

Service Manual

Auto Washer

Model: DWF-178L

DWF-178M/178W

DWF-179M/179W

✓ Caution

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

DAEWOO ELECTRONICS CORP.

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

Oct. 2011

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1. SPECIFICATIONS

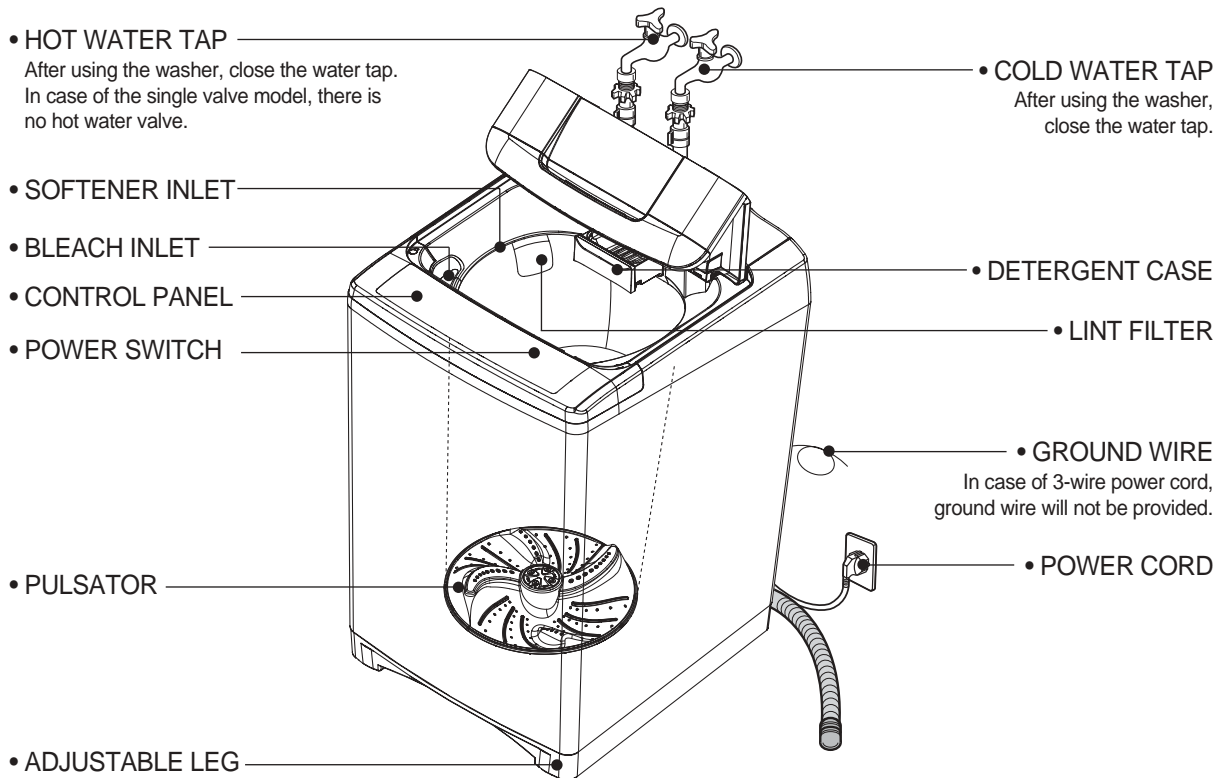
| No. | ITEM | | DWF-178L | DWF-178M/178W | DWF-179M/179W |
|-----|--|----------------|---|---|---------------|
| 1 | POWER SOURCE | | A.C 110V/60Hz , A.C 220V/50Hz , A.C 220V/60Hz | | |
| 2 | POWER | 110V/60Hz | 430W | | |
| | CONSUMPTION | 220V/50Hz,60Hz | 530W | | |
| 3 | MACHINE WEIGHT | | 42kg(Non-Pump) / 43kg(Pump) | | |
| 4 | DIMENSION (WxHxD) | | 598 x 956 x 643 mm | | |
| 5 | WASHING COURSE | | FULL AUTOMATIC 6 COURSES (FUZZY, BLANKET, ECONOMY, BABY CARE, SPORTS WEAR, DELICATE) | | |
| 6 | WATER CONSUMPTION | | 185 ℓ | | |
| 7 | WATER LEVEL SELECTOR | HIGH | 91 ℓ | | |
| | | MED | 82 ℓ | | |
| | | LOW | 69 ℓ | | |
| | | SMALL | 56 ℓ | | |
| 8 | OPERATING WATER PRESSURE | | 0.03MPa ~ 0.8MPa (0.3kgf/cm ² ~ 8kgf/cm ² = 2.94N/cm ² ~ 78.4N/cm ²) | | |
| 9 | REVOLUTION | WASH | 130~150 rpm(60Hz) / 125~140 rpm(50Hz) | | |
| | PER MINUTE | SPIN | 710~740 rpm(60Hz) / 640~675 rpm(50Hz) | | |
| 10 | PULSATOR | | TORNADO PULSATOR with 4 WINGS (ø 376mm) | | |
| 11 | WATER LEVEL CONTROL | | ELECTRONIC SENSING | | |
| 12 | GEAR MECHANISM ASS'Y | | HELICAL GEAR | | |
| 13 | LINT FILTER | | O | | |
| 14 | SOFTENER INLET | | O | | |
| 15 | FUNCTION FOR TIME DELAY (RESERVATION) | | O (OPTION) | | |
| 16 | ALARM SIGNAL | | O | | |
| 17 | RESIDUAL TIME DISPLAY | | O | | |
| 18 | AUTOMATIC WATER SUPPLY | | O | | |
| 19 | FUNCTION FOR BUBBLE | | O (OPTION) | | |
| 20 | AUTOMATIC RE-FEED WATER | | O | | |
| 21 | AUTOMATIC POWER OFF | | O | | |
| 22 | DOOR TYPE (TRANSPARENT) | | GLASS DOOR | PLASTIC DOOR | PLASTIC DOOR |
| | | | (TRANSPARENT) | (178W/179W : TRANSPARENT) (178M/179M : OPAQUE) | |

2. STRUCTURE OF THE WASHING MACHINE

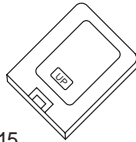
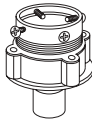
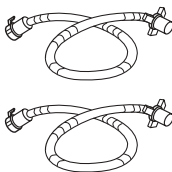
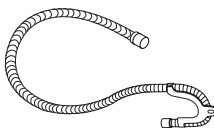

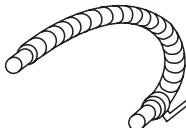
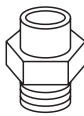
The parts and features of your washer are illustrated on this page.
Become familiar with all parts and features before using your washer.

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.



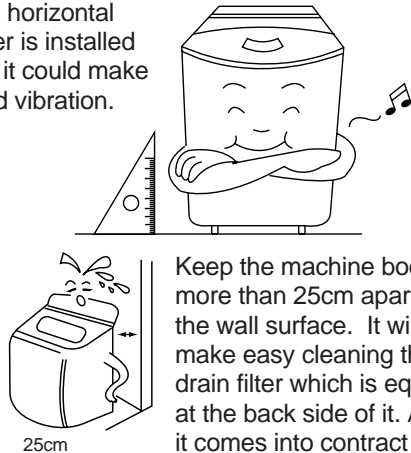
Accessories

| COVER UNDER [OPTION] | | WATER TAP ADAPTER | | INLET HOSE | |
|---|---|--|--|---|--|
|  3611402715 | |  | |  | |
| HOSE DRAIN [FOR PUMP] | HOSE DRAIN CLAMP | HOSE DRAIN[FOR NONPUMP] | | CONNECTOR INLET [OPTION] | |
|  3613218800 |  |  3613226600 | |  | |

3. 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.



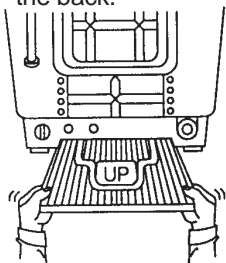
Keep the machine body more than 25cm apart from the wall surface. It will make easy cleaning the drain filter which is equipped at the back side of it. And if it comes into contact vibration may occur.

Never install in these places

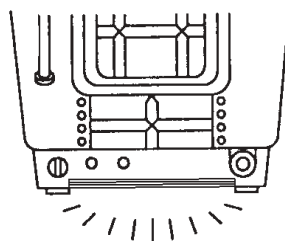
- The place where it would be exposed to direct sunlight.
- The place nearby a heater or heat appliance.
- The place where it would be supposed to be frozen in winter.
- The kitchen with coal gas and a damp place like a bathroom.

Installation Of the COVER UNDER (Noise Insulation Plate)

- 1** The packing box opened, there is a noise insulation plate. Put the noise insulation plate at the bottom of the back.



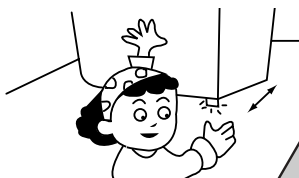
- 2** Push the noise insulation plate into the end, which decrease the noise made by this washer.



* The drawing of the COVER UNDER is variant from your model.

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

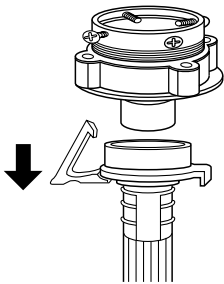
Be careful not to mistake in supplying between the hot(maximum : 50°C) and cold water.

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.

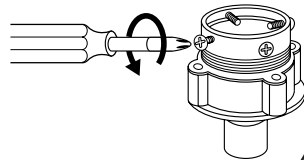
Do not over tighten : This could cause damage to couplings.

• • • • FOR ORDINARY TAP

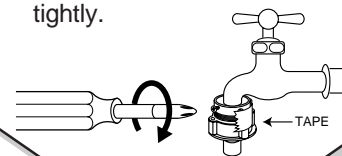
- 1 Pull down the collar of the inlet hose to separate it from the water tap adapter.



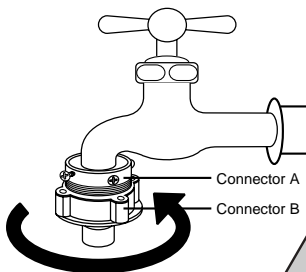
- 2 Loosen the four screws at the water tap adapter, but don't loosen the screws until they are separated from the water tap adapter.



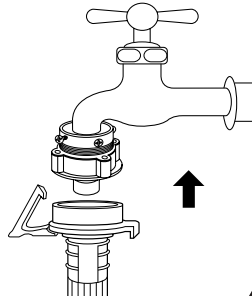
- 3 Connect the water tap adapter to the water tap tighten the four screws evenly while pushing up the adapter so that the rubber packing can stick to the water tap tightly.



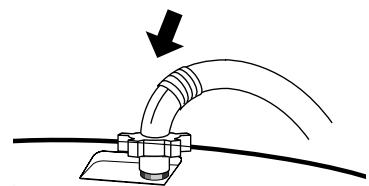
- 4 Remove the tape, and screw connector B into connector A tightly.



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



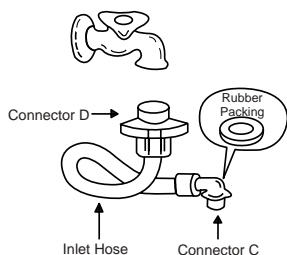
- 6 Connect the inlet hose adapter of the hose to the water inlet of the washer by turning it clockwise to be fixed tightly.



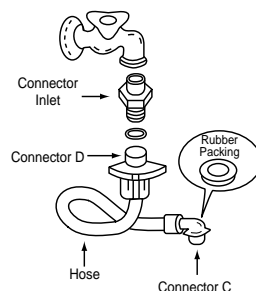
- Please check the rubber packing inside the inlet hose adapter of the hose.

• • • • 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.



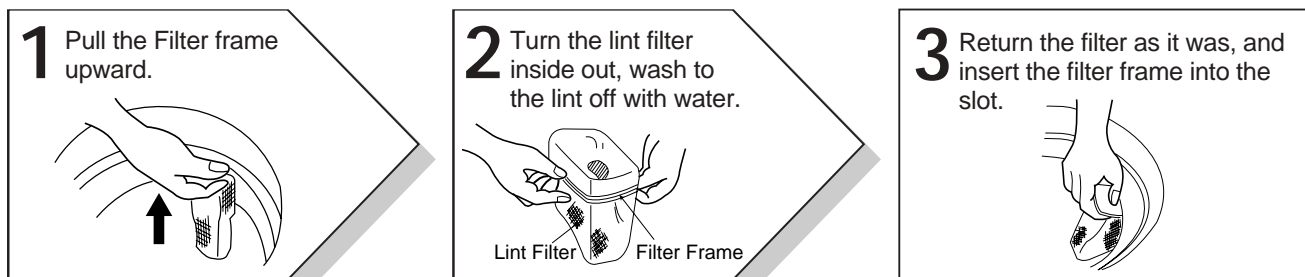
- 3 Insert the inlet hose adapter into the water inlet of a washer and turn it to be fixed.



- Assert the packing in the inlet.

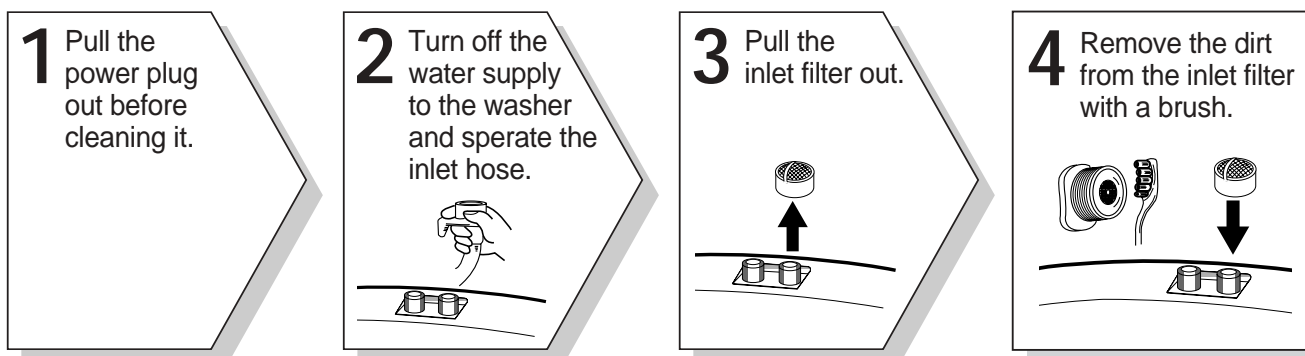
■ HOW TO CLEAN THE FILTER

• • • • CLEANING THE LINT FILTER



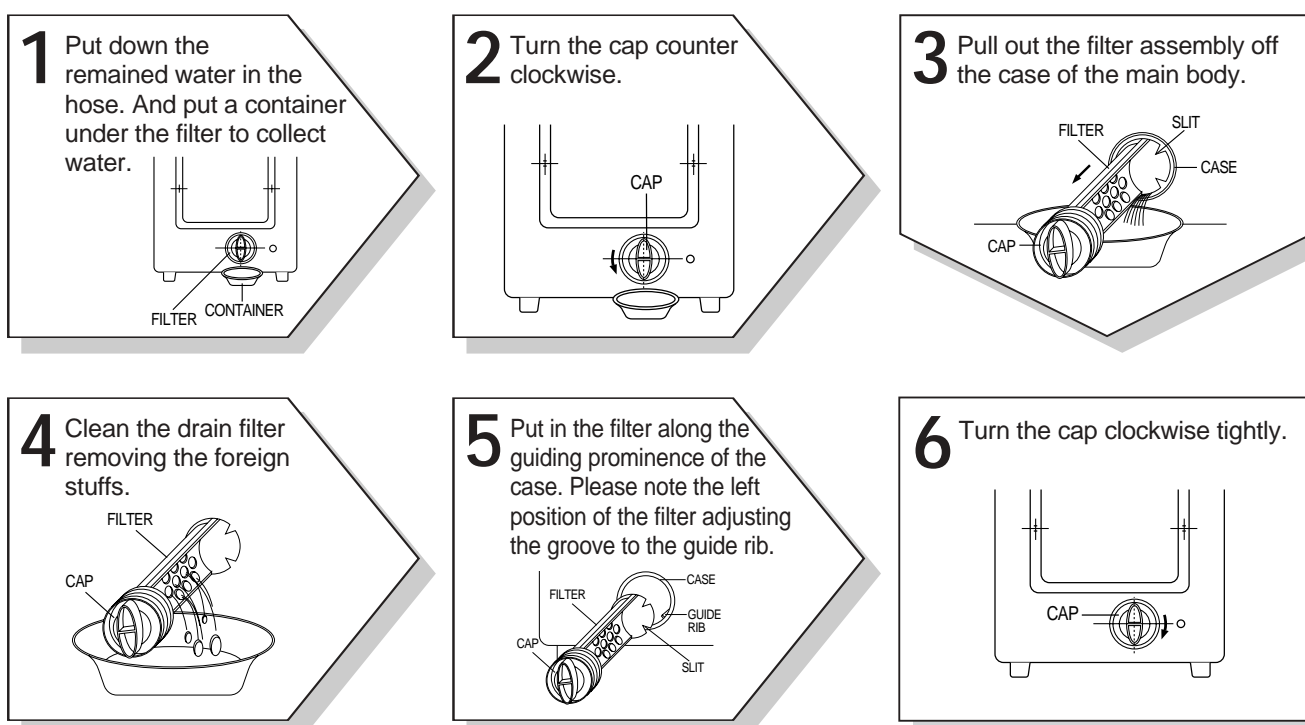
• • • • CLEANING THE WATER INLET FILTER

- 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 back 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.



4. FEATURE AND TECHNICAL EXPLANATION

FEATURE OF THE WASHING MACHINE

- ① The first applying Radical Technology in the world....go beyond washing, sterilize your clothes and deodorize a bad smell.(optional function)
- ② The first air bubble washing system in the world.
- ③ Quiet washing through the innovational low-noise design.
- ④ The wash effectiveness is much more enhanced because of the air bubble washing system.
- ⑤ The laundry detergent dissolves well in water because of the air bubble washing system.
- ⑥ The adoption of the water currents to adjust the unbalanced load.
- ⑦ One-touch operation system.

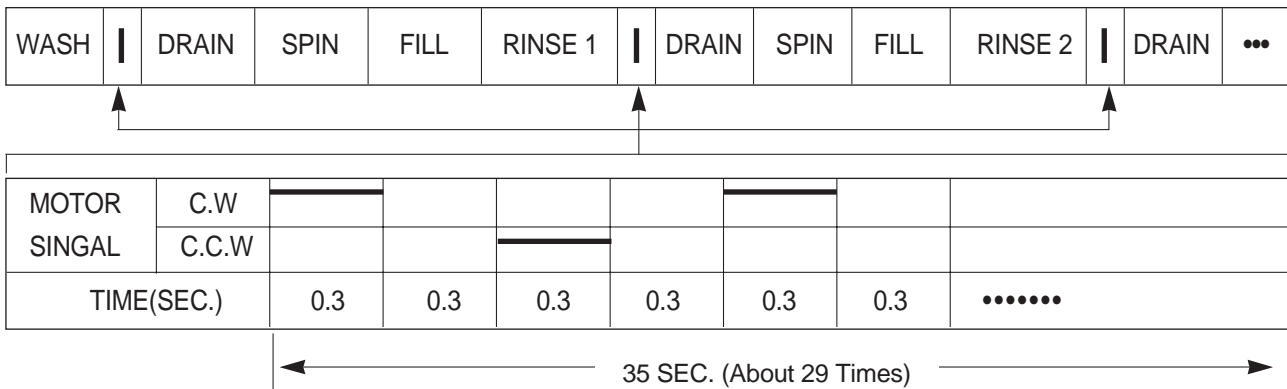
WATER CURRENT TO ADJUST THE UNBALANCED LOAD

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 DELICATE course have no operation of the water currents to adjust the unbalanced load.)

EFFECT

It reduces vibration and noise effectively while spinning.

WATER FLOW

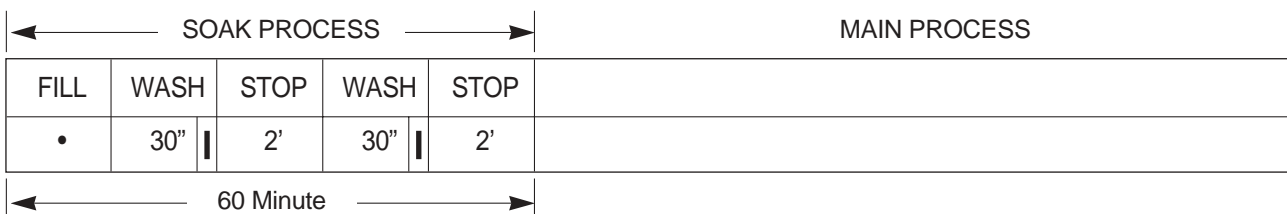


FUNCTION FOR SOAK WASH(OPTION)

DISPLAY THE RESIDUAL TIME

When the SOAK WASH is selected, the total wash time increases because 60 minutes for soak process are added to the time of main process.

PROGRESS



NOTES

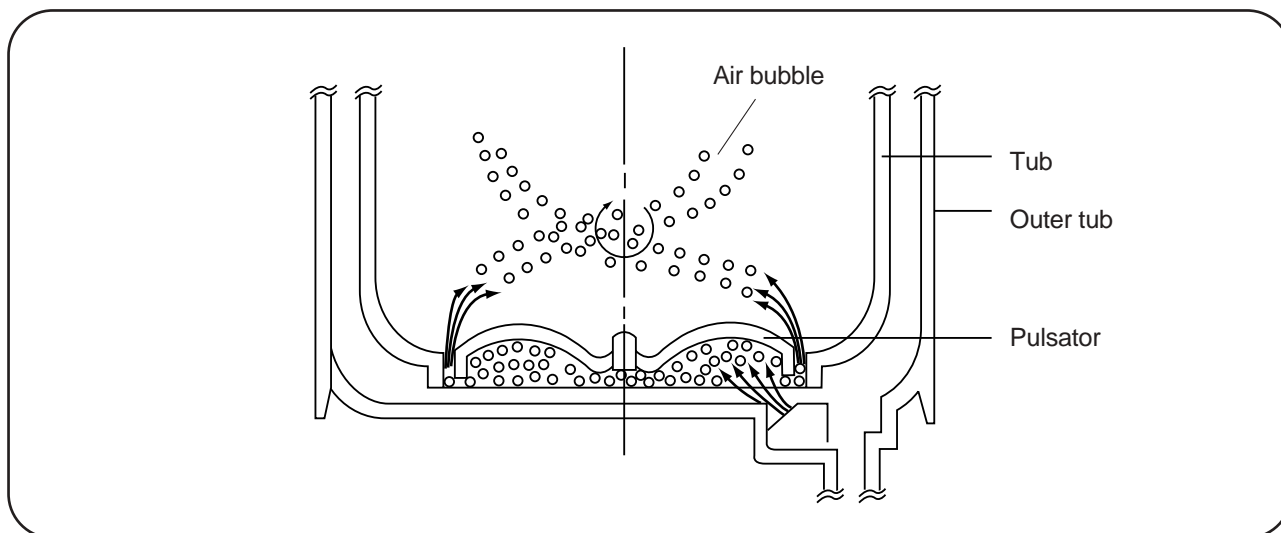
'|' mark indicates the operation of the water currents to adjust the unbalanced load.

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 2 minutes, the operation is interrupted to check the water level, and then the water is supplied again until the selected water level is reached.

FUNCTIONAL PRINCIPLE OF BUBBLE WASHING MACHINE

ACROSS SECTION



FUNCTIONAL PRINCIPLE

Bubble Motor 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.

AUTOMATIC DRAINING TIME ADJUSTMENT

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

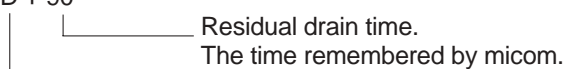
| | | |
|--------------------|---------------|--|
| Draining condition | Good draining | The washer begins spin process after drainage. |
| | Bad draining | Draining time is prolonged. |
| | No draining | Program is stopped and gives the alarm. |

FUNCTIONAL PRINCIPLE

- ① The micom can remember the time(D) from the beginning 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 DE blinked on display lamp. |

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

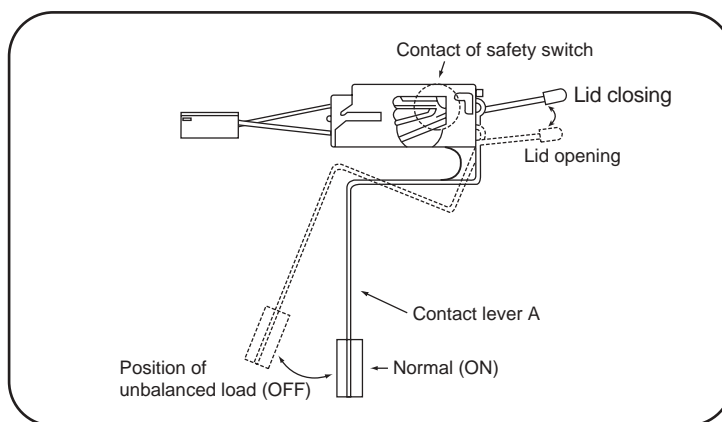


AUTOMATIC UNBALANCE ADJUSTMENT

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.

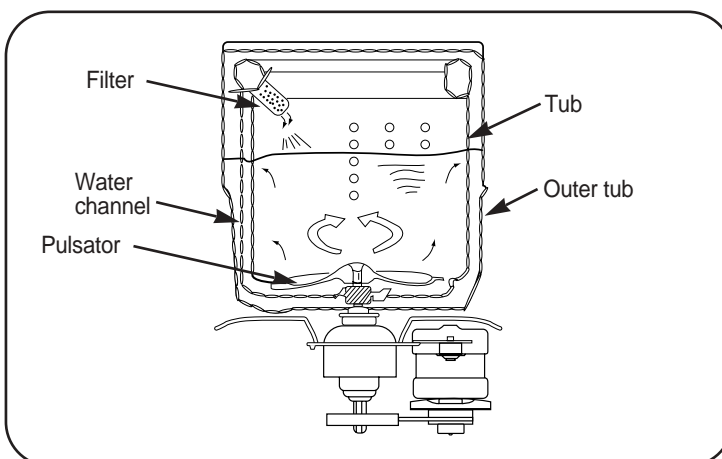
CIRCULATING-WATER COURSE AND LINT FILTER

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 fans creates a water currents as shown in figure.

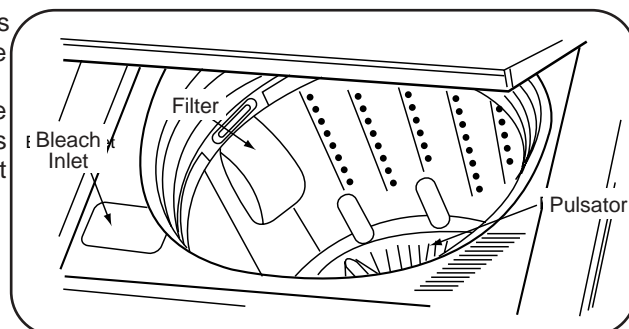
The water is then discharged from the upper part of the tub through the water channel. About 40 L/min. water is circulated at the 'high' water level, standard wash load and standard water currents.



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.

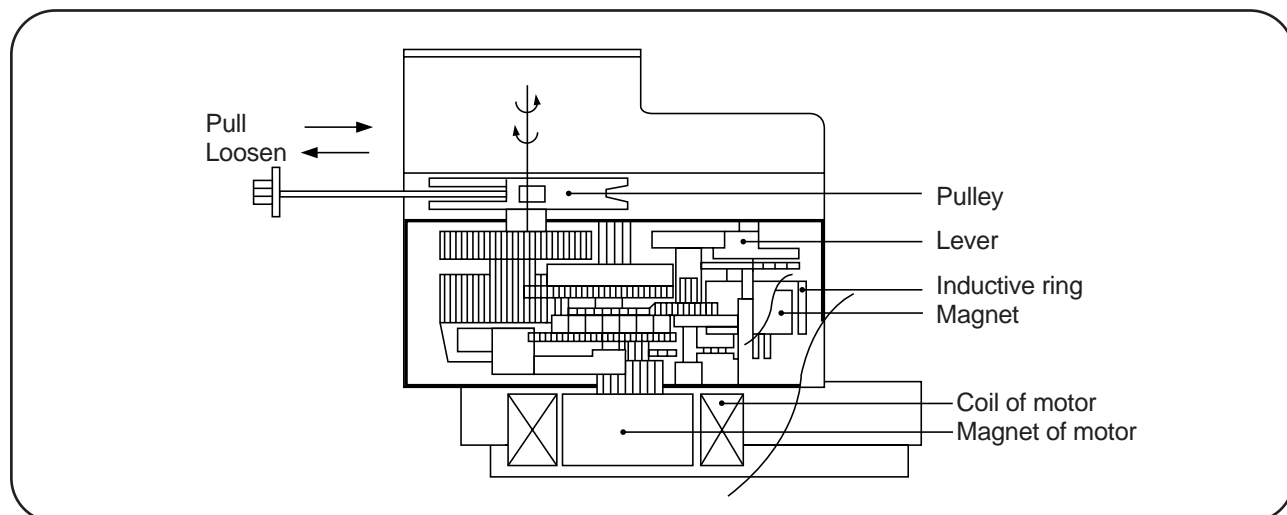
RESIDUAL TIME DISPLAY

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 .

DRAIN MOTOR

STRUCTURE

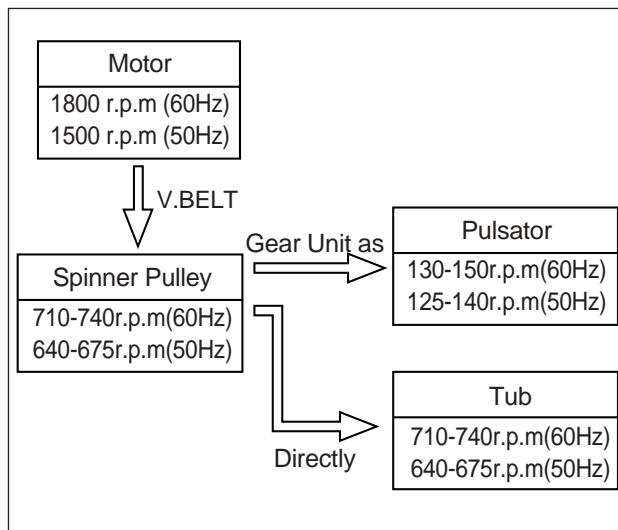
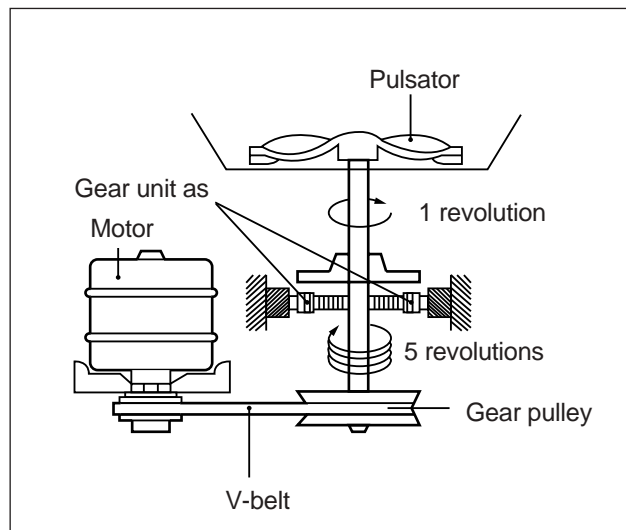
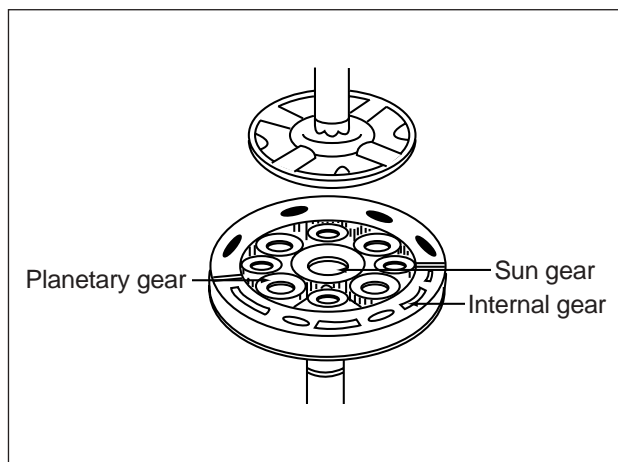
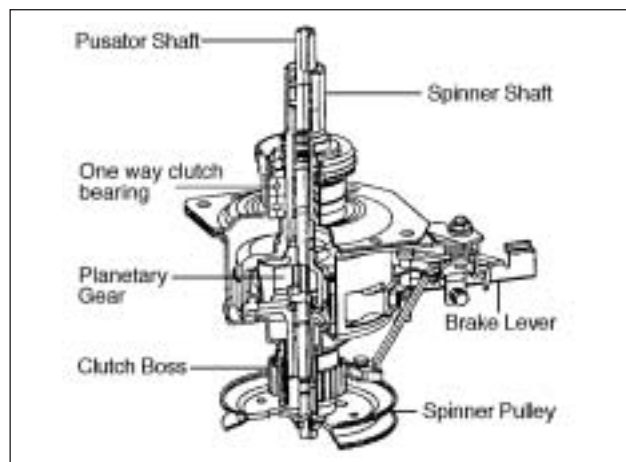


FUNCTIONAL PRINCIPLE

- 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.



5. 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.

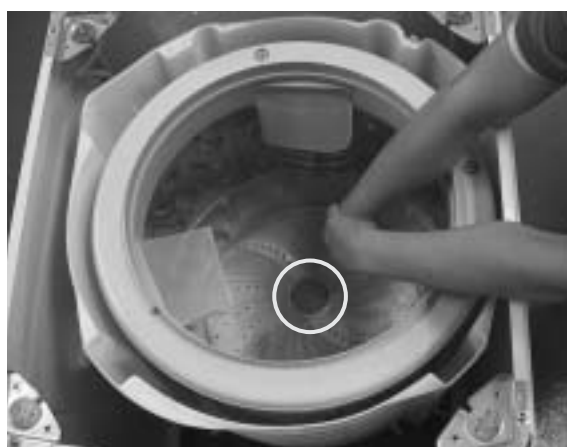
GEAR MECHANISM ASS'Y REPLACEMENT

GEAR MECHANISM ASSY REPLACEMENT

- ① Raise the top plate on the outer cabinet.
- ② Loosen four screws mounting outer tub cover and remove outer tub cover from the tub ass'y.



- ③ Remove the cap pulsator from the pulsator ass'y by using screw driver.



- ④ Loosen the pulsator mounting screw and remove the pulsator.



- ⑤ Remove the special nut by using "T" type box wrench.
- ⑥ Remove the special washer.



⑦ Remove the tub i assy.



- ⑧ Lay the top of the washer on the floor.
- ⑨ Remove four special bolts of gear protect by using a box wrench and remove gear protect.
- ⑩ Remove the V-belt.



⑪ Remove four special bolt of gear mechanism assy by using a box wrench.



⑫ Pull out the gear mechanism ass'y.



NOTES

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

DRAIN MOTOR AND VALVE REPLACEMENT (NON PUMP MODEL)

- ① Lay the top of the washer on the floor.
- ② Loosen two special screw of drain motor.



- ③ Take out the wire of drain motor from the bracket.
- ④ Separate the drain motor from the base.



- ⑤ Turn the valve by using screw driver as shown in picture.

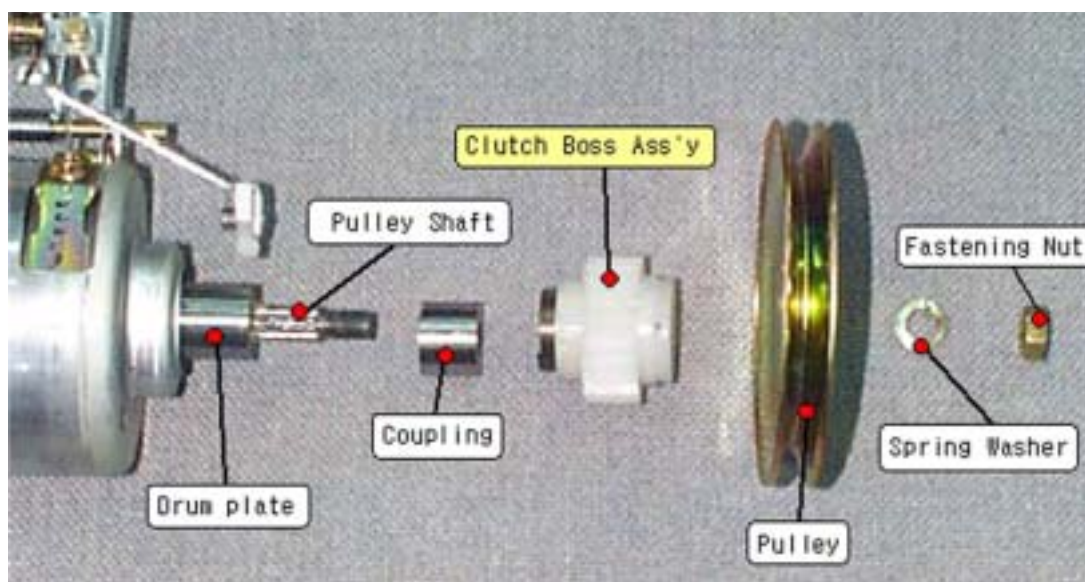
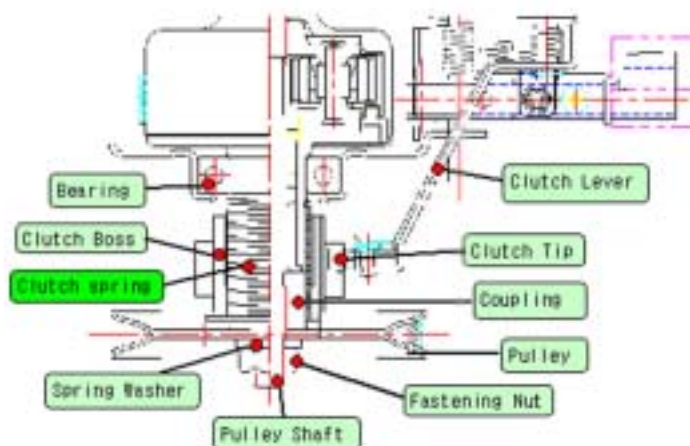


- ⑥ Remove the valve lid from the valve drain ass'y.

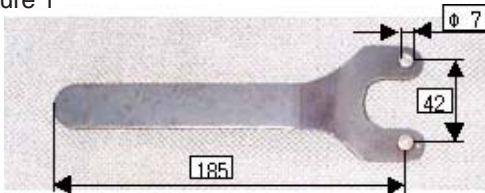


6. THE REPAIR METHOD OF GEAR MECHANISM FOR CLUTCH SPRING PROBLEM

THE STRUCTURE OF GEAR MECHANISM



● TOOL FOR REPLACING THE CLUTCH BOSS ASSEMBLE ●

| Tool name | Specification | Q'ty |
|--------------------------|--|----------|
| Fixing jig | Figure 1  | 1 |
| Ratchet handle | | 1 |
| Socket and extension bar | socket : 10mm, 17mm | per each |
| Some cotton yarn | | some |

HOW TO CHECK THE CLUTCH SPRING PROBLEM

PROBLEM

- 1) THE LAUNDRY IS IN THE SPIN TUB UNEVENLY WHEN JUST STARTING SPIN PROCESS.
- 2) THEREFORE, IT CAUSE THE SERIOUS NOISE AND VIBRATION WHEN WASHING AND SPINNING PROCESS OR SUPPLING WATER IRREGULARY WHEN SPINNING PROCESS AND CAUSE SHORT OF SPIN PERFORMANCE.

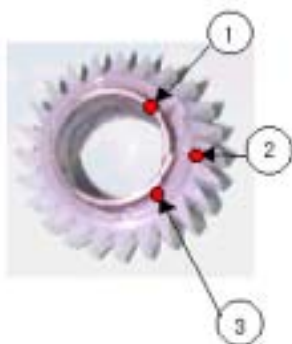
CHECKING METHOD

IN THIS CASE, YOU MUST EMPTY THE SPIN TUB FIRST.

- 1) TO CHECK THE REVOLUTION OF SPIN TUB. IF THE SPIN TUB DOES NOT REVOLVE AND ONLY THE PULSATOR IS TURNING, THAT IS CLUTCH SPRING DEFECT.
- 2) TO CHECK THE SPIN SPEED(RPM) BETWEEN SPIN TUB AND PULSATOR.
IF YOU FIND THE DIFFERENT SPIN SPEED BETWEEN SPIN TUB AND PUSATOR, THIS IS ALSO CLUTCH SPRING DEFECT.

IN THIS CASE, WE ARE GOING TO SUPPLY THE CLUTCH BOSS ASSEMBLY INSTEAD OF GEAR MECHANISM ASSEMBLY. PLEASE REFER TO FOLLOWING FIG.

THE CLUTCH BOSS ASSEMBLY


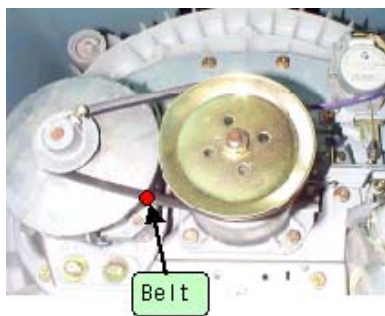
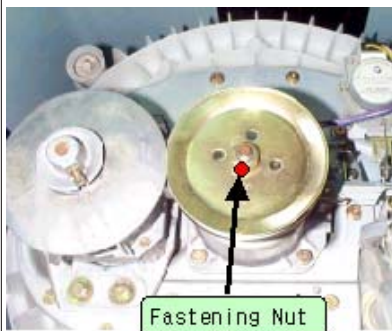



| NO. | PARTS NAME | SPECIFICATION | CODE | Q'TY |
|----------------|---|---------------|------------|------|
| 1 | CLUTCH SPRING | 1.5*1.5 | 3615110000 | 1 |
| 2 | CLUTCH BOSS | PP | 3619301300 | 1 |
| 3 | GREASE | beacon#325 3g | | |
| PACKING METHOD | PACKING THE CLUTCH BOSS ASS'Y BY USING VINYL PACK | | | 1 |

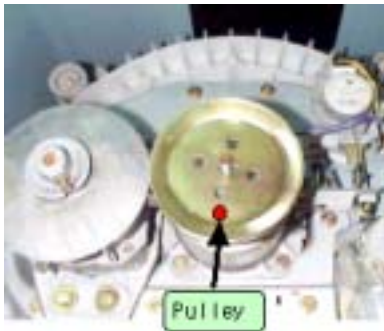

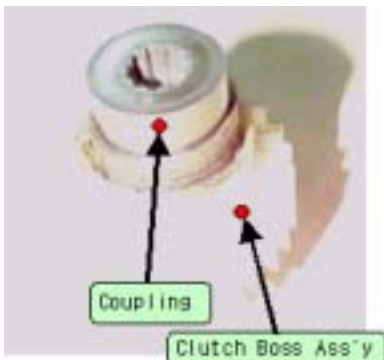

CLUTCH BOSS ASS'Y PART CORD : 3619301400

THE PROCESS OF DISASSEMBLE

Disassemble 1




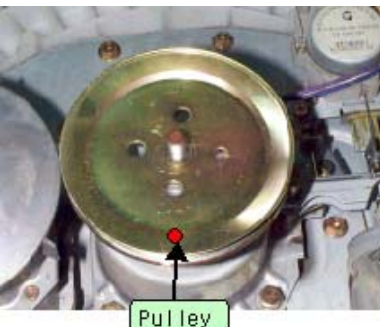

| No. | Process | Notice |
|-----|--|--|
| 1 |  <p>Release screws marked 4-point</p> | <p>Remove the protector</p> <p>Use wrench or driver. - ratchet handle - extension bar - socket : 10mm</p> |
| 2 |  <p>Belt</p> | <p>Remove the v-belt</p> |
| 3 |  <p>Fastening Nut</p> | <p>Loosen the fastening nut</p> <p>Use fixing jig for pulley as to see fig 1. and 17mm-socket for nut.</p> |
| 4 |  <p>Spring Washer</p> | <p>Disassemble the spring washer</p> <p>Take out plain washer if it has.</p> |

Disassemble 2

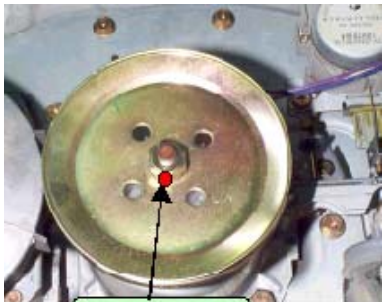

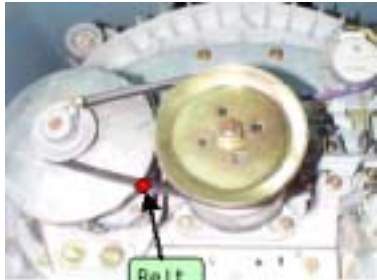
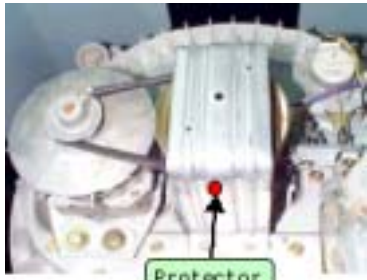
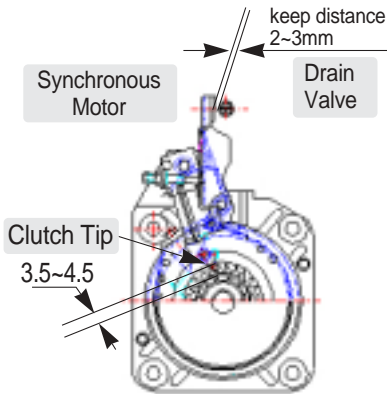
| No. | Process | Notice |
|-----|---|---|
| 5 |  | Disassemble the pulley |
| 6 |  | Disassemble the clutch boss assembly Catch the boss and pull upward with spiral rotate in the clockwise direction. |
| 7 |  | Separate coupling from clutch boss ass'y |
| 8 |  | Cleaning Clean the drum plate, coupling surface and contact face between drum plate and coupling. It is necessary to keep cotton piece goods being dry and clean. |

THE PROCESS OF ASSEMBLE



Assemble 1

| No. | Process | Notice |
|-----|--|---|
| 1 |  <p>Assemble the coupling</p> | Check the uneven face of coupling is assembled upward. |
| 2 |  <p>Assemble the new clutch boss ass'y</p> | <ul style="list-style-type: none"> - Push in the clutch boss ass'y with rotating on the clockwise direction. - After assembling, rotate on the clockwise more 2~3 teeth and pull out the pulley shaft upward.  |
| 3 |  <p>Assemble the pulley</p> | |
| 4 |  <p>Assemble the spring washer</p> | If there was plain washer, you have to assemble plain washer the first and then assemble spring washer. |

Assemble 2

| No. | Process | Notice |
|-----|--|---|
| 5 |  <p style="text-align: center;">Fastening Nut</p> | <p>Assemble the fastening nut</p> <ul style="list-style-type: none"> - Use fixing jig and 17mm socket wrench as if disassembling, as fastening torque about 100~200kgf-cm. - Check the end-play, up and downward and check the binding force, too much or not on bi-direct of rotation.  |
| 6 |  <p style="text-align: center;">Belt</p> | <p>Assemble the Belt</p> |
| 7 |  <p style="text-align: center;">Protector</p> | <p>Assemble the protector</p> |
| 8 |  | <p>Final checking</p> <p>Finally, check the distance between brake lever and control bolt(2~3mm). Also, check the interference depth both clutch tip and clutch boss(3.5~4.5mm).</p> |

REPLACE THE CASE FILTER ASS'Y

| | | |
|---|---|--|
| <p>① Separate the back cover from washing machine.</p> | <p>② Remove two screws.</p> | <p>③ Remove three screws.</p> |
|  |  |  |
| <p>④ Turn the case filter ass'y and separate it from the drain motor.</p> | <p>⑤ Separate the drain hose i from the case filter ass'y.</p> | <p>⑥ Separate the cavitation hose from the case filter ass'y.</p> |
|  |  |  |
| <p>⑦ Assemble the case filter ass'y that purchased.</p> | <p>⑧ Tie up three screws.</p> | <p>⑨ Tie up two screws.</p> |
|  |  |  |
| <p>⑩ Assemble the hose drain I to the case filter with bond & clamp.</p> | <p>⑪ Assemble the cavitation hose to the case filter with bond & clamp.</p> | <p>⑫ Assemble the back cover to the washing machine.</p> |
|  |  |  |

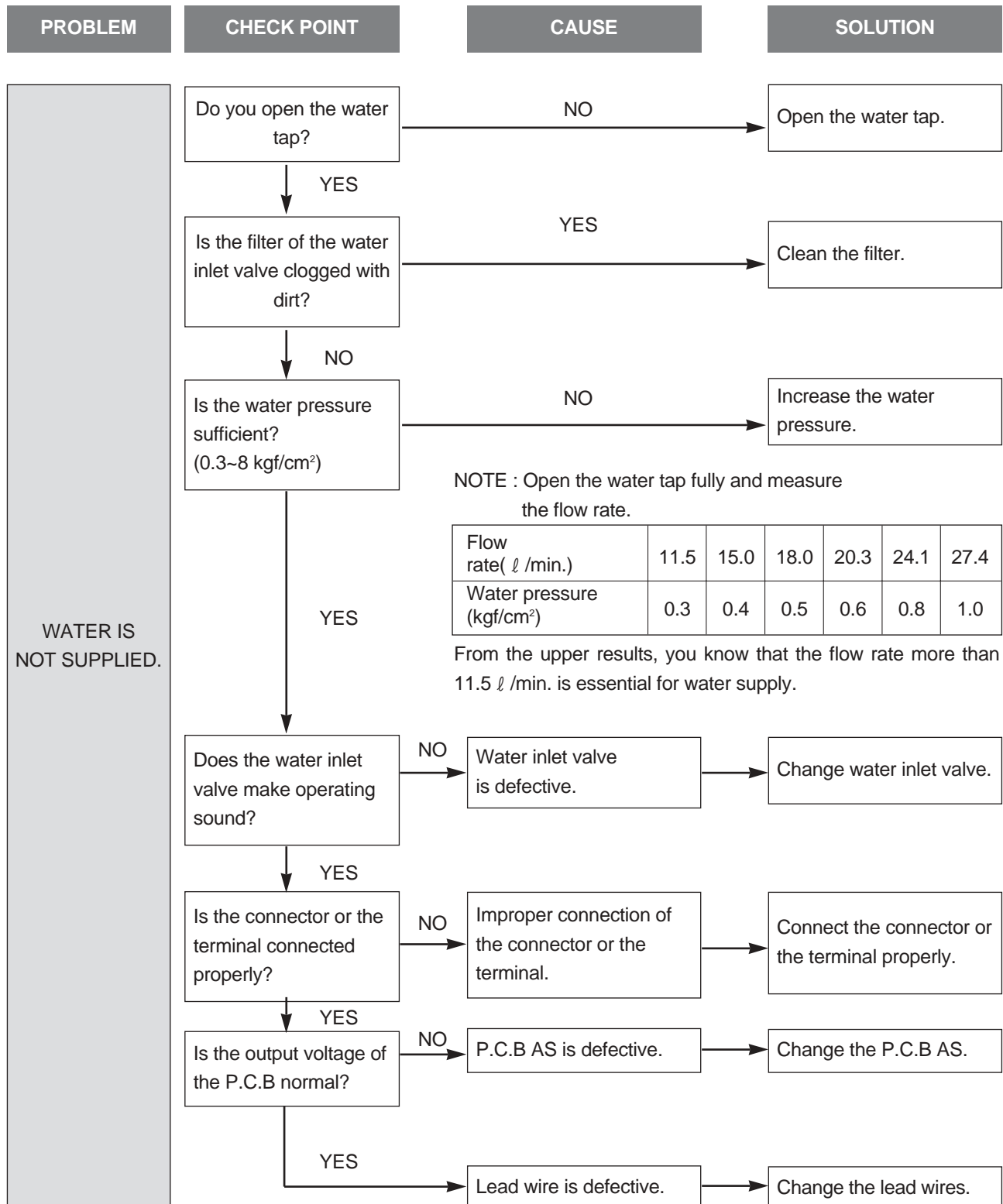
7. TROUBLE SHOOTING GUIDE



NOTES

1. When replace the P.C.B. ASS'Y do not scratch the surface of the P.C.B. ASS'Y.
2. Disconnect the power cord from the electric outlet.

CONCERNING WATER SUPPLY



| PROBLEM | CHECK POINT | CAUSE | SOLUTION |
|------------------------------|---|--|-------------------------------|
| WATER SUPPLY IS NOT STOPPED. | Does the water supply continue while the power is turned off? | YES The water inlet valve is defective. | Change the water inlet valve. |
| | NO Does the water supply start as soon as you press the power switch? | YES The triac of P.C.B is defective. | Change the P.C.B ASS'Y. |
| | NO Operate the washer after setting the water level to "HIGH" | | |
| | Does the water supply continue after the water reaches to the "HIGH" level? | NO | Normal operation. |
| | YES Is the air tube of water level switch kinked or deformed? | YES Air tube is defective. | Change the air tube. |
| | NO Pressure switch is defective. | | Change the pressure switch. |

CONCERNING WASHING

| PROBLEM | CHECK POINT | CAUSE | SOLUTION |
|---|--|---|--------------------------------|
| THE PULSATOR DOES NOT ROTATE EVEN IF THE WATER IS SUPPLIED. | Does the motor operate after finishing water supply? | | |
| | NO Does pulsator rotate in only one direction? | YES The triac of P.C.B is defective. | Change the P.C.B ASS'Y. |
| | YES Does the motor make operating sound? | NO | Normal |
| | NO Is the motor coil disconnected? | YES Motor is defective. | Change the motor. |
| | YES Is the connection condition of capacitor terminal good? | NO Improper connection. | Connect the terminal properly. |
| | YES Is the V-belt worn out? | YES V-belt is defective. | Change the V-belt. |
| | NO | | Change the motor. |
| | | | |

CONCERNING DRAINING

| PROBLEM | CHECK POINT | CAUSE | SOLUTION |
|--|--|---|---|
| THE WASHER DOES NOT DRAIN. * NON-PUMP MODEL | Do you install the drain hose properly? | NO Improper installation. | Install the drain hose properly. |
| | YES Is the foreign matter accumulated inside the drain housing? | YES Malfunction of drainage by the foreign matter. | Remove the foreign matter from the drain housing. |
| | NO Is the output voltage of the drain motor normal? | YES The drain motor is defective. | Change the drain motor. |
| | NO | P.C.B ASS'Y is defective. | Change the P.C.B ASS'Y. |
| THE WASHER DOES NOT DRAIN. * PUMP MODEL | Do you install the drain hose properly? | NO Improper installation. | Install the drain hose properly. |
| | YES Is the foreign matter accumulated inside the pump housing? | YES Malfunction of drainage by the foreign matter. | Remove the foreign matter from the pump housing. |
| | NO Is the output voltage of the drain pump normal? | YES The drain pump is defective. | Change the drain pump. |
| | NO | P.C.B ASS'Y is defective. | Change the P.C.B ASS'Y. |

CONCERNING SPINNING







| PROBLEM | CHECK POINT | CAUSE | SOLUTION |
|---------------------------|---|----------------------------|--|
| THE WASHER DOES NOT SPIN. | Is the lid open? | YES | Close the lid. |
| | NO | | |
| | Does the door switch operate normally? | NO | Door switch is defective. Change the door switch. |
| | YES | | |
| | Does the safety switch operate normally? | NO | Safety switch is defective. Change the safety switch. |
| | YES | | |
| | Is the connector of P.C.B ASS'Y connected properly? | NO | Improper connection of the connector. Connect the connector properly. |
| | YES | P.C.B. ASS'Y is defective. | Change P.C.B ASS'Y. |
| | Does the pulsator rotate while the tub does not rotate? | | |
| | NO | | |
| | YES | | |
| | Is the input voltage of the drain motor normal? | YES | Drain motor is defective. Change the drain motor. |
| | NO | P.C.B ASS'Y is defective. | Change the P.C.B ASS'Y. |
| | Is the V-belt worn out? | YES | V-belt is defective. Change the V-belt. |
| | NO | | |
| | Is the input voltage of motor normal? | YES | Motor is defective. Change the motor. |
| | NO | | |
| | Is the connection condition of capacitor terminal good? | NO | Improper connection. Connect the terminal correctly. |
| | YES | P.C.B ASS'Y is defective. | Change the P.C.B ASS'Y. |

CONCERNING OPERATION

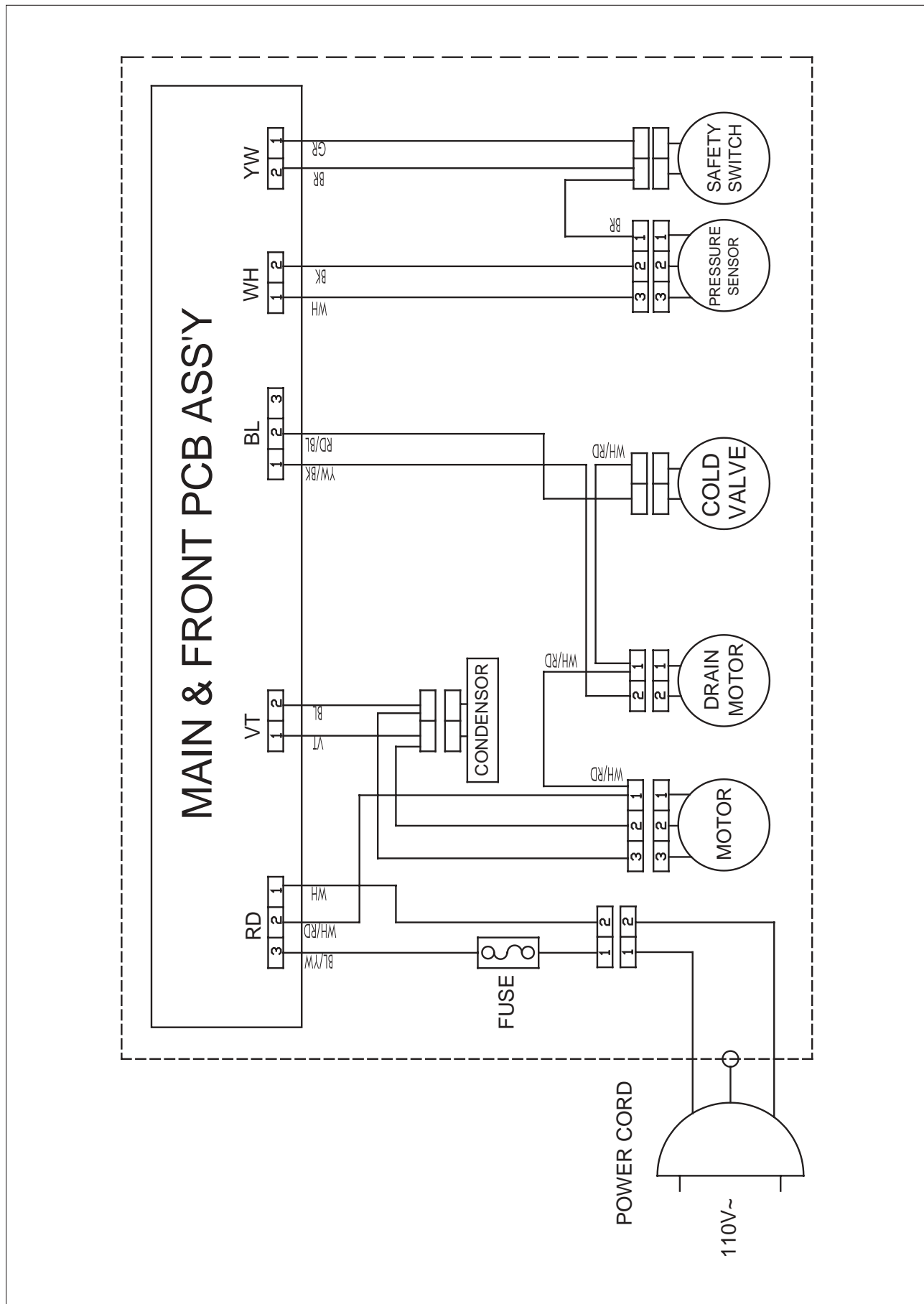
| PROBLEM | CHECK POINT | CAUSE | SOLUTION |
|--|---|--|---------------------------------|
| THE INDICATOR LAMPS(L.E.D) DO NOT LIGHT UP WHEN THE POWER BUTTON IS PRESSED. | Is the plug connected to electric outlet? | NO | Connect the plug. |
| | ↓ YES | | |
| | Is Fuse opened? | YES | Change Fuse. |
| | ↓ NO | | |
| | Is the condition of power button good? | NO Power button is defective. | Change P.C.B ASS'Y. |
| | ↓ YES | | |
| | Is the connector of the P.C.B. ASS'Y connected properly? | NO Improper connection of the connector. | Connect the connector properly. |
| | ↓ YES | | |
| | Is input voltage of the transformer normal? | NO Transformer is defective. | Change P.C.B ASS'Y. |
| | ↓ YES | P.C.B. ASS'Y is defective. | Change P.C.B ASS'Y. |
| PROGRESS LAMPS(LED) DO NOT LIGHT UP. | Do you press START/HOLD button? | NO | Press START/HOLD button. |
| | ↓ YES | P.C.B ASS'Y is defective. | Replace P.C.B ASS'Y. |
| MOTOR ROTATES WHEN START/HOLD BUTTON IS NOT PRESSED. | Does the pressure switch operate normally? | NO Pressure switch is defective. | Change the pressure switch. |
| | ↓ YES | | |
| | Check the output voltage of P.C.B ASS'Y. | Abnormal P.C.B ASS'Y is defective. | Change P.C.B ASS'Y. |
| ABNORMAL NOISE DURING WASH PROCESS. | Is the strange noise generated when the pulsator rotates in TEST MODE of P.C.B ASS'Y? | YES There is foreign matter between pulsator and tub. | Remove the foreign matter. |
| | ↓ NO | | |
| | Is the V-belt worn out? | YES V-belt is defective. | Change the V-belt. |

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

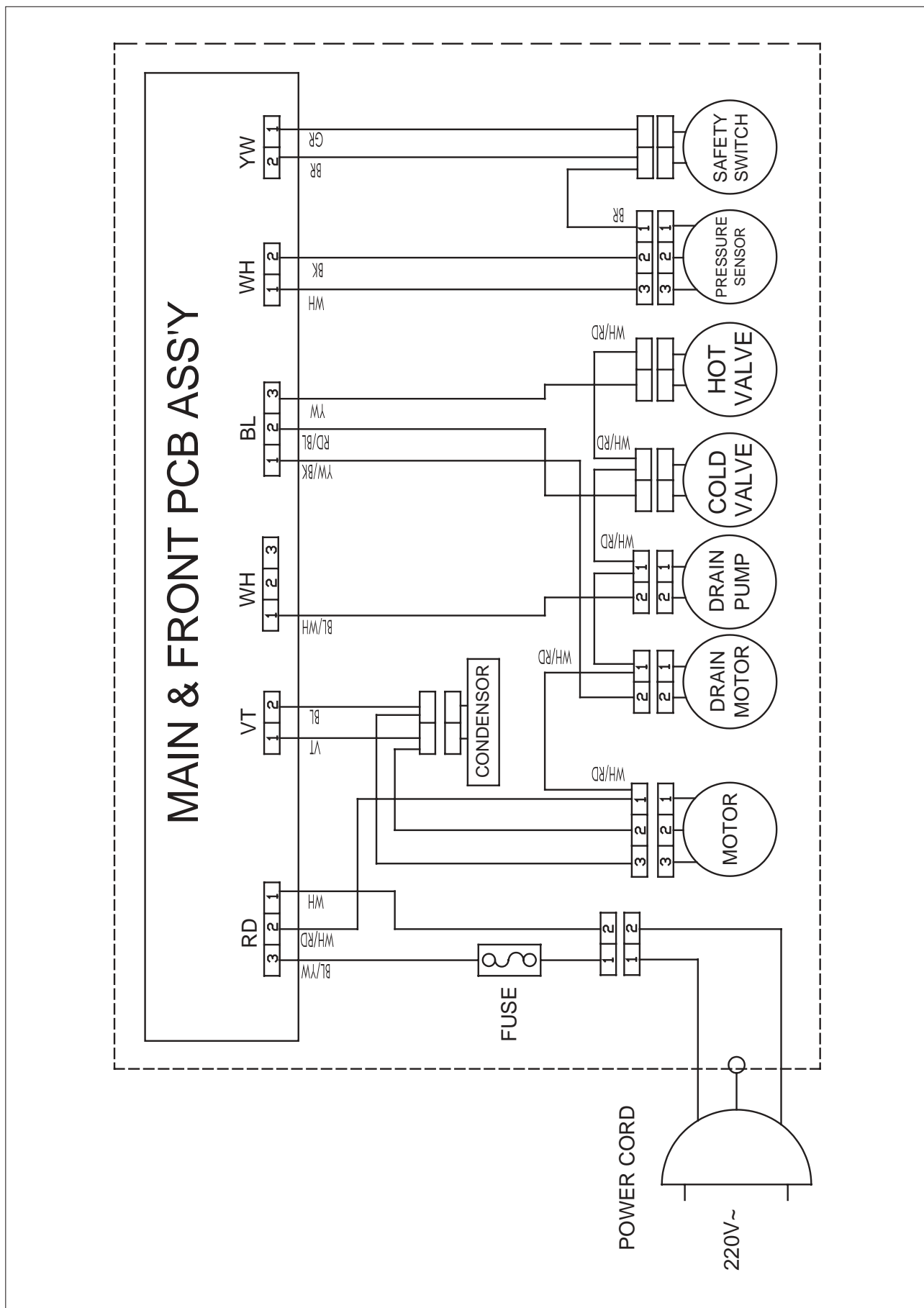
CONCERNING ERROR MESSAGE

| 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 or drain pump is inferior. | Change drain motor or drain pump. |
|  | 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 7 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. |

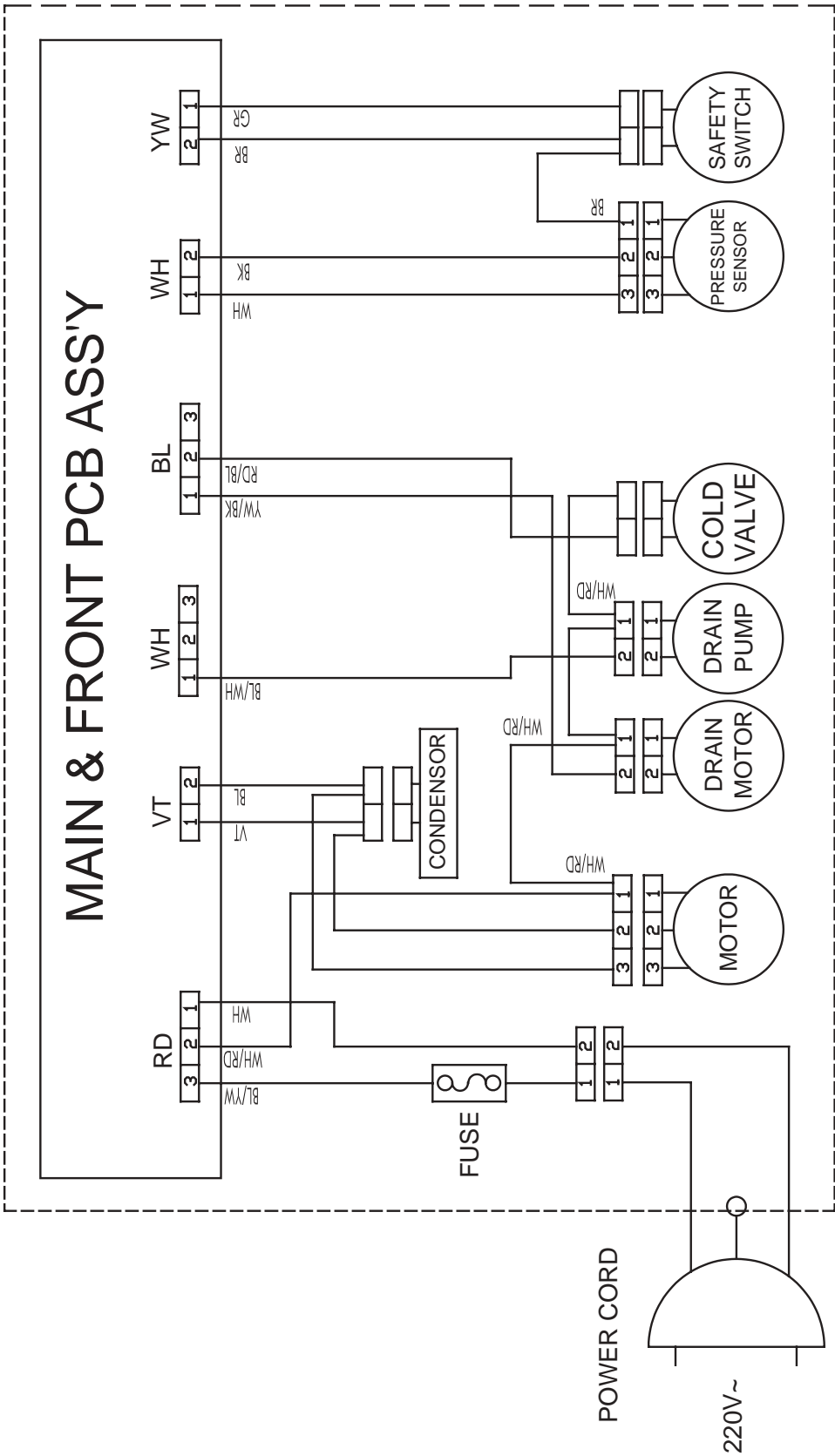
■ WIRING DIAGRAM (110V~, NON-PUMP, COLD ONLY)



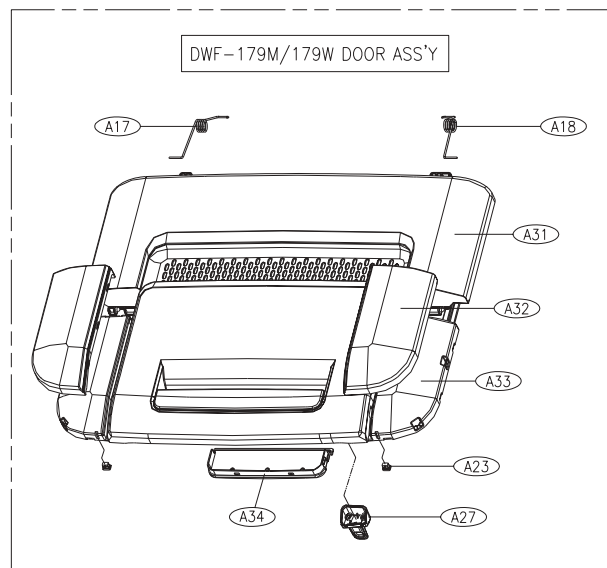
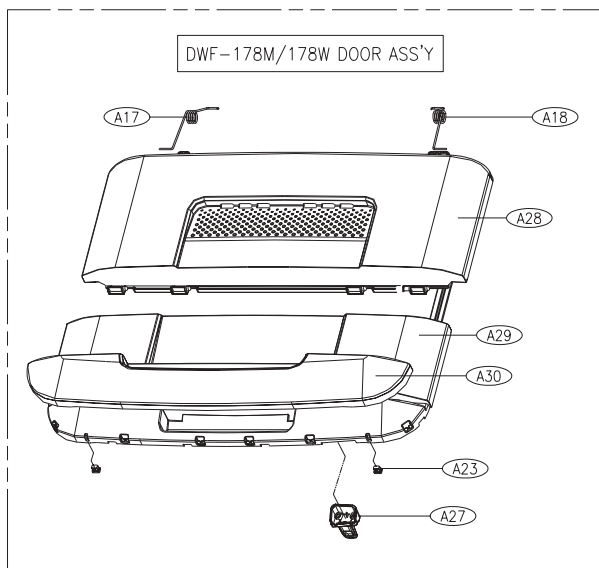
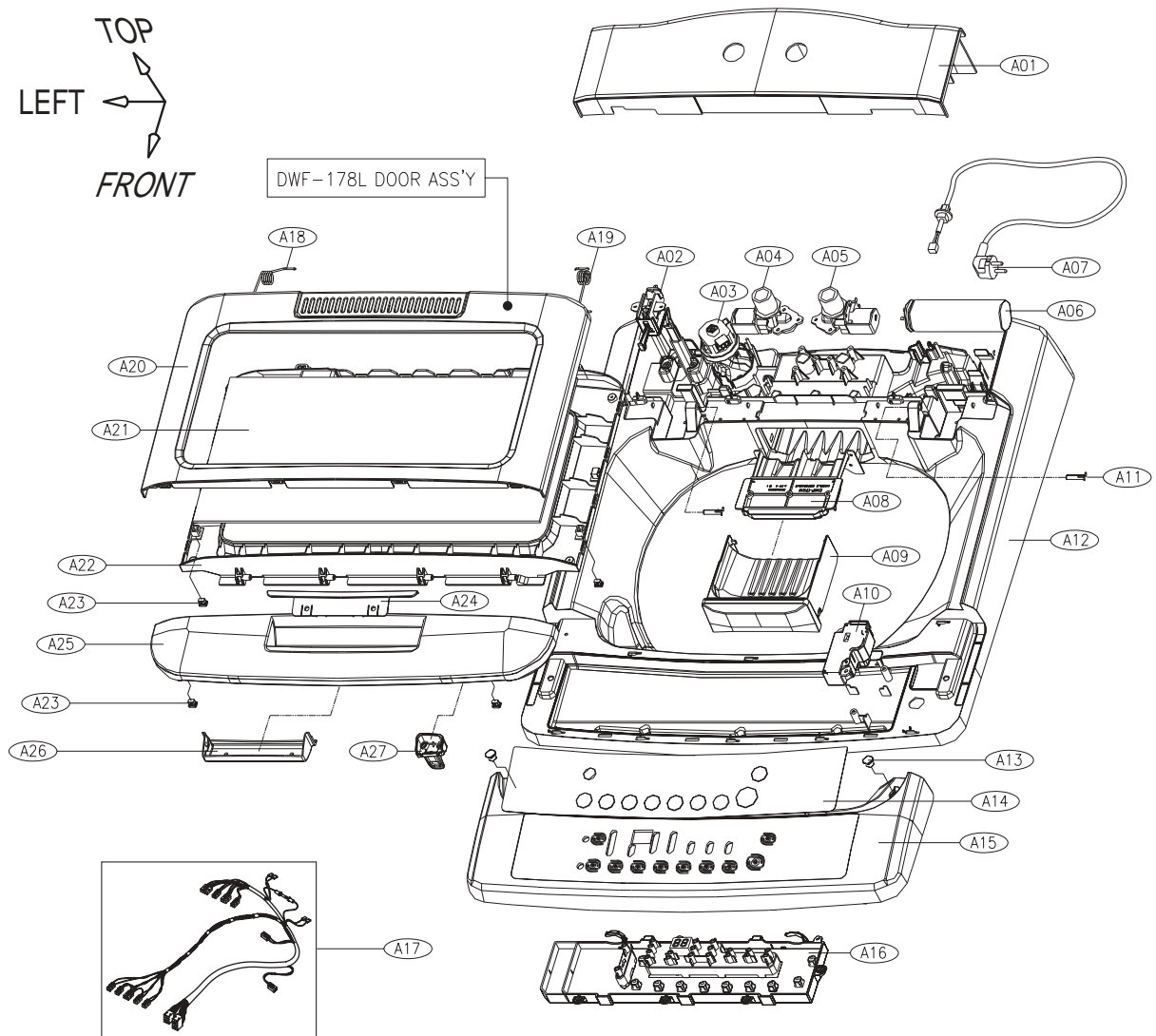
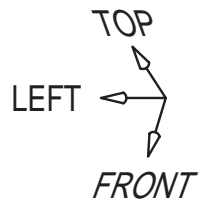
WIRING DIAGRAM (220V~, PUMP, COLD+HOT)

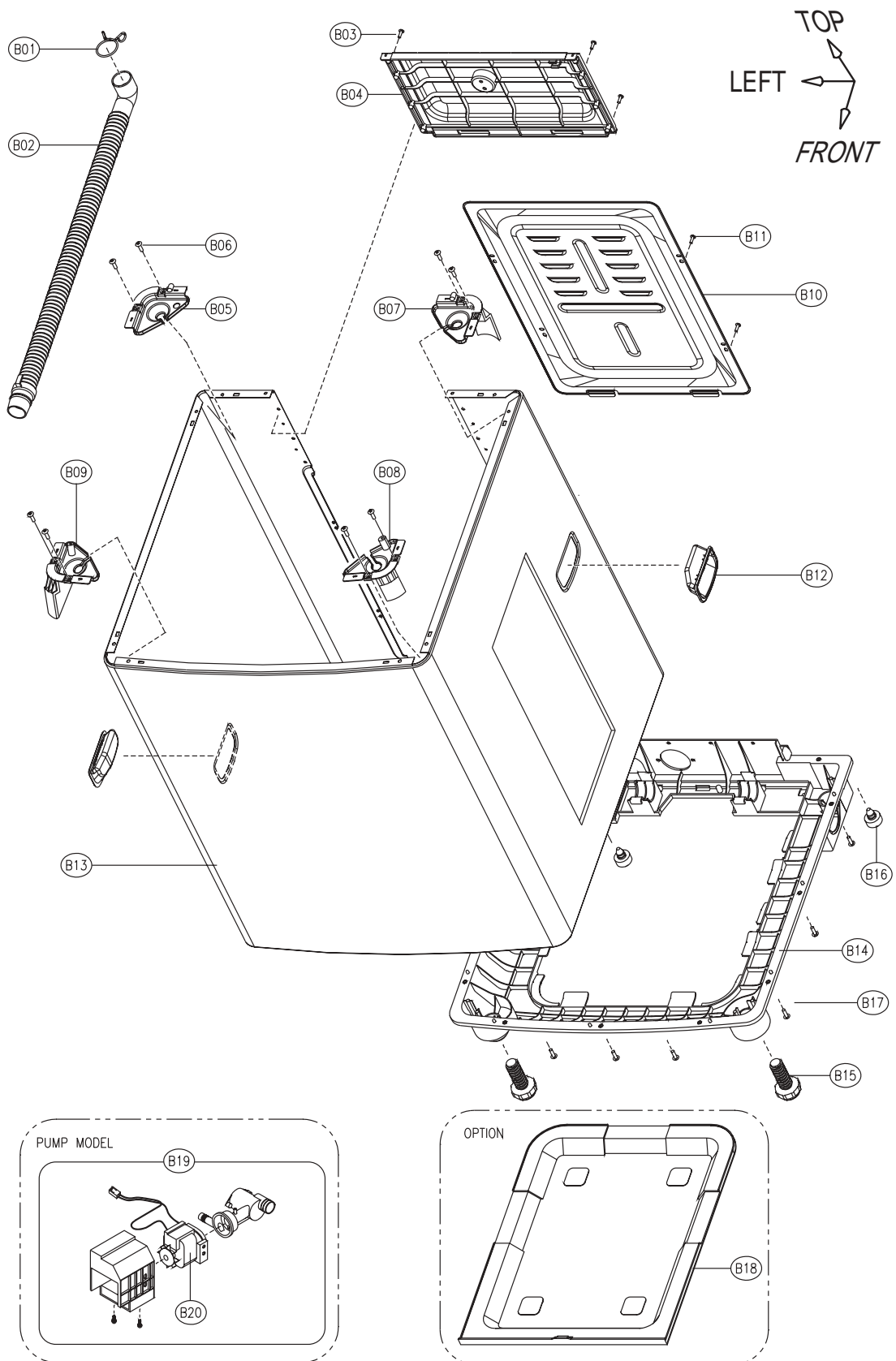


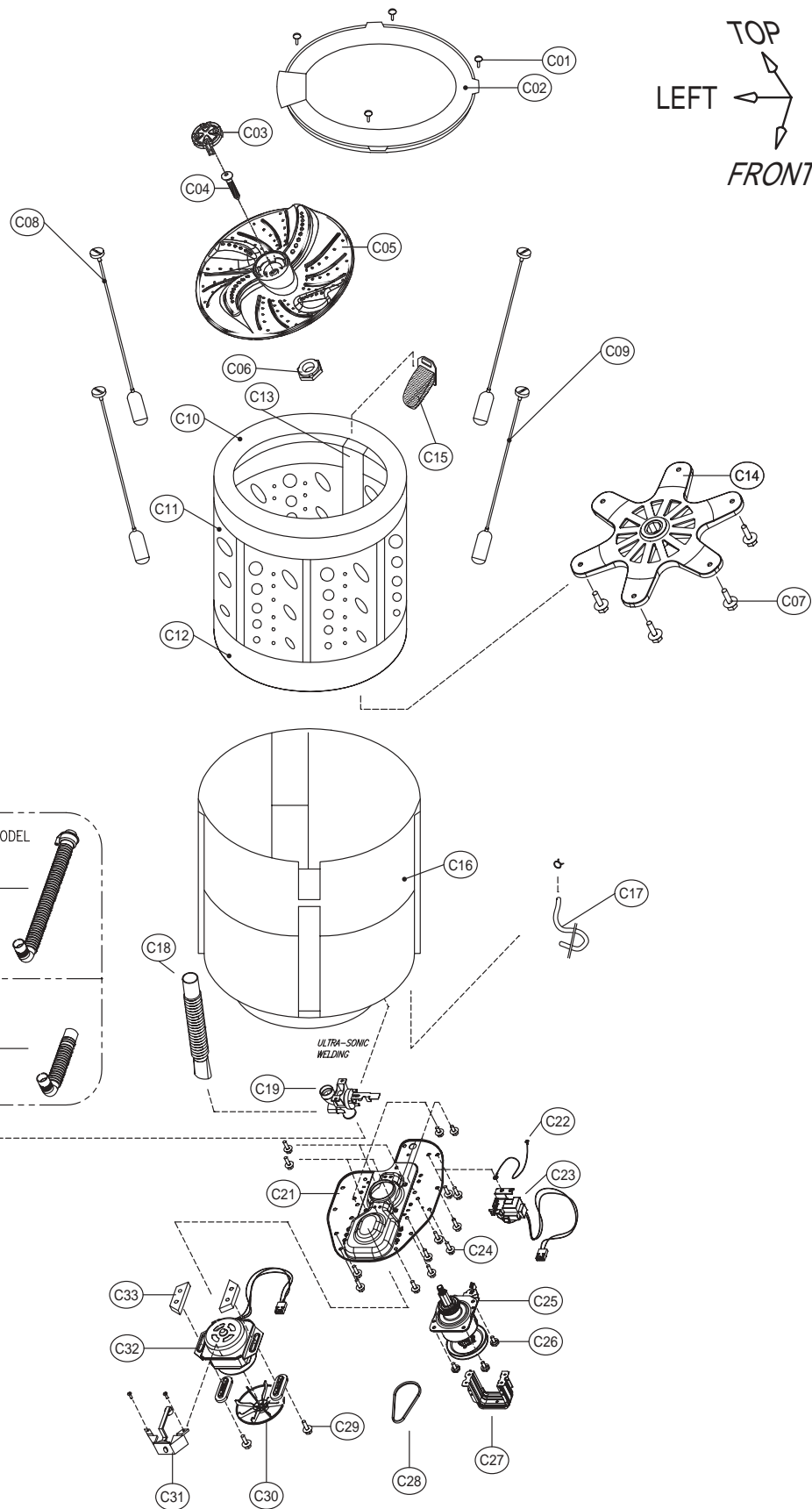
■ WIRING DIAGRAM (220V~, PUMP, COLD ONLY)



PARTS DIAGRAM







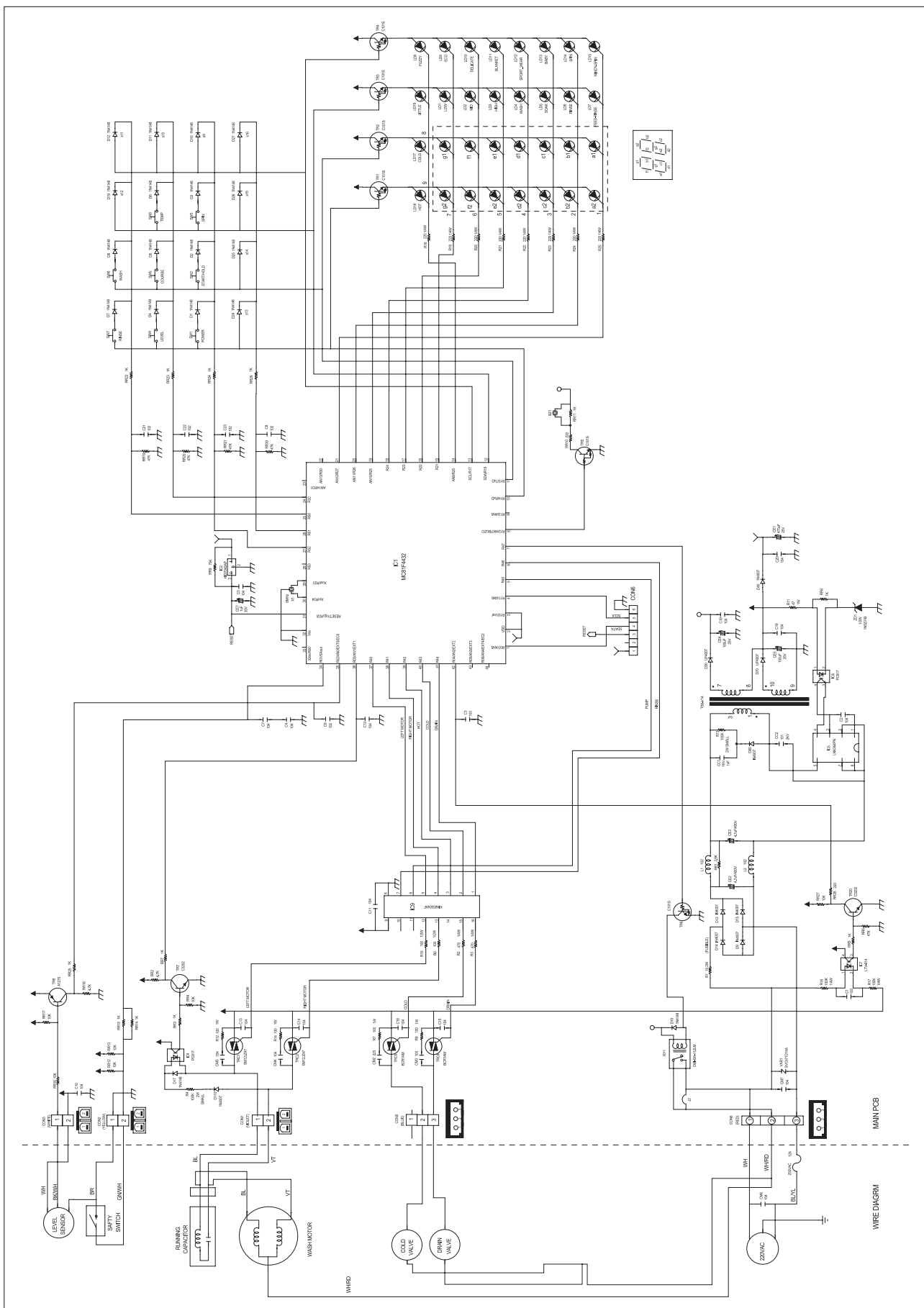
PARTS LIST

| No. | PARTS NAME | PARTS CODE | DESCRIPTION | Q'TY | REMARK |
|-----|--------------------|------------|--|-------|-----------------------|
| A01 | PANEL *B | 36142T4400 | PP(DWF-178L/178M/178W/179M/179W) | 1 | 178L/M/W, 179M/W |
| A02 | SWITCH SAFETY | 3619003171 | SF-030A3, CU/T=14, #187 | 1 | |
| A03 | SENSOR PRESSURE AS | 3614801635 | CDL-15N-1,225DO,3PIN,L1=740,L2=90 | 1 | |
| A04 | VALVE INLET (HOT) | 3615403811 | AC220-240V/50,60HZ,270DEG,HOT,35mA | 1 | 220-240V, HOT(OPTION) |
| A05 | VALVE INLET (COLD) | 3615403331 | AC110-130V/,60HZ,90DEG,COLD,35mA | 1 | 110-130V, COLD |
| | | 3615403731 | AC220-240V/50,60HZ,90DEG,COLD,35mA | | 220-240V, COLD |
| A06 | UNIT CAPACITOR AS | 3618929100 | 54μF 200VAC, CAN TYPE | 1 | For 110V/60Hz |
| | | 3618911300 | 12.5UF 400VAC, CAN TYPE | | For 220V/50Hz |
| | | 3618911200 | 11.4UF 400VAC, CAN TYPE | | For 220V/60Hz |
| A07 | CORD POWER AS | 3611332810 | 7A125V0.75SQ VCTFK TAIWAN LP-70 2.3M | 1 | 110/60, TAIWAN |
| | | 3611341F00 | CHILE. 0.75X3 240H/260H | | 220/50, CHILE |
| | | 3611339040 | CP-2PIN 100H IEC 53(VCTF,H05VV-F) 3X0.75 1.9M GY | | 220/60, PERU |
| A08 | NOZZLE DETERGENT | 3618112600 | PP(DWF-178L/178M/178W/179M/179W) | 1 | 178L/M/W, 179M/W |
| A09 | CASE DETERGENT | 36111T3100 | ABS(DWF-178L/178M/178W/179M/179W) | 1 | 178L/M/W, 179M/W |
| A10 | DOOR LOCK SWITCH | 3619048900 | 5A,JAPAN, 60B, 100V | (1) | OPTION(JAPAN) |
| A11 | HINGE DOOR | 3612902400 | POLYACETAL | 2 | |
| A12 | PLATE *T | 3614543000 | PP(DWF-178L/178M/178W/179M/179W) | 1 | 178L/M/W, 179M/W |
| A13 | CAP SCREW | 3610902600 | CR | 2 | |
| A14 | DECORATOR FILM | 36116DWC00 | PC FILM , 178W | 1 | DESIGN OPTION |
| A15 | PANEL *F | 36142T4500 | ABS(DWF-178L/178M/178W/179M/179W) | 1 | 178L/M/W, 179M/W |
| A16 | PCB AS | PRPSSWXC61 | DWF-178L, SMALL PCB, TAIWAN | 1 | 110/60, TAIWAN |
| | | PRPSSWXC64 | DWF-178L, LARGE PCB, CHILE & PERU | | 220/50-60, CHILE&PERU |
| | | PRPSSWXC69 | DWF-178L, LARGE PCB, PANAMA | | 220/50-60, PANAMA |
| A17 | HARNESS AS | 3612797A30 | DWF-178W 110V COLD (NON -PUMP) | 1 | 110V/NON-PUMP/COLD |
| | | 3612797A40 | DWF-178W 220V COLD,HOT (PUMP) | | 220V/PUMP/C&H |
| | | 3612797A70 | DWF-178W 220V COLD(PUMP) | | 220V/PUMP/COLD |
| A18 | SPRING DOOR L | 3615118800 | DWF-178 | 1 | 178L/M/W, 179M/W |
| A19 | SPRING DOOR R | 3615118801 | DWF-178 | 1 | 178L/M/W, 179M/W |
| A20 | DOOR BACK *O | 36117ADT00 | DWF-178L, ABS | 1 | 178L(MOLD) |
| | | 36117ADT10 | ABS DECORATOR SPRAY, 178L | | 178L(SPRAY) |
| A21 | DOOR GLASS | 36117AE000 | GLASS,178L,470X217X4.0T | 1 | OPTION(178L) |
| | | 36117AE010 | GLASS,178L,470X217X4.0T,NAZCA | | OPTION(178L, PERU) |
| | | 36117AE020 | GLASS,178L,470X217X4.0T,PATTERN,CHILE | | OPTION(178L, CHILE) |
| A22 | DOOR BACK *I | 36117ADU00 | ABS, 178L | 1 | 178L |
| A23 | CUSHION DOOR | 3611559900 | NR | 4 | 178L |
| | | | | 2 | 178M/W, 179M/W |
| A24 | DECO HANDLE | 36116DW600 | ABS, 178L | 1 | 178L(MOLD) |
| | | 36116DW610 | ABS VACUUM-METALIZED, 178L | | 178L(VACUUMMETALLIZE) |
| A25 | DOOR *F | 36117ADV00 | ABS, 178L | 1 | 178L(MOLD) |
| | | 36117ADV10 | ABS DECORATOR SPRAY, 178L | | 178L(SPRAY) |
| A26 | CAP HANDLE | 3610920400 | ABS, 178L | 1 | 178L |

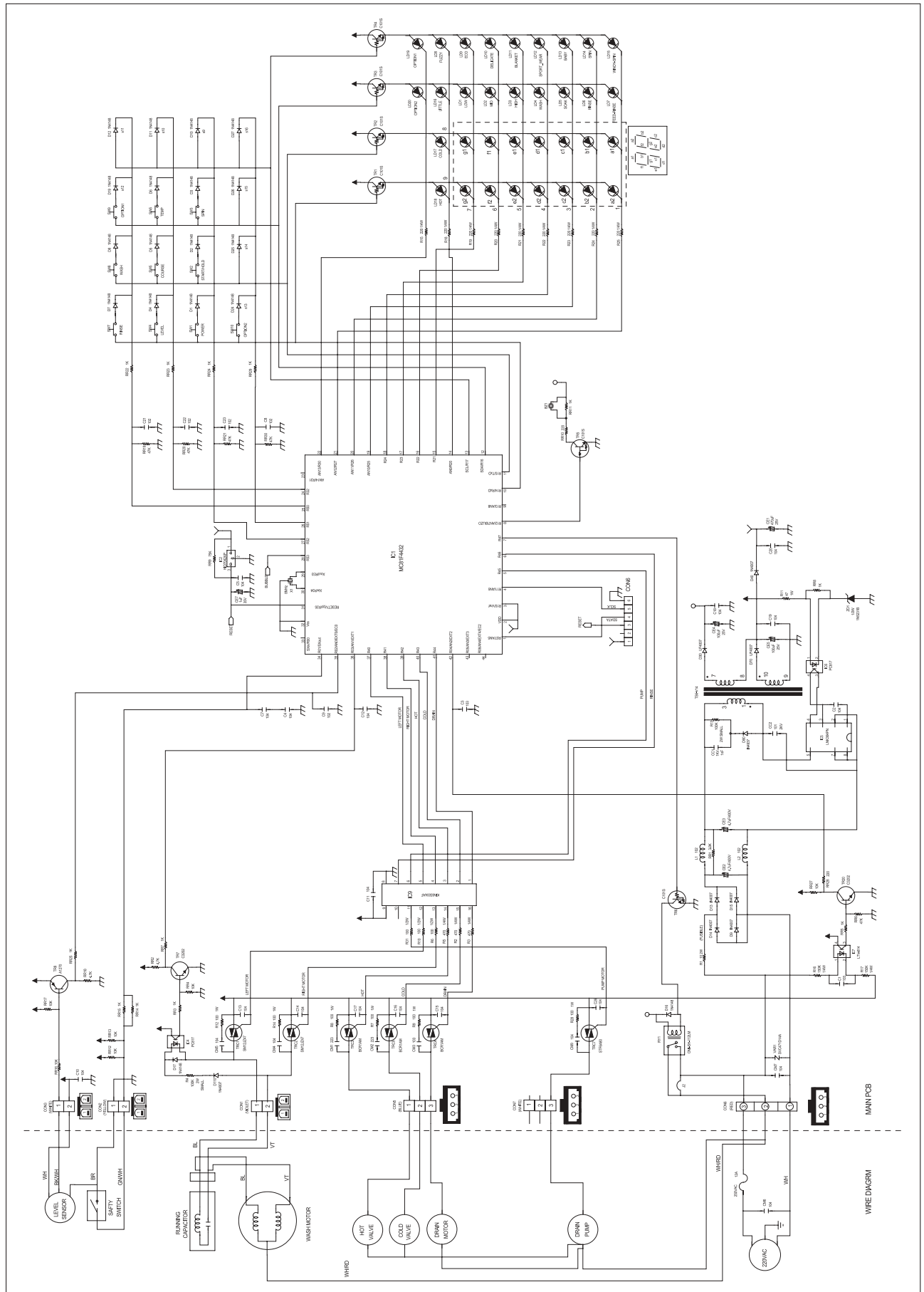
| No. | PARTS NAME | PARTS CODE | DESCRIPTION | Q'TY | REMARK |
|-----|---------------------|------------|--------------------------------------|-------|---------------|
| A27 | HOOK DOOR | 3613101800 | ABS, DWF-178 | (1) | OPTION(JAPAN) |
| A28 | DOOR *B | 361A114200 | ABS, 178M/178W | 1 | 178M/178W |
| A29 | DOOR *F | 361A114300 | ABS, 178M(OPAQUE) | 1 | 178M(OPTION) |
| | | | ABS, 178W(TRANSPARENT) | | 178W(OPTION) |
| A30 | COVER DOOR F | 3611432900 | ABS, 178M/178W | 1 | 178M/178W |
| A31 | DOOR *B | 36117ADR00 | ABS, 179M/179W | 1 | 179M/179W |
| A32 | COVER DOOR F | 3611433000 | ABS, 179M/179W | 1 | 179M/179W |
| A33 | DOOR *F | 36117ADS00 | ABS, 179M(OPAQUE) | 1 | 179M(OPTION) |
| | | | ABS, 179W(TRANSPARENT) | | 179W(OPTION) |
| A34 | CAP HANDLE | 3610920300 | ABS, 179M/179W | 1 | 179M/179W |
| B01 | CLAMP | 4501F06120 | SWPA2 ZN8-C D34 | 1 | NON-PUMP |
| | | 3611202200 | HSW3 PE-LD | | PUMP |
| B02 | HOSE DRAIN OUTER AS | 3613226600 | L=950MM, HANGER | 1 | NON-PUMP |
| | | 3613218800 | LD-PE/EVA L=1600 PUMP | | PUMP |
| B03 | SCREW TAPPING | 7122401411 | T2S TRS 4X14 MFZN | 4 | |
| B04 | PLATE UPPER | 3614514600 | PP, 1094 | 1 | |
| B05 | SUPPORTER TUB BL | 3615302931 | FRPP(5203G6) | 1 | |
| B06 | SCREW TAPPING | 7122401411 | T2S TRS 4X14 MFZN | 8 | |
| B07 | SUPPORTER TUB BR | 3615302921 | FRPP(5203G6) | 1 | |
| B08 | SUPPORTER TUB FR | 3615302901 | FRPP(5203G6) | 1 | |
| B09 | SUPPORTER TUB FL | 3615302911 | FRPP(5203G6) | 1 | |
| B10 | COVER *B | 3611414010 | 372*508*0.4T, SGCC | 1 | |
| B11 | SCREW TAPPING | 7112401011 | T1 TRS 4*10 MFZN | 4 | |
| B12 | HANDLE CABINET | 3612603300 | PP | 2 | |
| B13 | CABINET SUB AS | 3610809501 | PAINTING (0.6) | 1 | |
| B14 | BASE *U | 3610388300 | PP | 1 | |
| B15 | LEG ADJUST AS | 3617702123 | BUTYL FOOT, CONE SHAPE | 2 | |
| B16 | FOOT | 3612100330 | BUTYL VE(SMALL) | 2 | |
| B17 | SCREW TAPPING | 7122401411 | T2S TRS 4X14 MFZN | 11 | |
| B18 | COVER UNDER | 3611402715 | 1094 PP VIRGIN:RECYCLE=50:50 | (1) | OPTION |
| B19 | UNIT DRAIN PUMP AS | 361897409D | 220V 60HZ,40W,#1806 D/L,L/W=1410 | 1 | 220/60 |
| | | 36189L606D | 230~240V/50HZ,L=1400,1806 D/L | | 230-240/50 |
| B20 | UNIT DRAIN PUMP | 36189L1400 | 220V/60HZ,CU 40W,L=1400,BB CUT,B30-5 | 1 | 220/60 |
| | | 36189M1400 | 220~240V,CU 40W,L=1400,BB CUT,B30-6 | | 230-240/50 |

| No. | PARTS NAME | PARTS CODE | DESCRIPTION | Q'TY | REMARK |
|-----|---------------------|------------|--------------------------------|------|------------------|
| C01 | SCREW TAPPING | 7122401611 | T2S TRS 4X16 MFZN | 4 | |
| C02 | COVER TUB *O | 3611408500 | PP | 1 | |
| C03 | CAP PULSATOR | 3610920500 | PP, DWF-178W | 1 | 178L/M/W, 179M/W |
| C04 | SPECIAL SCREW | 3616062629 | STS430 6X26.5 | 1 | |
| C05 | PULSATOR AS | 3619705804 | DWF-178W, NANO SILVER | 1 | 178L/M/W, 179M/W |
| C06 | SPECIAL NUT | 4507D83080 | SUS 304 | 1 | |
| C07 | SPECIAL SCREW | 3616007001 | SCM24H,6.5*24 101S | 6 | |
| C08 | SUSPENSION AS (B) | 3619805700 | BLACK SPRING,111 | 2 | |
| C09 | SUSPENSION AS (F) | 3619805600 | YELLOW SPRING,120 | 2 | |
| C10 | BALANCER AS | 3616105500 | 850M | 1 | |
| C11 | TUB *I | 3618830700 | SUS 0.4T, ONE PIECE, 170M | 1 | |
| C12 | TUB *U | 3618816101 | PP-M/B | 1 | OPTION |
| | | 3618816113 | PP 1620G | | |
| C13 | GUIDE FILTER AS | 3612508300 | 850M,GUIDE-A(MEXICO) | 2 | |
| | | 3612508400 | 850M,GUIDE-B(MEXICO) | 1 | |
| C14 | FLANGE TUB | 3617200600 | ALDC12 VE1,6POINT | 1 | |
| C15 | FILTER AS | 4505E82002 | P.E(POLYESTER 90X120)INSE | 2 | |
| C16 | TUB *O | 3618802630 | PP JI-370(8KG) | 1 | |
| C17 | HOSE | 4500D08210 | ID=4.0 KOR | 1 | |
| C18 | HOSE OVERFLOW | 3613208901 | PELD, L=280mm | 1 | NON-PUMP |
| C19 | VALVE DRAIN AS | 3615408400 | 1098,s VE TYPE | 1 | ONLY NON-PUMP |
| C20 | HOSE DRAIN INNER AS | 3613218510 | LDPE+EVA L=210.5 | 1 | NON-PUMP |
| | HOSE DRAIN *I | 3613212120 | EVA,L=184 | | PUMP |
| C21 | BASE | 3610387400 | SECEN 2.0T | 1 | |
| C22 | HARNESS EARTH INNER | 3612757010 | L=560MM | 1 | |
| C23 | DRAIN MOTOR | 36196TAN30 | SV-HJ7T22D 100-110 50/60HZ | 1 | 100-110/50-60 |
| | | 36196TAN00 | SV-MX7T22D 220V50/60HZ | | 220/50-60 |
| C24 | SPECIAL SCREW | 3616007001 | SCM24H,6.5*24 101S | 16 | |
| C25 | GEAR MECHANISM | 3617310400 | GM-1000-YJ6P2 | 1 | |
| C26 | BOLT HEX | 7341801511 | 6B-1 8*15 MFZN | 4 | |
| C27 | PROTECTOR GEAR | 3618301310 | SBHG 1.2T | 1 | |
| C28 | BELT V | 3616590220 | M20.5 AGING | 1 | 60Hz |
| | | 3616590230 | M21, AGING | | 50Hz |
| C29 | BOLT HEX | 7650802528 | 6B-1 8*25 PW(3*28) MFZN | 2 | |
| C30 | PULLEY MOTOR AS | 3618401400 | M-TYPE(AL), DS=10 DP=48.5 60HZ | 1 | 60Hz |
| | | 3618401420 | M-TYPE(AL) DS=10 DP=53.0 50HZ | | 50Hz |
| C31 | BODY BUBBLE AS | 3610402931 | 104KR, HOSE L=2700MM | 1 | OPTION |
| C32 | MOTOR CONDENSER | 3964322--- | | 1 | 110/60 |
| | | 3964322100 | W2D50VA014 220V50HZ 1350L KET | | 220/50 |
| | | 3964322200 | W2D50UA019 220V60HZ 1350L KET | | 220/60 |
| C33 | CUSHION DOWN | 3611502700 | POM(8MM) | 2 | |

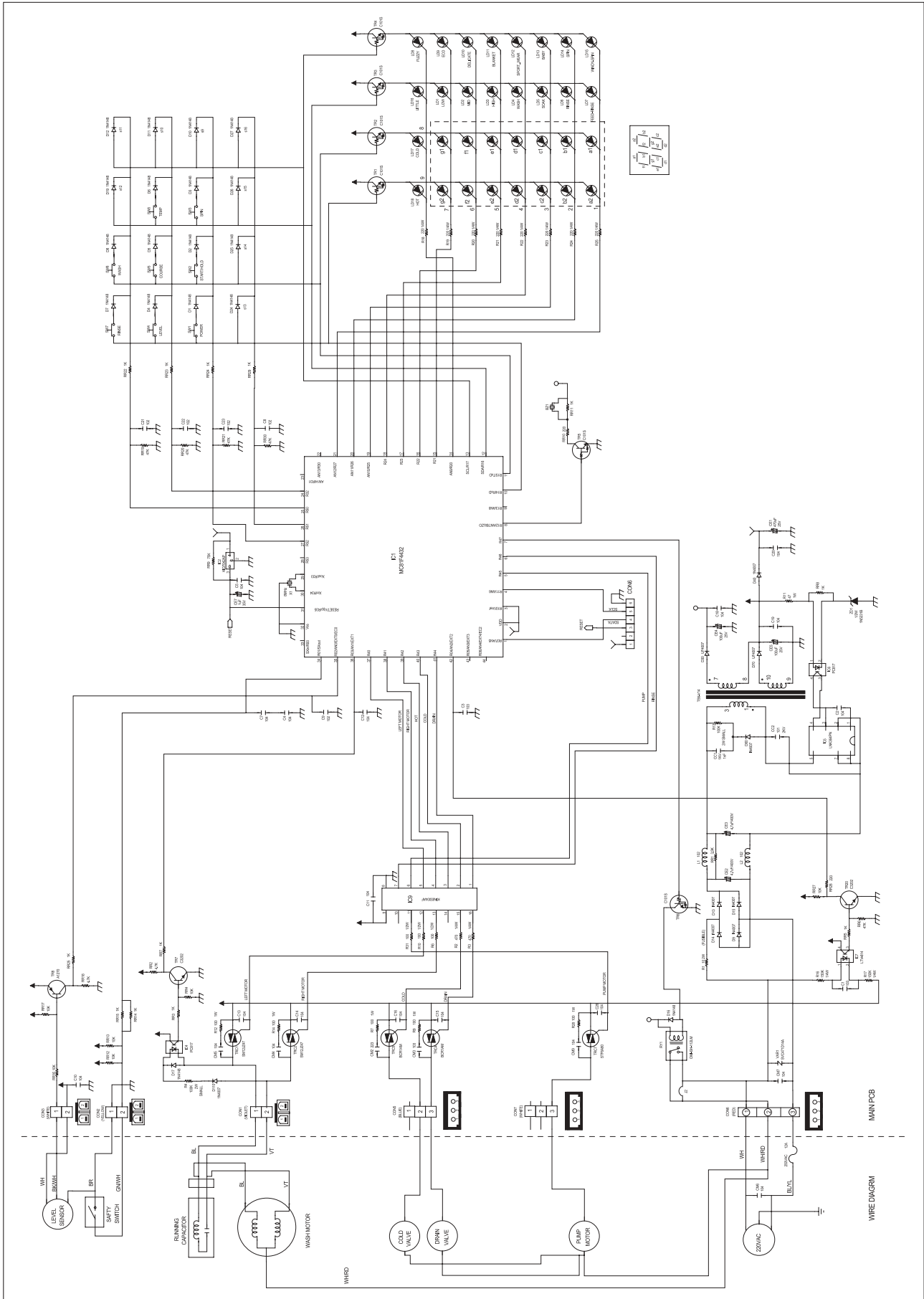
■ CIRCUIT DIAGRAM (110V~, NON-PUMP, COLD ONLY)



CIRCUIT DIAGRAM (220V~, PUMP, COLD+HOT)



CIRCUIT DIAGRAM (220V~, PUMP, COLD ONLY)





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연락처

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