



# WASHING MACHINE

P1401

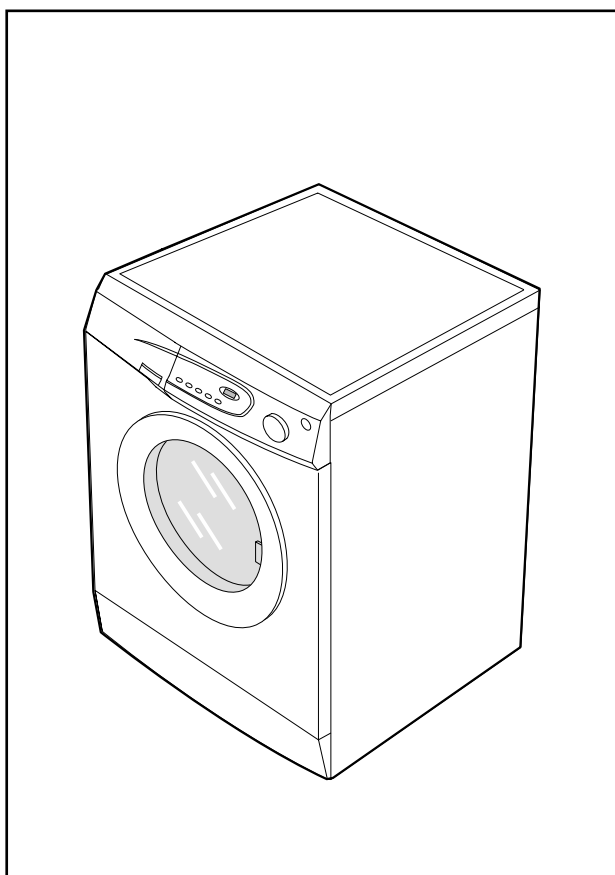
P1201

P1001

P801

# ***SERVICE*** Manual

## WASHING MACHINE



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## **Caution for the safety during servicing**

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**1. Do not allow the customer to repair the product.**

☞ The person may be injured or the product life may be shortened.

**2. Execute A/S after unplugging the power supply unit.**

☞ Be care of the electric shock.

**3. Do not plug several plugs in the same outlet.**

☞ It may cause the fire due to overheat.

**4. Check the damage, pressing or burning of the power plug or outlet.**

☞ Replace it promptly if it has problem.(It may cause the electric shock or fire)

**5. Do not clean the main body with the water.**

☞ It may cause the electric shock and fire and shorten the product life)

**6. The wiring of the harness shall be free from the moisture and tightened during serving.**

☞ It shall not be deviated by certain impact.

**7. Remove any dust or filth on the housing section,wiring section,connection section during servicing.**

☞ Protect the cause of the fire such as the tracking,shortage and etc.

**8. Check any mark of the moisture on the electrical parts, harness section and etc.**

☞ Replace the parts or remove the moisture.

**9. Check the assembly status of the parts after servicing.**

☞ Maintain the status before servicing.

**10. Pull out the power cord with holding the plug.**

☞ Be care of the electric shock and fire when the cord is damaged.

**11. Unplug the power plug from the outlet when the wash machine is not used.**

☞ Be care of the electric shock and fire due to the strike of the lightening.

**12. Do not use or store the spray or flammable materials(including gasoline,alcohol and etc.) around the wash machine.**

☞ Be care of the explosion or fire due to the electric spark.

**13. Do not put the bowl of water or wet laundry on the wash machine.**

☞ If the water is penetrated to the wash machine, this may cause the electric shock or fire.

**14. Do not install the wash machine in the place where the snow or rain falls.**

☞ It may cause the electric shock and fire and shorten the product life.

**15. Do not push the control buttons with the awl,pin, or sharp materials.**

☞ It may the electric shock and trouble.

**16. Check the wash machine is leveled horizontally and installed properly on the floor.**

☞ The vibration may shorten the product life.

**17. Joint the wire by the connector correctly.**

☞ When the wire is jointed by the tape, this may cause the fire due to the tracking.

**18. When the wash machine is to be laid for the service, put the pad on the floor and lay the product at side slowly.**

☞ If the wash machine is laid front, the relay may be damaged by the tub.

**19. When the wash-heater is replaced, check it is inserted in the bracket-heater and screw the nut.**

☞ If the wash-heater is not inserted in the bracket-heater properly, this may cause the noise and leakage since it is contacted to the drum.

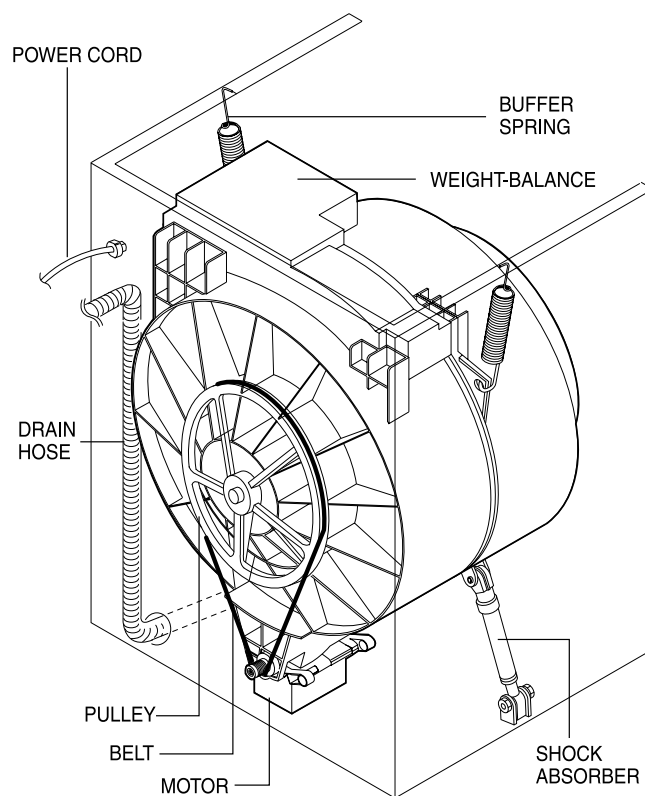
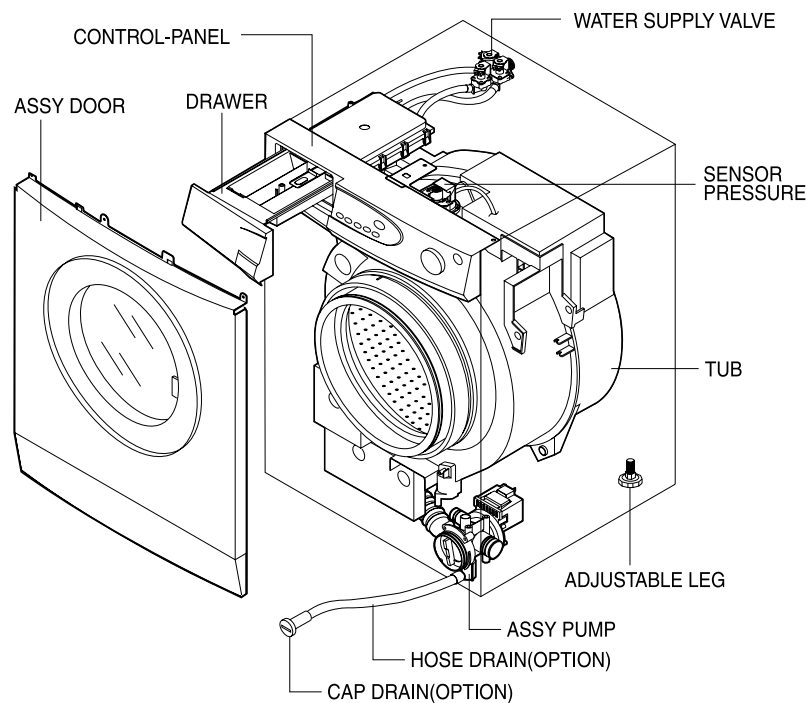
# 1. Specifications

WASH TYPE	FRONT LOADING TYPE					
DIMENSION	GROSS		W 680mm X D 665mm X H 892mm			
	NET		W 598mm X D 550mm X H 844mm			
WATER PRESSURE	50 kPa ~ 800 kPa					
WEIGHT	GROSS		80 kg			
	NET		75 kg			
WASH and SPIN CAPACITY	5.5 kg (DRY LAUNDRY)					
POWER CONSUMPTION	WASHING		220 V		180 W	
			240 V		180 W	
	WASHING and HEATING		220 V		2000	
			240 V		2400	
	SPIN	MODEL	P1401	P1201	P1001	P801
		220-240V	550W	500W	500W	430W
	PUMPING		34 W			
WATER CONSUMPTION	49l (STANDARD COURSE)					
SPIN REVOLUTION	MODEL		P1401	P1201	P1001	P801
	rpm		1400	1200	1000	800

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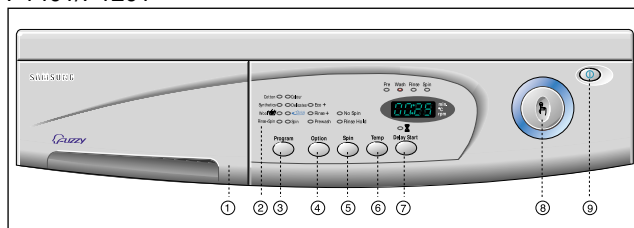
## 2. Overview of the Washing Machine

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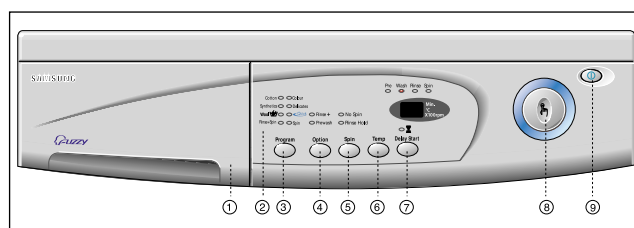


### 3. Overview of the control panel

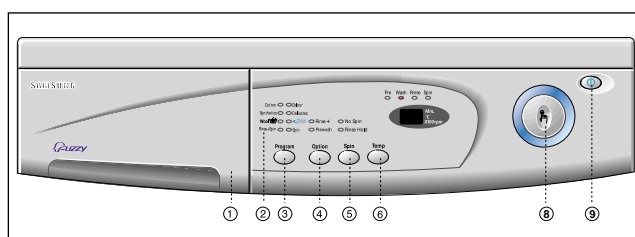
P1401/P1201



P1001



P801



#### 1. Detergent dispenser

#### 2. Display panel

Displays the remaining wash cycle time and error messages.

#### 3. Program button

Press the button to select one of the eight available wash programs.

Cotton, Colour, Synthetic, Delicate, Wool, Quick, Rinse+Spin, Spin

#### 4. Option Button

Press the button repeatedly to cycle through the available partial wash options

P1401/P1201 : Eco+ → Rinse+ → Prewash → (Eco+ + Rinse+) → (Rinse+ + Prewash) → Cancel → Eco+

P1001/P801 : Rinse+ → Prewash → (Rinse+ + Prewash) → Cancel

**Note** : Prewash is available only with Cotton, Colour, Synthetic or Delicate programs.

#### 5. Spin selection button

Press the button repeatedly to cycle through the available spin speed options.

<b>P1401</b>	no, rh, 400, 600, 800, 1000, 1200, 1400 rpm
<b>P1201</b>	no, rh, 400, 600, 800, 1000, 1200 rpm
<b>P1001</b>	no, rh, 400, 600, 800, 1000 rpm
<b>P801</b>	no, rh, 400, 600, 800 rpm

*no: no spin,  
rh: rinse hold*

When pressing this button during operation, you can see the selected spin speed in the display panel.

#### 6. Temperature selection button

Press the button repeatedly to cycle through the available water temperature options (cold water, 30 °C, 40 °C, 60 °C and 95 °C).

When pressing this button during washing, you can see the selected temperature in the display panel.

#### 7. Delay Start button

Press the button repeatedly to cycle through the available delayed start options (from 1 hour to 24 hours in one hour increments).

#### 8. Start/Pause button

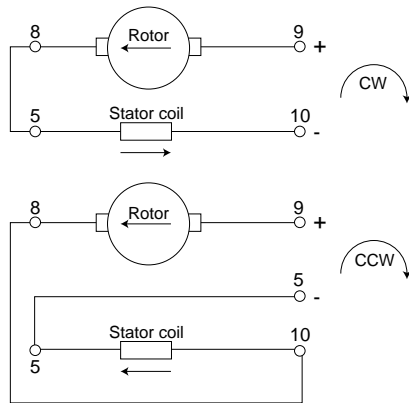
Press to pause and restart programs.

#### 9. Ⓚ (On/Off) button

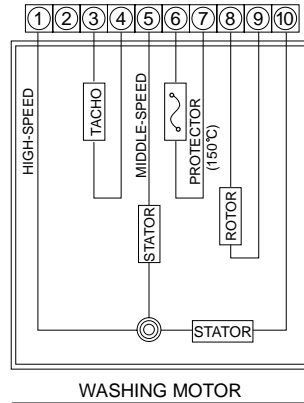
Press once to turn the washing machine on, press again to turn the washing machine off. If the washing machine power is left on for longer than 10 minutes without any buttons being touched, the power automatically turns off.

## 7. Designation of Main Components

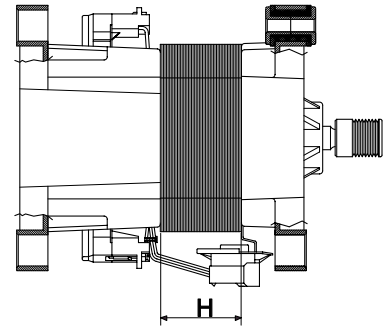
### 7-1 Normal / Reverse Revolution of Motor and R. P. M. Control



<Figure1>



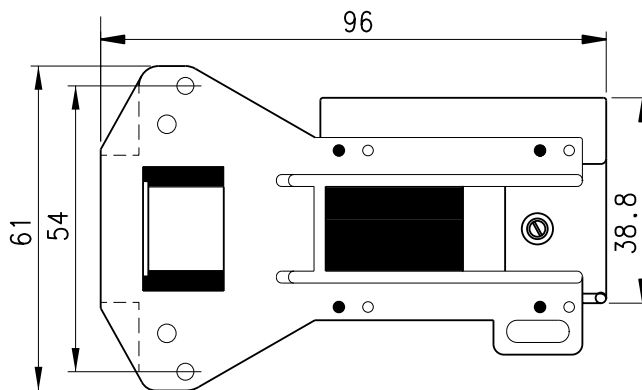
<Figure2>



<Figure3>

( $\pm 7\%$ )	STATOR(5.10)	STATOR(5.1)	ROTOR(8.9)	TACHO(3.4)	PROTECTOR(6.7)	"H"(mm)	Code-No	Remark
Resistance value	2.07 $\Omega$	0.90 $\Omega$	2.35 $\Omega$ $\uparrow$	42.7 $\Omega$	0	45	DC31-00002C	B
Rated value	220~240V / 50Hz							

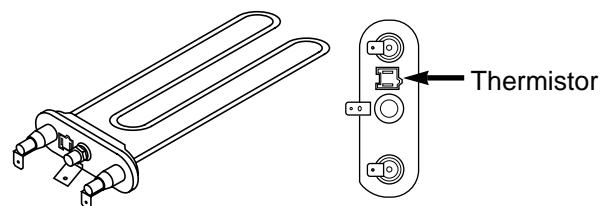
### 7-2 Door safety Device



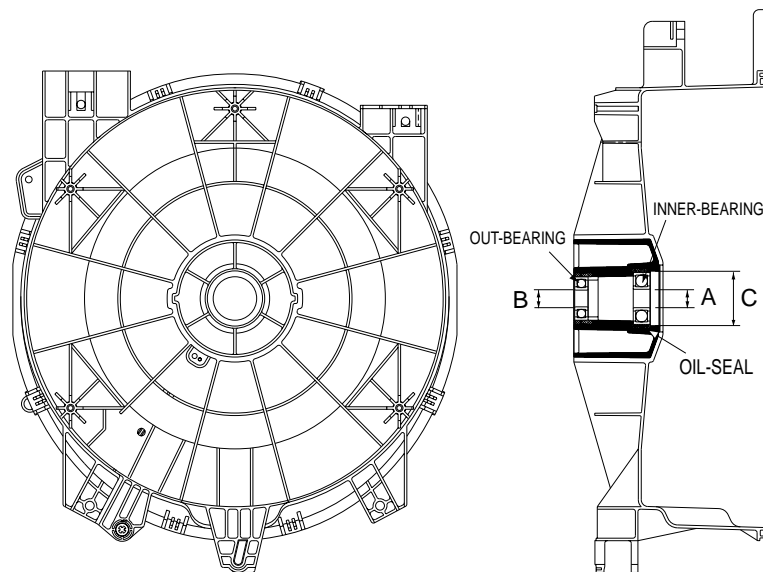
DC61-00122A

### 7-3 Heater

- 1) Capacity : AC 230V/2000W
- 2) Location : Bottom of TUB
- 3) Function : Raise the water temperature supplied at the wash process.
- 4) Resistance value : 23 $\Omega$  ~ 29 $\Omega$
- 5) Thermal Fuse : 128°C



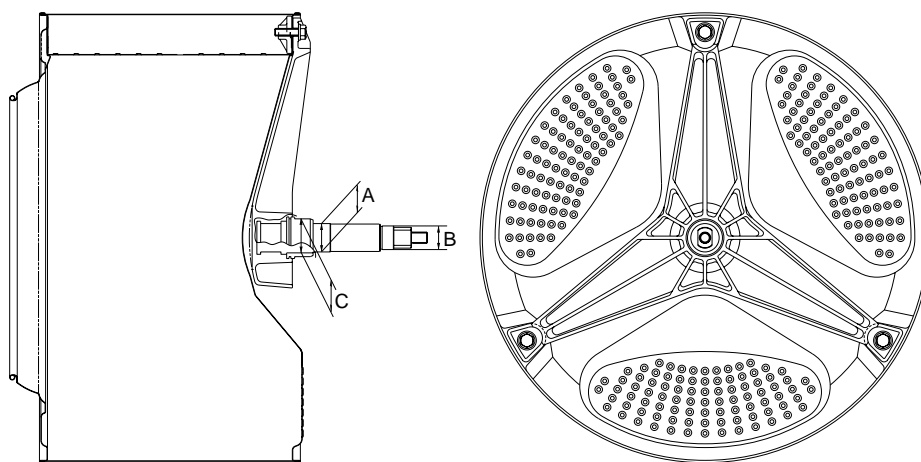
## 7-4 ASSY-TUB BACK



(unit : mm)

TYPE	INNER-BEARING(A)	OUT-BEARING(B)	OIL-SEAL(C)	Assy-Housing Bearing(D)	Assy-Tub Back	REMARK
I	ø 30	ø 25	ø 43.9	DC97-00419A	DC97-00214A	P1401
II	ø 30	ø 25	ø 43.9	DC97-00125A	DC97-00214B	P1001/P1201
III	ø 20	ø 17	ø 24.3	DC97-00215D	DC97-00214K	P801

## 7-5 ASSY- DRUM



(unit : mm)

TYPE	(A)	(B)	(C)	CODE-NO.	REMARK
I	ø 30	ø 25	ø 44.7	DC97-01463A	Lifter type P1001/P1201/P1401
II	ø 30	ø 25	ø 44.7	DC91-12281A	P1001/P1201
III	ø 30	ø 25	ø 44.7	DC97-00785B	P1401
IV	ø 20	ø 17	ø 25	DC97-00785A	P801

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## 4. General Error Function

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- When an error occurs, this function starts to keep generating error melody sounds and displays error indicators as shown in the followings per corresponding error by blinking in 0.5sec interval until the error status is completely cleared out. In this case, all the driving devices are turned off until the error is cleared out.

### 1. WATER SUPPLY ERROR

- Display shows 'E1'.
- Water Supply Error occurs when water level frequency does not show changes more than 100Hz or water is not supplied up to the water level presetting for 20 min or more at the time of initial water supply.
- The error status can be cleared by turning POWER S/W OFF and resuming the POWER ON initial status.

### 2. WATER DRAIN ERROR

- Display shows 'E2'.
- In case the water level frequency is 25.5KHz or less in the initial phase of UNB-detecting cycle.
- Water Drain error can be cleared by turning POWER S/W OFF and resuming the POWER ON initial status.

### 3. OVER-FLOW ERROR

- Display shows 'E3'.
- Over-Flow error occurs when the water level is in abnormal operation. It can be cleared by turning POWER S/W OFF. Water is drained prior to POWER S/W OFF and it is forced to be drained for 2 min if a frequency of more than 25.24 KHz is detected.

### 4. DOOR OPEN ERROR

- Display shows 'door'
- Door Open error can be cleared by closing the door.

### 5. UNBALANCE ERROR

- Display shows 'E4'.
- Laundry load is unbalanced; loosen any tangled laundry.
- If only one item of clothing needs washing, such as a bathrobe or jeans, the final spin result might be unsatisfactory and an "E4" error message will be shown in the display window.
- Unbalance error is cleared by POWER S/W OFF and by resuming the POWER ON initial status.

### 6. WATER HEATER ERROR

- Display shows 'E5,E6'.
- In case the water temperature rises by 40°C or more in 5 min. or by 2°C less in 10 min after heating is started.
- It can be cleared by turning POWER S/W OFF.

### 7. ASS'Y PRESSURE S/W ERROR

\* Generated Frequency Signal of WATER LEVEL(W/L) S/W (KHz)

Level	Low Level	High Level
Abnormal W/L Frequency	30.00 KHz	15.00 KHz

- If the same signal as the above table is detected for more than 5 seconds, it is a PRESSURE S/W Error.
- When the error occurs, water drain pump will operate for 3 min. and then turn off the water drain pump. Then the display shows 'E7' indicating a pressure s/w error indicator.

### 8. ABNORMAL WATER TEMPERATURE ERROR

Course	Water Temp
Delicate	50°C or more
Wool	50°C or more

- In case the water temperature is 50°C or more in Delicate and Wool course.
- At the time of initial water supply, if the water temperature is not appropriate, water starts to be drained and it is forced to be drained for 2 min when the abnormal frequency of 25.24KHz is detected.
- Display shows 'E8'.
- This error can be cleared by POWER S/W OFF.

### 9. WATER LEAKAGE ERROR (E9)

- Water Leakage error occurs when water is drained naturally after washing program starts.



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## 5. Trouble Diagnosis

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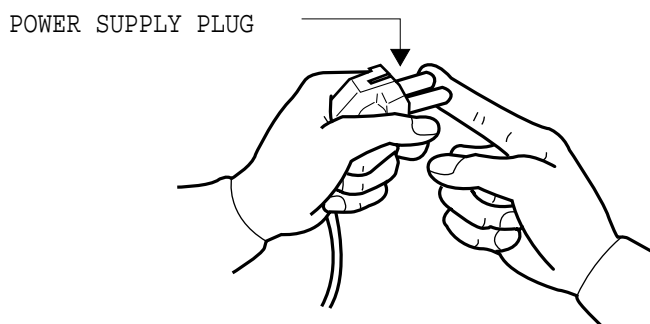
- As the micom wash machine is configured of the complicate structure, there might be the service call.  
Below information is prepared for exact trouble diagnosis and suitable repair guide.

### Caution for the Repair and Replacement

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**Please follow below instruction for the trouble diagnosis and parts replacement.**

- 1) As some electronic components are damaged by the charged static electricity from the resin part of wash machine or the human body, prepare the human body earth or remove the potential difference of the human body and wash machine by contacting the power supply plug when the work contacting to PCB is executed.



- 2) Since AC220~240V is applied to the triac T1 and T2 on P.C.B, the electric shock may occur by touching and be careful that the strong and weak electricity are mixed.
- 3) As the P.C.B assembly is designed for no trouble, do not replace the P.C.B assembly by the wrong diagnosis and follow the procedure of the trouble diagnosis when the micom is not operated normally.

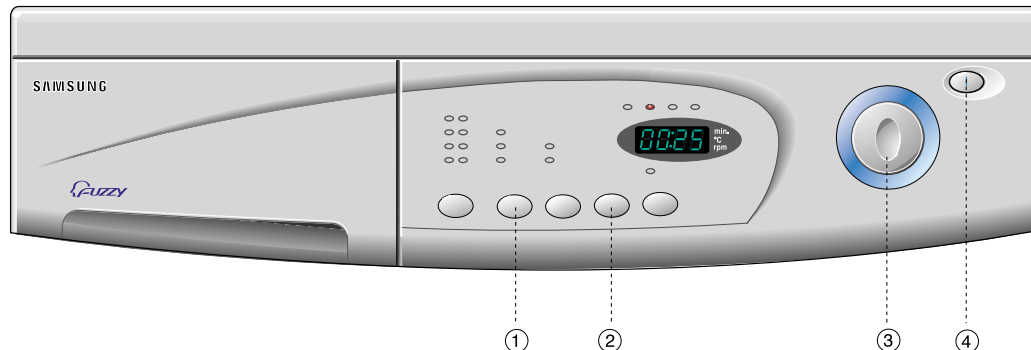
## 5-1. Trouble Diagnosis

No	Item	Cause and treatment
1	The power is not supplied	<ul style="list-style-type: none"> <li>- Is the PCB connector connected well?</li> <li>- Is the voltage normal?</li> <li>- Is the power supply plug connected well?</li> <li>- Is the noise filter connected well?</li> <li>- Is the secondary output of the power supply transformation normal?</li> <li>- Is the fuse disconnected? (option)</li> <li>• If above points are not found, the PCB assembly is out of order. Replace it.</li> </ul>
2	The water is not supplied.	<ul style="list-style-type: none"> <li>- Is the knob open?</li> <li>- Did you push START/PAUSE button after selecting the course?</li> <li>- Is the water supply valve connected well?</li> <li>- Is the winding of the water supply valve continuous?</li> <li>- Is the connection and operation of the pressure switch normal?</li> <li>• If above points are not found, the PCB assembly is out of order. Replace it.</li> </ul>
3	The wash does not start though the water supply is stopped.	<ul style="list-style-type: none"> <li>- Is the connection and operation of the pressure switch normal?</li> <li>- Is the pressure switch hose damaged so that the air is leaked?</li> <li>- Is the pressure switch hose bent?</li> <li>- Check the operation of the water level switch.</li> <li>• If above points are not found, the PCB assembly is out of order. Replace it.</li> </ul>
4	The drum does not rotate during washing.	<ul style="list-style-type: none"> <li>- Is the belt connected well?</li> <li>- Is the winding of the motor continuous? (Rotor winding, stator winding, generator)</li> <li>- Is the motor protector normal?</li> <li>• If above points are not found, the PCB assembly is out of order. Replace it.</li> </ul>
5	The drum rotates by one direction during washing. (The drum rotates to one direction for SPIN.)	<ul style="list-style-type: none"> <li>- The PCB assembly is out of order. Replace it. (Inversion relay open trouble)</li> </ul>
6	Drainage problem.	<ul style="list-style-type: none"> <li>- Is the drainage hose bent?</li> <li>- Is the winding of the drainage pump continuous?</li> <li>- Is the drain filter clogged by the waste?</li> <li>• If above points are not found, the PCB assembly is out of order. Replace it.</li> </ul>
7	Dehydration problem.	<ul style="list-style-type: none"> <li>- The unbalance is detected.</li> <li>- Put in the laundry uniformly and start again.</li> </ul>
8	Abnormal noise during SPIN.	<ul style="list-style-type: none"> <li>- Is the pulley nut loosen?</li> <li>- Is the transport safety device removed?</li> <li>- Is the product installed on the level and stable place? (Little noise may be generated during the high-speed SPIN.)</li> </ul>
9	Leak breaker or current/leak breaker is down during washing.	<p>&lt;When the leak breaker and current breaker is installed separately&gt;</p> <ul style="list-style-type: none"> <li>- When the leak breaker is down, check and make the earth of the outlet.</li> <li>- When the current is down, the current is leaked.</li> </ul> <p>&lt;Is the breaker down when the leak/current breaker is combined?&gt;</p> <ul style="list-style-type: none"> <li>- Check the rated capacity of the current and leak breaker. The current breaker may be down due to the lack of the current when the wash machine and other apparatus are used. In this case, execute the cold water wash to check whether the current capacity is lack.</li> </ul>
10	The heating is not executed.	<ul style="list-style-type: none"> <li>- Is the wash heater terminal unplugged?</li> <li>- Is the wash heater normal?</li> <li>- If above points are not found, the PCB assembly is out of order. Replace it.</li> </ul>

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## 6. Test Mode

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### 1. Driving Compartment Test Mode

- A. Hold down "1" and "2" keys simultaneously and then press POWER S/W "4" on.  
(Whole lamps turn on and display show "tl" after 3 Seconds.)
- B. The driving compartment can be tested when you press "3" key right after entering into the initial stage of the TEST MODE.

#### • Driving Compartment Test

Pre-wash VALVE ON(0.3sec) → OFF(0.3sec) → COLD VALVE ON(0.3sec) → [OFF(0.3sec) → HOT VALVE ON (0.3sec) : **OPTION**] → OFF(0.3sec) → Rinse VALVE ON(0.3sec) → OFF(0.3sec) → Pump MOTOR ON(0.3sec) → OFF(0.3sec) → MOTOR Left (0.5sec) → OFF(0.5 sec) → MOTOR Right (0.5sec) → OFF(0.3sec) → HEATER RELAY ON(0.3sec) → OFF(0.3sec) → DOOR OPEN  
(Function continues when door is closed)

### 2. THERMISTOR TEST MODE

- A. Hold down "1" and "2" keys simultaneously and then press POWER S/W "4" on.  
(Whole lamps turn on and display show "tl" after 3 Seconds.)
- B. Press the "1" key and display shows "t2"
- C. Press the "3" key and display shows the inside temperature of tub.

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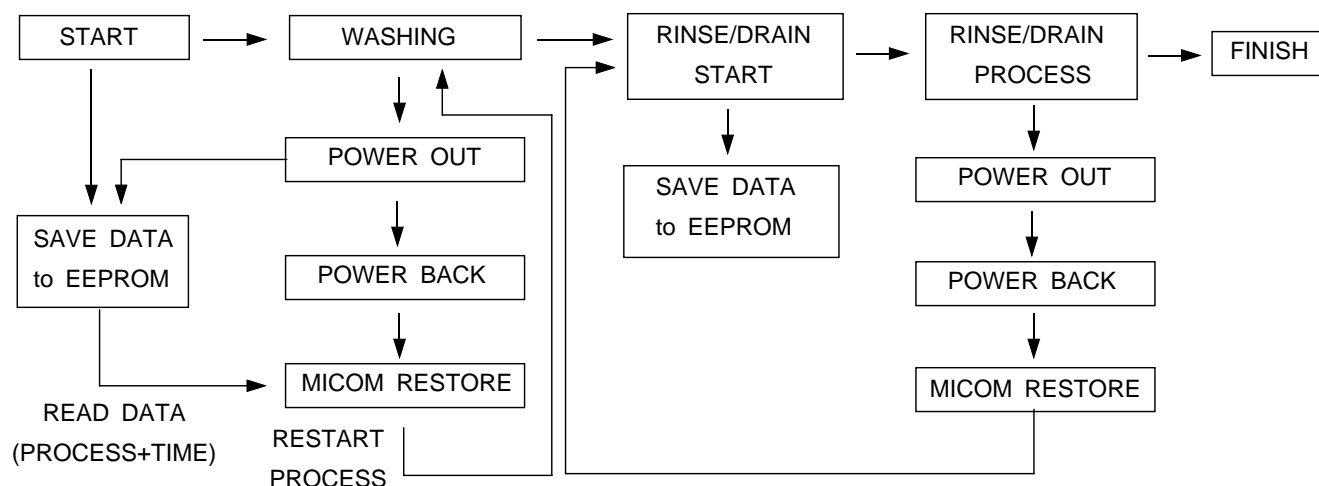
## 5. Main function

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### 9) Power-out compensation function

- If power is out on selected process, the process before power out is stored to EEPROM, once power is back the process before power out continues.
- When power is back, washing process starts from the process at the point of the power out, rinse/drain process starts from the initial process.

#### POWER-OUT COMPENSATION FUNCTION PROCESS



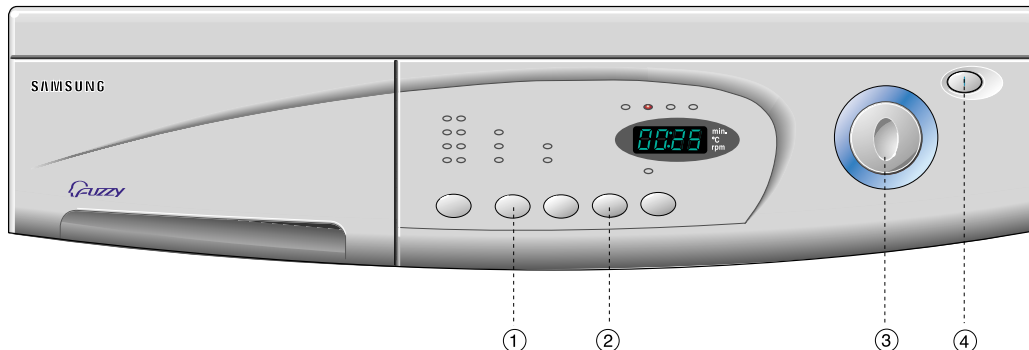
### 10) Water heater Error function

- ① This function starts working, when the heater works abnormally.  
(this function begins sensing the heater 2 minutes later, after the heater operating)
- ② The value of the initial thermistor(A1) is compared with that of the thermistor(A2) in 2 minutes ( $Y=A2-A1$ )  
- For 10 minute the variance of temperature(Y) is less than  $2^{\circ}\text{C}$  "E5" message is displayed on the panel.
- ③ The value of the initial thermistor(A1) is compared with that of the thermistor(A2) in 11 minutes ( $Y=A2-A1$ )  
- For 1 minute the variance of temperature(Y) increases more than  $7^{\circ}\text{C}$  (0.3V) "E6" message is displayed on the panel.
- ④ At this time heater, Error "E5 (heater do not work), E6(overheated)" is displayed and all working process off
- ⑤ The heater operating continues during heating hours, if washing hour is left over, the residual washing process keeps going without heating.

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## 6. Test Mode

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### 1. Driving Compartment Test Mode

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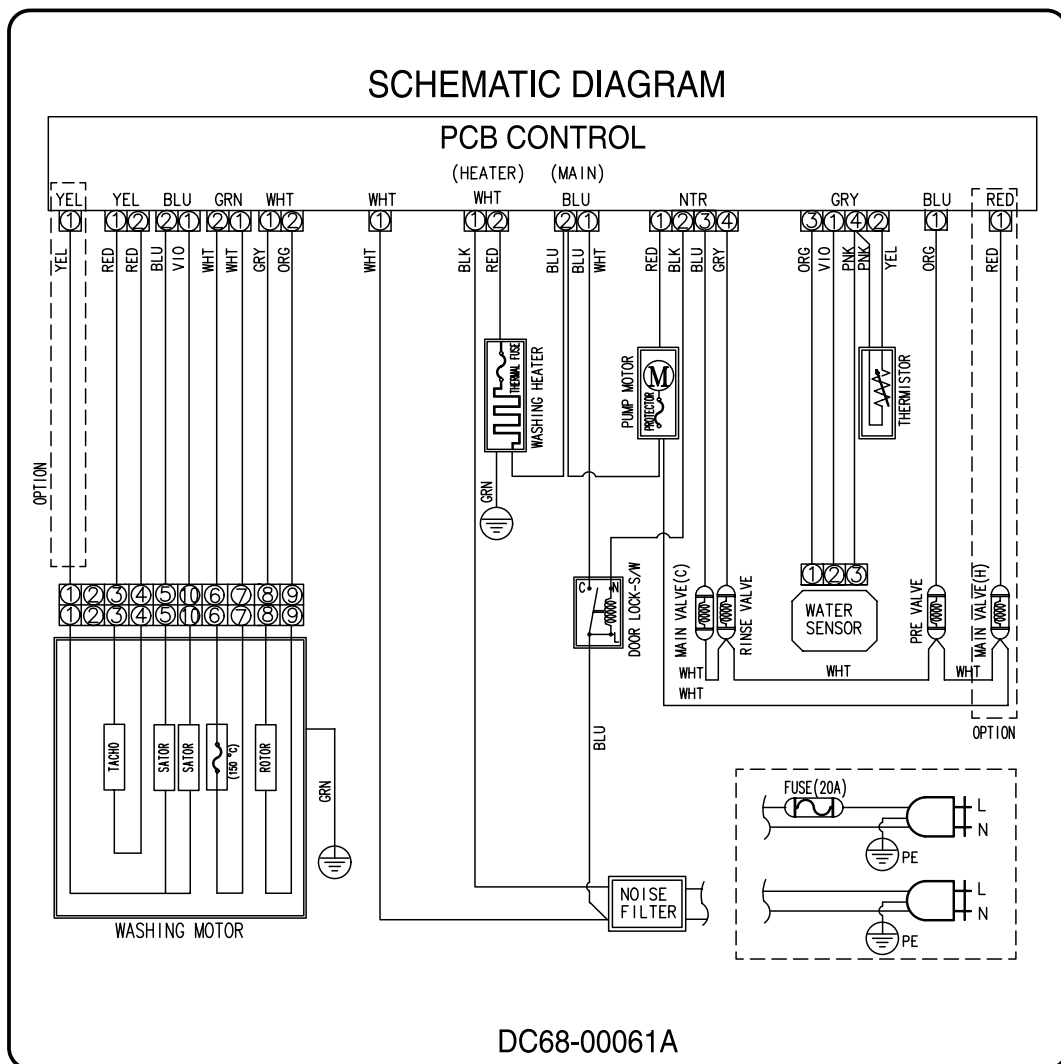
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(Function continues when door is closed)

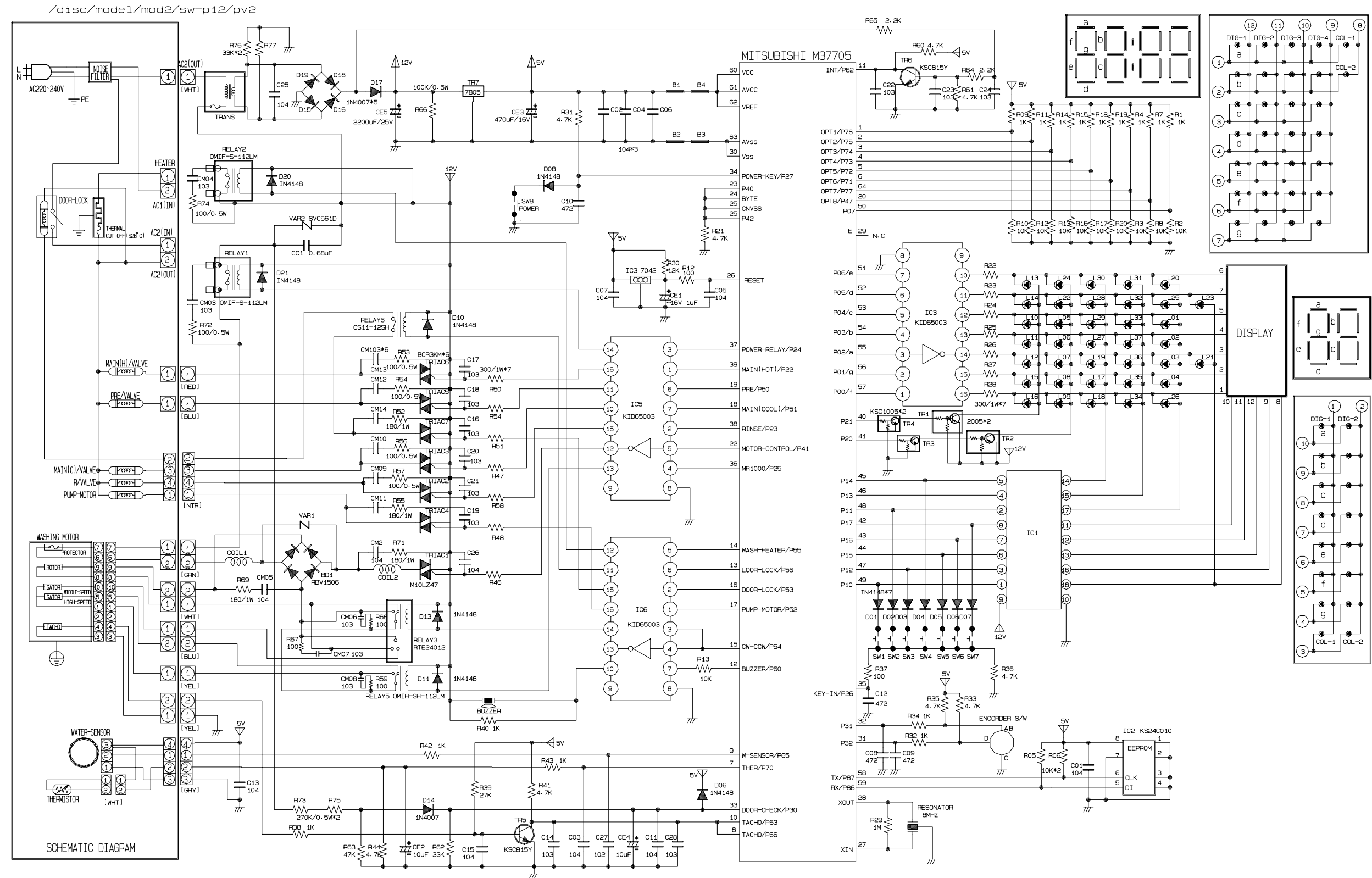
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- B. Press the “1” key and display shows “t2”
- C. Press the “3” key and display shows the inside temperature of tub.

## 8. PCB Schematic Diagram



## 8. PCB CIRCUIT DIAGRAM



## 8-1. WB : ASSY-PCB Part List

NO.	Part Code	Code No.	Q'ty	Description	Specificatio	Remark
1	WB002	1401-001007	1	THYRISTOR-TRIAC	10A,SM10LZ47(TOSHIBA)	TRIAC1
2	WB002	1401-001024	5	THYRISTOR-TRIAC	2A,SM2LZ47(TOSHIBA)	TRIAC 2~6
3	WB003	0402-001023	1	DIODE-BRIDGE	RBV1506,600V,15A,SIP-4	BD1
4	WB004	3501-001180	1	RELAY-MINIATURE	12V DC,RTE24012	RELAY3
5	WB004	3501-001156	2	RELAY-POWER	12VDC,0.53W,16000MA,1FORMA	RELAY 5
6	WB004	3501-001157	3	RELAY-POWER	12VDC,0.53W,16000MA,1FORMC	RELAY 1,2
7	WB004	3501-001007	1	RELAY	12Vdc,200mW,5A,(TAKAMISAYA)	RELAY6
8	WA010	DC26-00005B	1	TRANS-FORMER	450MA,220~240VAC,11VDC	TRANS
9	WB003	0402-000137	6	DIODE-RECTIFIER	1N4007,1000V,1A	D15-D19
10	WB006	0504-000130	2	TR-DIGITAL	KSR1105	TR3,TR4
11	WB006	DE13-20016A	1	IC-VOLT REGU.	KA7805A	TR7
12	WB006	0504-000159	2	TR-DIGITAL	KSR2105	TR1,TR2
13	WB006	0501-000465	1	TR-SMALL	MMBT390X	TR5,TR6
14	WB007	1202-000141	1	IC-VOL. COMP	7033,SOT-89	IC4
15	WB008	2802-001058	1	RESONATOR-CERAMIC	8MHz,0.2%,TP,10x5x8mm	RESO
16	WB007	DE13-20017A	3	IC-DRIVE	KID65003AP,DIP,16P,STICK	IC3,IC5,IC6
17	WB007	1103-001160	1	IC-EEPROM	4C010,128X8BIT,DIP,8P	IC2
18	WB009	DE30-20016A	1	BUZZER	CBE2220BA,STICK	BZ
19	WB010	3404-001022	7	SWITCH-TACT	15V,20mA,130°±40gf,6x6x5mm	SW 1~7
20	WB011	DE07-20040A	*	LED LAMP	SLH-34VC70F,RED,T,PI5	
21	WB012	0703-001056	1	LED DISPLAY	Y-GRN,4dig,7seg,46X19X24.6mm	



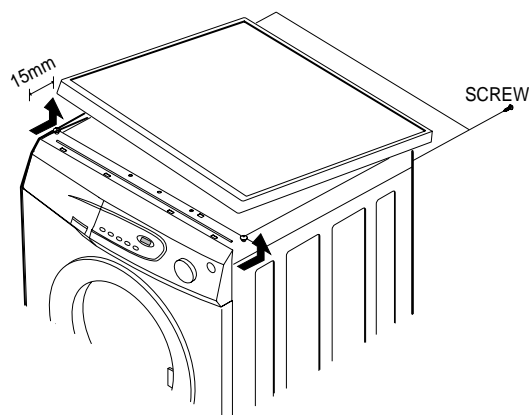
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## 9. Assemble and Disassemble

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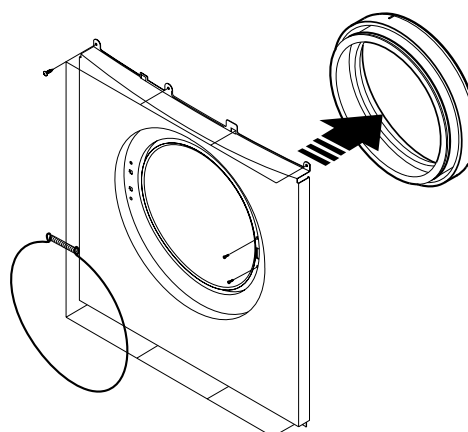
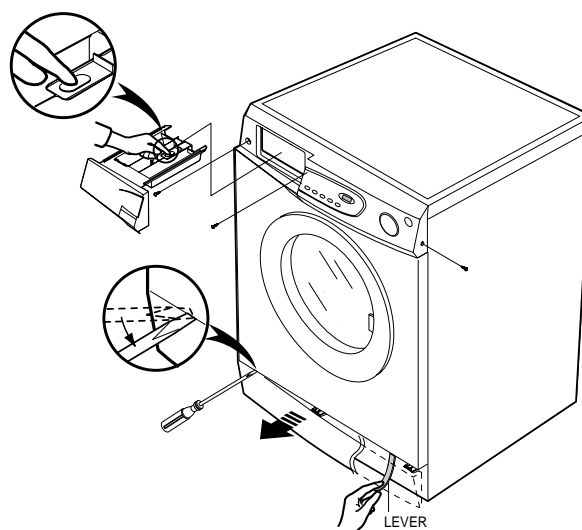
### 1. ASS'Y-COVER TOP

- 1) Remove two screws fixing the top-cover on back side.
- 2) Push the top-cover back about 15mm and pull it up.
- 3) It's possible to exchange and service Assy-Panel (PCB), the pressure-sensor, the noise-filter, the water valve and trans(option).



### 2. FRAME FRONT

- 1) Remove the top-cover and the ass'y drawer.
- 2) Remove two screws fixing the control-panel on front side and the screw on right side.
- 3) Remove the cover-front(L) by using the (-)driver.
- 4) Pull the lever and open the ass'y-door.
- 5) Part the diaphragm and the wire diaphragm away from the frame-front.
- 6) Remove the eight screws fixing the frame-front.
- 7) It's possible to exchange and service the heater, the pump, the shock-absorber and the door lock s/w.



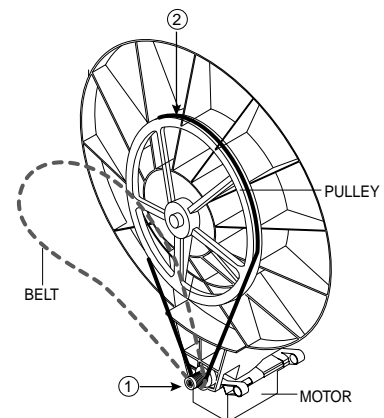
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## 9. Assemble and Disassemble

---

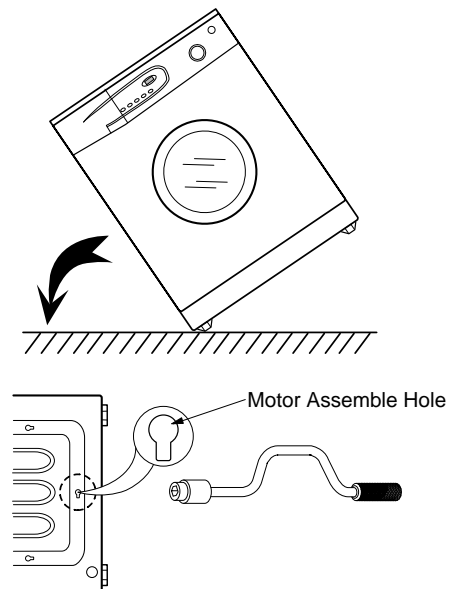
### 3. BELT

- 1) Remove the top-cover.
- 2) Disassemble and assemble the belt.
- 3) Check the belt is located at center of the motor-pulley.  
<When assemble the belt>  
Hook the belt on the motor pulley 1) and place it around the pulley 2).



### 4. MOTOR

- 1) Lay down the washer on left side.
- 2) Remove the wire housing from the motor.
- 3) Remove the bolt fixing the motor with the box drive on back side.
- 4) Remove the motor.



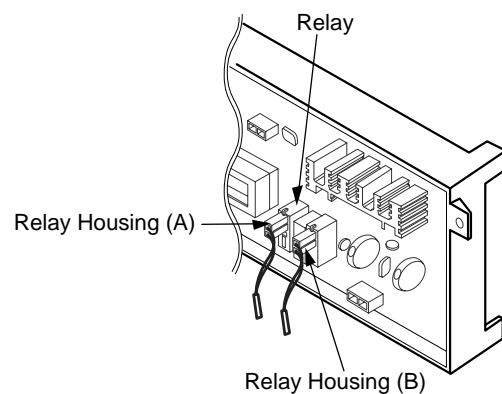
### 5. How to Assemble the RELAY Housing.

<CAUTION>

Insert the Relay Housing to the Relays on the opposite direction each other.

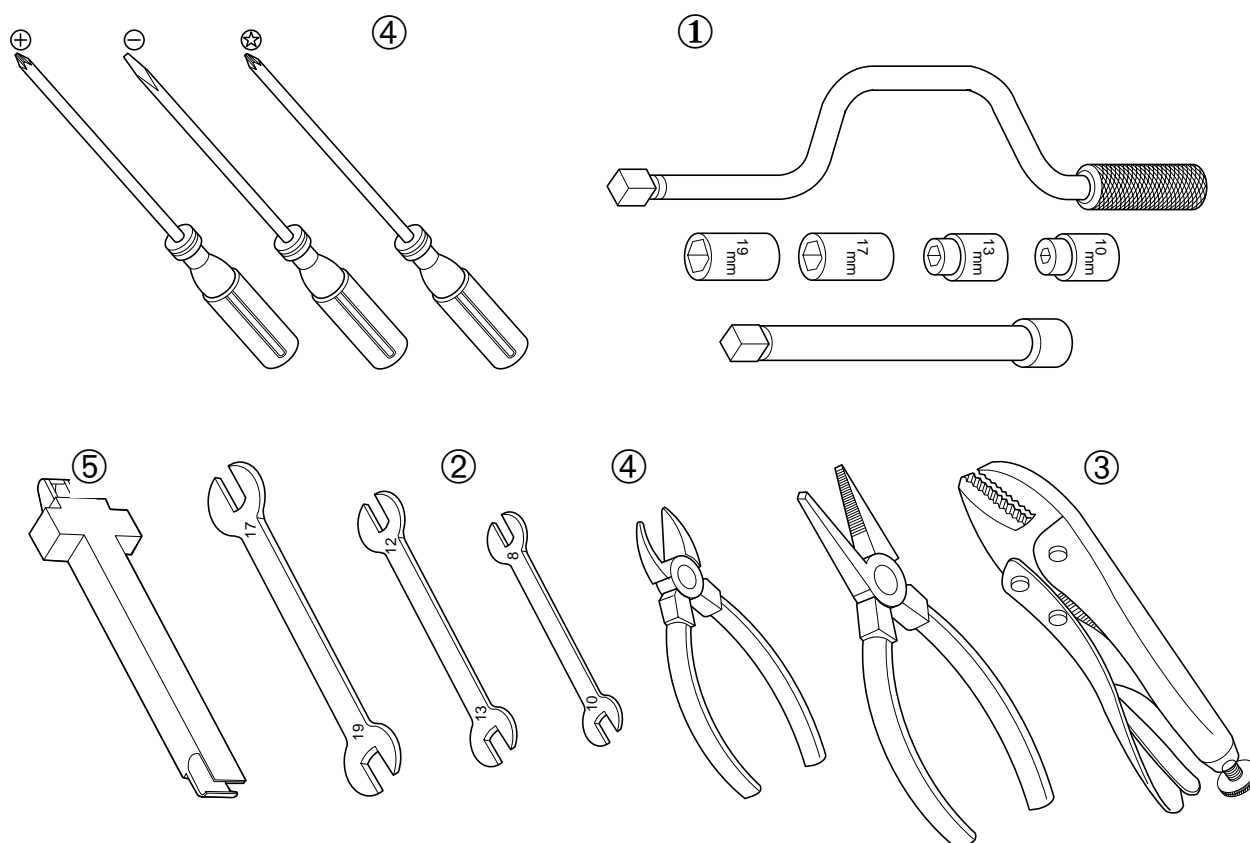
[Relay Housing Color]

A	B
WHITE	BLUE



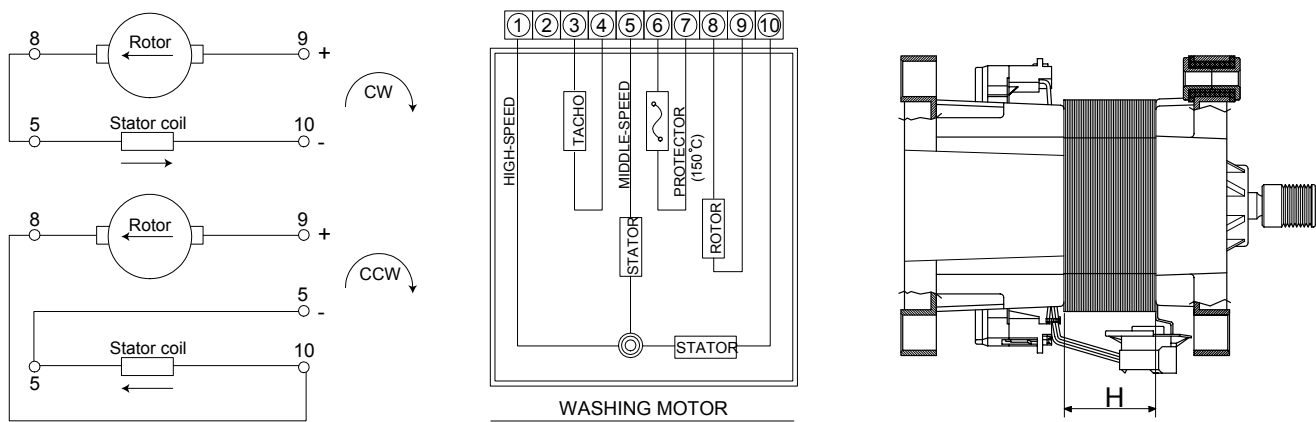
## 10. Tools for Disassembly and Assembly

NO.	TOOL		
①	Box driver	10mm 13mm 17mm 19mm	Heater (1) Motor (1), Balance (5) 2 holes of each left and right of the shock absorber 1 Pulley hole
②	Double-ended spanner	10, 13 17, 19mm	Replaceable for the box driver. Since the bolt runs idle when the box driver is used, use the box driver 17mm.
③	Vice pliers		Tool to protect the idle and abrasion of the bolt for the box driver.
④	Other(Driver, Nipper, Long nose)		General tools for the after service.
⑤	JIG for the Tub		1 (Disassemble and Assemble)



# 10. Designation of Main Components

## 10-1 Normal / Reverse Revolution of Motor and R. P. M. Control



<Figure1>

<Figure2>

<Figure3>

( $\pm 7\%$ )	STATOR(51)	ROTOR(8.9)	TACHO(3.4)	PROTECTOR(6.7)	"H"(mm)	Code-No.	Remark
Resistance value	2.08 $\Omega$	1.99 $\Omega$	38.8 $\Omega$	0	39	DC31-00002E	C1235
Rated value	220~240V/50Hz						

## 10-2 Door safety Device

### 1)Capacity

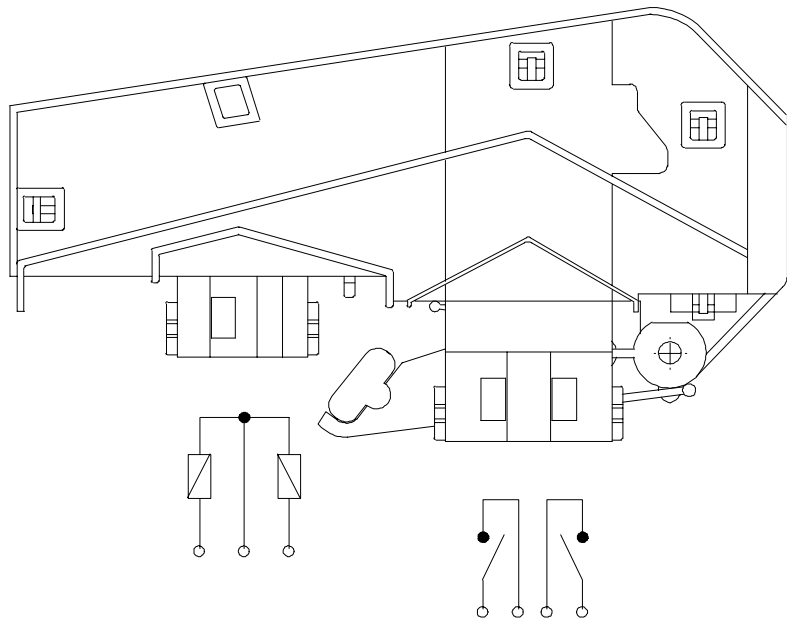
Code No : DC64-00652A

3P 1 - 2 Locking : 135 $\Omega \pm 10\%$

2 - 3 UnLocking : 135 $\Omega \pm 10\%$

4P 1 - 2 Door Lock 250V 16A

3 - 4 Door close 250V (16)1A

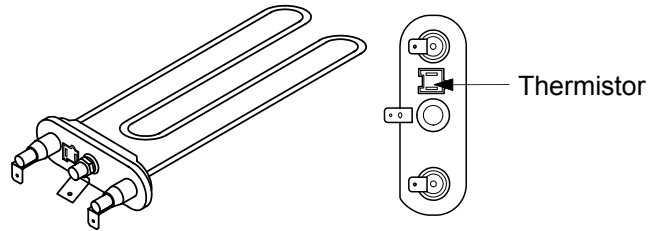


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### 10-3 Heater

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- 1) Capacity : AC 230V/1900W
- 2) Location : Bottom of TUB
- 3) Function : Raise the water temperature supplied at the wash process.
- 4) Resistance value : 23~29
- 5) Thermal Fuse : 169°C



### 10-4 Detergent tub and water supply value

---

A Detergent tub is composed of housing and 3 drawers . supplied water flows into the 3 drawer-detergent tub by way of classifier at each washing process.

three open drainage way whith detergent and supplied water by way of connector located under the housing flows into washing tub.

the water supply valve is composed of a hot water valve(1 way) and a cold water valve(2way) and water flow per min in the valve is below.

	Hot water valve(1 way)
water flow(L/min)	10L
resistance value	4.3kΩ
power consumption	AC 220v ~ 240V 50/60Hz
usable water pressure	0.5 ~ 8 kg/cm <sup>2</sup>

### 10-5 Shock absorber and buffer spring

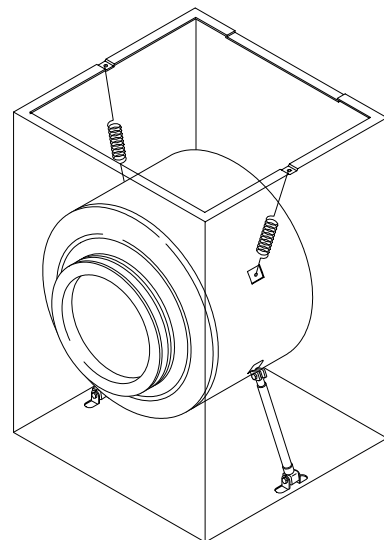
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This wash machine is equipped with 2 Shock absorbers with same capacity and with 2 buffer springs. 2 Shock absorber are placed under the tub and outside case , 4 buffer springs are placed on the right and left of the upper side of outside case.

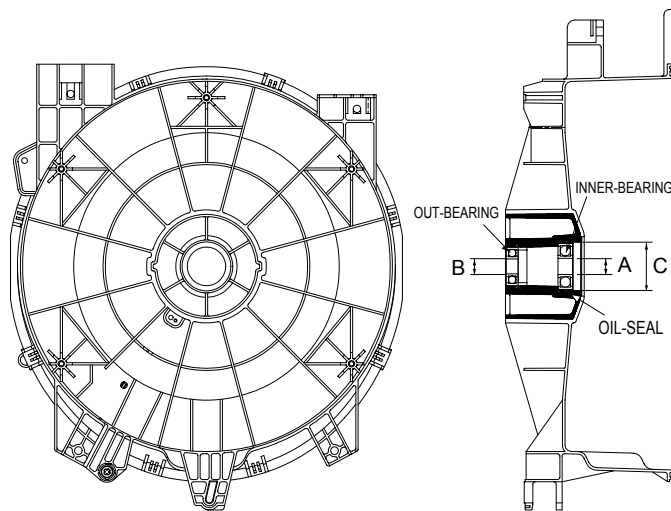
Shock absorber function: during wash, dehydration absorb the shock.

buffer spring: buffering the vibration

device	capacity of Shock absorber
Shock absorber	8±2kg



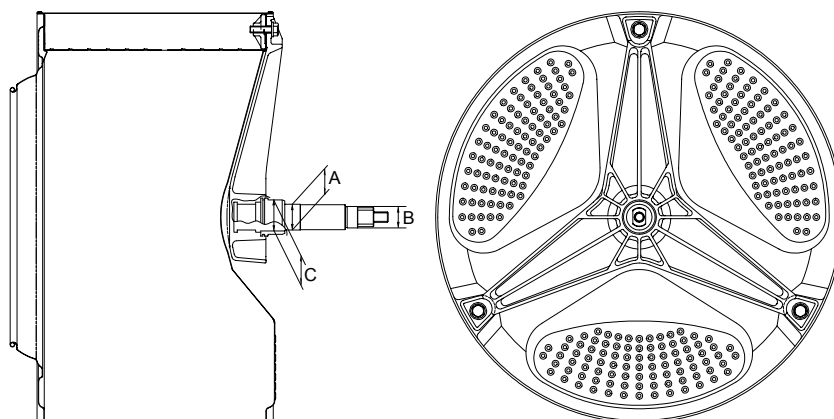
## 10-6 ASSY-TUB BACK



(unit : mm)

TYPE	INNER-BEARING(A)	OUT-BEARING(B)	OIL-SEAL(C)	Assy-Housing Bearing(D)	Assy-Tub Back
I	ø 30	ø 25	ø 34	DC97-05168A	DC97-00214R

## 10-7 ASSY- DRUM

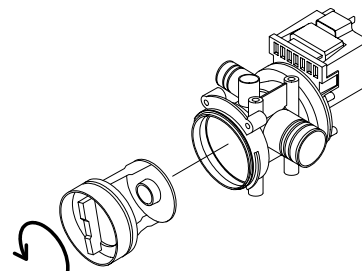


(unit : mm)

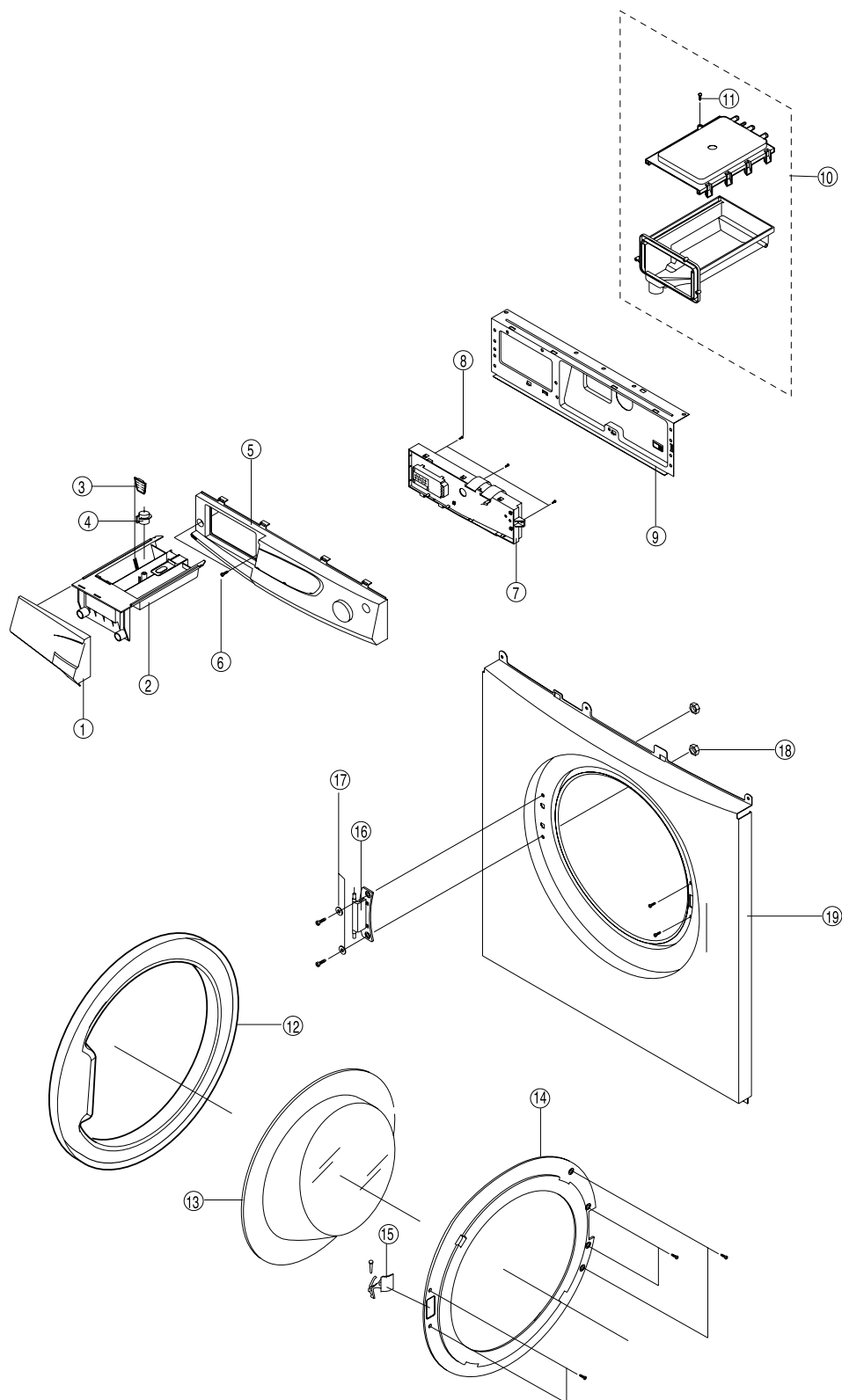
TYPE	(A)	(B)	(C)	CODE-NO.	REMARK
I	ø 30	ø 23	ø 35	DC97-01463H	

## 10-8 ASSY-PUMP DRAIN

- 1) Capacity : AC 230V 34W
- 2) Location : Front bottom(R)
- 3) Resistance : 150Ω ~ 180Ω



## 11. WC:TOP(FRONT) - Exploded View

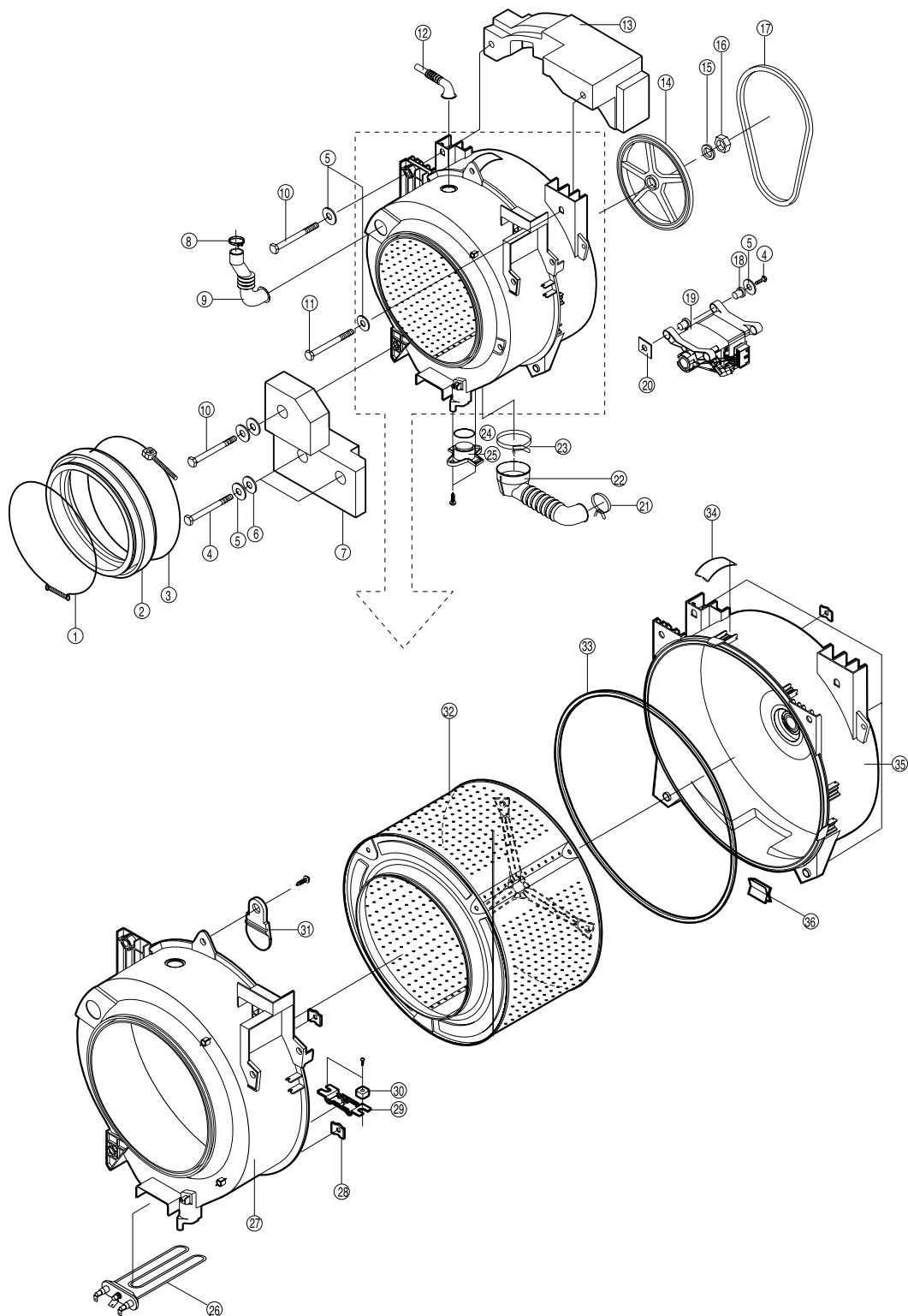


## 11-1. WC:TOP(FRONT) Parts List

No.	Location No.	Description	Code No.	Q'ty	P801	P1001	P1201	P1401
1	WCD01	PANEL - DRAWER	DC63-00030M	1	●	-	-	-
			DC63-00030L	1	-	●	-	-
			DC63-00030K	1	-	-	●	-
			DC63-00030J	1	-	-	-	●
2	WCD02	BODY-DRAWER	DC61-30348A	1	●	●	●	●
3	WCD03	GUIDE-LIQUID	DC61-60498A	1	●	●	●	●
4	WC005	CAP-RINSE	DC61-10687A	1	●	●	●	●
5	WC001	ASSY-PANEL CONTROL	DC97-01328C	1	●	-	-	-
			DC97-01328A	1	-	●	●	●
6	WZ001	SCREW TAPPING	6002-000445	2	●	●	●	●
7	WB001	ASSY PCB PARTS	MF-P801-00	1	●	-	-	-
			MF-P1001-00	1	-	●	-	-
			MF-P1201-00	1	-	-	●	-
			MF-P1401-00	1	-	-	-	●
8	WZ001	SCREW TAPPING	DC60-20049A	3	●	●	●	●
9	WCD04	ASSY-FRAME PLATE(U)	DC97-00417A	1	●	●	●	●
10	WCD05	ASSY-HOUSING DRAWER	DC91-12085A	1	●	●	●	●
11	WZ001	SCREW TAPPING	DC60-20049A	1	●	●	●	●
12	WCD07	COVER-DOOR	DC61-00055A	1	●	●	●	●
13	WCD08	DOOR-GLASS	DC61-00013A	1	●	●	●	●
14	WCD09	HOLDER-GLASS	DC61-00057A	1	●	●	●	●
15	WCD10	LEVER-DOOR	DC66-00016A	1	●	●	●	●
16	WCD11	ASSY-HINGE	DC97-00100A	1	●	●	●	●
17	WZ008	WASHER-PLAIN	DC60-60025C	2	●	●	●	●
18	WZ016	NUT-FLANGE	DD60-50018A	2	●	●	●	●
19	WCD12	ASSY-FRAME FRONT	DC97-00702A	1	●	●	●	●



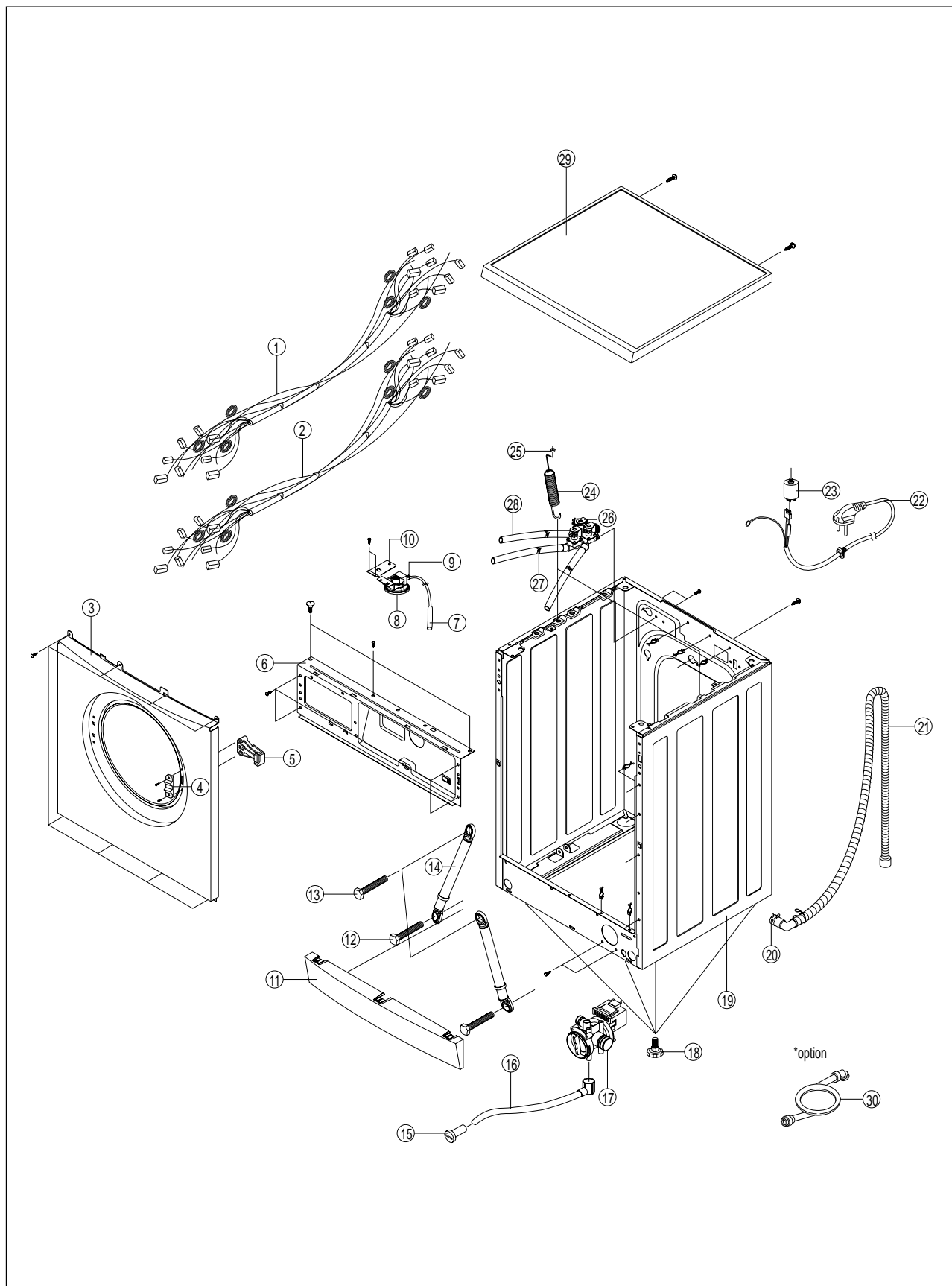
## 12. WD : TUB - Exploded View



## 12-1. WD : ASSY-TUB - Parts List

No.	Location No.	Description	Code No.	Q'ty	P801	P1001	P1201	P1401
1	WDD01	ASSY-WIRE DIAPHRAGM	DC91-12078A	1	●	●	●	●
2	WDD02	DOOR-DIAPHRAGM	DC61-20219A	1	●	●	●	●
3	WDD03	ASSY-CLAMP DIAPHGRAM	DC97-00850A	1	●	●	●	●
4	WDD04	BOLT-W.MOTOR	DC60-40138A	3	●	●	●	●
5	WZ008	WASHER-PLAIN	DC60-60044B	6	●	●	●	●
6	WZ009	WASHER-NYLON	DC60-60040A	3	●	●	●	●
7	WDD05	WEIGHT-BALANCER(L)	DC66-60154A	1	●	●	●	●
8	WZ010	BAND RING	DC65-60125A	1	●	●	●	●
9	WDD06	HOSE-DRAWER TUB	DC62-10305A	1	●	●	●	●
10	WZ011	BOLT-HEX	DC60-40140A	2	●	●	●	●
11	WZ012	BOLT-FLANGE	DC60-40132B	1	●	●	●	●
12	WD007	HOSE-AIR	DC62-10303A	1	●	●	●	●
13	WDD07	WEIGHT-BALANCER(U)	DC66-60153A	1	●	●	●	●
14	WD006	PULLEY	DC66-10176B	1	●	●	●	●
15	WZ014	WASHER-SPRING	DC60-60049A	1	●	●	●	●
16	WZ013	NUT-HEX	DC60-50148B	1	●	●	●	●
17	WD008	BELT-TRANSMISSION	DC66-10139B	1	●	●	●	●
18	WDD08	CUSHION-MOTOR	DC61-00041A	1	●	●	●	●
19	WDD09	MOTOR-DRUM	DC31-00002C	1	●	●	●	●
20	WZ013	BRACKET-NUT	DC61-00201A	1	●	●	●	●
21	WZ010	BAND RING	DC65-60118F	1	●	●	●	●
22	WDD10	HOSE-FILTER TUB	DC62-10304A	1	●	●	●	●
23	WZ015	CLAMP-HOSE	DC61-60497A	1	●	●	●	●
24	WDD11	PACKING-TRAP	DC62-40184A	1	●	●	●	●
25	WD009	CAP-TRAP	DC61-10676A	1	●	●	●	●
26	WDD12	HEATER	DC47-00001A	1	●	●	●	●
27	WDD13	TUB-FRONT	DC61-30346A	1	●	●	●	●
28	WDD14	BRACKET-NUT	DC61-40348B	5	●	●	●	●
29	WDD15	BRACKET-HEATER	DC61-40344A	1	●	●	●	●
30	WDD16	SPACER-HEATER	DC61-60496A	2	●	●	●	●
31	WDD17	VANE-CHECK	DC62-20311A	1	●	●	●	●
32	WDD18	ASSY-DRUM	DC97-00785A	1	●	-	-	-
			DC91-12281A	1	-	●	-	-
			DC97-00785B	1	-	-	●	●
33	WDD19	PACKING-TUB	DC62-40183A	1	●	●	●	●
34	WDD20	CLIP-TUB	DC61-60499B	8	●	●	●	●
35	WDD21	ASSY-TUB BACK	DC97-00214K	1	●	-	-	-
			DC97-00214B	1	-	●	-	-
			DC97-00214A	1	-	-	●	●
36	WDD20	CLIP-TUB	DC61-60520A	1	●	●	●	●

## 13. WE:CASE - Exploded View



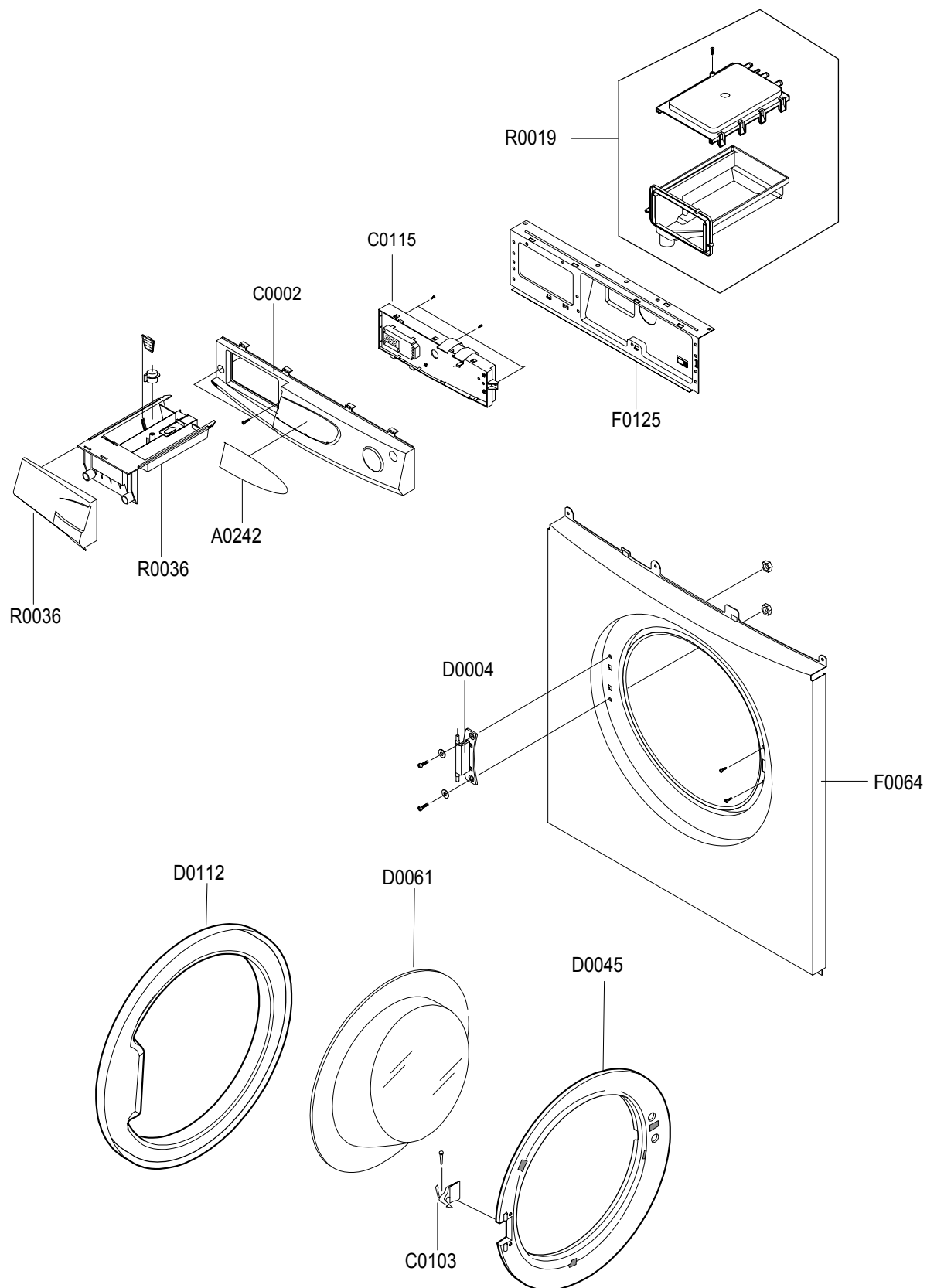
## 13-1. WE:ASSY CASE OUTER - Parts List

No.	Location No.	Description	Code No.	Q'ty	P801	P1001	P1201	P1401
1	WA006	ASSY-M.WIRE HARNESS	DC96-00052B	1	●	●	●	●
2	WA007	ASSY-WIRE HARNESS(SUB)	DC96-00053B	1	●	-	-	-
			DC96-00053A	1	-	●	●	●
3	WCD12	ASSY-FRAME FRONT	DC97-00702A	1	●	●	●	●
4	WED05	GUIDE-LEVER	DC61-60142A	1	●	●	●	●
5	WAD01	DOOR-LOCK S/W	DC61-00122A	1	●	●	●	●
6	WCD04	ASSY-FRAME PLATE(U)	DC97-00417A	1	●	●	●	●
7	WED04	HOSE-PRESSURE	DC62-10311A	1	●	●	●	●
8	WA002	SENSOR PRESSURE	DC32-30006P	1	●	●	●	●
9	WZ015	CLAMP-HOSE	DC61-60359D	1	●	●	●	●
10	WED05	BRACKET-PRESSURE	DC61-40345A	1	●	●	●	●
11	WED06	COVER-FRONT(L)	DC61-10672A	1	●	●	●	●
12	WZ011	BOLT-HEX	DC60-40144A	2	●	●	●	●
13	WZ011	BOLT-HEX	DC60-40141A	2	●	●	●	●
14	WED07	DAMPER-SHOCK	DC66-60149A	2	●	●	●	●
15	WED08	CAP-DRAIN	DC61-10673A	1	●	●	●	●
16	WD108	HOSE-DRAIN	DC62-10302A	1	●	●	●	●
17	WA003	ASSY-PUMP DRAIN	DC96-00115A	1	●	●	●	●
18	WE005	ASSY-LEG	DC91-12292A	4	●	●	●	●
19	WED09	ASSY-PAINT FRAME	DC99-00060A	1	●	●	●	●
20	WZ010	BAND RING	DC65-60125B	1	●	●	●	●
21	WZ005	ASSY-HOSE DRAIN(O)	DC97-00139B	1	●	●	●	●
22	WA001	ASSY-POWER CORD	DC96-00146A	1	●	●	●	●
23	WAD02	FILTER-EMI	DC29-00003A	1	●	●	●	●
24	WED10	SPRING-HANGER	DC61-70216C	2	●	●	●	●
25	WED11	SLEEVE-PLUG	DC61-60180A	3	●	●	●	●
26	WA009	VALVE-WATER(COOL)	DC62-30313A	1	●	●	●	●
27	WZ015	CLAMP-HOSE	DC61-60063B	6	●	●	●	●
28	WED12	HOSE-DRAWER	DC62-10068A	3	●	●	●	●
29	WCD13	ASSY-COVER TOP	DC97-00851A	1	●	●	●	●
30	WZ007	HOSE WATER(C)	DC62-10289B	1	●	●	●	●

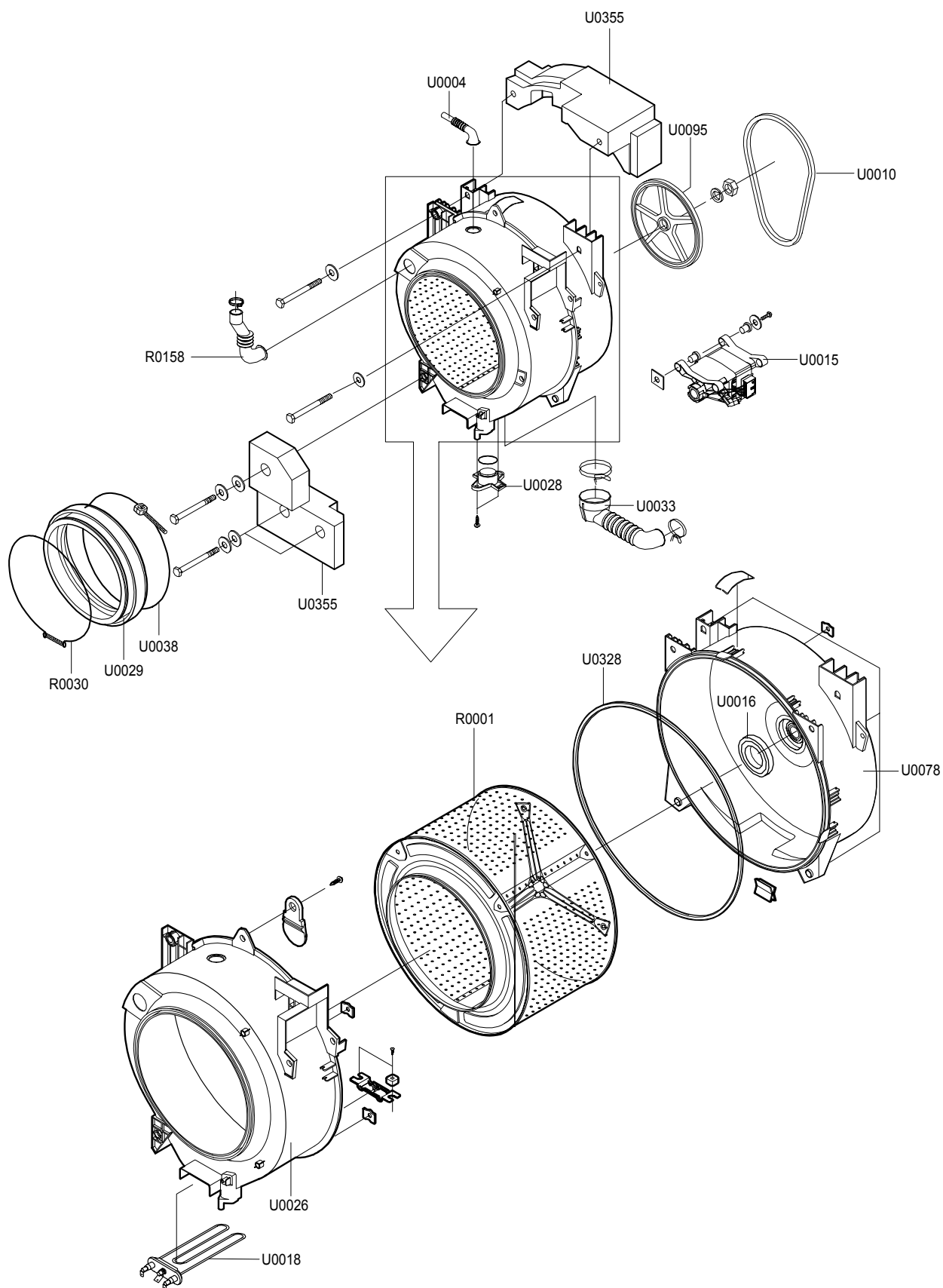
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## 15. TOP(FRONT) - Exploded View

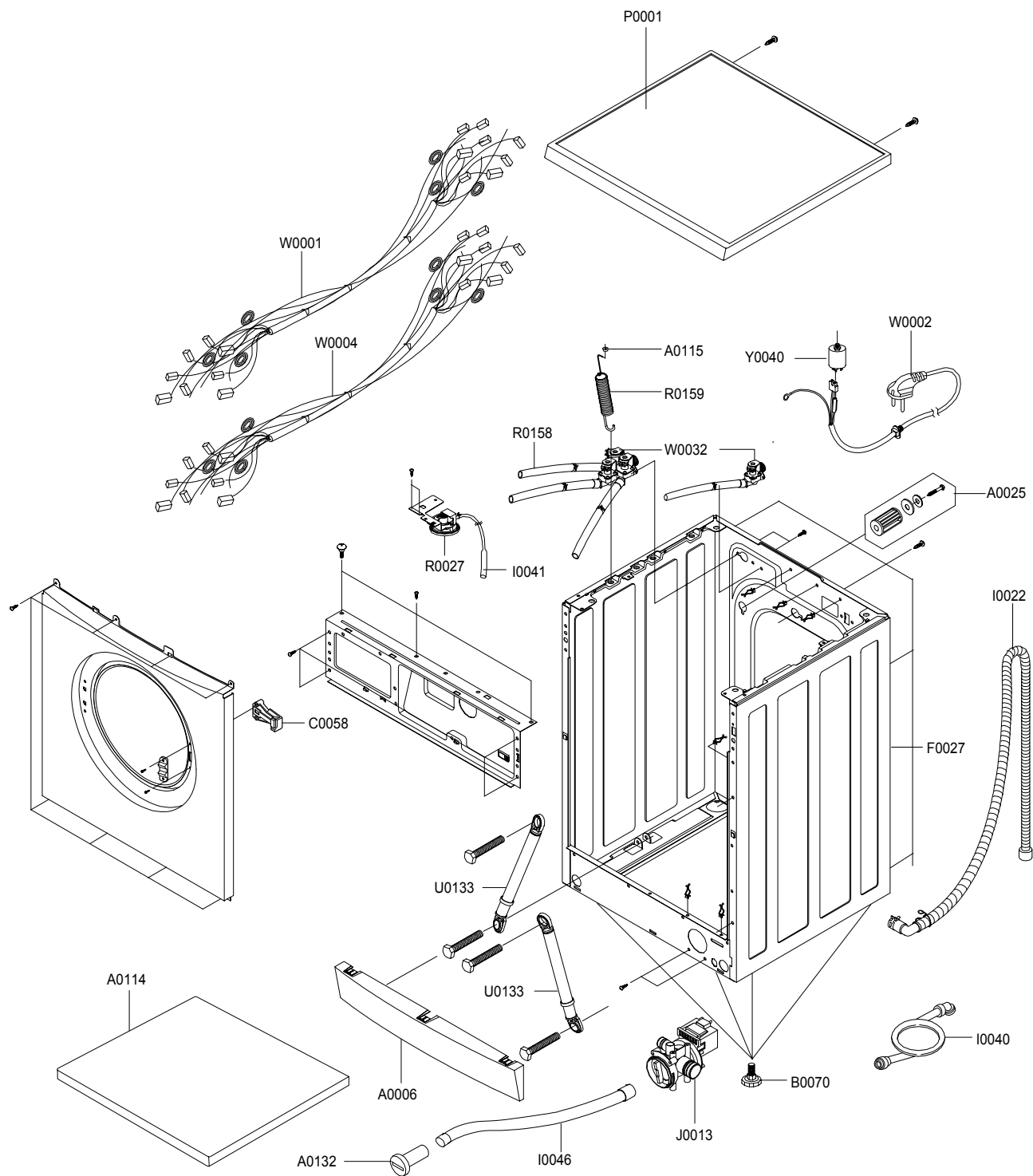
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## 15. TUB - Exploded View



## 15. CASE - Exploded View



## 15. Parts List

SVC code	code	description	spec	Q'ty	SA/SNA
A0006	DC61-10672A	COVER-FRONT(L)	SWF-P12,PP(BJ-730),-,,-,	1	SA
A0023	DC97-01160A	ASSY COVER DRAWER	P1092,BLEACH-CASE,PP,-	1	SA
A0025	DC91-12102A	ASSY FIXER TUB	-,SWF-P12,-,-,-,-	5	SA
A0034	DC60-40146A	BOLT-SPANER	-,CR,-,T2.5,OD36,-,-,-,-	1	SA
A0043	DC61-10688A	CAP-FIXER	SWF-P12,PP(TB53),-,,-,WHT,-,	6	SA
A0043	DC67-00208A	CAP-FIXER	J1453GW/XEU,PP,1.5mm,-,-,NTR,-	1	SA
A0067	DC69-00646A	CUSHION-CORNER	Q1636GW/XEU,EPS,-,-,-,-,7	1	SA
A0114	DC61-20235A	SHUTTER	DANPLA,PP(BB110),WHT,	1	SA
A0115	DC61-60180A	SLEEVE-PLUG	NYLON#6,SEW-720DR,-,-,NTR	3	SA
A0132	DC61-10673A	CAP-DRAIN	SWF-P12,PP(TB53),-,,-,WHT,-,	1	SA
A0242	DC64-00144X	INLAY-PANEL	P801DWN/XAC,PC(T=0.5),-,,-,-,	1	SA
A0243	DC68-00904A	MANUAL-BOOK	P805J/P803J/P801,SECA,ENG+FR	1	SA
A0328	DC63-00030M	PANEL-DRAWER	-,ABS(HG-0760),-,,-,-,WHT,	1	SA
A0358	DC96-00171A	ASSY WIRE EARTH	P-PJT(DRUM),-,,-,WIRE/UL1	1	SA
A0362	DC61-40081A	HOLDER-WIRE	DAWH-2NC,NYLON66,-,-,-,-,NTR	1	SA
B0070	DC97-14289A	ASSY LEG	ALL MODEL,Φ39 NUT-HEX FLANGE,-,	4	SA
C0002	DC97-01328A	ASSY PANEL CON- TROL	P1401/P1201/P1001,-,-	1	SA
C0058	DC61-20205B	DOOR-LOCK S/W	-,,-,-,-,P1092,-,-,BITRON	1	SNA
C0103	DC66-00016A	LEVER-DOOR	POM,-,-,-,-,NTR,DWM599W,DANBY	1	SA
C0115	MFS-P801H-00	ASSY PCB PARTS(M)	P801DWN	1	SA
D0004	DC97-00100C	ASSY HINGE	S1005J,OPEN ANGLE 180DEG,-,-,	1	SA
D0045	DC97-03423B	ASSY HOLDER GLASS	P1403J,-,CUSION-LID/AB	1	SA
D0046	DC97-04752A	ASSY LEVER DOOR	P-PJT,-,LEVER+SPRING,-,-	1	SA
D0061	DC64-00920C	DOOR-GLASS	WF-J145NV1/XEN,HeatTreatment	1	SA
D0109	DC61-60519A	GUIDE-BAR	SWF-P12,SHV-745CC1(SSEC),-,,-,-	1	SA
D0112	DC61-00055A	COVER-DOOR	P6091,ABS,-,-,-,-,WHT,ROUND	1	SA
F0027	DC99-00524A	ASSY PAINT FRAME	CLON-PJT,B1445AV,-,-,-,	1	SA
F0045	DC97-09928D	ASSY FILTER	V7-PJT,L65/W55/H55,-,-	1	SA
F0064	DC97-00702W	ASSY FRAME FRONT	-,MID-PJT/T0.8,-,-,-,RO	1	SA
F0065	DC97-05134B	ASSY FRAME PLATE(U)	R-PJT,WF-R1053/XSC,-	1	SA
F0125	DC61-30344A	FRAME-PLATE(U)	SWF-P12,EGI,-,-,NTR,-,-,-	1	SNA
I0022	DC97-14291B	ASSY HOSE DRAIN(O)	UG-KT/TROIKA/GERMANY,	1	SA
I0030	DC62-10278A	HOSE-HANGER	-,PP,-,-,-,-,NTR,JS20 RESIN	1	SA
I0040	DC97-01298A	ASSY HOSE WATER	W751SC,-,COLD,1.5MT,-,-	1	SA
I0040	DC97-01298B	ASSY HOSE WATER	W751SC,-,HOT,1.5MT,-,-	1	SA
I0041	DC62-10311A	HOSE-PRESSURE	-,EPDM,ID13.5,-,-,-,BLK,SW	1	SA
I0043	DC67-00205A	HOSE-AIR	ALL-MODEL,EPDM,ID16,-,T1.7,-,BL	1	SA
I0046	DC67-00244A	HOSE-DRAIN	HOSE-DRAIN,EPDM,ID6,OD11,T2.5	1	SA
I0047	DC61-01136A	CLAMPER HOSE	F1235J,SK5,-,T1.0/ID14.8,WH	1	SA
J0013	DC96-01336M	ASSY PUMP DRAIN	B1113JDW/XAC,-,ASKOLL/3H	1	SA
J0019	DC61-01674E	CASE-PUMP	WF7600SUV/XEO,PP,T2.5,W65,L94,	1	SA



J0025	DC31-30008F	PUMP-DRAIN	SW-70XP,120V,60Hz,SYNCHRONOUS	1	SC
P0001	DC97-11090B	ASSY COVER TOP	P1053GW/XEH,6.0KG/HUNGARY	1	SA
P0036	DC61-10687B	CAP-RINSE	SEW-HW108,ABS,-,-,-,GRN,-	1	SA
R0001	DC97-01463E	ASSY DRUM	P801(800RPM)KRNJM,LEFTER TYPE/	1	SA
R0002	DC66-10179B	DRUM-FRONT	SB-PJT,STS430,-,-,-,T0.4	1	SA
R0005	DC66-10178A	DRUM-BACK	SWF-P12,STS430,-,-,-,T0.5	1	SA
R0017	DC97-13901A	ASSY DRUM LIFTER	B MODEL,SSEC/B MODEL,-	3	SA
R0019	DC97-06572P	ASSY HOUSING DRAWER	B/P2/H+C,VALVE/110V/	1	SA
R0019	DC91-12085A	ASSY HOUSING DRAWER	SWF-P12,-,-,-,-	1	SA
R0027	DC97-00731A	ASSY SENSOR PRES- SURE	P1091,S-PRE+BRACKET+	1	SA
R0030	DC91-12078A	ASSY WIRE DIA- PHRAGM	SWF-P12,FRAME-FRONT,	1	SA
R0036	DC61-30348A	BODY-DRAWER	TS2-PJT,PP,T2.5,-,L262.9,W15	1	SA
R0106	DD60-50018A	NUT-FLANGE	-,M5XP0.8,FZY,MSWR10,-	2	SA
R0147	6011-001492	BOLT-FLANGE	M8,L25,PASS,STS304,NYLOCK,P1	3	SA
R0158	DC67-00285A	HOSE-DRAWER TUB	JUMP2-MODEL,EPDM,40,56,T	1	SA
R0158	DC67-00051D	HOSE-DRAWER	S1093~S6093,EPDM,-,-,-,BLK	0.97	SA
R0159	DC61-70216C	SPRING-HANGER	P1291,HSWR,CD3.5,-,L175,	1	SA
R0159	DC61-70217C	SPRING-HANGER	P1291,HSWR,CD3.2,-,L175,	2	SA
U0003	DC60-60044B	WASHER-PLAIN	-,SBC,ID8.4/OD30,T2.0,-,-	5	SA
U0003	DC60-60044A	WASHER-PLAIN	-,ID10.5,OD30,T3,-,STS304	2	SA
U0004	DC63-10003C	SPONGE-HOSE AIR	POL,GRY,SWF-P12,HB22-GRE	1	SA
U0005	DC60-60040A	FASTENER-WASHER	-,ID10.5,OD32,T2,-,PBSP-	5	SA
U0010	DC66-10176B	PULLEY	P1291,-,-,-,-,ID12.5	1	SA
U0013	DC97-00214L	ASSY TUB BACK	P801DWN/XAC,BACK/LOW-RPM,-	1	SA
U0015	DC31-00002D	MOTOR UNIVERSAL- DRUM	MCC61/64 148/SEC1,0	1	SA
U0016	DC62-00007A	SEAL-OIL	-,NBR(SD25),BLK,-,-,P6091/NBU	1	SA
U0018	DC63-00845A	COVER-HEATER	ALL MODEL,ABS(V0),-,-,-,-	1	SA
U0023	DC61-40348B	BRACKET-NUT	SBHG-R,P1291,T3,-,-,NO-PAI	2	SA
U0023	DC61-00201A	BRACKET-NUT	SBHG-R,P1291,T3,-,-,NO-PAI	1	SA
U0026	DC97-00215C	ASSY TUB FRONT	P1003J/W1092F/UL,NO-HEAT/	1	SA
U0028	DC61-10676A	CAP-TRAP	SWF-P12,PP(TB53),-,-,-,-	1	SA
U0029	DC61-20219A	DOOR-DIAPHRAGM	EPDM,-,-,-,-,GRY,SWF-	1	SA
U0033	DC62-10304A	HOSE-FILTER TUB	-,EPDM,ID65,-,L151,BLK	1	SA
U0038	DC91-12077D	ASSY CLAMP DIAPH- GRAM	WF-B853/XSC,TUB,-,S	1	SA
U0078	DC97-10977B	ASSY SEMI TUB BACK	P801/5.5KG,-,-,RPP(GR	1	SNA
U0095	6602-001497	BELT-TIMING GEAR	-,RUBBER(GATES),T3.4,-	1	SA
U0133	DC66-00343G	DAMPER-SHOCK	GW-PJT,STEEL+PP+RUBBER,100N	2	SA
U0307	DC61-00041A	CUSHION-MOTOR	SWF-6V,BUTYL,-,-,ID16/OD	1	SA
U0320	DC60-40144A	BOLT-HEX	M10,L41,ZPC2(YEL),SM10C/DAMPER	2	SA
U0320	DC60-40141A	BOLT-HEX	SM10C/DAMPER,HEX,M8,L66,-,ZPC2(	2	SA
U0328	DC62-40183A	PACKING-TUB	SWF-P12,EPDM,-,-,-,BLK,-	1	SA

U0353	DC61-60359E	CLAMPER HOSE	F1235AS/F1035AS,SK5,-,ID7.8	1	SA
U0353	DC61-60497A	CLAMPER HOSE-JOINT	SWF-P12,HSWR,-,ID70/O	1	SA
U0353	DC65-00019A	CLAMPER HOSE	DRUM W/M,SK5,-,D34/H5/T1.5,	2	SA
U0353	DC61-00133A	CLAMPER HOSE-FIX	P1291,PP,ID24.5,OD29.5,	2	SA
U0355	DC66-60153A	WEIGHT-BALANCER	SWF-P12,CONCRETE,UPPER,	1	SA
U0355	DC66-60154A	WEIGHT-BALANCER	SWF-P12,CONCRETE,LOWER,	1	SA
U0360	DC61-60499B	CLIP-TUB	HSWR,P1291,-,NO/PAINT,	8	SA
U0360	DC61-60520A	CLIP-TUB	SK5,SWF-P12,-,PLATE-TYPE,	2	SA
V0005	DC68-02315A	LABEL-ENERGY	P1005J~P801,-,MOJO+REMOV,-,	1	SA
W0001	DC96-00174B	ASSY WIRE HARNESS	-,P801(MIJU),-,SUB,-,-	1	SA
W0002	DC96-00038E	ASSY POWER CORD	P1092,125V/13A/EP3,-,-	1	SA
W0004	DC96-00173C	ASSY M. WIRE HAR- NESS	P1003J(MIJU),-,-,NO	1	SA
W0031	DC65-60118P	BAND-RING	WF-F105AV,HSWR,T3.0,-,-,YEL,ID	1	SA
W0031	DC65-60118K	BAND-RING	HSWR,YEL,PI2.0,OD22,ID18	1	SA
W0032	DC62-30309J	VALVE-WATER	P1092,PP(J320),-,-,-,#187(11	1	SA
W0032	DC62-30310R	VALVE-WATER	P1092,PP(J320),-,-,-,#187(11	1	SA
Y0040	DC29-00009A	FILTER-EMI	DFC-2715R,P/PV/P2,250V,15A,PI	1	SA
Z0004	DC60-50148B	NUT-HEX	SM20C(NYLON),M12,-,-,ZPC3(YEL),-	1	SA
	DC61-60142A	GUIDE-LEVER	-,Y745STC(S7A77),-,-,-,WHT,-	1	SA

