

Service Manual

Drum Type Washing Machine



NA-140VG3
NA-168VG3
NA-148VG3

Product Colour :White

Destination :Germany, United Kingdom, France, Spain,
 Italy, Holland, Belgium, Sweden, Norway, Denmark
 Russia, Singapore, Vietnam, United Arab Emirates,
 Oman, Qatar, Kuwait, Malaysia, Iran, Thailand,
 Australia, New Zealand, Hongkong, Lebanon,Indonesia

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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1. SPECIFICATIONS

| Model No | NA-140VG3 | NA-148VG3 | NA-168VG3 |
|---|---|---|---|
| Power source | AC220V-240V/50Hz | AC220V-240V/50Hz | AC220V-240V/50Hz |
| Product weight | 74kg | 74kg | 74kg |
| Dimensions(W*D*H)(mm) | 596*625*845 | 596*625*845 | 596*625*845 |
| Laundry capacity | 10.0kg | 8.0kg | 8.0kg |
| Body Colour | White | White | White |
| Operation Panel | Dial+LED | Dial+LED | Dial+LED |
| Drum(Wash) r/min .(Rated load) | 37 ~ 53 r/min. | 37 ~ 53 r/min. | 37 ~ 53 r/min. |
| Spin r/min. (Rated load) | Max: 1400r/min. | Max: 1400r/min. | Max: 1600r/min. |
| Washing Performance | Variable Rotation Control | ● | ● |
| | Wide Angle Water Supply Shower | ● | ● |
| Standardized water amount (Cotton60°C + Eco option) | 63L | 50L | 50L |
| Washing Program | 16 | 16 | 16 |
| Energy Consumption | Below 1.14kWh | Below 0.91kWh | Below 0.91kWh |
| Noise level | Super quiet by Inverter-Controlled brushless Motor | Super quiet by Inverter-Controlled brushless Motor | Super quiet by Inverter-Controlled brushless Motor |
| Easy to take-out laundry | 340mm window/0° Drum | 340mm window/0° Drum | 340mm window/0° Drum |
| Lid Open | One Pull Button | One Pull Button | One Pull Button |
| Maximum power consumption | 2000W-2350W | 2000W-2350W | 2000W-2350W |
| Heating power consumption | 2000W/230V | 2000W/230V | 2000W/230V |
| Pressure of tap water | 0.03-1Mpa | 0.03-1Mpa | 0.03-1Mpa |
| Course select | Cotton,15°C Wash(Cold wash), Quick 50,Rapid15,SportsWear, Shirts,Bedding,Baby-Care, Memory,Cotton Rinse Plus,Colours,Easy-Care, Delicates,Wool,Silk/Lingerie, Mixed | Cotton,15°C Wash,Quick 50,Rapid15,SportsWear,Shirts, Bedding,Skin-Care, Memory,Cotton Rinse Plus,Colours,Easy-Care, Delicates,Wool,Denim, Outdoor | Cotton,15°C Wash(Cold wash), Quick 50,Rapid15,SportsWear, Shirts,Bedding,Skin-Care, Memory,Cotton Rinse Plus,Colours,Easy-Care, Delicates,Wool,Denim, Outdoor |
| Temperature | Cold、30°C、40°C、60°C、90°C | Cold、30°C、40°C、60°C、90°C | Cold、30°C、40°C、60°C、90°C |
| Buzzer | Cycle-end buzzer,Beeper alarm | Cycle-end buzzer,Beeper alarm | Cycle-end buzzer,Beeper alarm |
| Error display | U appears: 4 items H appears: 20 items | U appears: 4 items H appears: 20 items | U appears: 4 items H appears: 20 items |
| Accessories | Elbow/Cover cap/Spanner/Water-supply hose | Elbow/Cover cap/Spanner/Water-supply hose | Elbow/Cover cap/Spanner/Water-supply hose |

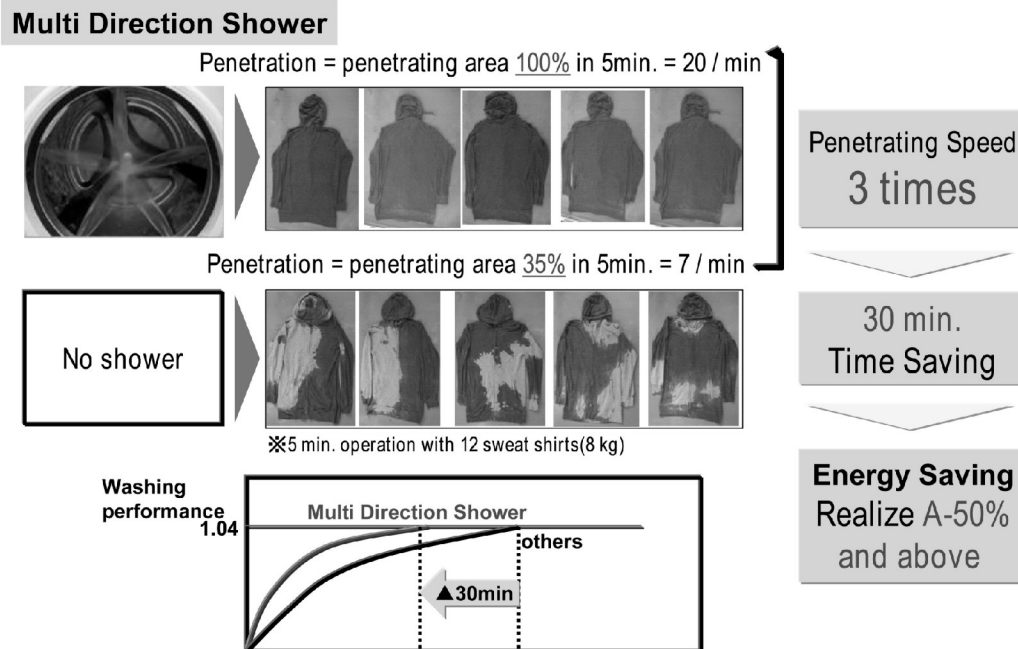
2. PRODUCT INFORMATION

2-1 Multi Direction Shower

Circulating water will shower from the five nozzles on the outer tub cover.

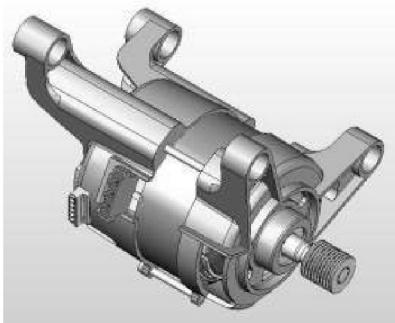
The water penetrates the laundry quickly, The water penetrates 3 times faster compared with a no shower type washing machine.

Multi Direction Shower for further Energy Saving



2-2 Advanced Inverter Control System

Quiet operation by new inverter motor & new arch design body NA-168VG3 series uses a DC brushless synchronized motor.



Rated specification

(1) Rotation speed

Low:400r/min

High:13200r/min

(2) Operation sound

\Below 75dB

(at 10000 r/min)

2-3 New arch design body

New arch design to strengthen the body unit.
Quieter compared to old model.

● Operation noise:

Wash: 53dB

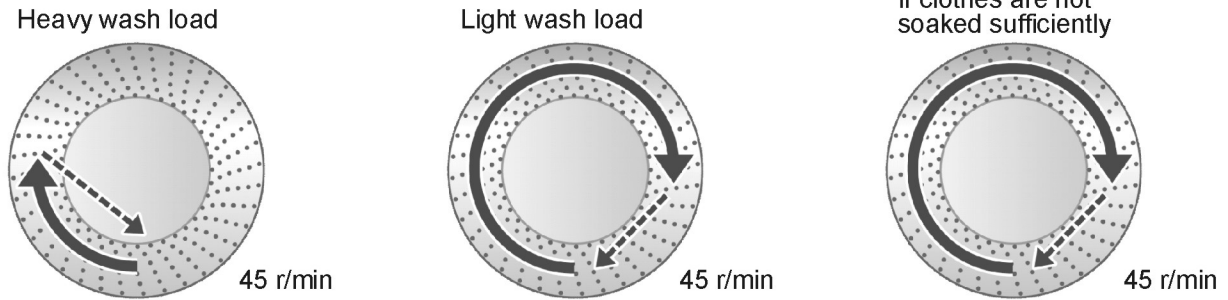
Spin: 71dB(for NA-140VG3,168VG3)



2-4 Smart Beat Wash by variable rotation control

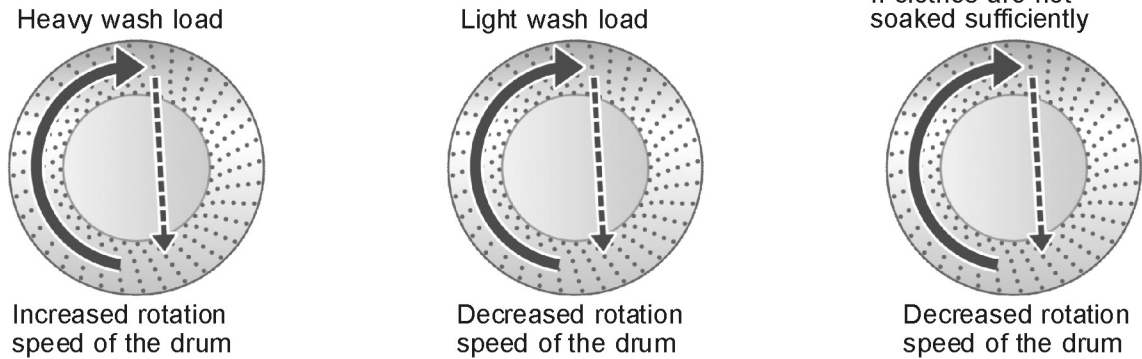
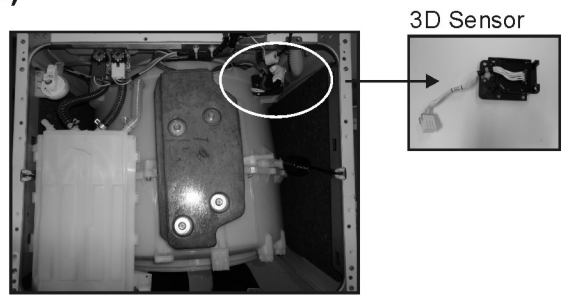
• Previous washing method

The drum rotates at a constant speed. Therefore, due to different fabrics and weights of clothing and insufficient penetration of water, dirt can not be beaten out by washing.



• New washing method (Variable rotation control)

The laundry's movement inside the drum shall be detected by 3D sensor, and the drum rotates most suitable speed to realize proper beat washing.



• How to check the 3D sensor

Operate "Test-No water"

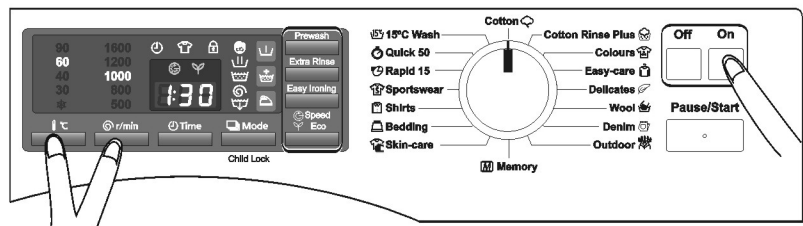
C-process: Spin Operation

Operate approx. 2 minutes with no load
(it shall be rotated smoothly)

- 1) Press Prewash. Switch =X-axis
- 2) Press Extra Rinse switch =Y-axis
- 3) Press Easy Ironing switch =Z-axis

- If indicate below 30 (Actual moving 3mm) → "3D sensor is working properly"
- If indicate more than 30 → "Replace the 3D sensor"

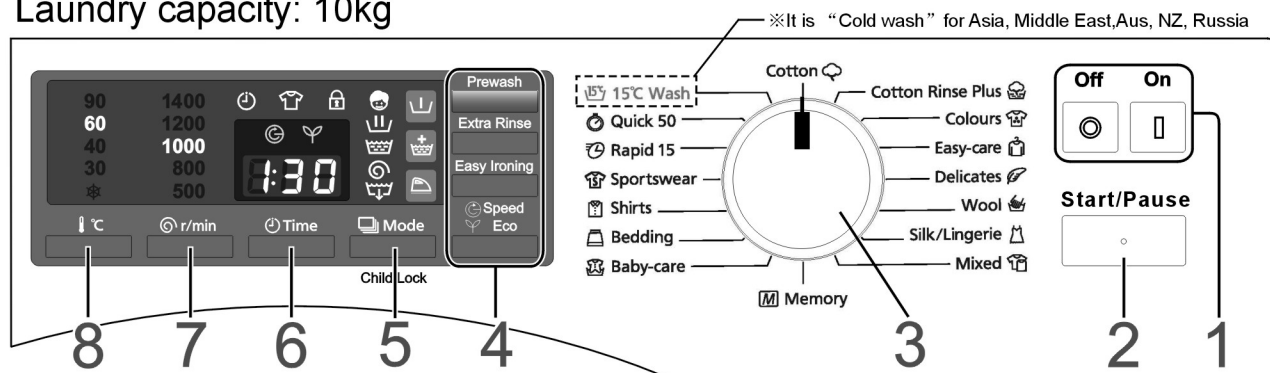
Incase there is no data and signal coming from the 3D sensor to the main PC Board within 30 seconds H41 shall be appeared. → Replace the 3D sensor



2-5 Model

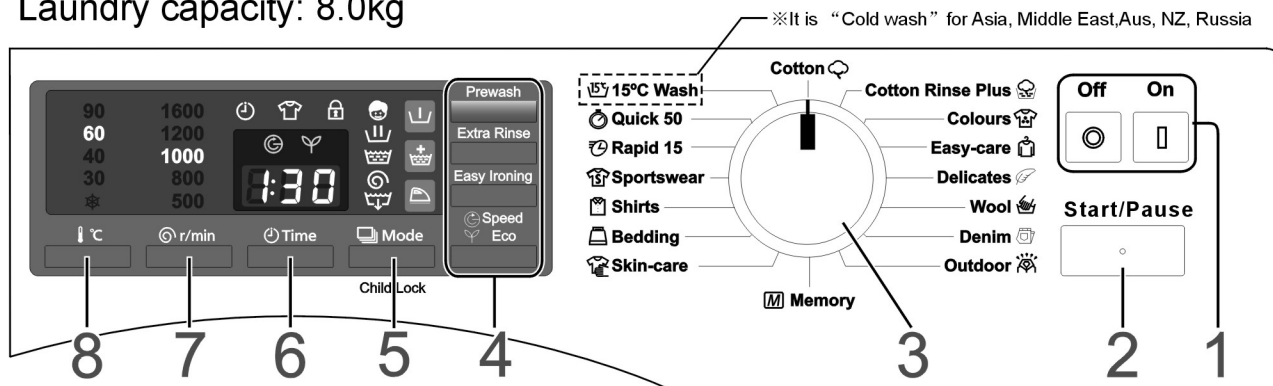
● For NA-140VG3

Laundry capacity: 10kg



● For NA-168VG3/NA-148VG3

Laundry capacity: 8.0kg



(For Model NA-168VG3)

Spin Speed Setting:

168VG3: *500r/min *800r/min *1000r/min *1200r/min *1600r/min

148VG3: *500r/min *800r/min *1000r/min *1200r/min *1400r/min

- | | |
|--------------------------------|---------------------------|
| 1. Power buttons | 5. Mode/Child lock button |
| 2. Start/Pause button | 6. Time button |
| 3. Programme selection dial | 7. Spin speed button |
| 4. Additional function buttons | 8. Temperature button |

2-6 Release the door lock for servicing

Incase the locked by breaker cut off or power outage.

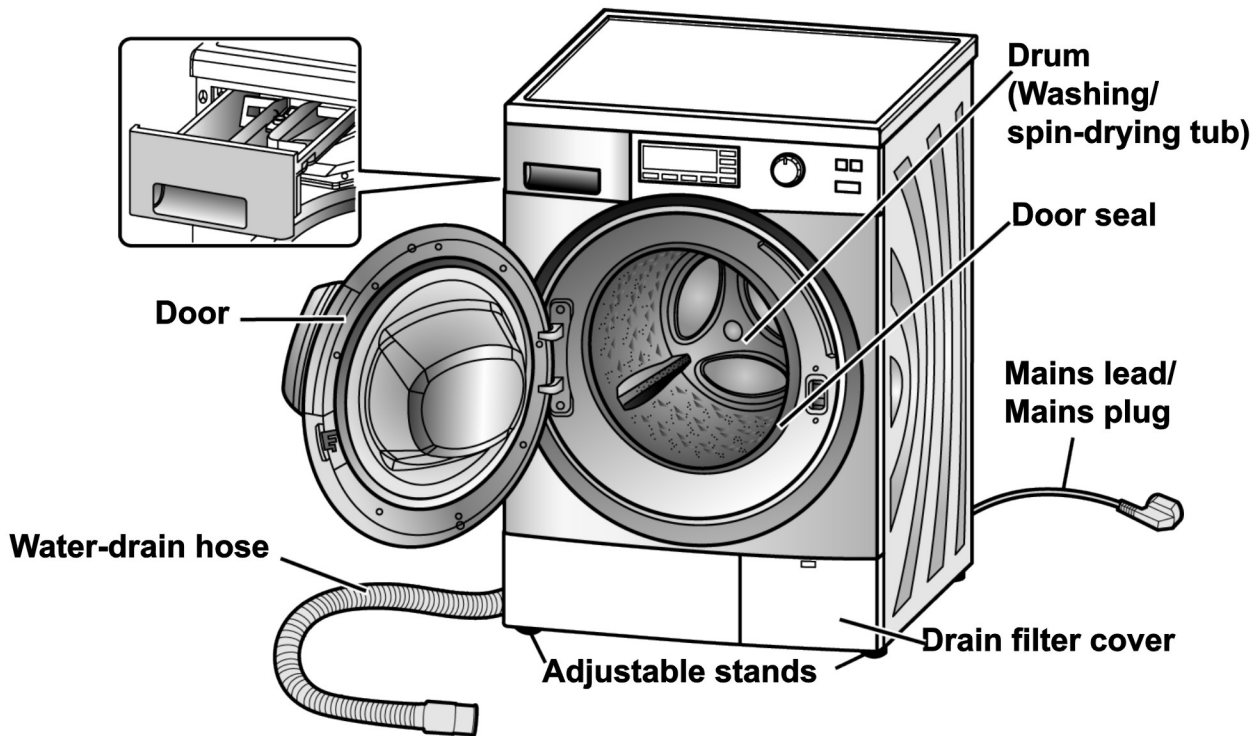


- Push a pin into small hole between the door and body B, and pull the door to open.

3 KNOW THE WASHING MACHINE

3-1 Component Name

Detergent drawer



Caution

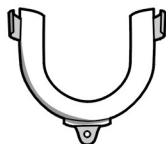
Do NOT bend the mains lead when the appliance is running.

Accessories

Make sure that all the accessories are supplied with the appliance.

Elbow

For fixing the water-drain hose

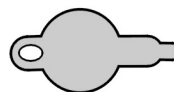


Spanner

End A is for adjusting the stand. End B is for the anchor bolts.

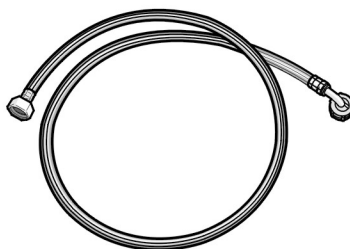


Cover cap (x4)



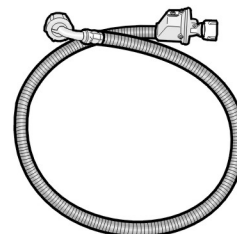
Water-supply hose

Either one of these hoses is supplied with the appliance.



Standard Hose

Hose with water-supply valve



4 MOVING AND INSTALLING

4-1 Carrying the washing machine

The appliance must be carried by 2 or more people.

Start by tilting the appliance backwards. One person should stand behind it, holding the rear of the top panel. The other person should grip the bottom stands in the front.



Caution

-Install the appliance on a flat, stable surface to avoid excessive vibration and noise.

If the floor is not flat and stable, contact your local Customer Service Centre.

-Do NOT install the appliance in direct sunlight or in a place where temperatures reach freezing.

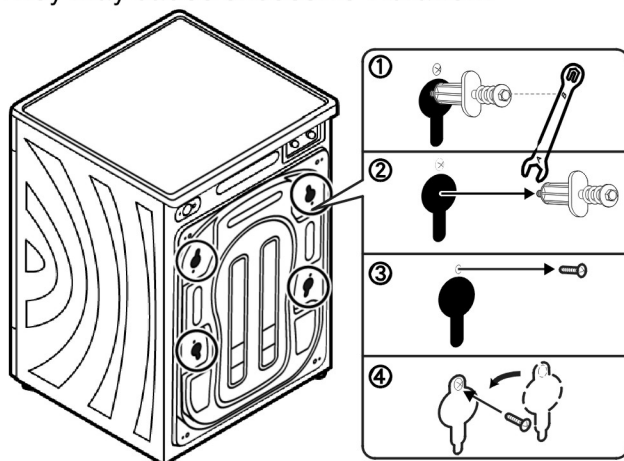
-Do NOT let metallic portions of the appliance come into contact with metal sinks or other appliances.

4-2 Removing the anchor bolts

Four anchor bolts keep the interior of the washing machine in place while it's being moved. They need to be removed before installation, using the spanner supplied and following the instructions below.

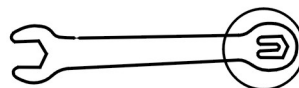
Note

The anchor bolts must be removed before the appliance is operated. They may cause excessive vibration.



● To remove the anchor bolts:

- ① Use the 'B' end of the spanner to loosen the four bolts.
- ② Pull the bolts out horizontally.
- ③ Remove the screws which are next to the bolt holes.
- ④ Push each cover cap (included with the accessories) over each bolt hole, and then secure them with the screws you removed in step ③.



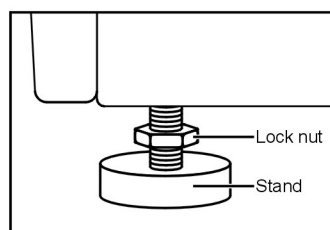
Note

Make sure that you store the anchor bolts, because they are used when transporting the appliance. If the appliance is passed on to another person, make sure to give the anchor bolts to that person.

4-3 Levelling the appliance

Using a level facilitates the making of adjustments.

To adjust the stands, use the "A" end of the spanner.



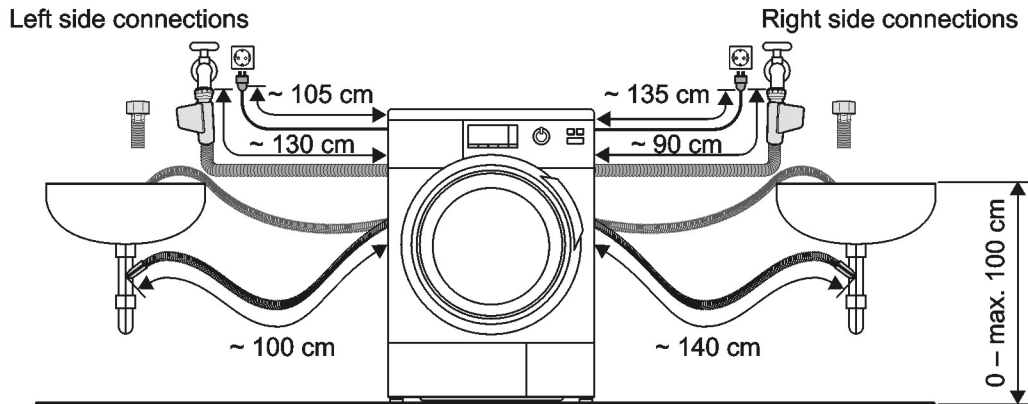
1. On each stand, loosen the lock nut by turning it clockwise.
2. Adjust each stand by turning it clockwise or anticlockwise.
3. Use a spirit level to make sure that the appliance is properly levelled.
4. Tighten each lock nut by turning it anticlockwise.

Caution

Make sure that all lock nuts are tightened securely and the stands are still bolted to the appliance.

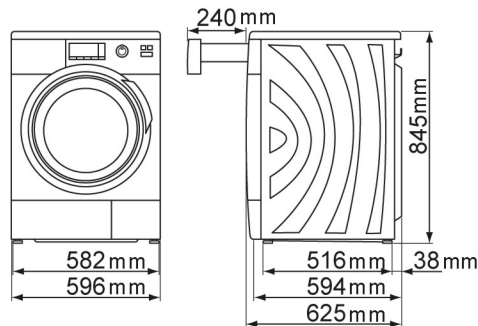
If they are unbolted, the appliance will move around.

4-4 Hose and Cable Lengths



4-5 washing machine dimensions in millimetres

Make sure that there is enough space for the appliance and the openings on the base are not obstructed by a carpet.



To adjust the stands, use A side of the included spanner.

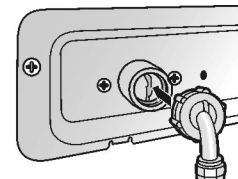
4-6 Water-supply hose

Caution

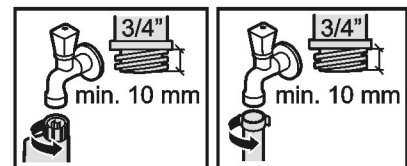
- Do NOT connect the water-supply hose to a combination tap.
- Do NOT twist, squash, modify, or cut the hose.
- Optimum water pressure is 0.03 – 1.0 MPa. If the water pressure exceeds this value, install a pressure reducing valve.
- Water-flow from the tap should be more than 5 L/min.

Connecting the water-supply hose

1. Attach one end of the hose to the water inlet on the back of the appliance and tighten the joint by hand.



2. Attach the other end of the hose to the tap and tighten it the same way.



Hose with water-supply valve

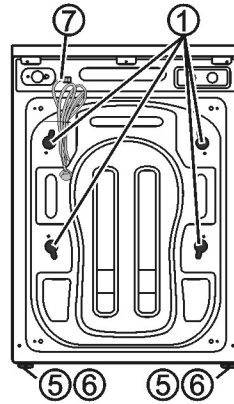
Standard hose

3. Open the tap slowly and make sure that there are no leaks around the joints.

The joints are subject to water pressure.

4-7 Checking After Installation

4-7-1 Installation checklist



- 1) Anchor bolts
Have you removed them and attached the cover caps properly?
- 2) Location
Is the appliance on a flat, stable surface?
Does it run without vibrating?
- 3) Water-supply hose
Is it free from leaks?
Is the water supply normal?
- 4) Water-drain hose
Is it free from leaks?
Does it drain normally?
- 5) Adjustable stands
Are they bolted securely to the appliance?
- 6) Stand cushions
Are they standing flat?
If the appliance is not level, there may be abnormal sounds when water is drained out.
- 7) Power supply
Is the household dedicated mains socket, fully rated at AC 220 V to 240 V?

4-7-2 Test run after installation

Check for water leakage, abnormal noise, and proper drainage.

Perform the following procedures WITHOUT laundry in the drum.

1. Turn on the tap.
2. Close the door.
3. Please spin after moved this washing machine.
Press the On button.
You have to select "Quick 50" course and "Spin" mode.
Then press the "Start" button.
4. While holding down the Speed/Eco and Easy Ironing buttons, press the On button.



5. When the display appears as below (3 seconds), press the Speed/Eco button.



The remaining time is displayed as below.



The test is run for about 3 minutes.

Check the following:

- Is there any abnormal noise?
If so, make sure that the appliance is level.
- Is there any water leakage?
If so, make sure that the hoses are properly connected.

You may get the following errors:



- Are the hoses properly connected?
Is the drain clogged?

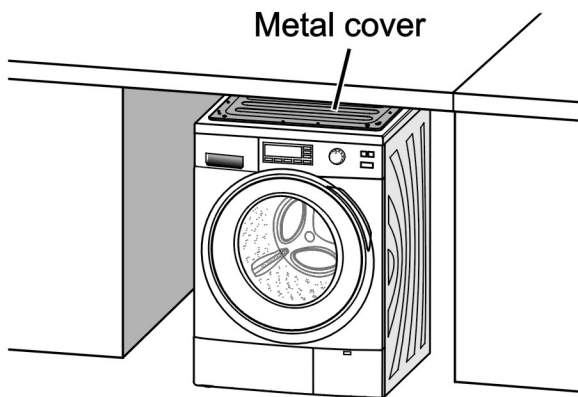


- Have you properly connected the water-supply hose and turned on the tap?

After recovering from an error, reopen and reclose the door to resume the test.

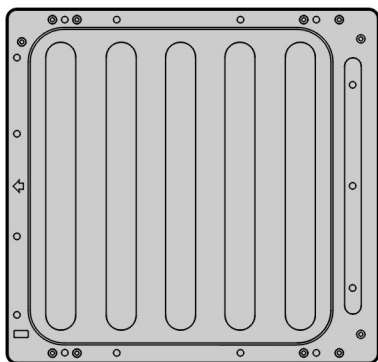
4-8 Installing a built-in washing machine

- You need a space at least 60cm wide.
- At least 2mm of clearance on the sides, and 3 mm of clearance above and behind the appliance are required.
- The counter above the appliance must be firmly fixed to the adjoining cupboards.
- If the clearance height ranges from 821 to 845 mm, request the sales dealer or service agent to install a metal cover on top of the appliance (sold separately), instead of the standard cover panel.



Note

If you need any accessories, contact your local Customer Service Centre.



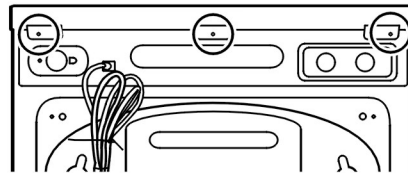
Metal cover (AXW4595-7SR0)
(AXW4595-7UK0) WHITE

※No need adjust water level sensor.

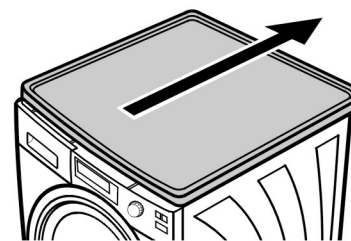
Changing the cover panel

Before assembling and disassembling, remove mains plug.

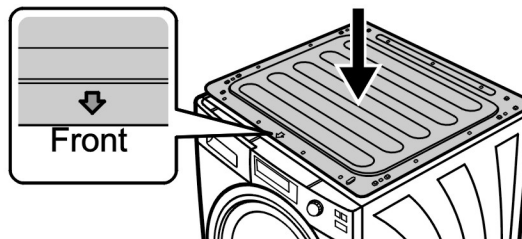
1. Remove the three screws on the back of the appliance.



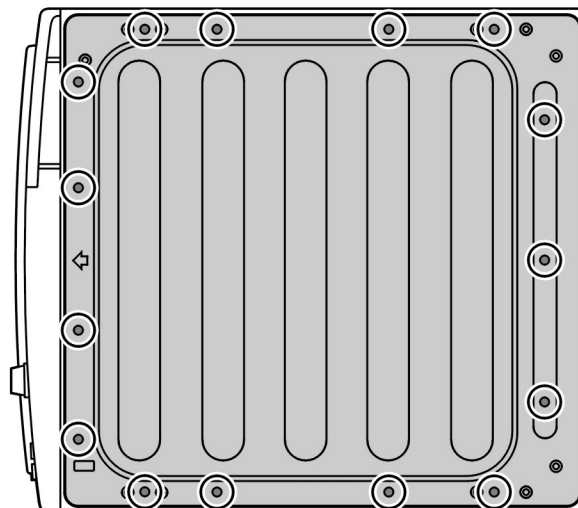
2. Slide the cover panel towards the rear and remove it.



3. Put the metal cover on the top of the appliance.



4. Secure the metal cover with all of the screws (15 in total).



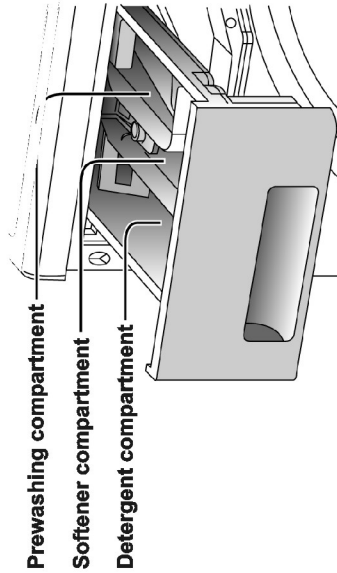
5. Adding Detergent and Other Chemicals

Pull out the detergent drawer and add detergent or softener to the correct compartment. Check the packages for the appropriate recommended amounts.

Caution

Do NOT use the appliance when the detergent drawer is removed.

This may result in a water leak.



Detergent compartment

The following detergents and additives may be added to this compartment:

- Detergent
- Water softening agent
- Stain remover
- Tub cleaning detergent or bleach

If you use multiple chemicals in this compartment for washing, add them in the following order:

1. Detergent
2. Water softening agent
3. Stain remover

Detergent

Use only detergents that are recommended for fully-automated washing machines. Please use low suds detergents.

Then, add detergent and start washing again.

To prevent powdered detergent from remaining in the drawer, perform the following:

- Dry the inside of the drawer with a cloth.
- Make sure that the detergent is not lumpy when you add it as this may cause a blockage over time.

Amount of Detergent

The amount of detergent you should use depends on the following factors:

- How soiled the laundry is
- The amount of the laundry
- Water hardness

The amount of foam varies according to the amount and type of detergent, how soiled the laundry is, and the hardness and temperature of the water.

Water softening agent

If you live in a hard water area (total hardness of 1.3 mmol/L or higher), we recommend the usage of a water softening agent. For more details on water hardness, contact your local water authority.

Use of a water softening agent can help reduce the amount of detergent that is required for each wash and help prevent the formation of limescale deposits, which may damage the appliance.

Softener compartment

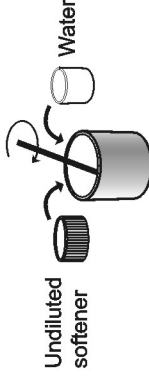
The following additives may be added to this compartment:

- Fabric softener
- Laundry starch

Fabric Softener

To prevent static, add softener before you start washing. It will be automatically added in the final rinse cycle.

Dilute concentrated softeners before you add them. Add up to only 130 ml to the compartment to avoid overflowing.



Rinse out the remaining softener with a splash of water or a damp cloth after washing. If it sticks to the compartment, pull out the drawer and clean it out.

Laundry starch

Simply add laundry starch to the softener compartment. It will be automatically added to the clothing as part of the final rinsing process. Make sure that you do not fill the compartment over the MAX level.

If it is hard to pour, you can dilute the starch slightly with water before adding it.

Note

After using starch, clean the detergent drawer, especially the softener cover. Then, run the Rapid 15 programme WITHOUT detergent to remove any excess starch in the drum.

Prewashing compartment

Detergent for prewashing

Whenever you use any programmes with the Prewash function, always put detergent for the prewash in this compartment.

6. MAINTENANCE

Cleaning the outside of the appliance

Clean the outside of the appliance with a soft cloth and mild detergent, for example, kitchen detergent, and soapy water.

Warning

- Do NOT splash water over the appliance.
- Do NOT use cream cleansers, thinners, nor products containing alcohol or paraffin oil.

Cleaning the drum

If you keep using cold water in the appliance, bacteria may build up inside the drum and give off an odour. You can avoid this by running the 90°C Cotton programme once a month. (If you use a scale remover, follow the manufacturer's instructions.)

Caution

Viruses and bacteria are not killed in water temperature of 40°C. Pathogens can spread via the commingling of clothes and thus transmit diseases.

Pathogens die at 60°C or higher. However, using water temperatures up to 90°C is unnecessary.

Note

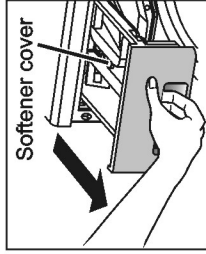
Do NOT put laundry nor laundry detergent into the appliance while it is being cleaned.

If you use tub cleaning detergent or bleach, put it into the detergent drawer before starting the wash. The appropriate amount to be used is about 30 ml.

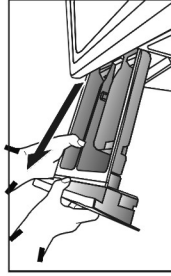
Cleaning the detergent drawer

Detergent residue soon builds up if the detergent drawer is not cleaned regularly. Detergent build up may develop mould.

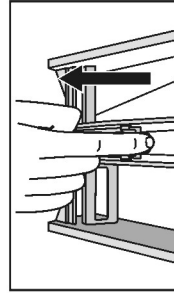
1. Pull out the detergent drawer.



2. Remove the detergent drawer by simultaneously lifting and pulling it.



3. Pull your finger on the tab near the front of the softener cover then pull it up to remove it from the detergent drawer.



4. Wash out the old detergent with water.

Use a cloth to wipe the water from the appliance.

5. The softener cover press it down to move to original point of detergent drawer. Then move the detergent drawer by inserting.

Cleaning the door seal and window

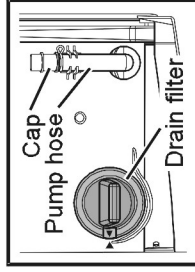
After each wash, perform the following:

- Remove any objects from the door seal.
- Wipe the window and seal to remove lint and stains.

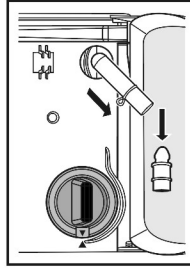
Cleaning the drain filter

We recommend cleaning the drain filter every 1 month. Filter will have lint build up, reduces the water from the shower.

1. Switch off and unplug the appliance.
2. Open and remove the drain filter cover.



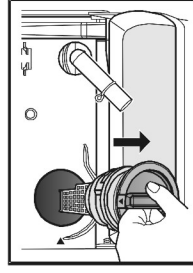
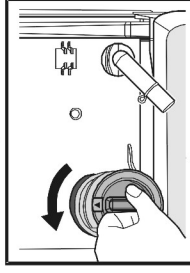
3. Pull out the pump hose and remove the cap to drain the water.



4. After all the water has drained away, loosen the drain filter.

5. Carefully loosen the drain filter. More water may drain out. This is normal.

6. Turn the drain filter anticlockwise to unscrew it. Then, remove it.



7. Remove any lint and debris.

8. Replace the drain filter.

9. Replace the cap and pump hose to the original position.

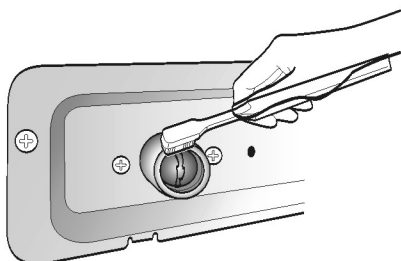
Caution

BE CAREFUL when draining hot water.

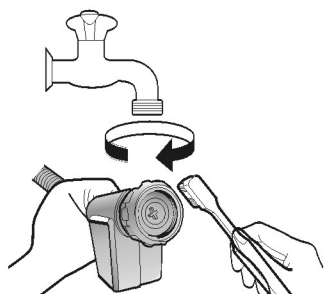
Cleaning the water-supply filter

Clean the filter if water is not supplied properly.

1. Turn the tap off.
2. Switch on the appliance.
3. Select the Cotton programme, and then press the Start button.
4. After 1 minute, switch off the appliance. Water has drained out of the water-supply hose.
5. Disconnect the water-supply hose from the appliance.
6. Clean the filter, which is on the rear of the appliance.
Use a small brush, for example, a toothbrush.



7. If the unit is supplied with the hose fitted with a water-supply valve turn off the tap supplying the appliance, disconnect the hose from the tap, and then clean the filter on hose by the same way.



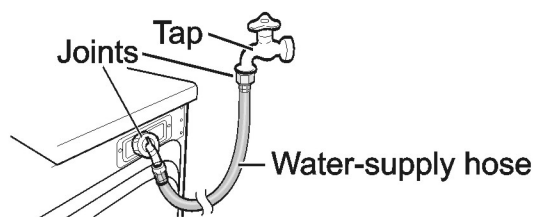
8. Reconnect the water-supply hose.
Tighten the plastic joint firmly.
9. Turn on the tap, then check for leaks.

Preventing a frozen water-supply hose

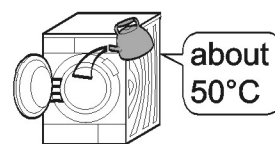
If the appliance is delivered in freezing weather conditions, after setting up, leave it at room temperature for 24 hours before using. This will ensure that the water-supply hose does not get clogged up with ice.

If your water-supply hose freezes, perform the following procedures:

1. Wrap warm towels around the joints of the water-supply hose.

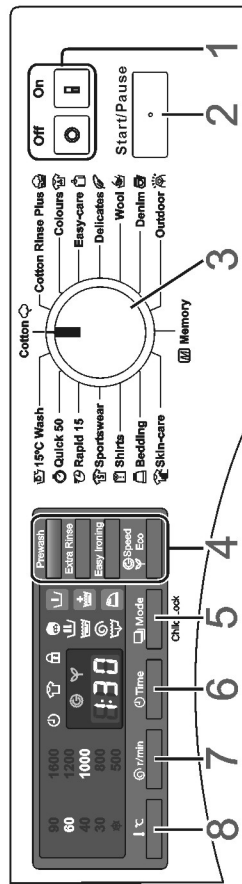


2. Add 2 to 3 litres of warm water to the drum.

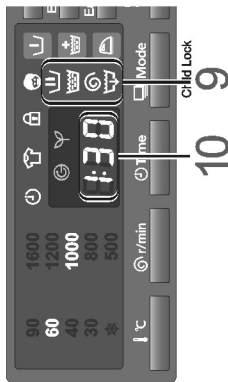


3. Start washing with the Drain only function, using the Mode button.

7. USING THE BUTTONS



Display on NA-168VG3



1. Power buttons

- If you do not press the Start button within 10 minutes after the appliance has been switched on, the appliance automatically switches itself off.
- The display below appears for 3 seconds after the appliance has been switched off. You cannot turn the appliance on until this display disappears.



2. Pause/Start button

- Press this button to start or pause the wash programme.

3. Programme selection dial

- Use this dial to choose the best programme for the laundry.

4. Additional function buttons

- Press these buttons to add functions to the programme to suit the laundry.

5. Mode/Child Lock button

- Press this button to select the function of processes, for example, the Rinse and Spin function or the Drain only function.
- Press and hold this button to set the child safety lock. The door and the controls will be locked.

6. Time button

- Press this button to preset the time for when the washing finishes.

7. Spin speed button

- Press this button to see the spin speed (r/min) or to choose the spin speed for the programme you have selected. (The maximum spin speeds of model NA-140VG3 and NA-148VG3 are 1400 r/min. NA-168VG3 is 1600r/min.)

8. Temperature button

- Press this button to choose water temperatures ranging from cold to 90°C. You can choose hotter temperatures for whites, cottons, or soiled laundry.

9. Process indicator

- This indicator shows the current process of the programme. The process consists of wash, rinse, spin, and drain.

- The light goes off when the wash is finished.

10. Remaining time indicator

- This indicator shows the approximate time until the washing finishes. For example, '1:18' means 1 hour and 18 minutes.

- The time is acquired from the weight of the laundry measured when washing starts. The indicator flashes while the weight is being measured.

Unlocking the door

The door automatically locks while in use, and the symbol is shown while the door is locked. A click will be heard when the door locks or unlocks.

Note

- While the door is locked, if the appliance is switched off, or if there is a power interruption, the door stays locked until the switch is turned on again.
- This is different from the child safety lock.

Press the Start button to unlock the door during operation.

After about 1 minute, the drum stops spinning, and the door will automatically unlock.

Caution

If you have to unlock the door mid-programme, make sure that water from the drum does not overflow onto the floor.

Water and soap suds might come out of the door and the door opening. You may need a towel to soak them up.






Optional Functions

Individual washing functions (Process selection)

You can select a single process, or combine several processes by selecting individual washing functions.

Note
You cannot select individual washing functions in the Rapid 15 programme.

Press the **Mode** button  to select a function.

| Function | Description |
|--|--|
| Rinse only  | Rinse washed laundry (Rinse water remains) |
| Spin only  | Spin-dry washed laundry |
| Wash - Rinse  | Wash and rinse laundry (Rinse water remains) |
| Rinse - Spin  | Rinse and spin-dry washed laundry |
| Drain only  | Drain water from the drum |


- Whenever you start washing, the process display flashes to show that which function is in progress.






- With the Spin only or Rinse - Spin function, if there is any water in the drum operation starts from the drain process.

Additional functions

Depending on the programme, you can combine different additional functions.

Note
Some additional functions cannot be used with certain programmes. If you select an unavailable function, an error alarm will sound.

Press one or more of the function buttons  you wish to combine.

| Function | Description |
|--|--|
| Eco  | Washing consumes less energy and water but takes longer. |
| Speed  | Washing times will be shorter than those of the basic programmes, suitable for lightly soiled laundry. |
| Extra Rinse  | Rinse your laundry more thoroughly with an extra rinsing process. |
| Prewash  | Prewash cycle for heavily soiled laundry |
| Easy Ironing  | - Make ironing easier by spin-drying your laundry more gently (at 800 r/min or less). - After washing has finished, the laundry is rotated intermittently for up to 30 minutes or until the door is opened. - Reduces wrinkles and helps to unravel tangled laundry. |

You can activate or deactivate the Extra Rinse and Easy Ironing functions during a washing process but not after it has finished.

If there is according to the course program, you can not add functions.

Preset timer

You can use the timer to preset the time for when the washing finishes.

- You cannot preset the Wool and Silk/Lingerie programmes.
- The wash might finish before or after preset times depending on the kind of laundry, the temperature, and the conditions of water supply and drainage.

Note
Do NOT use detergent which does not dissolve thoroughly with the preset function, because the detergent might cake up before the wash starts and not flow out.

Setting a preset time

Continuously press the Time button until the desired preset time is displayed.

Changing a preset time

1. Press the Off button, and then press the On button.
2. Choose the desired programme and optional functions.
3. Set a preset time.

Cancelling a preset time

Press the Off button. (All settings will be cancelled.)


Checking a preset time

Press the Time button.

Child safety lock

The child safety lock prevents children from climbing into the drum and getting trapped. This function keeps the door closed and locked even when the appliance is not in use. It also disables the control buttons.

Activating/deactivating child safety lock




















1. Switch on the appliance.
2. Press and hold the Mode button for at least 5 seconds.
The  symbols light up to show that the child safety lock is activated.
3. To deactivate, hold down the mode button again for 5 seconds (please ignore three beeps heard, keep mode button pressed until it unlocks)

8. PROGRAMMES

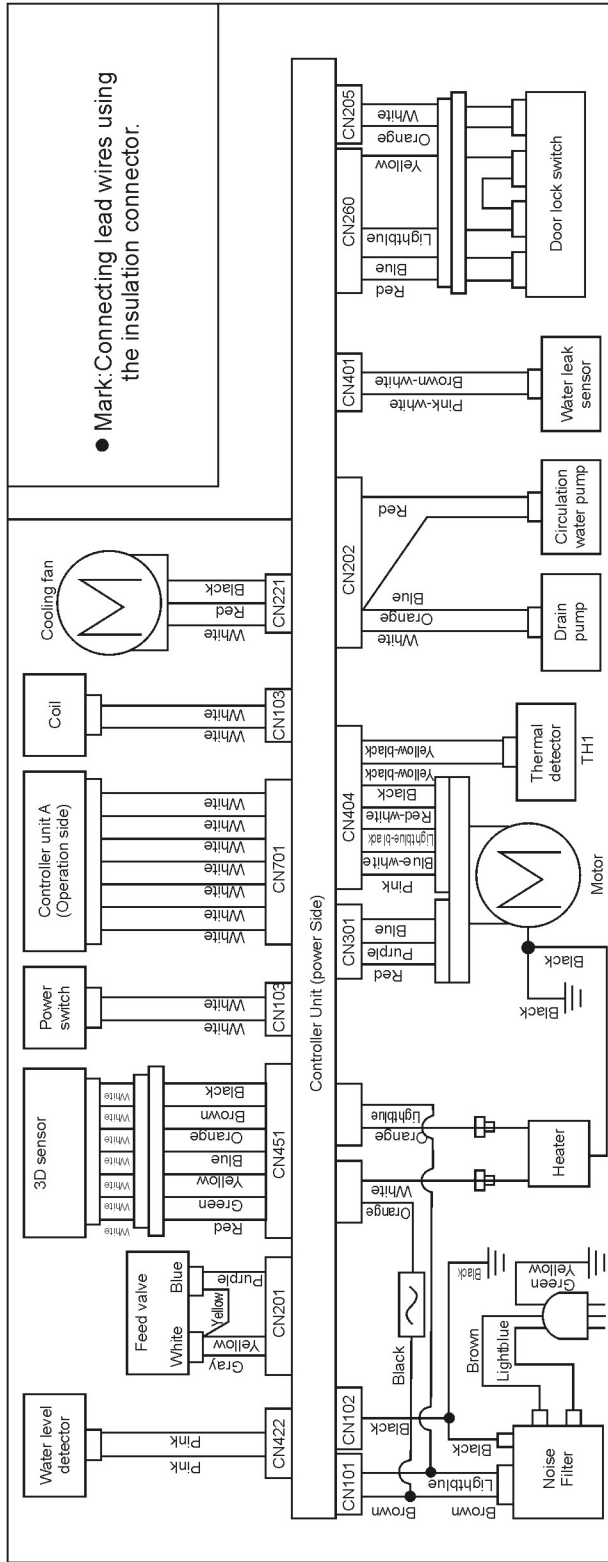
8-1. Details of Programmes

| Programme | Available programme | | Auto setting | | | | | Manual setting | | | Additional functions | | | |
|-------------------|---------------------|------------------|--------------|------------------|----------------------|------------------|------------------|----------------|----------------------|-----------|----------------------|---------|--------------|--------|
| | 140VG3 | 148VG3 168VG3 | Temperature | Number of rinses | Spin-dry revolutions | Approximate time | | Temperature | Spin-dry revolutions | Eco Speed | Extra Rinse | Prewash | Easy Ironing | |
| | | | | | | 140VG3 | 148VG3 168VG3 | | | | | | | 168VG3 |
| Cotton | ✓ | ✓ | 40°C | 2 | 1200 | 1:09 - 2:04 | 1:09 - 1:49 | Cold - 90°C | 500 - 1600 | ✓ | ✓ | ✓ | ✓ | |
| Cotton Rinse Plus | ✓ | ✓ | 40°C | 2 | 1200 | 1:22 - 2:12 | 1:22 - 1:57 | Cold - 90°C | 500 - 1600 | ✓ | ✓ | ✓ | ✓ | |
| Easy-care | ✓ | ✓ | 40°C | 2 | 800 | 1:01 - 1:31 | 1:01 - 1:21 | Cold - 60°C | 500 - 1200 | ✓ | ✓ | ✓ | ✓ | |
| Delicates | ✓ | ✓ | 40°C | 2 | 800 | 0:55 - 1:00 | 0:55 - 1:00 | Cold - 40°C | 500 - 800 | — | ✓ | ✓ | ✓ | |
| Wool | ✓ | ✓ | 30°C | 3 | 500 | 0:40 | 0:40 | Cold - 40°C | 500 | — | ✓ | — | — | |
| Silk/Lingerie | ✓ | — | 30°C | 3 | 500 | 0:40 | — | Cold - 40°C | — | — | ✓ | — | — | |
| Quick 50 | ✓ | ✓ | 40°C | 2 | 1200 | 0:46 - 0:49 | 0:46 - 0:49 | Cold - 60°C | 500 - 1600 | — | ✓ | ✓ | ✓ | |
| Rapid 15 | ✓ | ✓ | 30°C | 1 | 800 | 0:15 | 0:15 | Cold - 30°C | 500 - 800 | — | — | — | — | |
| Colours | ✓ | ✓ | 40°C | 2 | 1200 | 0:58 - 1:23 | 0:58 - 1:13 | Cold - 40°C | 500 - 1600 | ✓ | ✓ | ✓ | ✓ | |
| Mixed | ✓ | — | 40°C | 2 | 1200 | 1:09 - 1:44 | — | Cold - 40°C | — | ✓ | ✓ | ✓ | ✓ | |
| 15°C Wash | ✓ | ✓ | ✳ | 2 | 1200 | 1:14 - 1:29 | 1:14 - 1:29 | Cold | 500 - 1600 | — | ✓ | ✓ | ✓ | |
| Memory | ✓ | ✓ | — | — | — | — | — | Cold - 90°C | 500 - 1600 | ✓ | ✓ | ✓ | ✓ | |
| Baby-care | ✓ | — | 40°C | 3 | 1200 | 1:29 - 2:04 | — | Cold - 90°C | — | ✓ | ✓ | ✓ | ✓ | |
| Skin-care | — | ✓ | 40°C | 3 | 1200 | — | 1:29 - 1:49 | Cold - 90°C | 500 - 1200 | ✓ | ✓ | ✓ | ✓ | |
| Shirts | ✓ | ✓ | 40°C | 2 | 500 | 1:08 | 1:08 | Cold - 60°C | 500 - 800 | ✓ | ✓ | ✓ | ✓ | |
| Sportswear | ✓ | ✓ | 40°C | 2 | 800 | 1:30 | 1:30 | Cold - 40°C | 500 - 1200 | ✓ | ✓ | ✓ | ✓ | |
| Bedding | ✓ | ✓ | 30°C | 2 | 800 | 1:02 | 1:02 | Cold - 40°C | 500 - 800 | — | ✓ | — | ✓ | |
| Outdoor | — | ✓ | 30°C | 3 | 800 | — | 1:48 | Cold - 40°C | 800 | ✓ | ✓ | ✓ | — | |
| Denim | — | ✓ | 30°C | 2 | 800 | — | 0:55 | Cold - 40°C | 500 - 1200 | ✓ | ✓ | ✓ | ✓ | |

8-2. Selecting the Programme

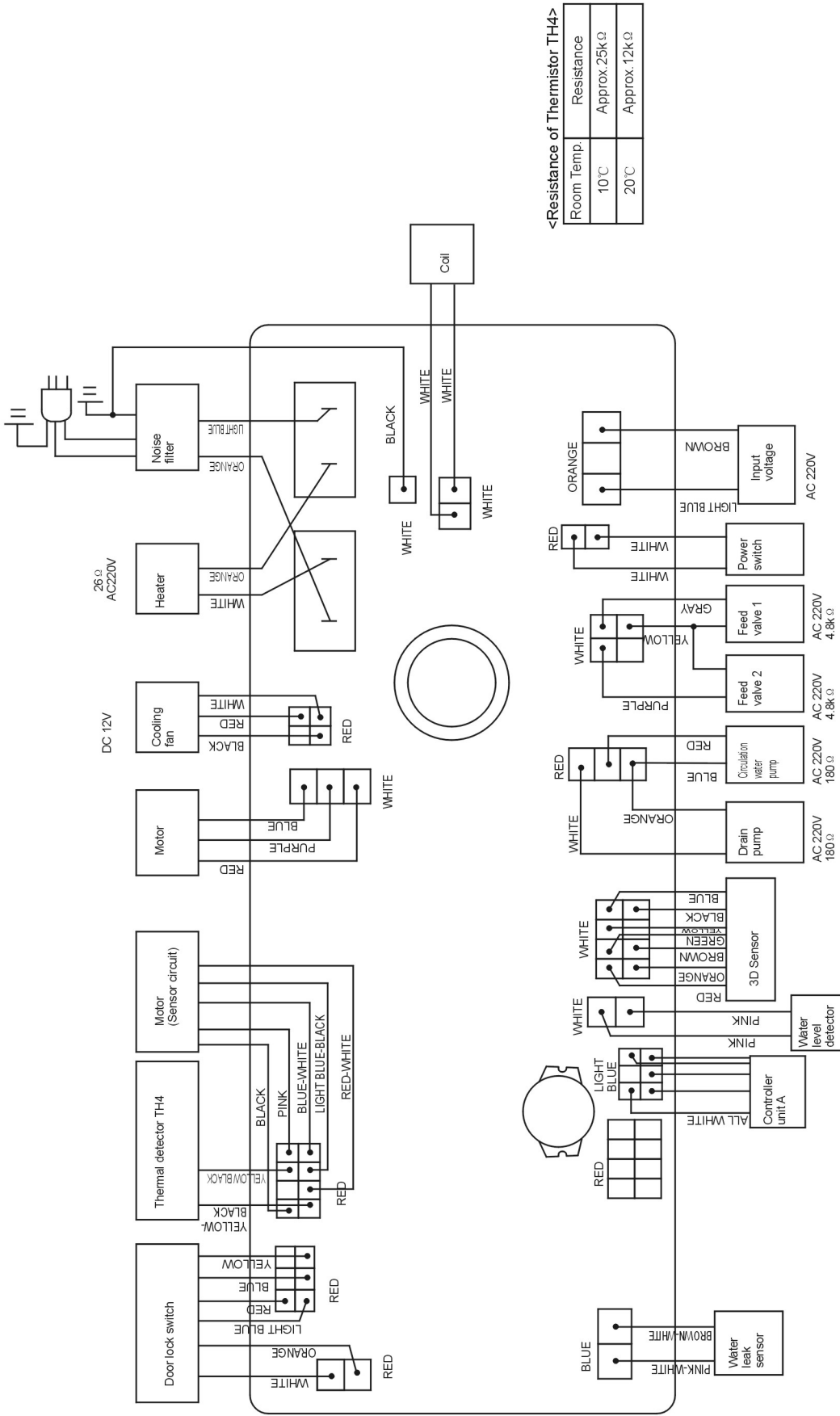
| Programme | Description | 140VG3 Max load | 148VG3 168VG3 Max load |
|---|---|--------------------|------------------------------|
|  Cotton | Daily washing for cotton, linen and cotton blend items (For examples, T-shirts, underwear, towels, tablecloths) | 10 kg | 8 kg |
|  Cotton Rinse Plus | Washing takes longer overall but rinsing is more thorough than the Cotton programme. | 10 kg | 8 kg |
|  Easy-care | Gentle washing for cotton, linen, and synthetics. | 5 kg | 4 kg |
|  Delicates | Gentle washing for synthetic fibres, textiles, satin, lace, etc. | 5 kg | 4 kg |
|  Wool | Gentle washing for hand wash only wool, machine washable wool, and wool blends | 2 kg | 2 kg |
|  Silk/Lingerie | For lingerie and washable silk items. Washes gentler than the Wool programme. | 2 kg | — |
|  Quick 50 | Washes lightly soiled items in 50 minutes. | 5 kg | 4 kg |
|  Rapid 15 | Washes a few lightly soiled items in 15 minutes. | 2 kg | 2 kg |
|  Colours | For washing coloured cottons or coloured cotton blend items separately | 5 kg | 4 kg |
| Programme | Description | 140VG3 Max load | 148VG3 168VG3 Max load |
|  Mixed | For items with mixed fabrics, for example, cotton, linen and synthetic fibres | 10 kg | — |
|  15°C Wash | For lightly soiled cottons, and linen blends. | 5 kg | 4 kg |
|  Memory | Programme based on the Cotton programme featuring selected optional functions and settings. | 10 kg | 8 kg |
|  Baby-care | For babywear | 5 kg | — |
|  Skin-care | For items that need to be gentle to the skin, for example, underwear, sheets, towels, and baby clothes. Items are spray washed and thoroughly rinsed. | — | 4 kg |
|  Shirts | For shirts and blouses | 2 kg | 2 kg |
|  Sportswear | For synthetic sportswear | 3 kg | 3 kg |
|  Bedding | For large items, for example, blankets, curtains, and bedspreads | 3 kg | 3 kg |
|  Outdoor | For synthetic fabric outdoor wear and water-repellent clothing | — | 3 kg |
|  Denim | The spray washing is used to prevent jeans from fading. | — | 2 kg |

9. WIRING DIAGRAM



10. CHECK INPUT AND OUTPUT VOLTAGE OF THE PC BOARD

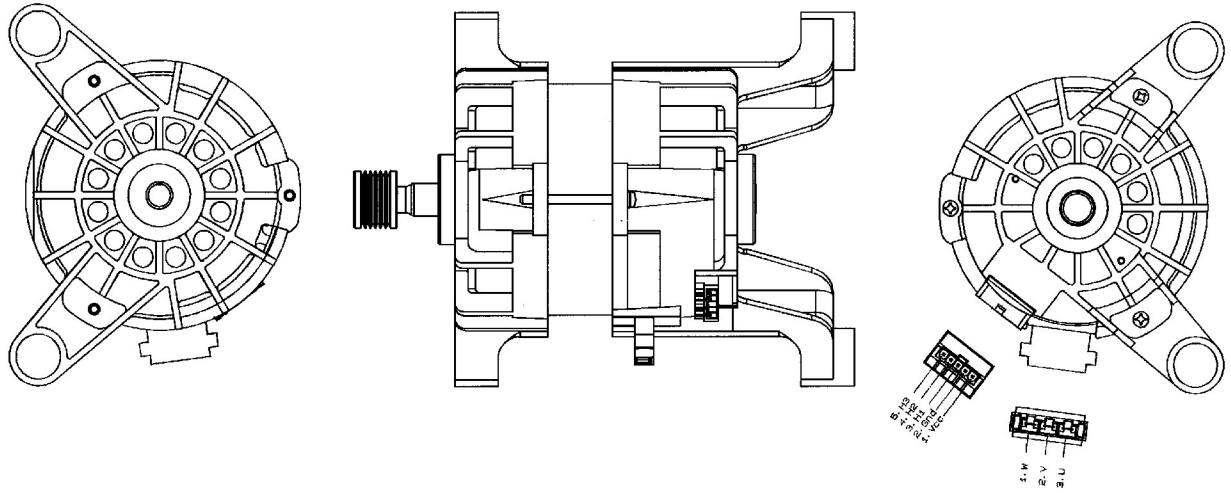
- 10-1 1. Before replace PC Board, check input and output voltage of the PC Board.
2. Check range of the test meter.
3. When check output voltage of the PC Bord, set a program of the Washing Machine on the working mode.



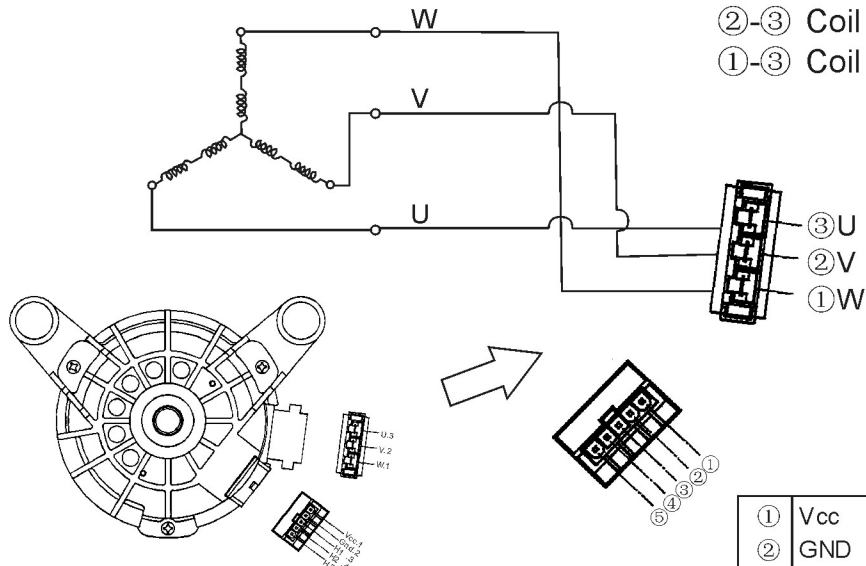
<Method to check the motor>
 • The resistance of the each terminal of the motor shall be shown on next page.

10-2 Motor (Brushless type)

- Rotation speed: Inverter control
- Operation sound: Below 75dB at 10000 r/min.
(Measured operation sound: 50cm from the motor)



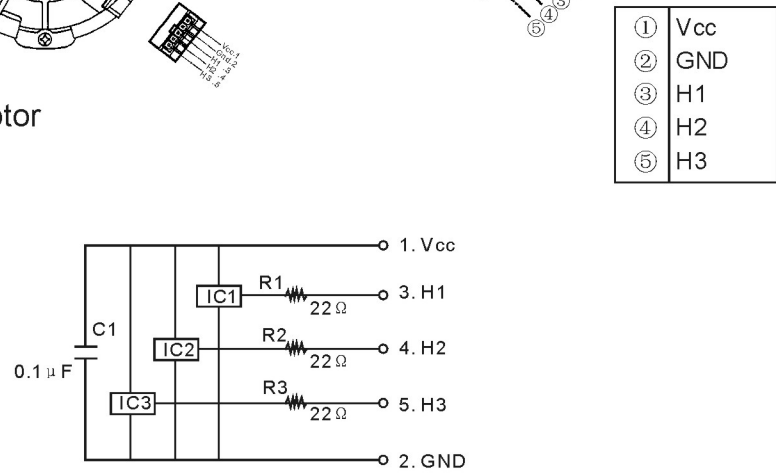
A) Wiring of the motor



<Rated resistance>

- ①-② Coil Approx. 2.07 Ω
- ②-③ Coil Approx. 2.07 Ω
- ①-③ Coil Approx. 2.07 Ω

B) Sensor circuit of the motor



| | |
|---|-----|
| ① | Vcc |
| ② | GND |
| ③ | H1 |
| ④ | H2 |
| ⑤ | H3 |

11 TROUBLESHOOTING

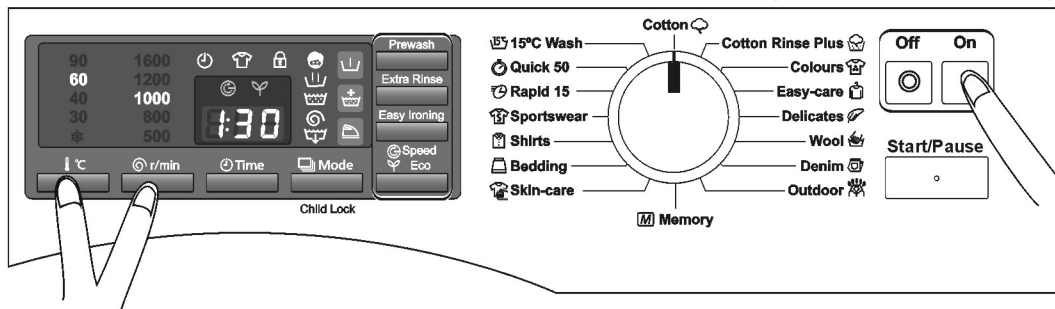
| | Problem | Cause |
|-----------------|--|--|
| Washing machine | Buttons do not work. | <ul style="list-style-type: none"> - The programme, temperature and process settings cannot be changed while washing is in progress (the rinse or spin settings can be changed). - Child safety lock may be activated. |
| | Door does not open. | <ul style="list-style-type: none"> - Door lock may be activated. - Child safety lock may be activated. - The water temperature or level may be too high. |
| | Unusual odour | <ul style="list-style-type: none"> - Rubber parts may give off a smell when you start using the appliance, but the smell will go away over time. You can wash the drum by running the 90°C programme. |
| Wash | No water going into the appliance. | <ul style="list-style-type: none"> - The water tap might be turned off. - The water-supply hose may be frozen. - The water supply may be disrupted. - The water-supply filter may be clogged. |
| | There is only a small amount of water. | <ul style="list-style-type: none"> - If you have paused the washing and then restart it, the appliance may drain out some water. Do NOT pour water in through the door. |
| | Water builds up during the washing. | <ul style="list-style-type: none"> - This is normal; water is automatically supplied if the amount of water has decreased. For heavy loads, the water may fill up repeatedly. |
| | Water drains out during the washing. | <ul style="list-style-type: none"> - This is normal; the water frequently drains out and builds up in order to wash away excess foam. This feature is called foam detection. |
| Rinse/Spin | No water flows into the appliance during the rinsing process. | <ul style="list-style-type: none"> - Before rinsing, the appliance spins to drain out remaining water. The water will fill up after that. |
| | Rinsing begins before the spin process finishes. | <ul style="list-style-type: none"> - The appliance may have detected an unbalanced load, which is caused by the laundry shifting to one side of the drum, so rinsing started automatically to correct the imbalance. - After washing, excess foam may remain, so the water is drained out and refilled to wash it away. This feature is called foam detection. |
| | During spin-dry, the drum stops and rotates several times. | <ul style="list-style-type: none"> - This is normal; the appliance has detected an unbalanced load and is trying to correct it. |
| | Foam and water remain in the door or door seal. | <ul style="list-style-type: none"> - Although some foam and water might remain depending upon the state of the laundry and the amount of detergent used, the performance of the rinse cycle is unaffected. |
| | Spin cycle repeatedly starts and stops. | <ul style="list-style-type: none"> - This is normal; intermittent spinning of the tub helps the spin process to operate quietly. - The laundry may be too light. If so, add one or two bath towels. |
| Time | The displayed remaining time changes. | <ul style="list-style-type: none"> - The remaining time is estimated and corrected continually. Thus, the time displayed may change. - The remaining time increases if an extra rinsing and spinning are required to correct an unbalanced load, which is caused by the laundry shifting to one side of the drum. |

| Problem | | Cause |
|---------------------------|---|--|
| Detergent and foam | There is no foam or hardly any foam. | <ul style="list-style-type: none"> - The amount of foam varies, depending on the temperature, level and softness of the water. - You may have put powdered detergent directly into the drum; you must put it in the detergent drawer. - You may not be using enough detergent. - You may be using a reduced-foam type of detergent. - Heavily soiled laundry and larger loads of laundry may reduce the amount of foam. |
| | There is a lot of foam . | <ul style="list-style-type: none"> - The amount of foam varies, depending on the temperature, level and softness of the water. - You may have used too much detergent. - The type of detergent you are using may cause excess foam. |
| | Fabric softener overflows. | <ul style="list-style-type: none"> - The softener may have exceeded the MAX level for the detergent drawer. - You may have spilt the liquid by closing the detergent drawer too strongly. |
| | After the wash has finished, powdered detergent residue remains. | <ul style="list-style-type: none"> - You may have put powdered detergent directly into the drum; you must put it in the detergent drawer. |
| Noise | There is an unusual noise or vibration. | <ul style="list-style-type: none"> - There may be metal items in the drum. - The anchor bolts may not have been removed. - The appliance may be on a sloping or unstable surface. <p>If none of the above is the cause, contact your local Customer Service Centre.</p> |
| | There is noise when the water drains out. | <ul style="list-style-type: none"> - This is normal; it is the noise that is caused by the operation of the drain pump. |
| | The fan makes noise. | <ul style="list-style-type: none"> - This is normal; the fan is cooling off the electric parts. |
| Others | The electricity supply cuts out while the appliance is on. | <ul style="list-style-type: none"> - The appliance will stop, and will not start by itself when the power comes back on. You have to select a programme and start it again. |
| | A circuit breaker trips the electricity supply. | <ul style="list-style-type: none"> - The appliance stops, and will not start by itself when you reset the breaker. You have to find out what caused the breaker to trip and solve it. Then, reset the breaker to turn the electricity supply back on, and switch on the appliance again. |
| | The water supply is disrupted. | <ul style="list-style-type: none"> - When the water is supplied again, it may be impure at first. You have to disconnect the water-supply hose and drain away the impure water through the tap. Make sure that the water-supply hose has been reconnected before using the appliance. |
| | The display is not clear. | <ul style="list-style-type: none"> - The appliance may be in a brightly lit or sunlit area. |

12 Operating Test-No Water

Method to "Operating Test- No Water"

(For Model NA-168VG3)



1. Press the power switch to "OFF".
2. Press and hold both the "°C (temp)" and "r/min (spin speed)" buttons with one hand.
3. Press the power switch to "ON".
4. Release your fingers from the buttons and power switch you pressed in step (2) and (3) above.
(Check-mode-A shall be carried out with your fingers released.)
5. Press the "°C (temp.)" button within 3 seconds to the desired check contents. (Carry out check B,C,I,F,G1,G2,G3 and H)

| Number of times the "°C(temp)" button is pressed | Process Check | Action Check | Lamp illumination condition | Action condition | | | | | | | | | | |
|--|------------------|--|-----------------------------|--|-----------------------------|------------------|------------------|----------------------|-------------------------------------|------------------|----------|----------------|-----------------|----------------|
| 0 | A | <ul style="list-style-type: none"> • Cycle end buzzer • Time indication • Auto power off | 888 | <ul style="list-style-type: none"> • When the end buzzer sounds three times, "888" will simultaneously flash on and off in the remaining time display, and the power will automatically switch off immediately after operation is finished. If other numbers or characters than "888" appear in the remaining time display, there will be: <ul style="list-style-type: none"> [1] Abnormal in memory storage (the "speed lamp" lights up) [2] Abnormal in memory storage (the "Eco lamp" lights up) | | | | | | | | | | |
| 1 | B | <ul style="list-style-type: none"> • Wash operation • Feed valve operation • Circulation water pump • Cooling fan ON | 6 | <ul style="list-style-type: none"> • Even if there is no water in the drum, the washing operation will continue for six minutes. • Check condition of feed valves by pressing "r/min (spin speed)" button. <table border="1"> <tr> <td>Mode-0 Stand-by position</td> <td>Mode-1 FV1 ON</td> <td>Mode-2 FV2 ON</td> <td>Mode-3 FV1 FV2 ON</td> <td>Mode-4 Circulation water pump ON</td> </tr> <tr> <td>Temp · lamps OFF</td> <td>lamps ON</td> <td>30°C Clamps ON</td> <td>30°C & lamps ON</td> <td>40°C Clamps ON</td> </tr> </table> | Mode-0 Stand-by position | Mode-1 FV1 ON | Mode-2 FV2 ON | Mode-3 FV1 FV2 ON | Mode-4 Circulation water pump ON | Temp · lamps OFF | lamps ON | 30°C Clamps ON | 30°C & lamps ON | 40°C Clamps ON |
| Mode-0 Stand-by position | Mode-1 FV1 ON | Mode-2 FV2 ON | Mode-3 FV1 FV2 ON | Mode-4 Circulation water pump ON | | | | | | | | | | |
| Temp · lamps OFF | lamps ON | 30°C Clamps ON | 30°C & lamps ON | 40°C Clamps ON | | | | | | | | | | |
| 2 | C | <ul style="list-style-type: none"> • Spin operation • Lid lock switch operation • Cooling fan ON • Check the 3D Sensor | 7 | <ul style="list-style-type: none"> • The spinning operation continues for seven minutes. • It is possible to check the door lock switch, if it is faulty, "time" lamp lights up. • It shall be checked condition of the 3D sensor. Press "Prewash" button: X-axis Press "Extra Rinse" button: Y-axis Press "Easy Ironing" button: Z-axis | | | | | | | | | | |
| 3 | I | <ul style="list-style-type: none"> • Heater operation • Cooling fan ON | 8 | <ul style="list-style-type: none"> • The door will be locked, and water filled to the set level (50mm from the drum bottom), and it starts hot-water washing for 6 minutes. (The drum rotate 45r/min, repeat 20 seconds. ON-3 seconds. OFF, after that water can be drained. • If no water. The heater won't operate, and lamp lights up. | | | | | | | | | | |
| 4 | F | <ul style="list-style-type: none"> • Memory proper data of laundry amount detector to the micro processor | F | <ul style="list-style-type: none"> • After replacing the motor or PC Board w/components for power side when servicing, press "r/min (spin speed)" button once to operate laundry amount sensor properly. This will ensure the correct data is memorised by the micro processor. | | | | | | | | | | |

| Number of times the "i C(temp)" button is pressed | Process Check | Action Check | Lamp illumination condition | Action condition | | | | | | | | | | | | | | |
|---|---------------|--|-----------------------------|--|------------------|-----------|----------------------|-------------|------------------|------------|---------------|---------------|-------------|--------|--------------|---------------|--|------------------|
| 5 | G1 | <ul style="list-style-type: none"> Indicated Error history of last 10 times | E1 | <ul style="list-style-type: none"> "E1" would be indicated initially, and press "⊙r/min(spin speed)" button to show last time, and press it twice to display the time before last, and press it 3 times to display previous 3 times, and indicate error code of last 10 times by pressing it, and return to "E1" as initial mode. If there were errors in the past, "U" or "H" and some number shall be indicated. If it had no Error history, "00" mark would be displayed. <table border="1"> <tr> <td>Initial position</td> <td>Last time</td> <td>The time before last</td> <td>3 times ago</td> </tr> <tr> <td>Temp • lamps OFF</td> <td>⊗ lamps ON</td> <td>30°C lamps ON</td> <td>30°C and ⊗ ON</td> </tr> </table> <table border="1"> <tr> <td>4 times ago</td> <td>.....→</td> <td>10 times ago</td> </tr> <tr> <td>40°C lamps ON</td> <td></td> <td>60°C and 30°C ON</td> </tr> </table> | Initial position | Last time | The time before last | 3 times ago | Temp • lamps OFF | ⊗ lamps ON | 30°C lamps ON | 30°C and ⊗ ON | 4 times ago |→ | 10 times ago | 40°C lamps ON | | 60°C and 30°C ON |
| Initial position | Last time | The time before last | 3 times ago | | | | | | | | | | | | | | | |
| Temp • lamps OFF | ⊗ lamps ON | 30°C lamps ON | 30°C and ⊗ ON | | | | | | | | | | | | | | | |
| 4 times ago |→ | 10 times ago | | | | | | | | | | | | | | | | |
| 40°C lamps ON | | 60°C and 30°C ON | | | | | | | | | | | | | | | | |
| 6 | G2 | <ul style="list-style-type: none"> Indicates Error history of last 3 times Indicate contents of wash program when occurred error | E2 | <ul style="list-style-type: none"> "E2" would be indicated initially, and press "⊙r/min(spin speed)" button to show last time, and press it twice to display the time before last, and press it 3 times to display previous 3 times and return to "E2" as initial mode. If there were errors in the past, "U" or "H" and some number shall be indicated. If it had no Error history, "00" mark would be displayed. After pressing "⊙r/min(spin speed)" button, while indicating the error code. Press "Mode(Process)" button, contents of wash program when occurred error shall be indicated (operated course, water temperature, spin speed, remain time and selected optional functions) Press "Prewash" button: indicates repeated times of the spin action. Press "Extra Rinse" button: indicates rotation speed of final spin action. Press "Easy Ironing" button: Indicates "Operated washing time". Press "Speed/Eco" button: Indicates operated course ("O" means Cotton, and increase number by turning the wash program select knob clockwise). <table border="1"> <tr> <td>Initial position</td> <td>Last time</td> <td>The time before last</td> <td>3 times ago</td> </tr> <tr> <td>Temp • lamps OFF</td> <td>⊗ lamps ON</td> <td>30°C lamps ON</td> <td>30°C and ⊗ ON</td> </tr> </table> | Initial position | Last time | The time before last | 3 times ago | Temp • lamps OFF | ⊗ lamps ON | 30°C lamps ON | 30°C and ⊗ ON | | | | | | |
| Initial position | Last time | The time before last | 3 times ago | | | | | | | | | | | | | | | |
| Temp • lamps OFF | ⊗ lamps ON | 30°C lamps ON | 30°C and ⊗ ON | | | | | | | | | | | | | | | |
| 7 | G3 | <ul style="list-style-type: none"> Indicate contents of wash program operates normally last time | E3 | <ul style="list-style-type: none"> "E3" would be indicated initially. Press "Mode(Process)" button, contents of the last wash program that functioned will be indicated (operated course, water temperature, spin speed, remain time and selected optional functions) Press "Prewash" button: indicates maximum repeated times of the spin action. Press "Extra Rinse" button: indicates highest rotation speed of final spin action. Press "Easy Ironing" button: Indicates longest washing time. Press "Speed/Eco" button: Indicates operated wash program ("O" means Cotton, and increase number by turning the wash program select knob clockwise). | | | | | | | | | | | | | | |
| 8 | H | <ul style="list-style-type: none"> Indicates operation times | C | <ul style="list-style-type: none"> "C" would be indicated initially, and press "⊙r/min(spin speed)" button to change indication of the digit of operation times. Press once: Digit "Thousand–Hundred" for washing times. [The "⊗" lights up] Press twice: Digit "Ten–One" for washing Times. [The "30°C" lights up] | | | | | | | | | | | | | | |

13 ERROR DISPLAY

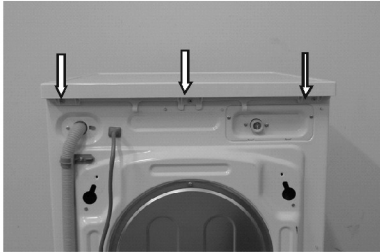
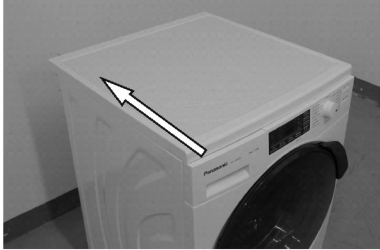
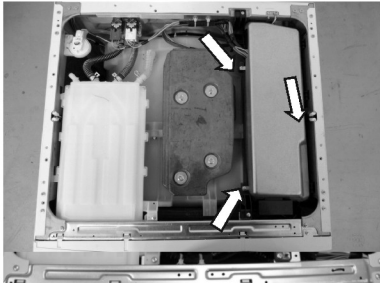
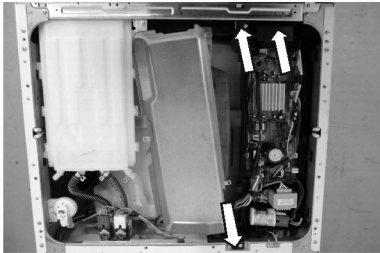

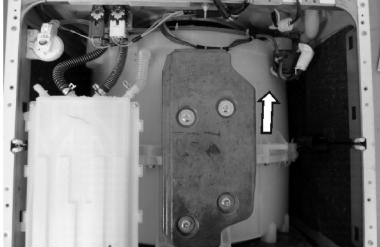
If there is an operation error, or if there is an occurrence of the electric component problem on the washing machine, the program of the operation shall be stopped, and warning buzzer shall be rung (All of U and H21 and H43), and "U" and a number appears alternately.


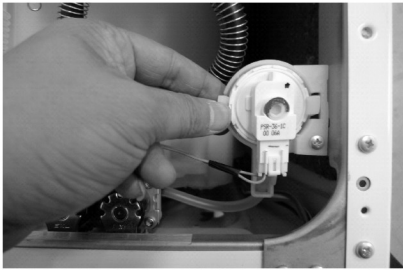
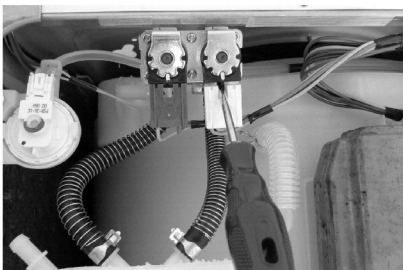
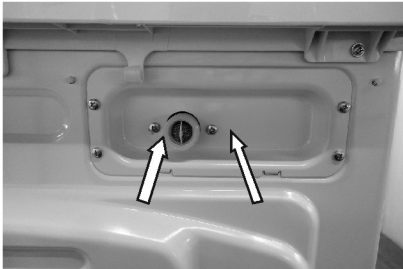


(Incase of U11) 

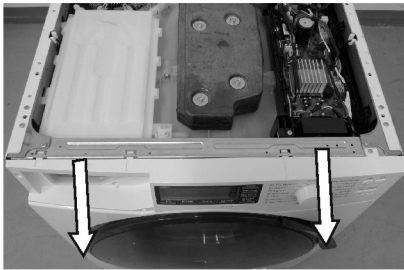
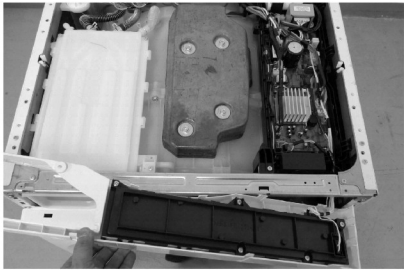



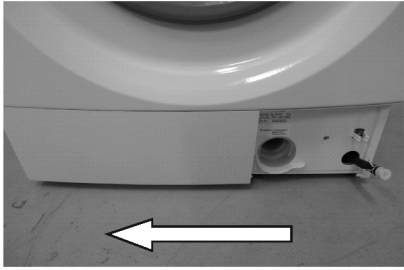
| Indication | Contents | Detect contents | Check point | Method to clear |
|------------|---|--|--|---|
| U11 | Unable to drain | Incase won't detect reset point in 12 min. After starting of drain. | <ul style="list-style-type: none"> • Is something wrong with the drain hose? • Is lint clogging it? • Check if condition of the water level detector. | After solving problems, open the door and close it, and then restart operation. |
| U12 | The door is open | Door is opening at start point of the operation. | <ul style="list-style-type: none"> • Is the door open? | Close the door to start operation. |
| U13 | Unbalanced load | Detect unbalanced load at spin process. | <ul style="list-style-type: none"> • Check if clothes are not tangled in the drum. • Check if the washer is not installed on an unstable or sloping floor. | After solving problems, open the door and close it, and then restart operation. |
| U14 | Unable to supply water | It's takes over 20 min. to reach specified water level. | <ul style="list-style-type: none"> • It's takes over 4 min. to reach just bottom portion of the drum. • Check if condition of the water valve. • Is the filter of the feed valve clogged? | After solving problems, open the door and close it, and then restart operation. |
| H01 | Water level detector | Input frequency from the water level detector is out of rated frequency. | <ul style="list-style-type: none"> • Check if condition of the connectors. • Replace water level detector. • Replace PC Board (Power side). | Turn off the power |
| H04 | Short circuit of power relay on the PC.Board | Detect short circuit of the power relay on the PC Board. | <ul style="list-style-type: none"> • Replace PC Board. | Remove the power plug |
| H05 | Data shall not be memorized. | Data won't saved to the micro processor(In case of service check mode-B). | <ul style="list-style-type: none"> • Replace PC Board (Power side). • Effected service mode (Check mode-B) only. | Turn off the power |
| H07 | Malfunction of rotary detector. | Input signal from the rotary detector when operating the motor will be generated as a matter of course | <ul style="list-style-type: none"> • Check if condition of the connector and lead wire of the rotary detector. • Replace the motor. • Replace the PC Board (Power side). | Turn off the power |
| H09 | Open circuit of the PC Board's communication line | Won't communicate between the PC Board power side and operation side. | <ul style="list-style-type: none"> • Check if lead wire condition of PC Board between power and operation side, and replace one of PC Boards. | Remove the power plug |
| H17 | Open circuit or short circuit of the thermistor TH4 | Detect abnormal signal from the thermistor TH4 | <ul style="list-style-type: none"> • Check if condition of the connectors. • Replace the thermistor TH4 | Turn off the power |

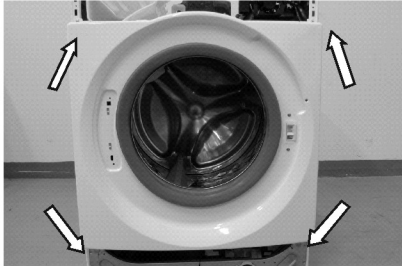

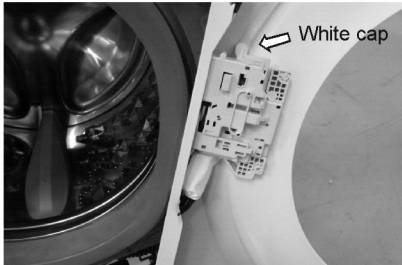
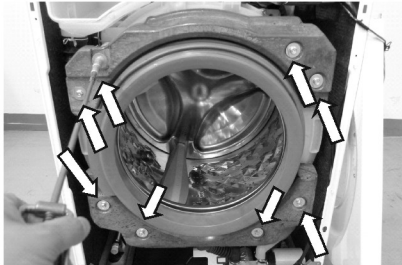

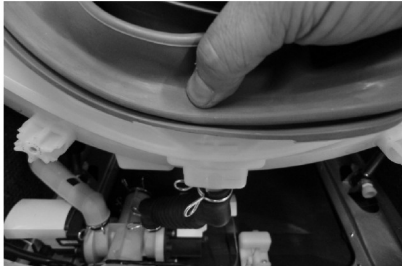
| Indication | Contents | Detect contents | Check point | Method to clear |
|------------|---|---|---|---|
| H21 | Water level detector detect abnormal frequency | Water level detector detect increasing of water level (Includes foam) | <ul style="list-style-type: none"> • Replace the feed valve. * Operate the drain pump to drain water. | Turn off the power |
| H23 | Open circuit or short circuit of the heater relay | Detect abnormal signal of the heater relay | <ul style="list-style-type: none"> • Replace PC.Board (Power side) | Turn off the power |
| H27 | Malfunction of the door lock switch. | Door lock switch won't operate even operating position. | <ul style="list-style-type: none"> • Check if condition of the connector for the door lock switch. • Replace the door lock switch. • Replace the PC.Board (Power side). | Turn off the power |
| H29 | Decreased rotation speed of the cooling fan | Rotation speed of the cooling fan should be decreased below 1200r/min | <ul style="list-style-type: none"> • Check if condition of the connector for the cooling fan. • Replace the cooling fan. • Replace the PC Board (Power side) | Turn off the power |
| H35 | Mulfuction of removed belt. | Incase braking time shall be measured lower than specifaion | The motor's rotation when start braking is over 750 r/min in spin process. | Turn off the power (it won't turn off for 5 min.) |
| H41 | Acceleration data shall not be altered | During spinning acceleration data shall not be obtained or altered | <ul style="list-style-type: none"> • Replace the 3D sensor. • Replace the PC Board (Power side). | Turn off the power |
| H43 | Water shall be leaked inside of the washing machine | Water leak detector detect water on the botton plate | <ul style="list-style-type: none"> • Check if water leakage from the hoses and joint portions inside of the washing machine. | Turn off the power |
| H44 | Abnormal vibration in spin process | Detecting the drum rotation by rotary detector in the motor | To detect rotation speed of the drum is 100 r/min lower than selected spin rotation. | Turn off the power |
| H46 | Open or short circuit of the water leak detector | Detect abnormal signal from the water leak detector. | <ul style="list-style-type: none"> • Replace PC Board (Power side) | Turn off the power |
| H48 | Mulfuction of the thermistor on the PC Board | Detecting open or short circuit of the TH-6 on the PC Board | This Error code shall not be indicated on the panel face board display, but it is possible to find it on Operating test-No water. | Not necessary, it will continue to operate |
| H51 | Mulfuction of over load on the motor | Detect input signal from the rotary detector at initial rotating of the motor | <ul style="list-style-type: none"> • Check if the drum can rotate smoothly by hand. • Check if condition of the connector for the motor. • Replace the motor. • Replace the PC Board (Power side) | Turn off the power |
| H52 | Supplied abnormal high voltage | Measured input voltage (Voltage is above tolerance levels). | <ul style="list-style-type: none"> • Check input voltage to the washing machine. | Turn off the power |
| H53 | Supplied abnormal Low voltage | Measured input voltage (Voltage is below tolerance levels). | <ul style="list-style-type: none"> • Check input voltage to the washing machine. | Turn off the power |
| H57 | High current levels are drawn during motor rotation | Detect abnormal high current signal during motor rotation | <ul style="list-style-type: none"> • Replace the PC.Board (Power side) • Replace the motor | Turn off the power |

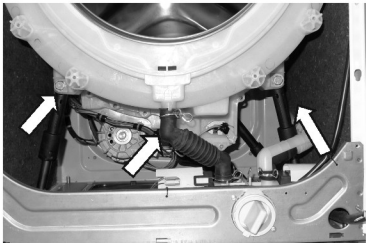
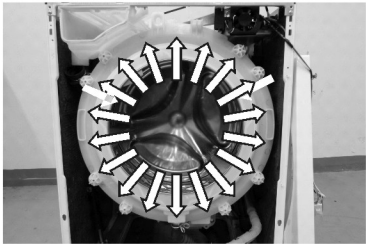

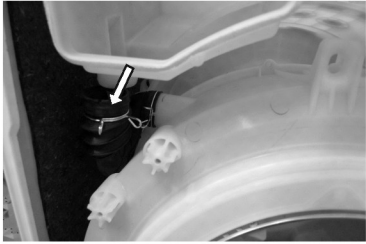
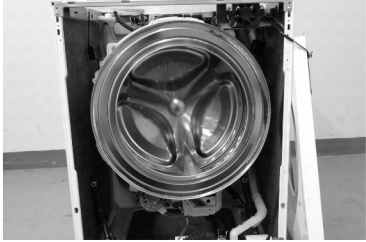

14. DISASSEMBLY INSTRUCTIONS AND ADJUSTMENTS




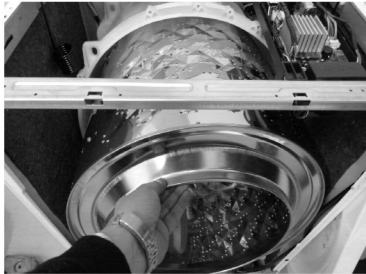

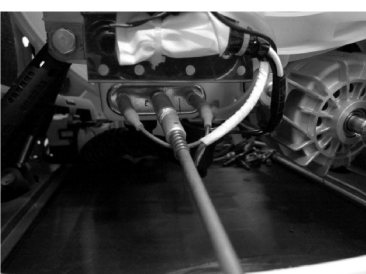
| Description | Figure | Procedure |
|---|---|---|
| 1、 Replacement of the top board |  | 1.Remove the three screws mounting the top board as shown in figure. |
| |  | 2.Hold and slide the top board to arrow direction slightly as shown in figure, and pull it up to remove. |
| 2、 Replacement of the PC Board w/components for Power side |  | After removing the top board, 1.Remove the three screws mounting the steel cover. |
| |  | 2.Remove the steel cover. 3.Remove all the connectors and the lead wire holders from the PC Board for power side, and remove the lead wires. 4.Remove the two screws mounting the PC Board for power side and the two screws mounting the earth wires. Note: To assemble, please note, 8-pins red colour connector case is not used. |
| |  | 5.Remove the cooling fan cover. 6. Loosen the lead wire of cooling fan and remove the retaining clips. 7.Remove the cooling fan and the noise filter, and remove the PC Board for power side. |
| 3、 Replacement of the 3D sensor |  | After removing the top board and the PC Board for power side. 1.Remove the two screws mounting the 3D sensor. |

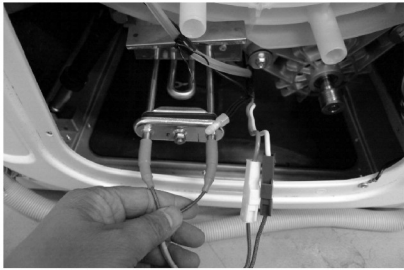

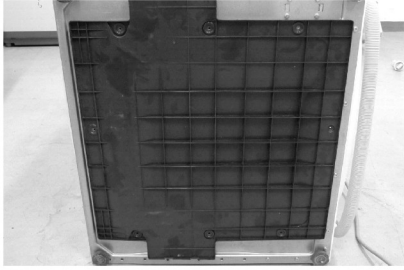


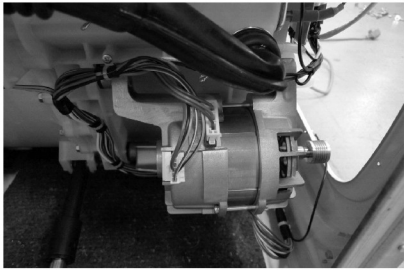
| Description | Figure | Procedure |
|--|---|---|
| |  | <p>2.Remove the two lead wire holders,loosen the lead wire holder and insulation tape, remove one connector to remove the 3D sensor.</p> |
| <p>4、 Replacement of the water level detector</p> |  | <p>After removing the top board, 1.Push the retaining clip outward as shown in figure, and pull the water level detector upward. 2.Remove the connector and sub hose A from the water level detector.</p> |
| <p>5、 Replacement of the feed valve</p> |  | <p>After removing the top board, 1.Slide the connector out with a screwdriver as shown in figure.</p> |
| |  | <p>2.Remove the two screws mounting the feed valve as shown in figure.</p> |
| |  | <p>3.Pull out the feed valve, loosen the hose clamp by long nose pliers. 4.Pull out the feed hose with a screwdriver. 5.Remove the feed valve.</p> |
| <p>6、 Replacement of the PC Board for operation</p> |  | <p>After removing the top board, 1.Remove the detergent case B,and remove the one screw mounting the panel face board as shown in figure.</p> |

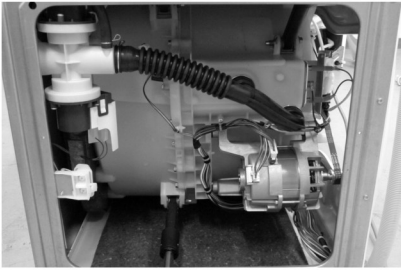

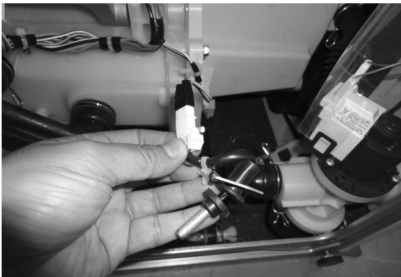
| Description | Figure | Procedure |
|--|---|--|
| |  | <p>2.Remove the one screw mounting the panel face board on the upper side.</p> <p>3.Press upper clips down while pulling the panel face board forward, and pulling it.</p> <p>4.Remove the three screws mounting the steel cover of the PC Board for power side to remove.</p> |
| |  | <p>5.Remove the two connectors from the PC Board for power side.</p> <p>6.Remove the five screws and the retaining clips the PC Board, and remove the PC Board cover.</p> <p>Note: Please spread a cloths to prevent scratch on the surface of the panel face board.</p> |
| <p>7、 Replacement of the door unit</p> |  | <p>1.After opening the door unit,remove the two screws mounting the door unit.</p> <p>2.Hold and pull the door unit upward to remove.</p> |
| <p>8、 Replacement of the door lock switch</p> |  | <p>After removing the panel face board and the door unit</p> <p>1.Pull out the body band B as shown in left figure and remove it.</p> |
| |  | <p>2.After opening the drain filter cover,Remove the pump hose out from the hose holder.</p> <p>3.Pull out the pump hose and remove the cap to drain remaining water.</p> <p>4.Turn the drain filter counter-clockwise to unscrew and remove it.</p> <p>5.Remove the one screw mounting the panel A.</p> |
| |  | <p>6.Slide the panel A to left slightly to remove as shown in left figure.</p> |

| Description | Figure | Procedure |
|---|---|--|
| |  | <p>7.Remove the four screws mounting the body B.</p> |
| |  | <p>8.Remove the wringer frame packing (Made of rubber) from the body B. 9.Remove two screws mounting the door lock switch. 10.Hold the body B and pull it up slightly then turn it to right side.</p> |
| |  | <p>11.Loosen the lead wire holder, remove the tape and take out the connector from the insulation cover. 12.Remove the connector . 13.Remove the lid lock switch. Note:There is a white cap on the top of the lid lock switch ,Please do not drop off.</p> |
| <p>9、 Replacement of the wringer frame packing A</p> |  | <p>After removing the body B. 1.Remove the eight bolts mounting both front side balance weights with a box wrench (Size 10mm). 2.Remove both balance weights as shown in figure.</p> |
| |  | <p>3.Remove the body band B fixing the wringer frame packing by using the two long nose pliers.</p> |
| |  | <p>4.Remove the wringer frame packing A from the outer tub cover. Note: When to mounting the wringer frame packing A, cutting portion of the wringer frame packing should be set to the bottom portion of the outer tub cover.</p> |

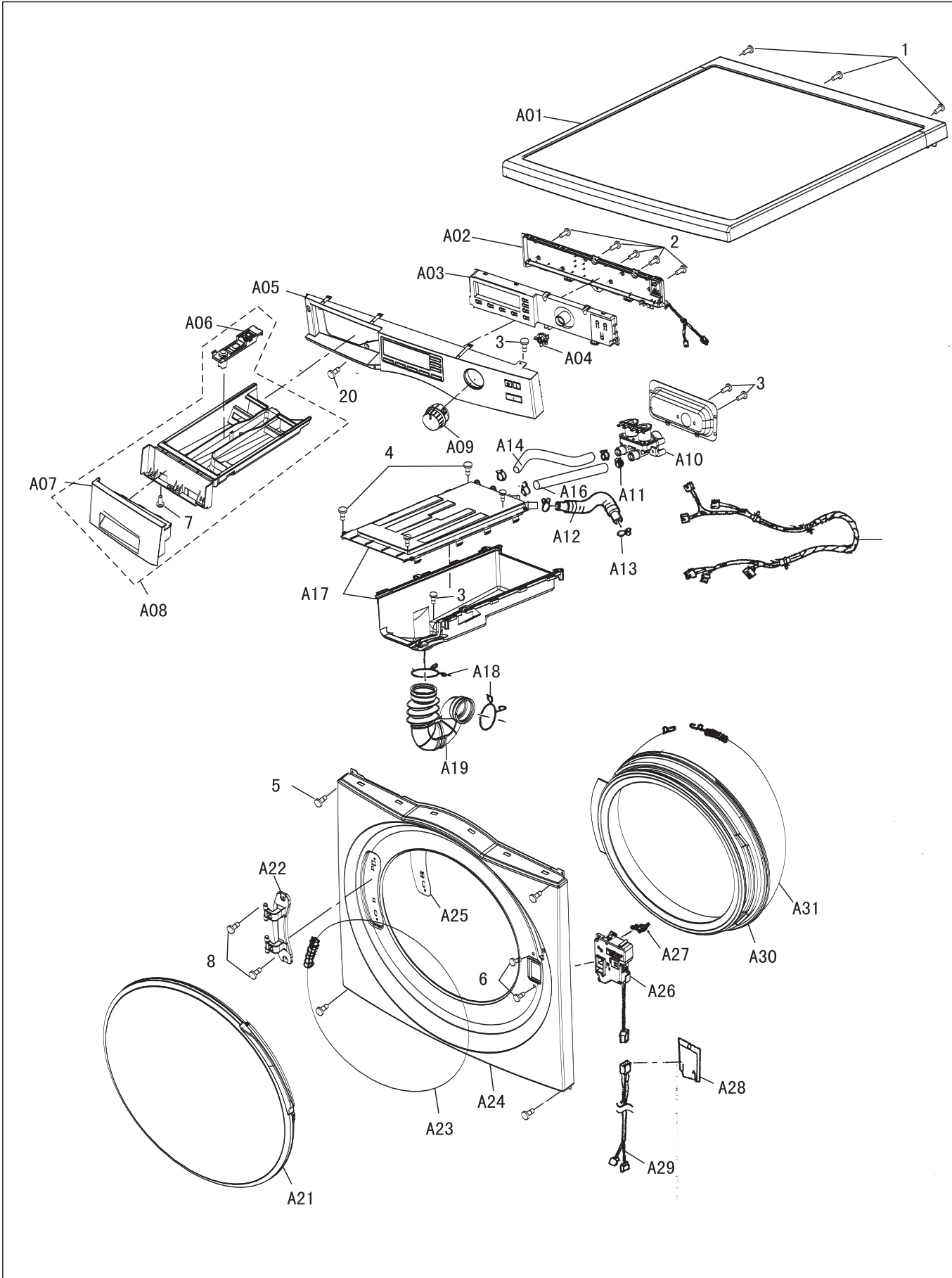
| Description | Figure | Procedure |
|---|---|---|
| 10、 Replacement of the outer tub cover |  | <p>After removing the body B, wringer frame packing A and both front side balance weights.</p> <ol style="list-style-type: none"> 1. Remove the two bolts mounting the damper spring by the box wrench (Size 16mm) as shown in figure. 2. Remove the hose clamp from the outer tub. |
| |  | <ol style="list-style-type: none"> 3. Remove upper balance weights. 4. Remove the nineteen bolts mounting the outer tub cover by a long box wrench (Size 10mm) as shown in figure. |
| |  | <ol style="list-style-type: none"> 5. Remove the two screws mounting the thermistor-1 and remove it. 6. Pull both right and left side damper spring out from the outer tub. |
| |  | <ol style="list-style-type: none"> 7. Remove the hose clamp mounting the feed hose. |
| |  | <ol style="list-style-type: none"> 8. Pull out the outer tub cover to remove. |
| |  | <p>When you install the outer tub cover, please lay down the washing machine on it's rear side to install it easily.</p> <ol style="list-style-type: none"> 1. Set the outer tub proper position as shown. 2. Tighten the nineteen bolts to mount the outer tub cover. |

| Description | Figure | Procedure |
|--|---|---|
| <p>11、 Replacement of the drum unit</p> |  | <p>After removing the outer tub cover. 1.Remove the five screws mounting the rear panel. 2.Remove the rear panel.</p> |
| |  | <p>3.Turn the large pulley and remove the belt outward.</p> |
| |  | <p>4.Insert the two holes of the pulley with two screwdrivers as shown in left figure to fasten the large pulley. 5.Loosen the nut with spanner as shown in left figure. 6.Remove the pulley and two gaskets.</p> |
| |  | <p>7.Pull out the drum unit to remove slowly for not touching to the body edges.</p> |
| <p>12、 Replacement of the heater</p> |  | <p>After removing the rear panel. 1.Cut the two lead wire holder by the pliers to remove the insulation cover.</p> |
| |  | <p>2.Remove one nut mounting the heater unit by the box wrench (Size 10mm) and remove the earthwire.</p> |

| Description | Figure | Procedure |
|---|---|--|
| |  | <p>3. Loosen the nut mounting the heater unit slightly by the box wrench. (Note: Do not remove this nut completely).</p> <p>4. Press the nut by the box wrench, then pull the heater out.</p> <p>5. Remove the two connectors from the heater.</p> |
| <p>13、 Replacement of the Pump unit</p> |  | <p>After removing the panel A,</p> <p>1. Remove the two screws mounting the pump unit.</p> |
| |  | <p>2. Lay down the washing machine on its left side.</p> <p>3. Remove the eight screws mounting the bottom plate A as shown in left figure and remove the bottom plate A.</p> |
| |  | <p>4. Remove the three hose clamps and three hoses from the pump unit.</p> <p>5. Remove one lead wire holder mounting the lead wire unit.</p> <p>6. Remove the pump unit .</p> |
| <p>14、 Replacement of the Motor unit</p> |  | <p>Lay down the washing machine on its left side, and remove the bottom plate A,</p> <p>1. Remove the two screws mounting the motor by using the ratchet type as shown in left figure .</p> |
| |  | <p>2. Remove the two connectors of the motor.</p> <p>3. Pull out the motor unit.</p> <p>Note: please spread a cloth on the floor to prevent scratch to the body.</p> |

| Description | Figure | Procedure |
|---|--|---|
| <p>15、 Replacement of the overflow hose</p> |  | <p>Lay down the washing machine,remove the bottom plate A.</p> <ol style="list-style-type: none"> 1.Remove the three hose clamps mounting the overflow hose. 2.Remove the overflow hose. <p>Note:please spread a cloth to prevent scratch to the body.</p> |
| <p>16、 Replacement of the thermal detector</p> |  | <p>Lay down the washing machine, and remove the bottom plate A.</p> <ol style="list-style-type: none"> 1.Remove the two screws mounting the thermal detector with a short screwdriver. <p>Note: Please spread a cloth on the floor to prevent scratch to the body.</p> |
| |  | <ol style="list-style-type: none"> 2.Loosen the lead wire holder and take out the connector. 3.Remove the thermal detector. |

15.LOCATION OF PART-A



REPLACEMENT PARTS LIST-A

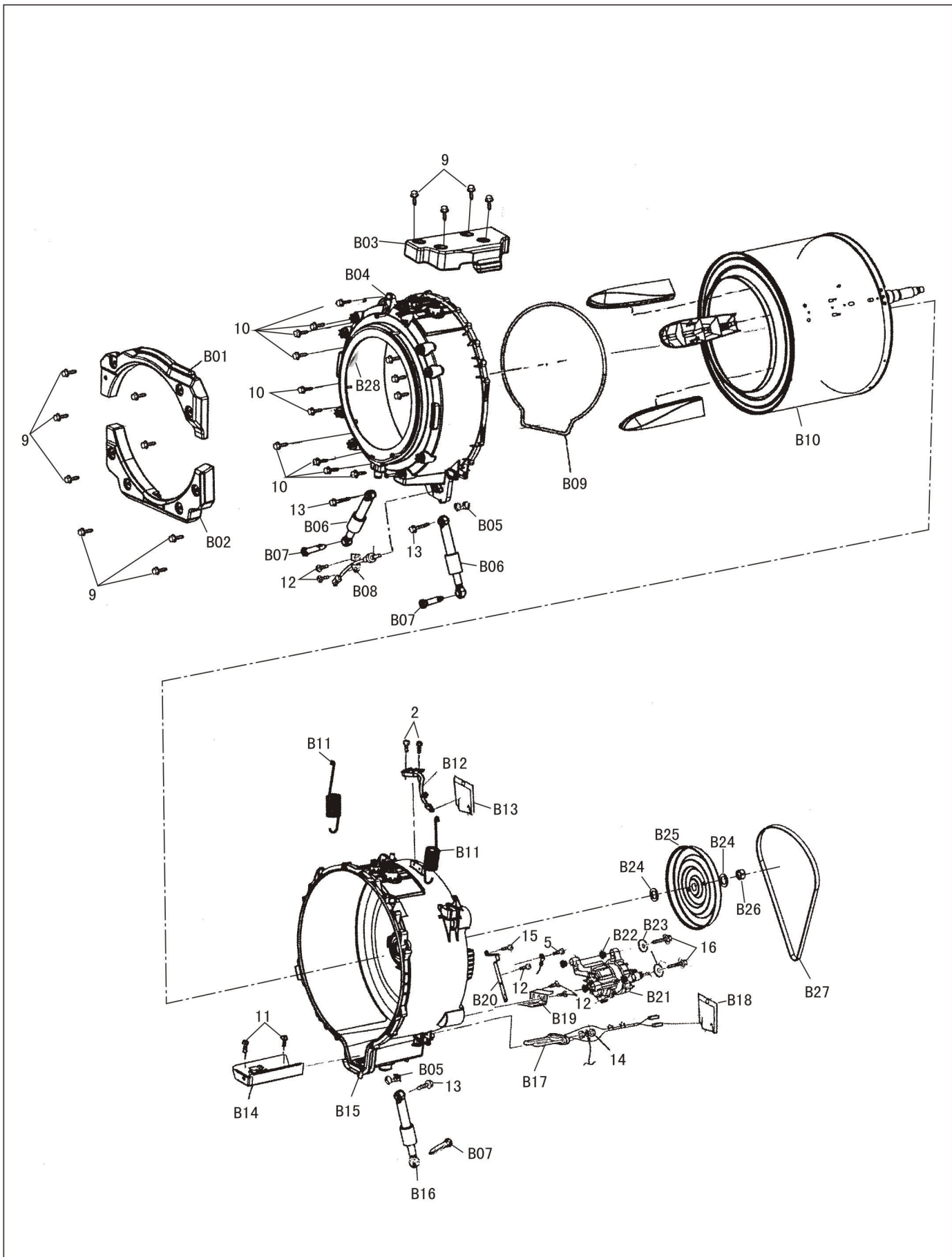
(U):U indicates parts at the remarks that can be replaced by user.

△:Components identified by △ Mark have special characteristics important for safety.

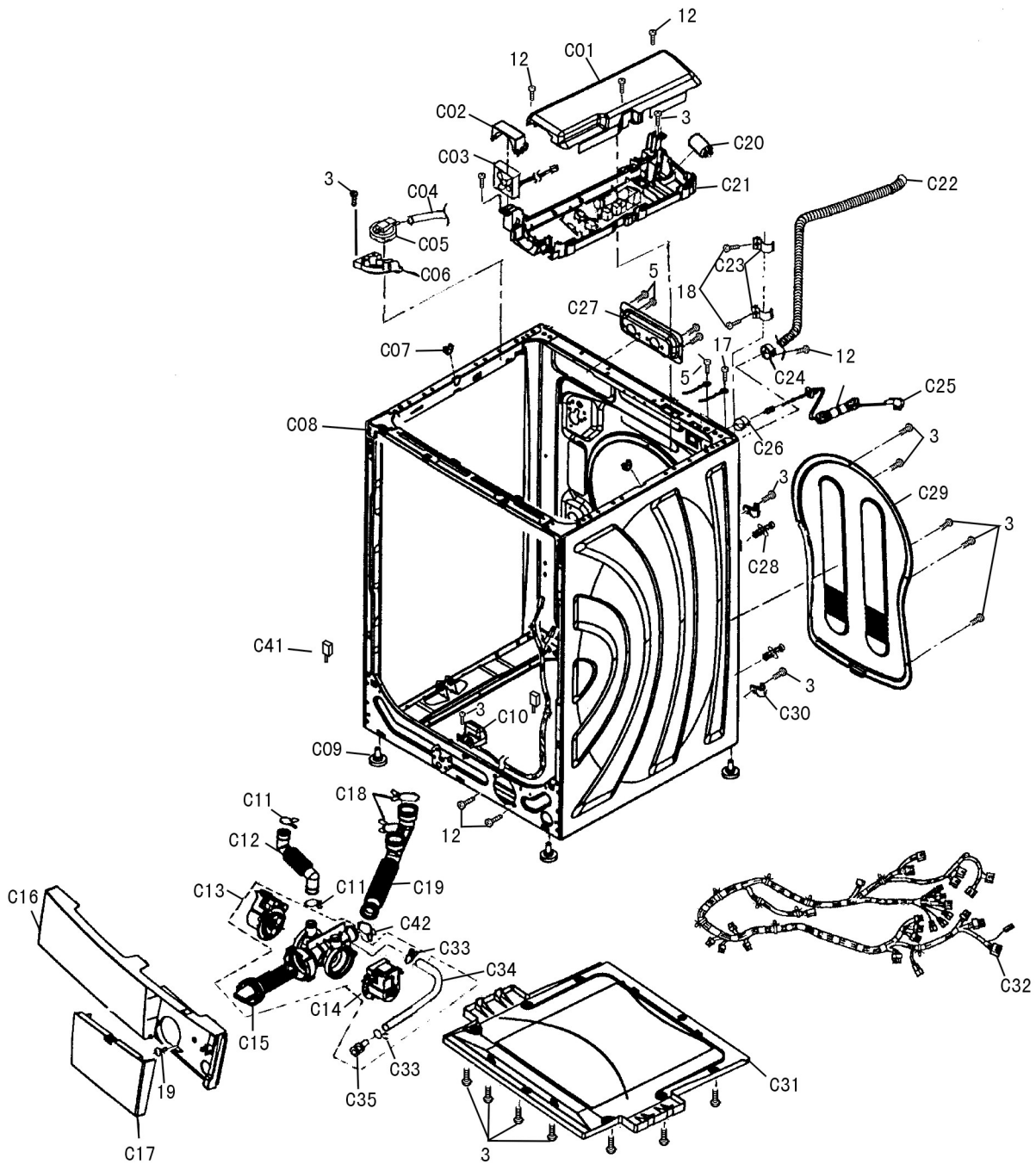
When replacing any of these components use only manufacture's specified parts.

| Ref. No. | Description | Part No. | Q'ty | Model No. | | | Remarks |
|----------|-----------------------|--------------|------|-----------|--------|--------|--|
| | | | | 140VG3 | 168VG3 | 148VG3 | |
| A01 | TOP BOARD | AXW11NB7SR0 | 1 | ○ | ○ | ○ | (U) |
| A02 | CONTROLLER UNIT A | AXW24S-7SR0 | 1 | ○ | ○ | ○ | △ For Europe |
| | | AXW24S-7UM0 | 1 | ○ | × | ○ | △ For Asia, Middle East, AUS, NZ, Russia |
| A03 | CONTROLLER PLATE | AXW146-7SR1 | 1 | ○ | × | ○ | Includes A04 For Europe |
| | | AXW146-7SR2 | 1 | × | ○ | × | |
| | | AXW146-7UM1 | 1 | ○ | × | ○ | |
| A04 | KNOB PLATE | AXW336B7SR0 | 1 | ○ | ○ | ○ | |
| A05 | PANEL FACE BOARD UNIT | AXW1J-7SR0 | 1 | × | ○ | ○ | GERMANY |
| | | AXW1J-7TU0 | 1 | × | ○ | ○ | UK/POLAND |
| | | AXW1J-7TX0 | 1 | × | ○ | ○ | FRANCE |
| | | AXW1J-7UA0 | 1 | × | ○ | ○ | SPAIN |
| | | AXW1J-7UC0 | 1 | × | ○ | ○ | ITALY |
| | | AXW1J-7TU0 | 1 | × | ○ | ○ | HOLLAND |
| | | AXW1J-7ST0 | 1 | ○ | × | × | GERMANY |
| | | AXW1J-7TW0 | 1 | ○ | × | × | UK/POLAND |
| | | AXW1J-7TZ0 | 1 | ○ | × | × | FRANCE |
| | | AXW1J-7UB0 | 1 | ○ | × | × | SPAIN |
| | | AXW1J-7UD0 | 1 | ○ | × | × | ITALY |
| | | AXW1JB7TW0 | 1 | ○ | × | × | HOLLAND |
| | | AXW1J-7UJ0 | 1 | ○ | × | × | RUSSIA |
| | | AXW1J-7UH0 | 1 | × | × | ○ | RUSSIA |
| | | AXW1JB7UN0 | 1 | ○ | × | × | For Asia, Middle East, AUS, NZ |
| | | AXW1JB7UM0 | 1 | × | × | ○ | |
| A06 | SOFTENER CASE CAP | AXW2177A7SR5 | 1 | ○ | ○ | ○ | (U) |
| A07 | PANEL FACE C | AXW147B7ST0 | 1 | ○ | × | × | (U) |
| | | AXW147B7SS0 | 1 | × | ○ | × | (U) |
| | | AXW147B7SR0 | 1 | × | × | ○ | (U) |
| A08 | RINSE CASE UNIT | AXW21DB7ST0 | 1 | ○ | × | × | (U)Includes A06,A07 |
| | | AXW21DB7SS0 | 1 | × | ○ | × | (U)Includes A06,A07 |
| | | AXW21DB7SR0 | 1 | × | × | ○ | (U)Includes A06,A07 |
| A09 | COURSE SELECT KNOB | AXW6C-7SR0 | 1 | ○ | ○ | ○ | |
| A10 | FEED VALVE | AXW29A-7SR0 | 1 | ○ | ○ | ○ | △ |
| A11 | HOSE CLAMP | AXW264-7SR0 | 4 | ○ | ○ | ○ | |
| A12 | SUCTION HOSE A | AXW237-7SR0 | 1 | ○ | ○ | ○ | |
| A13 | HOSE CLAMP | AXW264-6WJ0 | 2 | ○ | ○ | ○ | |
| A14 | FEED HOSE A | AXW1718-7SR0 | 1 | ○ | ○ | ○ | FOR PREWASH |
| A16 | FEED HOSE B | AXW1719-7SR0 | 1 | ○ | ○ | ○ | |
| A17 | DETERGENT CASE A | AXW2150-7SR0 | 1 | ○ | ○ | ○ | |
| A18 | HOSE CLAMP | AXW245-6ML0 | 2 | ○ | ○ | ○ | |
| A19 | FEED HOSE | AXW1250-7SR0 | 1 | ○ | ○ | ○ | |
| A20 | LEAD WIRE UNIT B | AXW14B-7SR0 | 1 | ○ | ○ | ○ | △FEED VALVE |
| A21 | DOOR UNIT | AXW1GB7SR0 | 1 | ○ | ○ | ○ | (U)Includes A22 |
| A22 | DOOR HINGE | AXW192-7SR0 | 1 | ○ | ○ | ○ | Included in A21 |
| A23 | BODY BAND BU | AXW1Z-7SR0 | 1 | ○ | ○ | ○ | |
| A24 | BODY B UNIT | AXW1BB7SR0 | 1 | ○ | ○ | ○ | |
| A25 | BODY SUPPORT D | AXW114B7SR0 | 1 | ○ | ○ | ○ | |
| A26 | DOOR LOCK SWITCH | AXW1619-7SR0 | 1 | ○ | ○ | ○ | |
| A27 | PUSH SWITCH | AXW1412-7SR0 | 1 | ○ | ○ | ○ | |
| A28 | CHEMICAL COVER | AXW448-7KU0 | 1 | ○ | ○ | ○ | |
| A29 | LEAD WIRE UNIT | AXW14F-7SR0 | 1 | ○ | ○ | ○ | △DOOR LOCK SW |
| A30 | WRINGER FRAME PACKING | AXW212-7SR0 | 1 | ○ | ○ | ○ | |
| A31 | BODY BAND B | AXW172-7SR0 | 1 | ○ | ○ | ○ | |

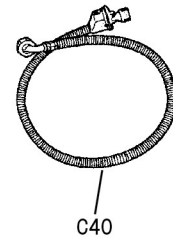
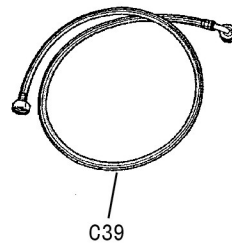
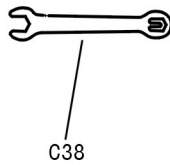
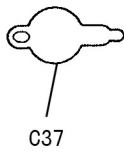
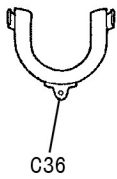
LOCATION OF PART-B



LOCATION OF PART-C



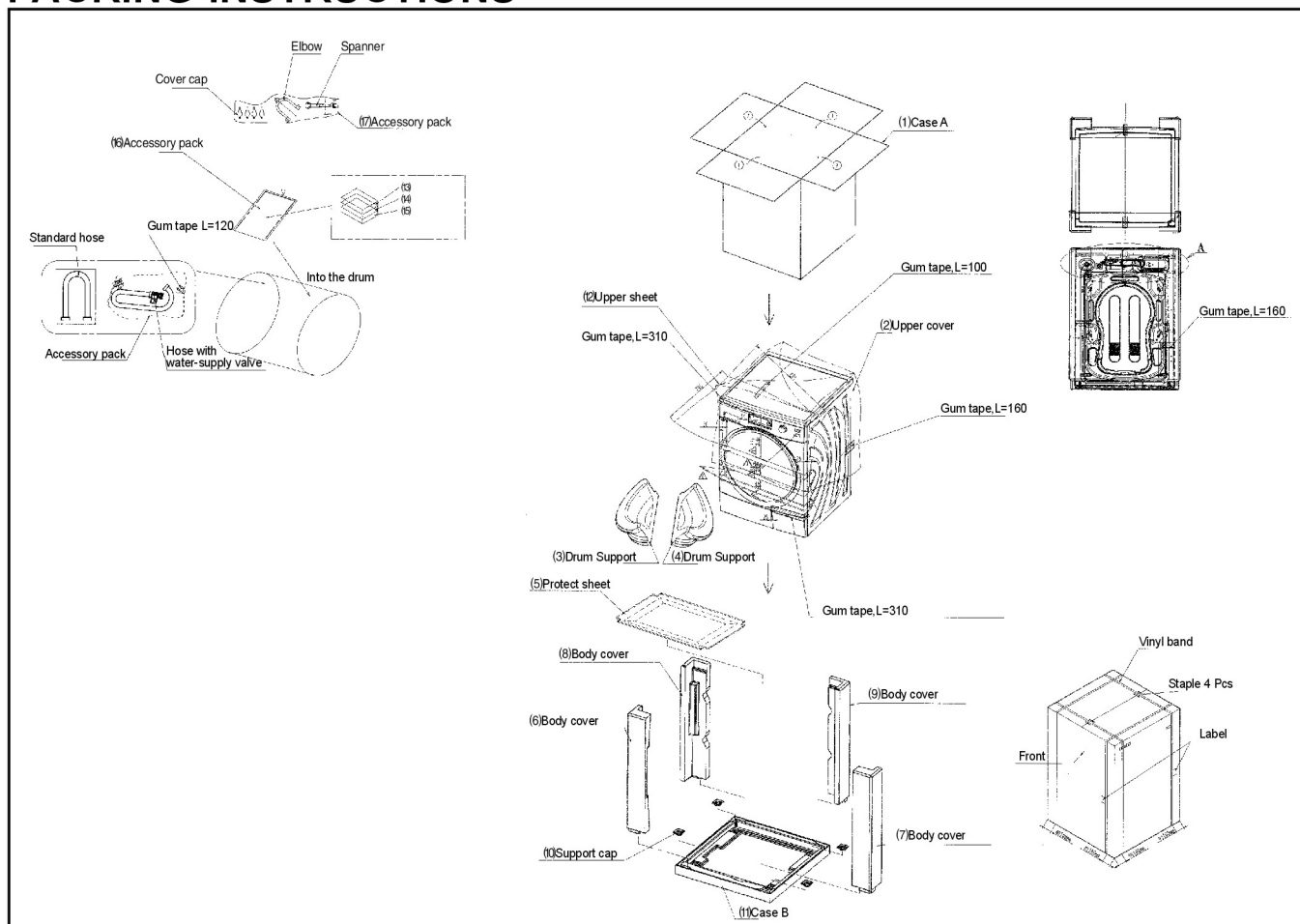
Accessories



REPLACEMENT PARTS LIST-C

| Ref. No. | Description | Part No. | Q'ty | Model No. | | | Remarks |
|----------|------------------------------|--------------|------|-----------|--------|--------|--|
| | | | | 140VG3 | 168VG3 | 148VG3 | |
| C01 | PC BOARD COVER C | AXW542-7SR0 | 1 | ○ | ○ | ○ | |
| C02 | FAN CAP | AXW862-7SR5 | 1 | ○ | ○ | ○ | |
| C03 | FAN UNIT | L6FAYYYH0163 | 1 | ○ | ○ | ○ | △ |
| C04 | AIR HOSE A UNIT | AXW2Q-7SR0 | 1 | ○ | ○ | ○ | |
| C05 | WATER LEVEL DETECTOR | AXW24T-0360 | 1 | ○ | ○ | ○ | △ |
| C06 | DETERGENT CASE C | AXW1278-7SR0 | 1 | ○ | ○ | ○ | |
| C07 | SUSPENSION HOLDER | AXW3440-7FH0 | 2 | ○ | ○ | ○ | |
| C08 | BODY UNIT | AXW1AB7SR0 | 1 | ○ | ○ | ○ | Includes C09、C23、C27 |
| C09 | LEG PLATE UNIT | AXW3I-7EU0 | 4 | ○ | ○ | ○ | |
| C10 | WATER LEAK SENSOR | AXW14G-7SR0 | 1 | ○ | ○ | ○ | |
| C11 | HOSE CLAMP | AXW245-6WJ4 | 2 | ○ | ○ | ○ | |
| C12 | FEED HOSE B | AXW1260-7SR0 | 1 | ○ | ○ | ○ | |
| C13 | DRAINING PUMP UNIT | AXW8R-7SR0 | 1 | ○ | ○ | ○ | △ |
| C14 | PUMP MOTOR | AXW8C-7SR0 | 2 | ○ | ○ | ○ | △ |
| C15 | DRAIN FILTER | AXW2205A7SR0 | 1 | ○ | ○ | ○ | (U) |
| C16 | PANEL A | AXW130B7SR0 | 1 | ○ | ○ | ○ | (U) |
| C17 | PANEL B | AXW140B7SR0 | 1 | ○ | ○ | ○ | (U)Includes Label |
| C18 | HOSE CLAMP | AXW245-6WJ1 | 2 | ○ | ○ | ○ | |
| C19 | DRAIN HOSE B | AXW231-7SR0 | 1 | ○ | ○ | ○ | |
| C20 | NOISE FILTER | AXW2430-0400 | 1 | ○ | ○ | ○ | |
| C21 | PC BOARD W/COMPONENTS | AXW24C-7ST06 | 1 | ○ | × | × | For Europe △ △ For Asia, Middle East, NZ, Russia, Aus △ For Asia, Middle East, NZ, Russia Australia △ |
| | | AXW24C-7SS06 | 1 | × | ○ | × | |
| | | AXW24C-7SR06 | 1 | × | × | ○ | |
| | | AXW24C-7UN06 | 1 | ○ | × | × | |
| | | AXW24C-7UM06 | 1 | × | × | ○ | |
| | | AXW24C-7ZT06 | 1 | × | × | ○ | |
| C22 | DRAINING HOSE UNIT | AXW2EA7FH0 | 1 | ○ | ○ | ○ | |
| C23 | DRAIN HOSE HOLDER | AXW120A7FH0 | 2 | ○ | ○ | ○ | |
| C24 | DRAIN HOSE HOLDER | AXW170A7FH0 | 1 | ○ | ○ | ○ | |
| C25 | POWER CORD | AXW4A-7SR0 | 1 | ○ | ○ | ○ | Germany/France/Spain/Italy/Holland△ |
| | | AXW4A-7TU0 | 1 | ○ | ○ | ○ | UK △ |
| | | AXW4A-7UU0 | 1 | ○ | × | ○ | Thailand △ |
| | | AXW4A-7UW0 | 1 | ○ | × | ○ | Australia/New Zealand△ |
| C26 | MAGNET RING | TFT-081813N | 1 | ○ | ○ | ○ | |
| C27 | FEED VALVE PLATE | AXW2901-7SR0 | 1 | ○ | ○ | ○ | |
| C28 | OUTER TUB HOLDER UNIT | AXW90E-7SR0 | 4 | ○ | ○ | ○ | (U) |
| C29 | REAR PANEL | AXW156-7SR0 | 1 | ○ | ○ | ○ | (U) |
| C30 | DRAIN HOSE HOLDER | AXW120A7FH1 | 3 | ○ | ○ | ○ | |
| C31 | BOTTOM PLATE | AXW2158-7SR0 | 1 | ○ | ○ | ○ | (U) |
| C32 | LEAD WIRE UNIT | AXW14A-7SR0 | 1 | ○ | ○ | ○ | |
| C33 | HOSE CLAMP | AXW264-6WJ0 | 2 | ○ | ○ | ○ | |
| C34 | DRAIN HOSE A | AXW230-7FH0 | 1 | ○ | ○ | ○ | |
| C35 | SUB DRAIN PORT CAP | AXW260-6WJ0 | 1 | ○ | ○ | ○ | (U) |
| C36 | ELBOW | AXW229-6WJ0 | 1 | ○ | ○ | ○ | (U) |
| C37 | COVER CAP | AXW1188-6YK0 | 4 | ○ | ○ | ○ | (U) |
| C38 | SPANNER | AXW526-7FH0 | 1 | ○ | ○ | ○ | (U) |
| C39 | STANDARD HOSE | AXW12C-7TU0 | 1 | ○ | ○ | ○ | (U) |
| C40 | HOSE WITH WATER-SUPPLY VALVE | AXW12C-7SR0 | 1 | ○ | ○ | ○ | (U)GERMANY |
| C41 | HOOK | AXW135-7FH0 | 1 | ○ | ○ | ○ | |
| C42 | HOSE CLAMP | AXW245-6WJ0 | 1 | ○ | ○ | ○ | |

PACKING INSTRUCTIONS



| Ref. No. | Description | Part No. | Q'ty | Model No. | | | Remarks |
|----------|------------------------|--------------|-------------|--------------|--------|--------|--|
| | | | | 140VG3 | 168VG3 | 148VG3 | |
| 1 | CASE A | AXW9001-7ST0 | 1 | ○ | × | × | |
| | | AXW9001-7SS0 | 1 | × | ○ | × | |
| | | AXW9001-7SR0 | 1 | × | × | ○ | |
| | | AXW9001-7UJ0 | 1 | ○ | × | × | |
| | | AXW9001-7UH0 | 1 | × | × | ○ | Russia |
| | | AXW9001-7UN0 | 1 | ○ | × | × | Singapore/Vietnam/UAE/Oman/Qatar/Kuwait/ |
| | | AXW9001-7UM0 | 1 | × | × | ○ | Lebanon/Malaysia/Australia/New Zealand |
| | | AXW9001-7UL0 | 1 | ○ | × | × | |
| | | AXW9001-7UK0 | 1 | × | × | ○ | Hongkong |
| | | AXW9001-7UV0 | 1 | ○ | × | × | |
| | | AXW9001-7UU0 | 1 | × | × | ○ | Thailand |
| | | AXW9001-7ZY0 | 1 | × | × | ○ | Indonesia |
| | | 2 | UPPER COVER | AXW9060-7FH0 | 1 | ○ | ○ |
| 3 | DRUM SUPPORTER | AXW9054-7SR0 | 1 | ○ | ○ | ○ | L |
| 4 | DRUM SUPPORTER | AXW9054-7SR5 | 1 | ○ | ○ | ○ | R |
| 5 | PROTECT SHEET | AXW9014-7SR0 | 1 | ○ | ○ | ○ | |
| 6 | BODY COVER(L) | AXW9050-7SR0 | 1 | ○ | ○ | ○ | |
| 7 | BODY COVER(R) | AXW9050-7SR5 | 1 | ○ | ○ | ○ | |
| 8 | BODY COVER(L) | AXW9051-7SR0 | 1 | ○ | ○ | ○ | |
| 9 | BODY COVER(R) | AXW9051-7SR5 | 1 | ○ | ○ | ○ | |
| 10 | SUPPORT CAP | AXW9066-7SR0 | 4 | ○ | ○ | ○ | |
| 11 | CASE B | AXW90B-7SR0 | 1 | ○ | ○ | ○ | For Europe |
| | | AXW90B-7UH0 | 1 | ○ | × | ○ | For Asia, Middle East, AUS, NZ, Russia |
| 12 | UPPER SHEET | AXW9069-7FH0 | 1 | ○ | ○ | ○ | |
| 13 | OPERATING INSTRUCTIONS | AXW9901-7SR0 | 1 | ○ | ○ | ○ | Germany |
| | | AXW9901-7TU0 | 1 | ○ | ○ | ○ | UK/Australia/New Zealand |

| Ref. No. | Description | Part No. | Q'ty | Model No. | | | Remarks |
|----------|------------------------|--------------|------|-----------|--------|--------|---|
| | | | | 140VG3 | 168VG3 | 148VG3 | |
| | | AXW9901-7TX0 | 1 | ○ | ○ | ○ | France |
| | | AXW9901-7UA0 | 1 | ○ | ○ | ○ | Spain |
| | | AXW9901-7UE0 | 1 | ○ | ○ | ○ | Holland |
| | | AXW9901-7UH0 | 1 | ○ | × | ○ | Russia |
| | | AXW9901-7UM0 | 1 | ○ | × | ○ | Singapore/Vietnam/UAE/Oman/Qatar/Kuwait/Lebanon |
| | | AXW9901-7UK0 | 1 | ○ | × | ○ | Hongkong |
| | | AXW9901-7UP0 | 1 | ○ | × | ○ | Malaysia |
| | | AXW9901-7US0 | 1 | ○ | × | ○ | Iran |
| | | AXW9901-7UU0 | 1 | ○ | × | ○ | Thailand |
| | | AXW9901-7UW0 | 1 | ○ | × | ○ | New zealand |
| | | AXW9901-7ZT0 | 1 | ○ | × | ○ | Australia |
| | | AXW9901-7ZY0 | 1 | × | × | ○ | Indonesia |
| 14 | SERVICE CENTRE | AXW9911-7FH2 | 1 | ○ | × | ○ | |
| | | AXW9911-7UU0 | 1 | ○ | ○ | ○ | Thailand |
| 15 | GUARANTEE SERVICE BOOK | AXW9923-7FH0 | 1 | ○ | ○ | ○ | |
| | | AXW9923-7MJ0 | 1 | ○ | ○ | ○ | Germany |
| | | AXW9923-7MP0 | 1 | ○ | ○ | ○ | UK |
| | | AXW9923-7JV0 | 1 | ○ | × | ○ | Russia |
| | | AXW9923-7UL0 | 1 | ○ | × | × | Hongkong |
| | | AXW9923-7UK0 | 1 | × | × | ○ | Hongkong |
| | | AXW9923-7UR0 | 1 | ○ | × | × | Malaysia |
| | | AXW9923-7UP0 | 1 | × | × | ○ | Malaysia |
| | | AXW9923-7UV0 | 1 | ○ | × | × | Thailand |
| | | AXW9923-7UU0 | 1 | × | × | ○ | Thailand |
| | | AXW9923-7UW0 | 1 | ○ | × | ○ | Australia/New Zealand |
| | | AXW9923-7ZY0 | 1 | × | × | ○ | Indonesia |
| 16 | ACCESSORY PACK | AXW9057-7FH3 | 1 | ○ | ○ | ○ | Operating instructions |
| 17 | ACCESSORY PACK | AXW9057-7FH1 | 3 | ○ | ○ | ○ | Power cord |

SMALL STANDARDIZED METAL PARTS

| Ref. No. | Description | Part No. | Q'ty | Model No. | | | Remarks |
|----------|-------------|-------------|------|-----------|--------|--------|---------|
| | | | | 140VG3 | 168VG3 | 148VG3 | |
| 1 | SCREW | XTWAXW466J | 3 | ○ | ○ | ○ | |
| 2 | SCREW | XTB4+16CFJ | 7 | ○ | ○ | ○ | |
| 3 | SCREW | XTB4+10FFJ | 26 | ○ | ○ | ○ | |
| 4 | SCREW | XTB4+12GFJ | 4 | ○ | ○ | ○ | |
| 5 | SCREW | XTBAXW437J | 30 | ○ | ○ | ○ | |
| 6 | SCREW | XTB4+10CV | 2 | ○ | ○ | ○ | |
| 7 | SCREW | XTB4+12CV | 1 | ○ | ○ | ○ | |
| 8 | SCREW | XTBAXW438J | 2 | ○ | ○ | ○ | |
| 9 | SCREW | XTWAXW6521 | 12 | ○ | ○ | ○ | |
| 10 | SCREW | XTWAXW6514J | 19 | ○ | ○ | ○ | |
| 11 | SCREW | XTTAXW439 | 2 | ○ | ○ | ○ | |
| 12 | SCREW | XTB4+12BFJ | 11 | ○ | ○ | ○ | |
| 13 | SCREW | XVHAXW1009J | 3 | ○ | ○ | ○ | |
| 14 | NUT | XNF6FJ | 1 | ○ | ○ | ○ | |
| 15 | SCREW | XYA5+12CHFJ | 1 | ○ | ○ | ○ | |
| 16 | SCREW | XTWAXW6522 | 2 | ○ | ○ | ○ | |
| 17 | SCREW | XYN5+C10BN | 2 | ○ | ○ | ○ | |
| 18 | SCREW | XTB4+8BFJ | 2 | ○ | ○ | ○ | |
| 19 | SCREW | XTT4+16BX | 1 | ○ | ○ | ○ | |
| 20 | SCREW | XTB4+16CXR | 1 | ○ | ○ | ○ | |