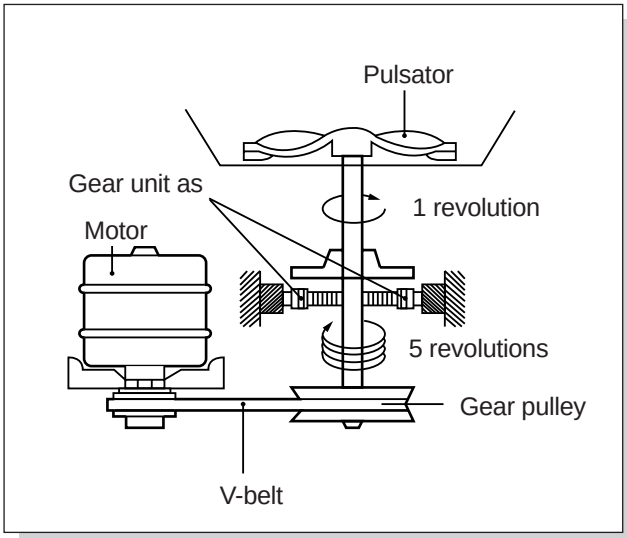
1 When the DRAIN MOTOR connected to the power source, the DRAIN MOTOR rotates with 900 r.p.m and revolves the pulley by gear assembly for reducing.
2 When the pulley is rotated, the pulley winds the wire to open the drain valve.
3 Therefore, rotation of pulley changed to the linear moving of wire.
4 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.

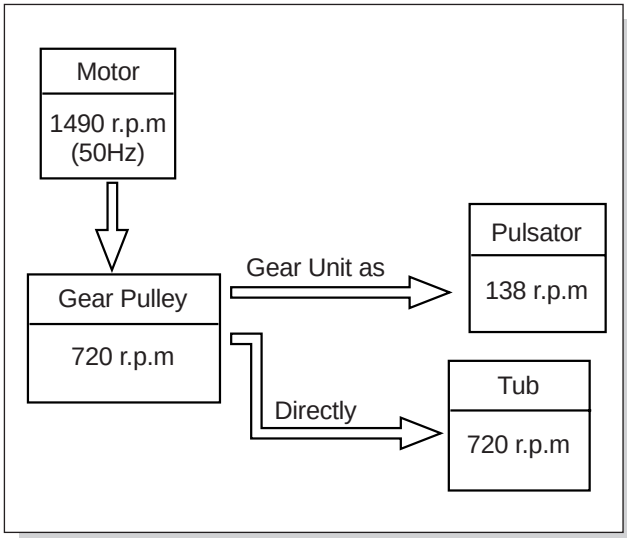
Gear Mechanism Ass'y

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



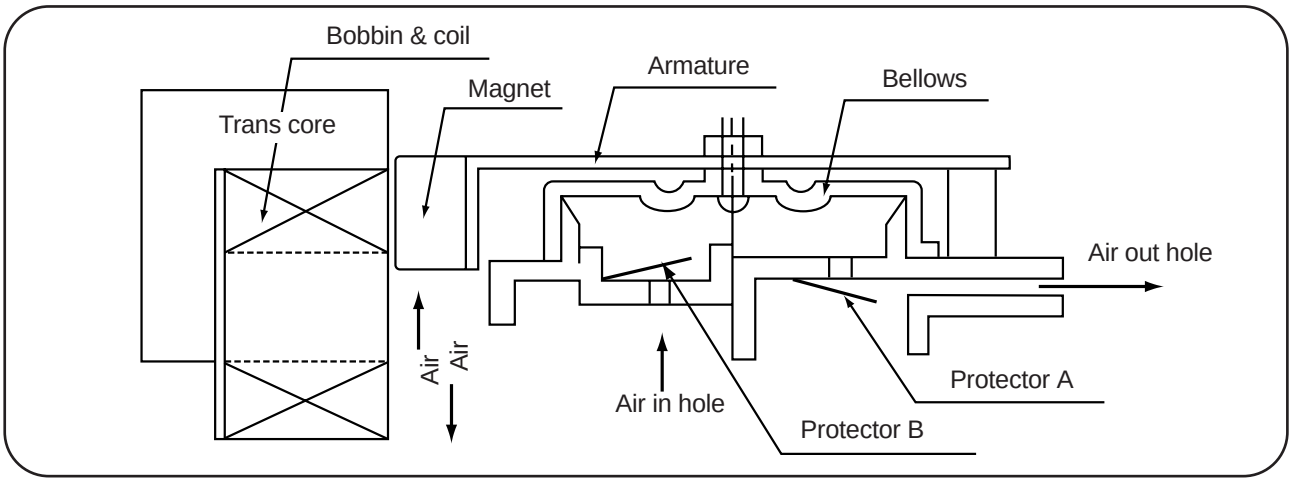






Principle of Bubble Generator

STRUCTURE



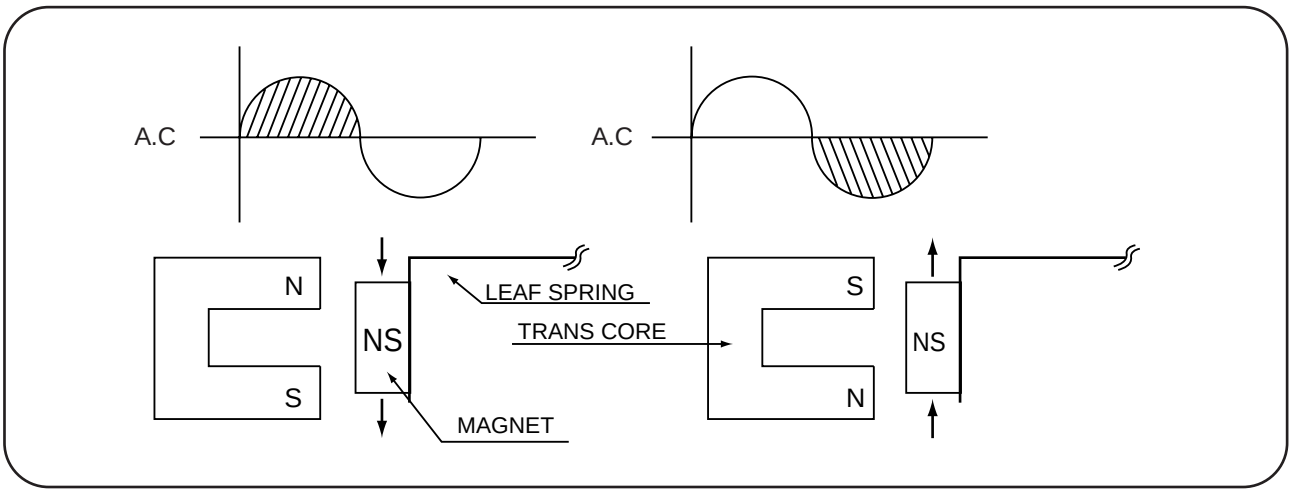
PRINCIPLE OF INTAKE & OUTLET OF THE AIR

INTAKE : ARMATURE moves up, and BELLOWS inhales the air. At the same time, protector B is open and A is close.

OUTLET : ARMATURE moves down, and BELLOWS exhausts the air. At the same time, protector B is close and A is opend.

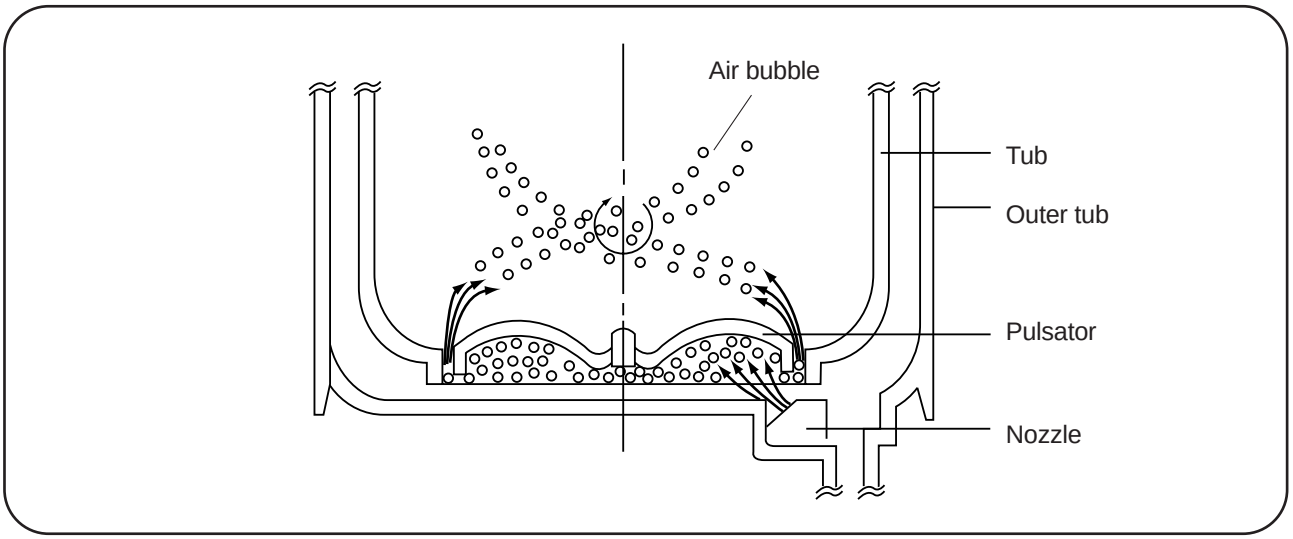
FUNCTIONAL PRINCIPLE OF TRANS & MAGNET

- The phase of A.C electric power changes to 60 cycle/second.
- The magnetic pole of trans core is changed by the change of the phase of A.C electric power.
- The core repeats push and pull (3600 times/min.) of the at mature magnet.



Functional Principle of Bubble Washing Machine

ACROSS SECTION



FUNCTIONAL PRINCIPLE

Bubble generator supplies the air from the bottom of outer tub to the inner space of pulsator, the air is dispersed by the rotation of pulsator. Air-bubble is created by the centrifugal force, and rises up.

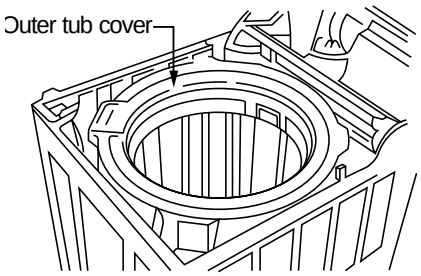
7. DIRECTIONS FOR DISASSEMBLY AND ADJUSTMENT

Warning

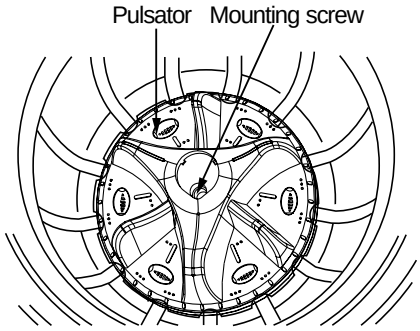
BEFORE ATTEMPTING TO SERVICE OR ADJUST ANY PART OF THE WASHING MACHINE, DISCONNECT THE POWER CORD FROM THE ELECTRIC OUTLET.

Gear Mechanism Ass'y Replacement

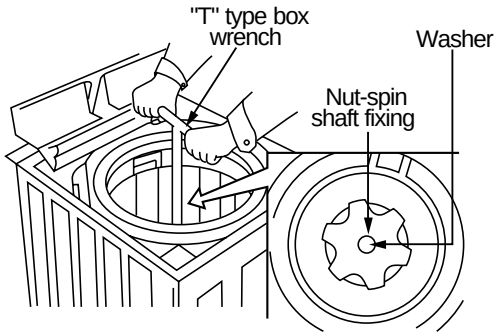
- Raise the top plate on the outer cabinet.
- Remove outer tub cover from the tub ass'y.



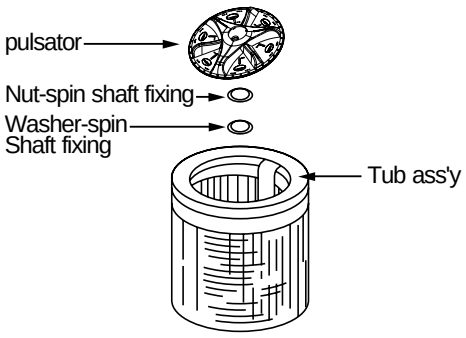
- Loosen the pulsator mounting screw and remove the pulsator.



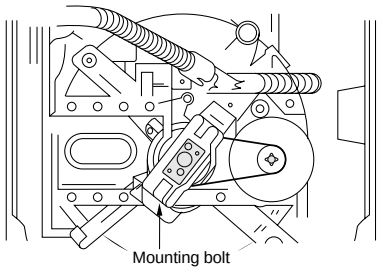
- Remove the spinner shaft flange nut by using 'T' type box wrench.



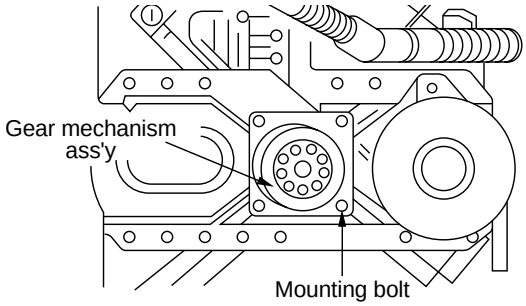
- Remove the tub ass'y.



- Lay the front of the washer on the floor.
- Remove four bolts mounting the plate-gear protect by using a box wrench and remove plate-gear protect.
- Remove the V-belt.



- Remove four bolts mounting the gear mechanism ass'y by using a box wrench.
- Pull out the gear mechanism ass'y.

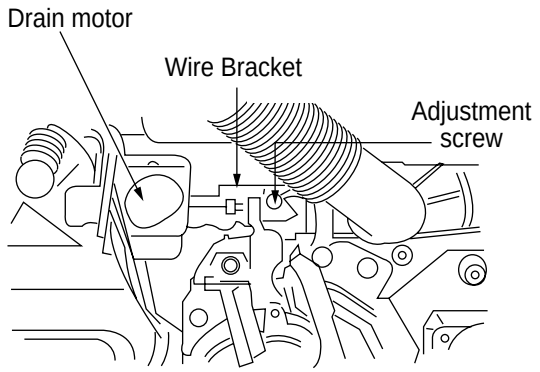


NOTES

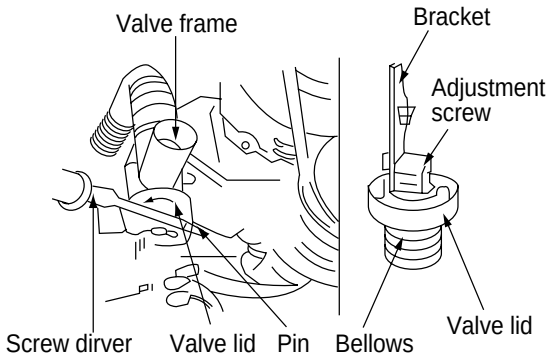
To assemble the gear mechanism ass'y, reverse the disassembly procedure.

Drain Motor and Valve

¡ Lay the front of the washer on the floor.
¡ Loosen the adjustment screw and two bolts mounting the drain motor.
¡ Take out the wire of drain motor from the bracket.

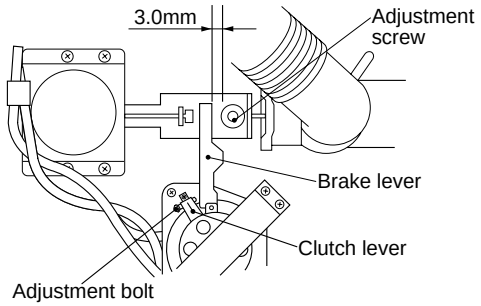


¡ Separate the drain motor from the bracket.
¡ Turn the valve lid by using screw driver as shown in figure and remove the valve lid from the valve frame.



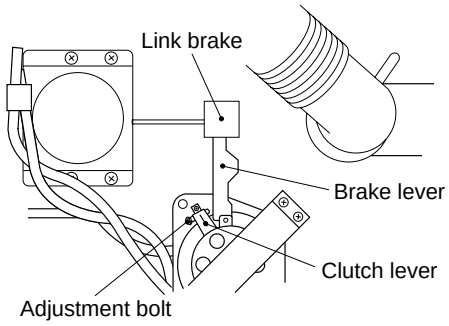
Brake Adjustment

¡ Loosen the adjustment screw fastening the bracket and place the adjustment screw to the brake lever as shown in figure.
¡ Tighten the adjustment screw completely.



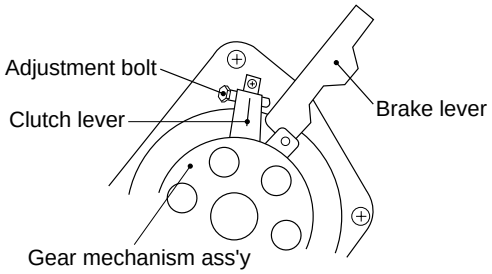
(Non pump model)

¡ Tighten the link brake screw completely.



(Pump model)

¡ Loosen the adjustment bolt and turn the adjustment bolt until the end of the bolt touches to the brake lever.
¡ Tighten the lock nut and apply a small amount of paint-lock.



NOTES:

1. The brake adjustment has been made at the factory, so that it is not re-adjust.
   However, in case of insufficient brake operation, problem the upper procedure.

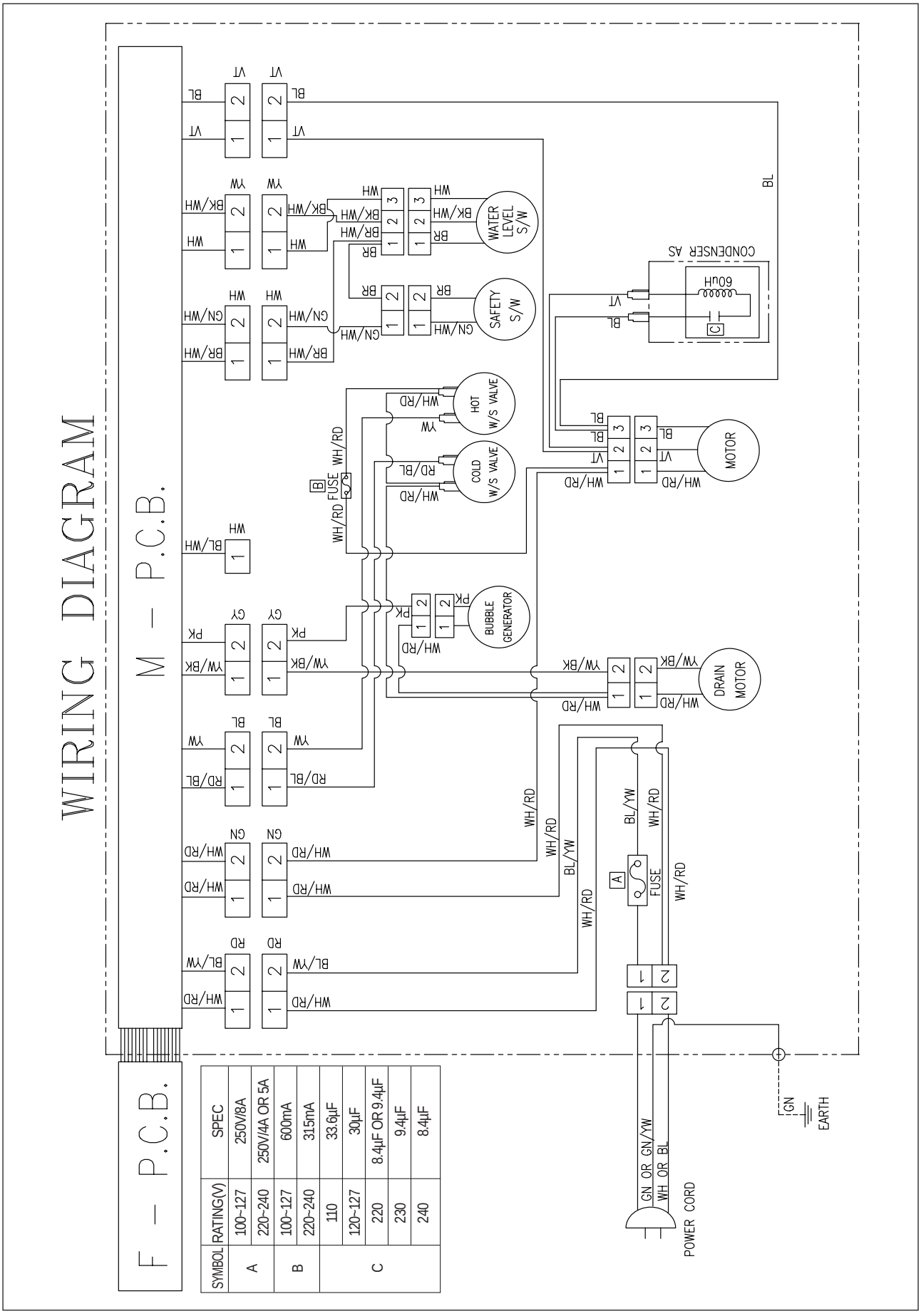
2. Overtightening of the adjustment bolt will cause poor brake performance.

3. Undertightening of the adjustment bolt will cause continuous braking and thereby. cause the problems of the motor during the spingcycle.

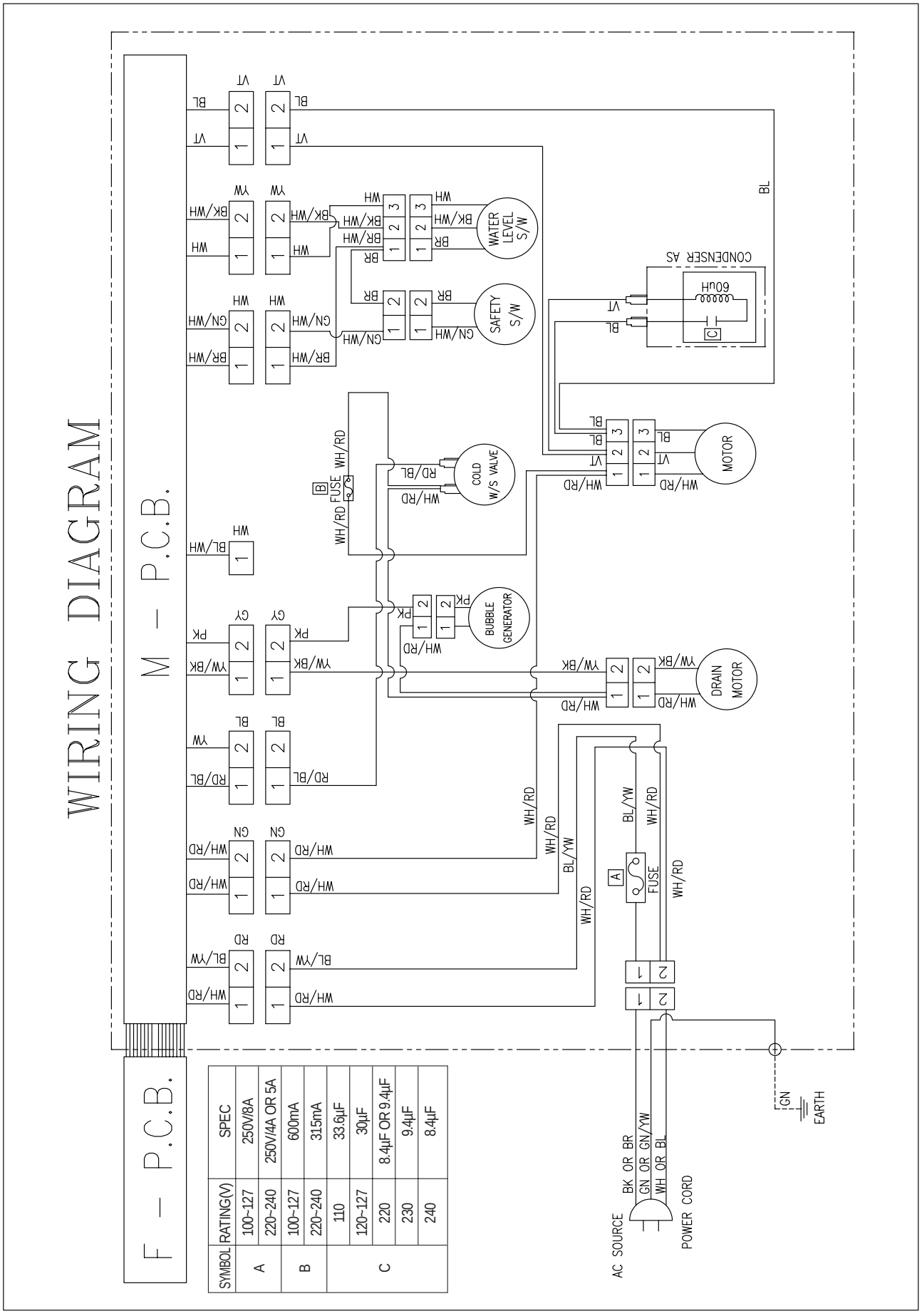
Concerning Error Message

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 30 minutes, yet it doesn't come to assigned water level.	Check whether or not is 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 7 seconds, the message is displayed during 1 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.

§ Wiring Diagram [non-pump]

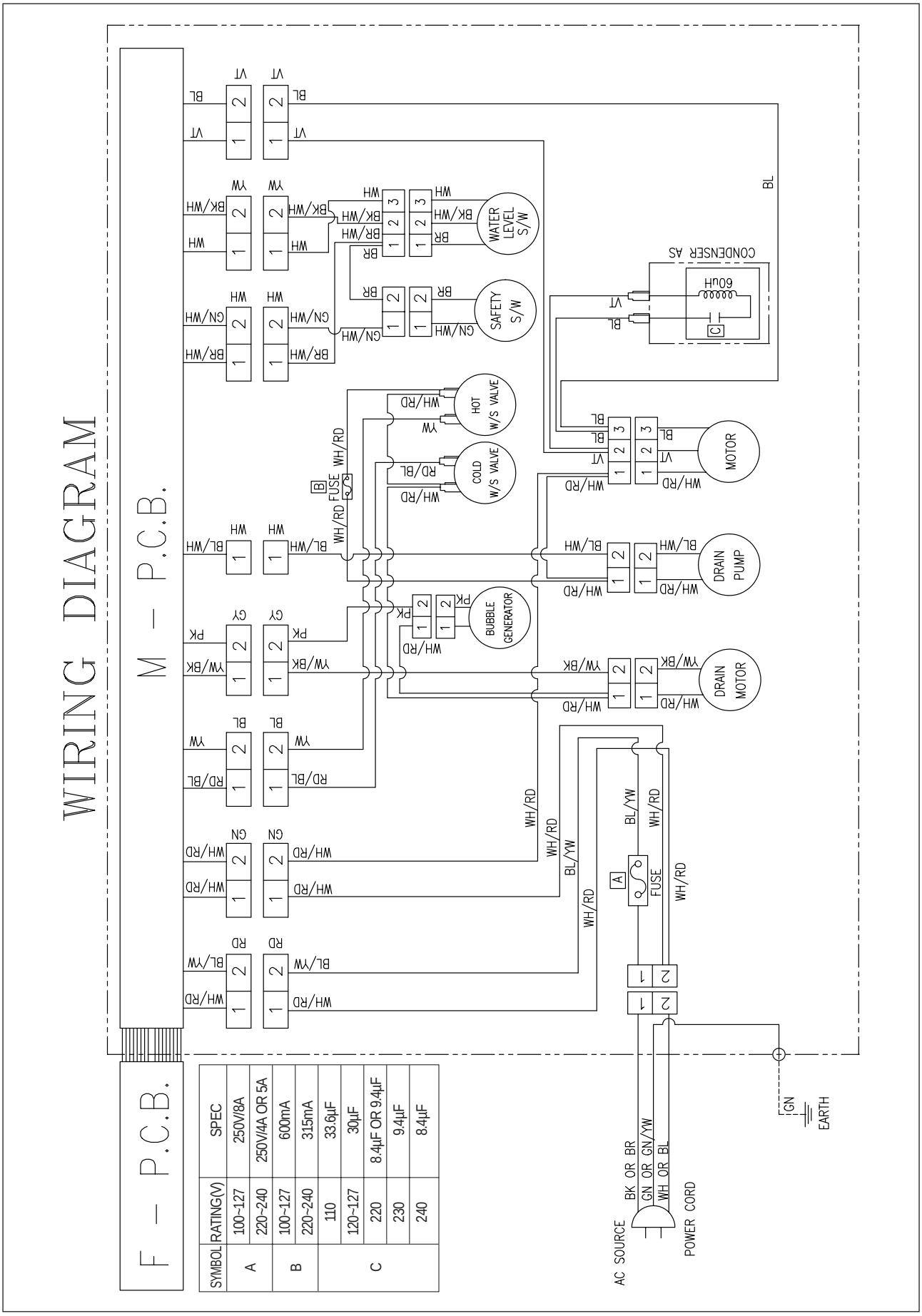


§ [Non-Pump, Single Valve]



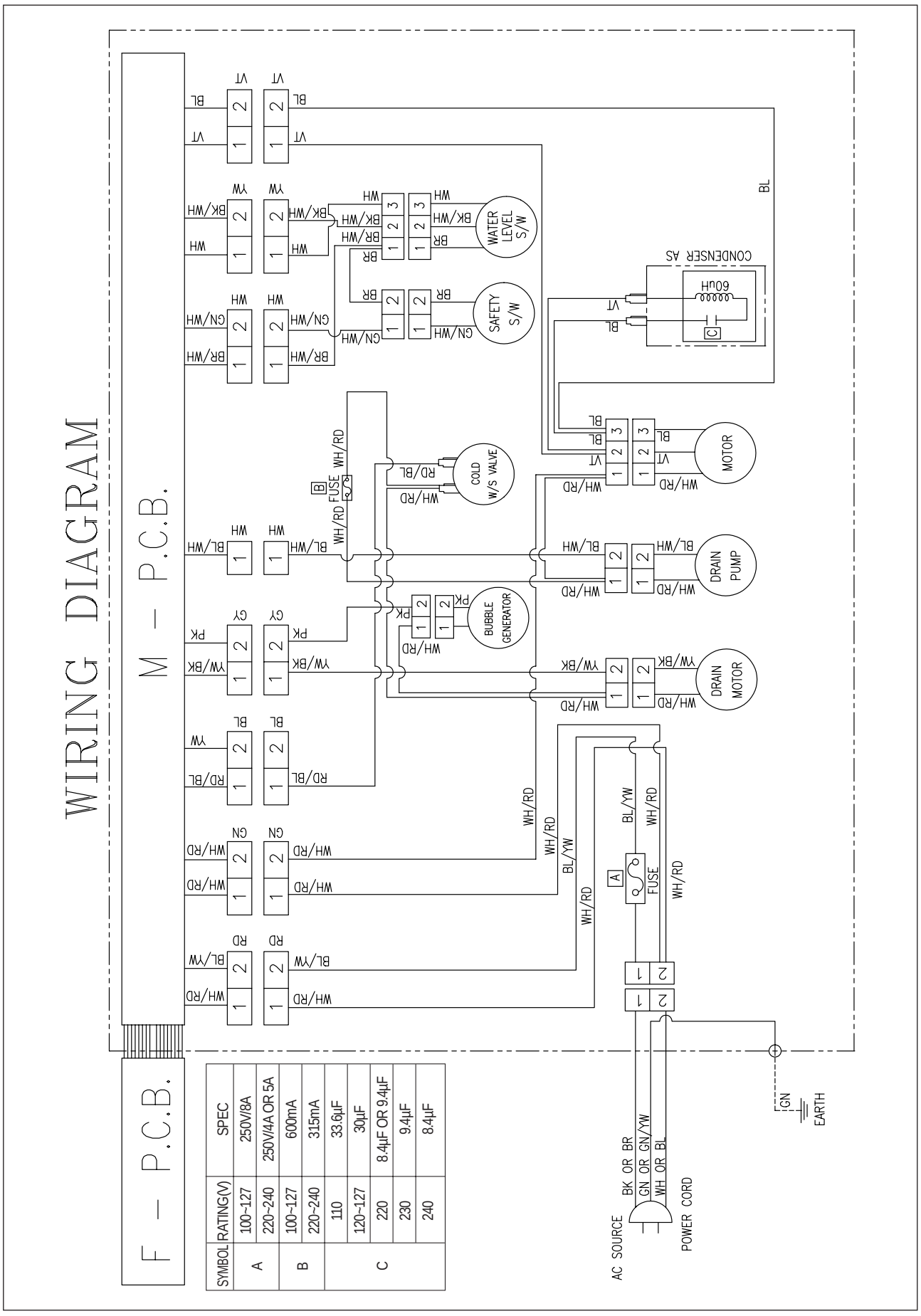
SYMBOL	RATING(V)	SPEC
A	100~127	250V/8A
	220~240	250V/4A OR 5A
B	100~127	600mA
	220~240	315mA
C	110	33.6μF
	120~127	30μF
	220	8.4μF OR 9.4μF
	230	9.4μF
	240	8.4μF

§ [Pump]

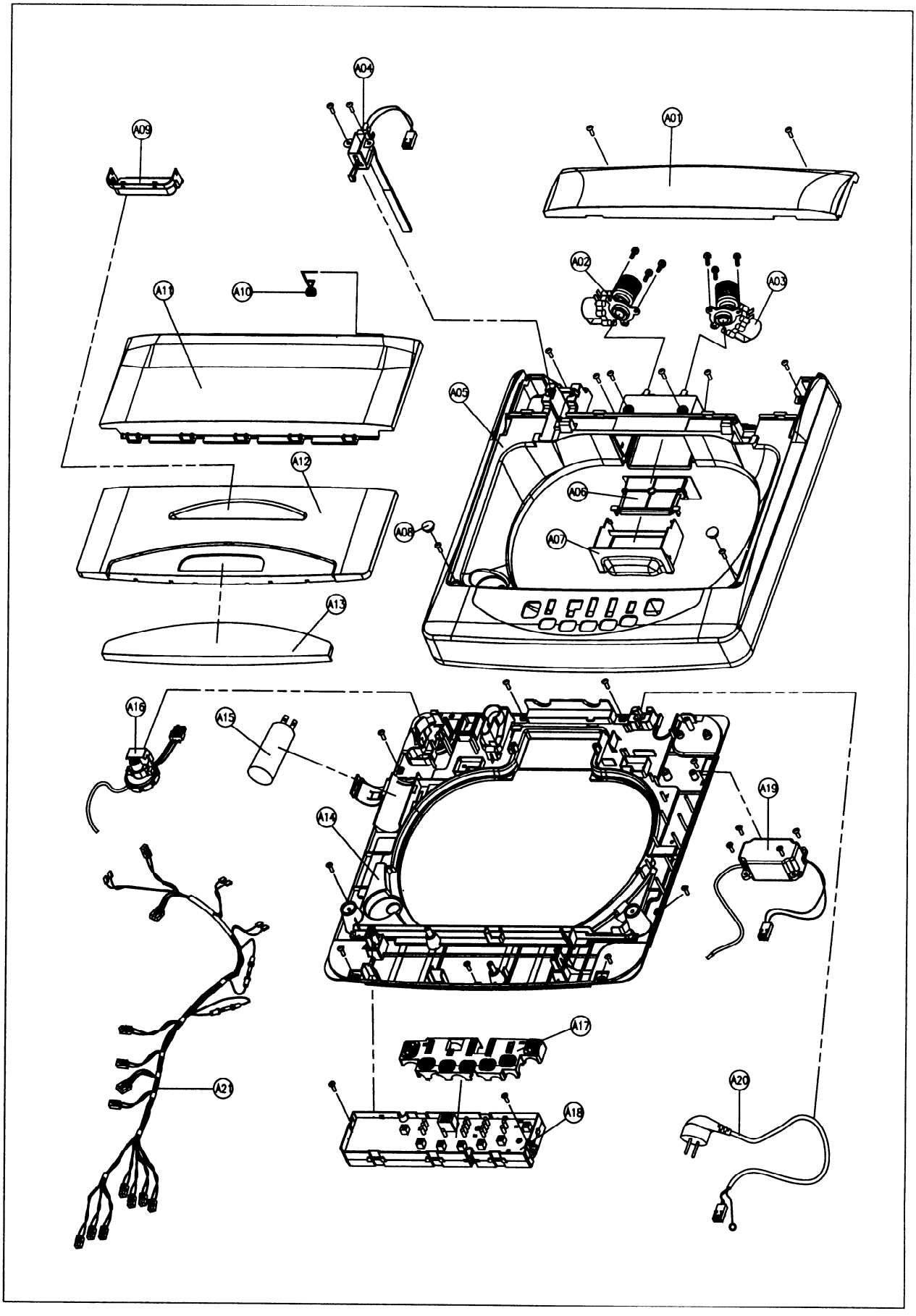


SYMBOL	RATING(V)	SPEC
A	100~127	250V/8A
	220~240	250V/4A OR 5A
B	100~127	600mA
	220~240	315mA
C	110	33.6μF
	120~127	30μF
	220	8.4μF OR 9.4μF
	230	9.4μF
	240	8.4μF

§ [pump, single valve]



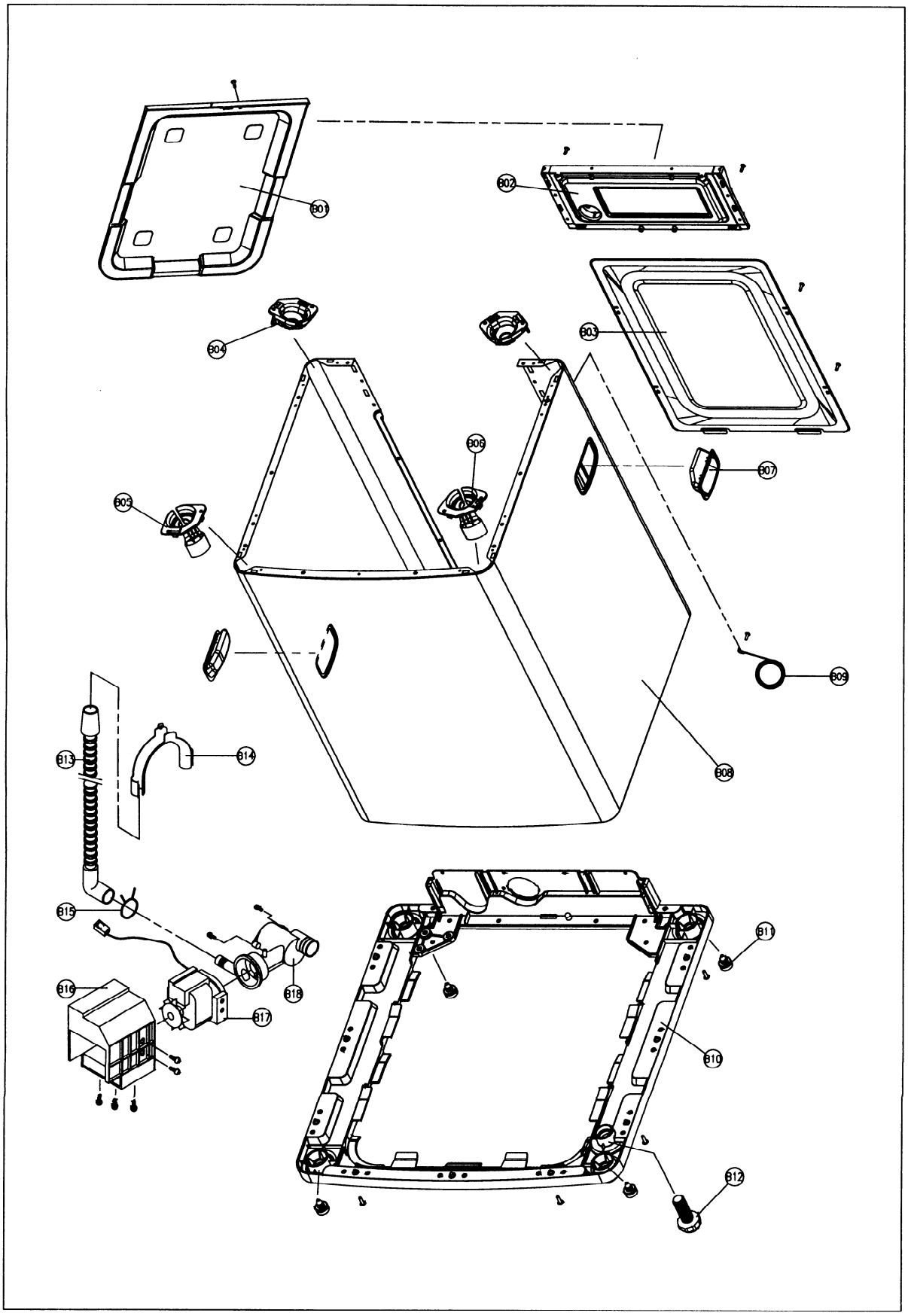
PARTS DIAGRAM



Parts List

LOC.	PART NAME	PART CODE	SPECIFICATION	REMARK
A01	PANEL B			
		3614220200	ABS	6020
A02	VALVE INLET(HOT)			
		3615403810	(NP, N, MP, M)	6020
		3615402110	(LP, L)	6020
		3615403610	(TP, T, SP, S)	6020
A03	VALVE INLET(COLD)			
		3615403730	(NP, N, MP, M)	6020
		3615402030	(LP, L)	6020
		3615403530	(TP, T, SP, S)	6020
		3615403330	(J)	6020
A04	SWITCH SAFETY AS			
		3619043600		6020
A05	PLATE T			
		3614515100	ABS	6020
A06	NOZZLE DETERGENT			
		3618102100	PP	6020
A07	CASE DETERGENT			
		3611117200	ABS	6020
A08	CAP REAR	3610902600	CR	
A09	HANDLE DOOR			
		3612604000	ABS	6020
A10	DOOR SPRING			
		3615108900	SUS304	6020
A11	DOOR B			
		3611793300	ABS	6020
A12	DOOR F			
		3611793200	ABS	6020
A13	WINDOW DISPLAY			
		3615501800	ABS	6020
A14	BRACKET	3610602900	PP	
A15	UNIT CAPACITOR AS	3618911700	9.4μF, CAN TYPE	AC 220~230V/50HZ
		3618911600	8.4μF, CAN TYPE	AC 240V/50Hz, AC 220V/60Hz
		3618912000	33.6μF, CAN TYPE	AC 110V/60Hz
		3618911900	30μF, CAN TYPE	AC 127V/60Hz
A16	SENSER PRESSURE	3614800960	DC 5V CDN-D7	
A17	PANEL F			
		3614200100	ABS	6020

LOC.	PART NAME	PART CODE	SPECIFICATION	REMARK
A18	PCB AS			
		PRPSSW8300	AC 220~230V/50Hz PUMP	6020
		PRPSSW8400	AC 220~230V/50Hz N-PUMP	
		PRPSSW8301	AC 240V/50Hz PUMP	6020
		PRPSSW8401	AC 240V/50Hz N-PUMP	
		PRPSSW8302	AC 220V/60Hz PUMP	6020
		PRPSSW8402	AC 220V/60Hz N-PUMP	
		PRPSSW8303	AC 110V/60Hz PUMP	6020
		PRPSSW8403	AC 110V/60Hz N-PUMP	
		PRPSSW8304	AC 127V/60Hz PUMP	6020
		PRPSSW8404	AC 127V/60Hz N-PUMP	
		PRPSSW8405	AC 100V/50,60Hz	6020
A19	ASSY BUBBLE	3618946300	AC 220~240V/50,60Hz	
		3918946400	AC 110~127V/50,60Hz	
A20	CORD POWER AS	3611304600	LFC-3R 3X0.75 2.3M GY	AUSTRALIA, ARGENTINA
		3611304700	F H05W 3X0.75 2.3M WH	CHILE
		3611304800	RW-300/500 3X0.75 2.3M	PR. CHINA
		3611304900	- VCTF 3X0.75 2.3M	INDIA
		3611305000	R VCTFK 2X1.25 2.3M GY	JAPAN
		3611305100	U VCTF 3X0.75 2.3M GY	KOREA
		3611305200	P VCTF 3X0.75 2.3M GY	KUWAIT
		3611305300	- VCTF 3X0.75 2.3M WH	MALAYSIA
		3611305400	- H05W-F 3X0.75 2.3M BK	SINGAPORE
		3611305500	A - VCTFK 2X0.75 2.3M GY	TAIWAN
		3611305600	F H05W 3X0.75 2.3M BK	USSR, HUNGARY
		3611305700	C SJT 3X18AWG 2.2M GY	PANAMA, USA
		3611305800	H05W-F 3X0.75 2.3M GY	SOUTH AFRICA
		3611305900	P VCTF 3.0.75 2.3M WH	OMAN
A21	HARNESS ASSY	3612754500	NON OPTION	PUMP
		3612754510	NON-BUBBLE PUMP	
		3612754520	NON-HOT INLET VALVE	
		3612754530	FULL OPTION	
		3612754600	NON OPTION	N-PUMP
		3612754610	NON-BUBBLE PUMP	
		3612754620	NON-HOT INLET VALVE	
		3612754630	FULL OPTION	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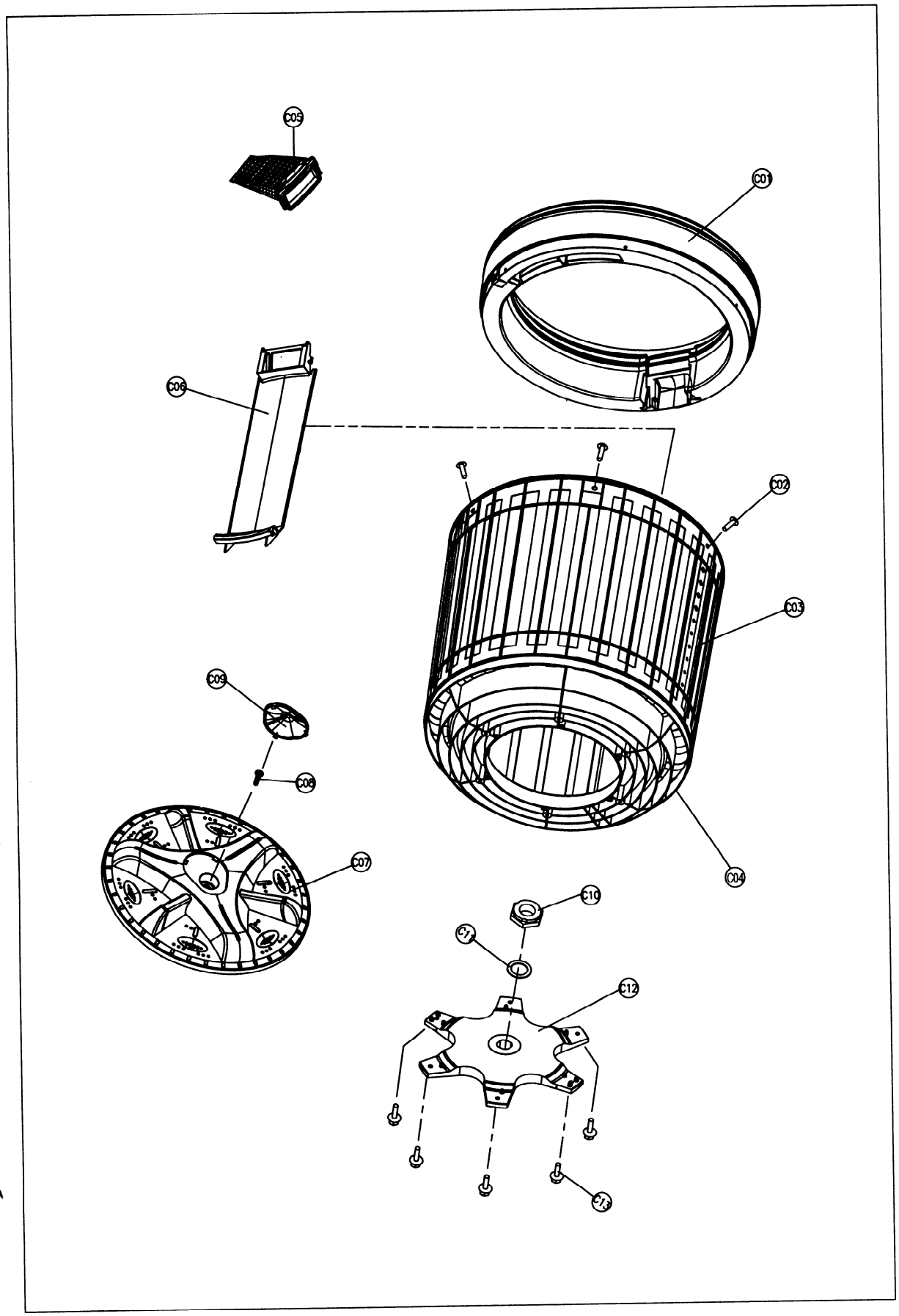
Parts List

LOC.	PART NAME	PART CODE	SPECIFICATION	REMARK
B01	COVER UNDER	3611402700	PP	
B02	PLATE UPPER	3614514900	PP	
B03	COVER B	3611414010	372x508x0.4t, SGCC	
B04	HOLDER SUPPORT	3613010300	FRPP, B	
B05	HOLDER SUPPORT	3613010200	FRPP, FL	
B06	HOLDER SUPPORT	3613010100	FRPP, FR	
B07	HANDLE CABINET	3612603300	PP	
B08	CABINET	3610808100	1740.2x767.4x0.6t	
B09	SARNESS OUTER	3610068700	50/0.18 GREEN ST710480-2	EARTH
B10	BASE U	3610311000	PP	6020
B11	FOOT	4509D10020	BUTYL RUBBER	
B12	LEG ADJUST AS	3617702200	DWF-5591DPN	
B13	HOSE DRAIN O	3613217800	PE-LD	PUMP
	HOSE DRAIN O AS	3613213500	EVA L=950	N-PUMP
B14	GUIDE DRAIN HOSE	3612502300	PP	PUMP
B15	CLAMP HOSE O	3611202200	HSW-3	PUMP
	CLAMP	3611201000	HSW-3, MFZN D36	N-PUMP
B16	COVER PUMP	3611405320	PP	PUMP
B17	MOTOR SHADED POLE	3963514000	AC 220~240V/50Hz	PUMP
		3963514010	AC 220V/60Hz	
		3963514020	AC 110V/60Hz	
		3963514030	AC 127V/60Hz	
B18	FILTER AS	3611901530	DWF-5590DPNF, E-TYPE	PUMP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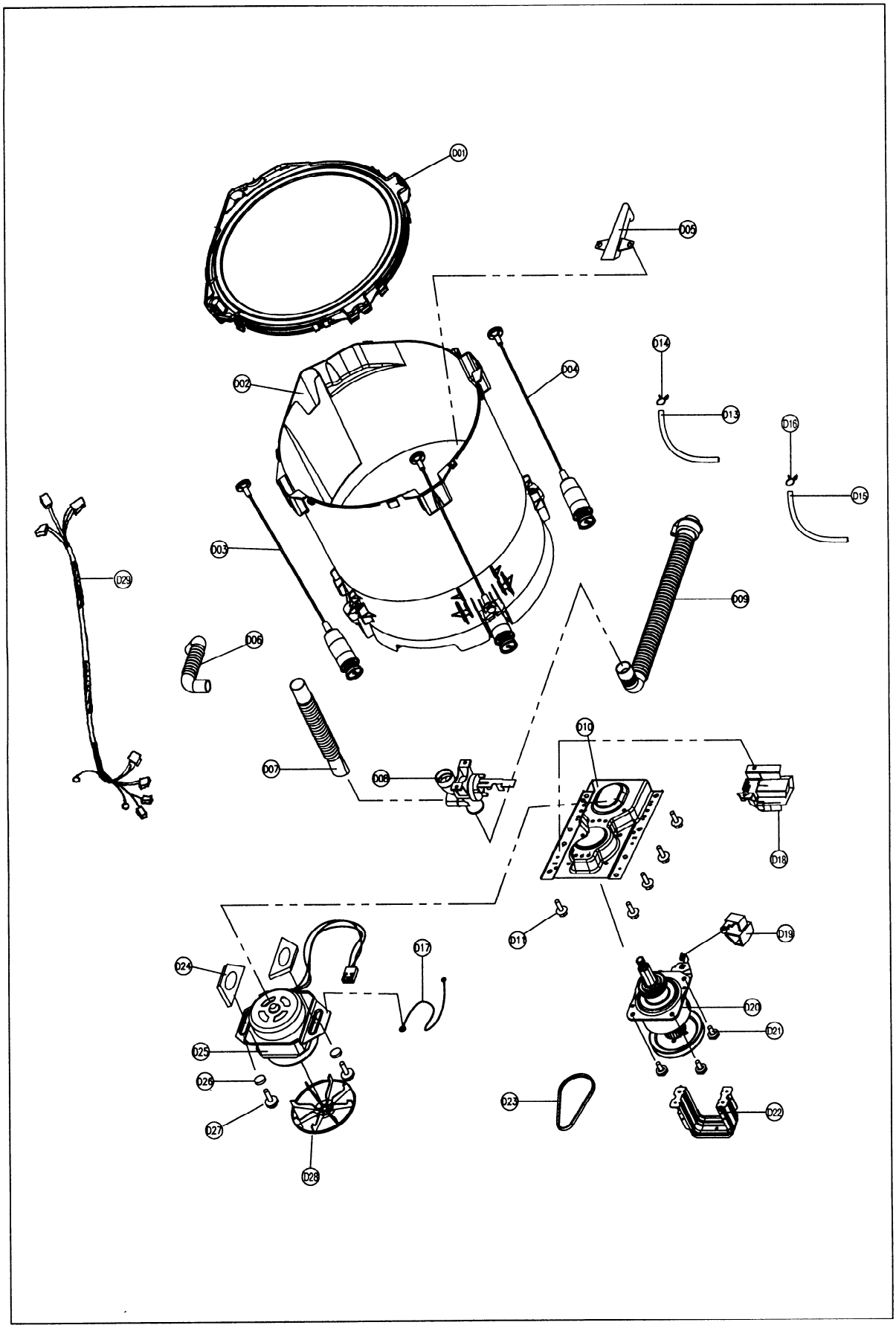
Parts List

LOC.	PART NAME	PART CODE	SPECIFICATION	REMARK
C01	BALANCER AS			
		3616104700	DWF-6010PN	6020
C02	SPECIAL SCREW	4505E05050	5.2x18	
C03	TUB I			
		3618808500	SUS	6020
C04	TUB U	3618808600	PP	6020
C05	FILTER AS	4505E82002	PE(90*120) INSERT	
C06	GUIDE FILTER			
		3612506700	PP	6020
C07	PULSATOR AS			
		3619704600	DWF-6010PN	6020
C08	SC. PULSATOR FIX AS	4505E3203A	6x26.5, O-RING+SILICON	
C09	CAP PULSATOR	3610909300	PP	
C10	SPECIAL NUT	4507D83080	SUS 304	
C11	SPECIAL WASHER	3616006500	SUS 304	
C12	FLANGE TUB	4505E05021	ADC-10	
C13	SPECIAL SCREW	4505E05040	5x24	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Parts List

LOC.	PART NAME	PART CODE	SPECIFICATION	REMARK
D01	COVER TUB O	3611414600	PP	
D02	TUB O	3618807600	PP	
D03	SUSPENSION AS F	3619802300	DWF-5510NP	
D04	SUSPENSION AS B	3619802400	DWF-5510NP	
D05	NOZZLE BODY	3618101400	PP	
D06	HOSE DRAIN I	3613220600	TPE	PUMP
D07	HOSE OVERFLOW	3613220700	L=245	N-PUMP
D08	VALVE DRAIN AS	3615404020	5591D, VE	N-PUMP
D09	HOSE DRAIN I AS	3613221800	DWF-5510N	N-PUMP
D10	BASE	3610302900	SECEN 1.6t	
D11	SPECIAL BOLT BASE	4505E83100	6.5x23	
D12	HARNESS SUB AS	3612754900	SUB HARNESS+EARTH	PUMP
		3612754910	SUB HARNESS+EARTH	N-PUMP
D13	HOSE	4500D08220	ID=8, L=20	CAVITATION HOSE
D14	CLAMP	4500D08180	SWC BUBB PIE=8	
D15	HOSE	4500D08220	ID=8, L=30	BUBBLE HOSE
D16	CLAMP	4500D08180	SWC BUBB PIE=8	
D17	HARNESS EARTH INNER	3612755700	L=180	CHILE
D18	SYNCRONOUS MOTOR	3966010270	AC 220~240V/50Hz	PUMP
		3966010260	AC 220~240V/50Hz	N-PUMP
		3966320370	AC 220V/60Hz	PUMP
		3966320360	AC 220V/60Hz	N-PUMP
		450ED45170	AC 110~127V/60Hz	PUMP
		450ED45176	AC 110~127V/60Hz	N-PUMP
		3966130260	AC 100V/50,60Hz	N-PUMP
D19	LINK BRAKE	3617801010	PP	PUMP
D20	GEAR MECHANISM	3617306000	GM-4900-KJ4XO	N-PUMP
		3617306010	GM-4900-KJ4PO	PUMP
D21	BOLT HEX	7640802011	6B-1 8x20 SW MFZN	
D22	PROTECTOR GEAR	3618301300	SBHG 1.6t	
D23	BELT V	4507D34020	M 20	50Hz
		4507B34020	M19.5	60Hz
D24	SPECIAL WASHER	4505E34030	PP	
D25	MOTOR CONDENSER	3964340100	AC 220~240V/50Hz	NP, N, MP, M
		3964340200	AC 220V/60Hz	LP, L
		3964340300	AC 10~127V/60Hz	TP, T, SP, S
D26	SPECIAL WASHER	4505E34040	PP	
D27	BOLT HEX	7650802511	6B-1 8X25 HS MFZN	
D28	PULLY MOTOR AS	3618401420	M-TYPE DS=10 DP=53.0	50Hz
		3618402800	M-TYPE DS=10 DP=48.5	60Hz
D29	HARNESS SUB AS	3612754900	SUB HARNESS + EARTH + PUMP	PUMP
		3612754910	SUB HARNESS + EARTH	N-PUMP

CIRCUIT DIAGRAM