

# ASKO SERVICE ACADEMY

## Service Manual for the 600 Series of Washing Machines

 **ASKO**  
BUILT TO LAST LONGER

You have in your hand the ASKO Service Manual for the new generation of washing machines, that are friendly to the environment in both their manufacture and their use.

This new generation of washing machines has been designed for ease of servicing. By this we mean that it's a simple job, for example, to replace a damaged side panel. That's why we've changed the design from a one-piece shell to a split shell.

To secure parts, we have replaced many of the screws by plastic snap fasteners. We have also designed the machines so that you can perform as much servicing as possible from the front, all for simplifying service.

We have also integrated service aids, such as hooks to hang parts on, so that you can use both hands for installation.

### **Presentation of the different models:**

W600 and W620 - are programmer-controlled washing machines.

W640, W650 and W660 - are electronically-controlled washing machines.

W640, W650 and W660 can be user-programmed, and set to start the washing program with a delay of up to 12 hours. You can choose from a total of eleven different languages on the display, the number and choice of languages depend on the market.

The W660 is also equipped with a rinsing sensor that can detect any detergent residue in the rinse water, thus determining if any further rinsing is needed to obtain an extra good rinse result. This is particularly important for people with sensitive skin. Each model is available with two different front designs - with or without a front loading door.

Servicing washing machines has to be easy, and just as it is important for us that the customer shall be satisfied with our simple, able and durable 600 series, so we also want to give you, the service engineer, the conditions to permit you to work efficiently and satisfactorily.

We hope that this Service Manual will be a positive tool in your daily work, and you are welcome, if you have any questions concerning servicing ASKO products, to contact us at the after-sales department of ASKO Cylinda AB in Vara.

### GENERAL

- The electrical and plumbing installations shall be carried out by a qualified electrician and plumber respectively.

### SERVICE

#### **WARNING**

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Always switch off the main electrical power supply when dismantling and assembling the washing machine.

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- Always use an earthed EMC wristband when working with electrical components, such as panel and program control printed circuit boards.

### TRANSPORT/WINTER STORAGE

If the machine is to be transported, or stored for the winter in unheated premises, empty the needle trap and drain pump, see the "Cleaning and maintenance" section.

### DISPOSAL

When the machine comes to end of its useful life and is to be scrapped, it must be immediately rendered unusable.

Contact your local authority to find out how the machine should be scrapped and recycled properly.

The machine is manufactured and labelled for recycling.

# INSTALLATION

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## TRANSPORT SUPPORTS

Before the machine can be used, the 3 transport supports must be removed. Each transport support consists of a screw, a washer and a transport sleeve. The transport sleeves are used after the supports have been removed, to plug the holes in the transport beam.

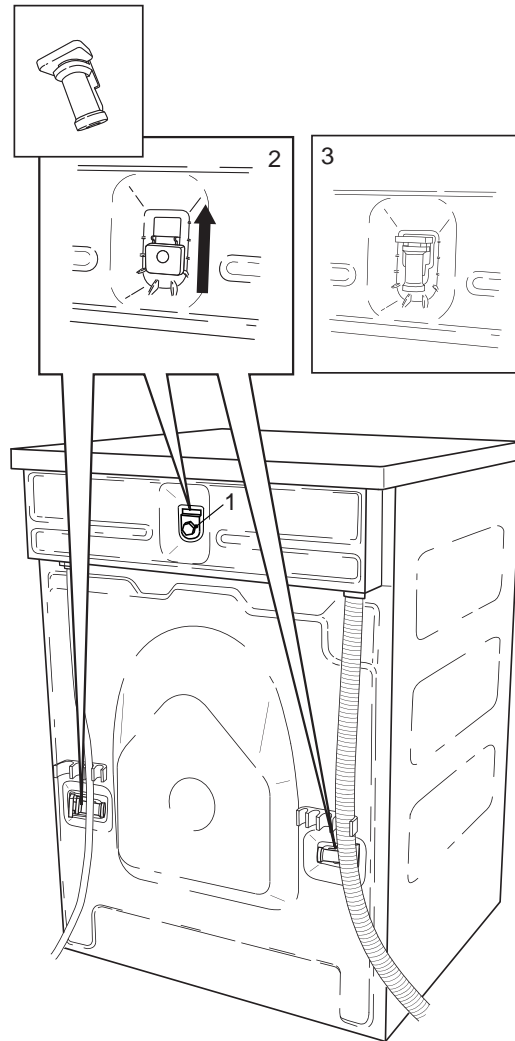
### Removing the transport support

1. Undo the screw and remove the washer.
2. Remove the transport sleeve by first raising it up and then taking it out.
3. Fit the transport sleeves into the transport support holes.

### IMPORTANT

Keep the screws and washers in a safe place, in case the machine has to be transported again later on.

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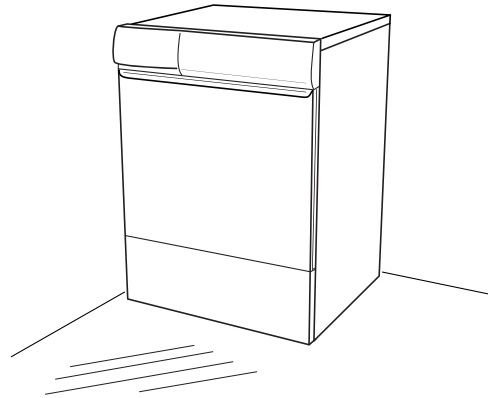


## LOCATION OF THE WASHING MACHINE

The washing machine can be either free-standing or built in.

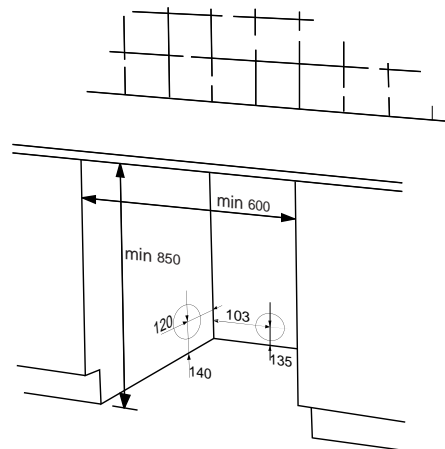
### A. Free-standing

The washing machine can be located as a free-standing unit.



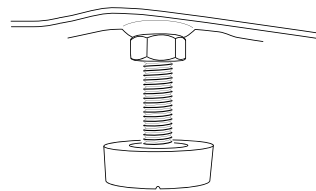
### B. Built-in

The washing machine can be built in under a work top with a working height of 850 - 900 mm. Leave a 5 mm gap all round the machine, including a space between the rear edge of the top cover and the wall behind it.



## ADJUSTING THE FEET

Adjust the feet so that the machine is stable and upright on the floor. Secure the feet by tightening their locking nuts.



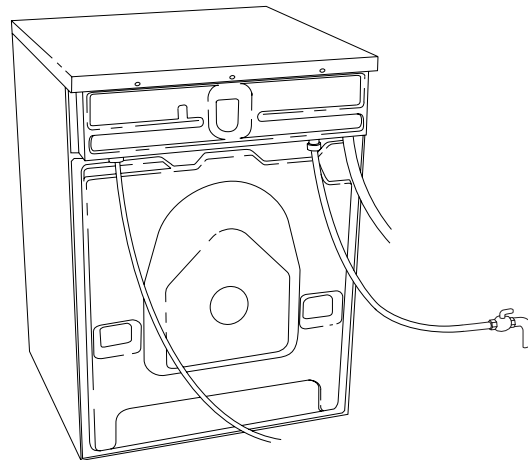
# INSTALLATION

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## WATER CONNECTION

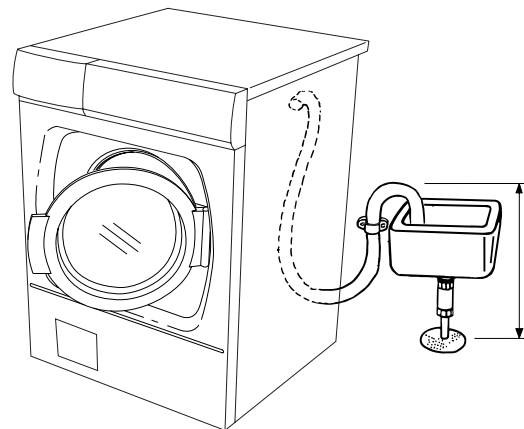
The machine is plumbed in with the connection hose that comes with it. The water pressure shall be 0.1-1MPa (approx. 1-10kp/cm<sup>2</sup> ; 10-100N/cm<sup>2</sup>).

The water supply must have a stop cock. If the piping is new, it can be advisable to first thoroughly flush it through so that any dirt will be flushed out. Otherwise, any dirt in the piping could block the filter in the machine's inlet valve and stop the water supply.



## DRAIN CONNECTION

The machine is delivered with a connected drain hose that shall be connected to a suitable sink or other drain connection. The height shall be 500 - 900 mm above floor level. Make sure the drain hose does not kink.



## ELECTRICAL INSTALLATION

The electrical installation must be carried out by a qualified tradesman. Installation is by means of a plug to an earthed wall outlet, or by a fixed installation cable with all-pole switching.

## Connections on delivery

The machine is supplied for single-phase 230V use with a plug, heating element power 2000 W and fused at 10 A. If an earth fault breaker is installed, it should be of type A.

### Soaking

Clockwise 9 seconds on, 6 seconds off, counter-clockwise 9 seconds on, 6 seconds off, and so on.

### Normal operation

Clockwise 12 seconds on, 3 seconds off, counterclockwise 12 seconds on, 3 seconds off, and so on.

### Delicate operation

Clockwise 3 seconds on, 27 seconds off, counterclockwise 3 seconds on, 27 seconds off, and so on.

### Wool wash

Clockwise 3 seconds on, 57 seconds off, counterclockwise 3 seconds on, 57 seconds off, and so on.

### Loosening

Clockwise 12 seconds on, 3 seconds off, counterclockwise 12 seconds on, 3 seconds off, and so on.

### Washing cycle

40± 1 rpm leading in.  
49.1± 1 rpm during washing cycle.

### Spin drying speed

**W600:** 800 or 1000 rpm.

**W620:** 600-1200 rpm. Selectable in 100 rpm steps.

**W640:** 600-1400 rpm. Selectable in 100 rpm steps.

**W650:** 600-1500 rpm. Selectable in 100 rpm steps.

**W660:** 600-1600 rpm. Selectable in 100 rpm steps.

### Out-of-balance check

There are 2 different spin dry sequences, long and short. Both consist of a preliminary spin, the washing cycle and a main spin dry.

Before the preliminary spin the machine runs a separating cycle at 100 rpm, and measures the drum inertia on the way up and down. This checks for out-of-balance. During this cycle the holder may make violent movements although there is nothing wrong.

There are 3 different limit values for out-of-balance that permit different spin drying speeds.

No. 1: 1300 - 1600 rpm

No. 2: 1000 - 1299 rpm

No. 3: - 999 rpm

### Preliminary spin dry (long and short spin dry)

A preliminary spin dry is performed so that the machine will have a smoother start for its main spin dry cycle.

A maximum of 10 restarts are made at limit no. 3 to reach 500 rpm. If the out-of-balance is still too great in the final, tenth, attempt, the program will continue without the preliminary spin or main spin dry cycles. This is indicated on the display after the program has finished.

### Selected spin drying speed 1300-1600 (long and short spin dry)

A maximum of 5 restarts are made at limit no. 1 to try to achieve the selected spin drying speed.

If the out-of-balance is too great, a maximum of 3 restarts will be made at limit no. 2 to try to achieve 1200 rpm. If limit no. 1 is achieved during any of these 3 restarts, the selected spin drying speed will be run.

If the out-of-balance is still too great, a maximum of 2 restarts at limit no. 3 will be made to try to reach 900 rpm. If limit no. 2 or limit no. 1 is achieved during any of these 2 restarts, 1200 rpm or the respective selected spin drying speed will be run.

If the out-of-balance is still too great in the final, tenth, attempt, the program will continue without performing spin drying. This is indicated on the display after the program has finished.

### Selected spin drying speed 1000-1299 rpm (long and short spin dry)

A maximum of 8 restarts at limit no. 2 are made to try to reach the selected spin drying speed.

If the out-of-balance is too great, a maximum of 2 restarts will be made at limit no. 3 to try to achieve 900 rpm. If limit no. 2 is achieved during any of these 2 restarts the selected spin drying speed will be run.

If the out-of-balance is still too great in the final, tenth, attempt, the program will continue without performing spin drying.

## MOTOR FUNCTIONS

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### **Selected spin drying speed 600-900 rpm (long and short spin dry)**

A maximum of 10 restarts at limit no. 3 to try to reach the selected spin drying speed.

If the out-of-balance is still too great in the final, tenth, attempt, the program will continue without performing spin drying. This is indicated on the display after the program has finished.

### **Restart point after interrupted start attempt**

If a start has been interrupted due to excessive out-of-balance, the motor runs for 1 cycle counter-clockwise, and then another attempt is made.

### **Drain pump during long spin dry**

The drain pump runs continuously for the first 6 minutes and then 50 seconds off, 10 seconds on, 50 seconds off, and so on for the remainder of the respective cycle. If a restart takes place due to excessive out-of-balance, the drain pump operating time is reset to zero.

### **Drain pump during short spin dry**

The drain pump runs continuously for the whole cycle.



## The machine will not start

1. Check that the washing lid is closed properly.
2. Check the fuses for the house electricity supply.
3. **W620:** Check that the Delayed start button  $\odot^{5h}$  is not pressed in.  
**W640, W650 and W660:** Check that the Delayed start symbol  $\odot$  is not being shown on the display.

## The machine will not work

1. Measure the voltage between PF1 and PF3 (W600 and W620) also between E1-1 and E1-2 (W640, W650 and W660). The value should be the same as the mains power supply voltage.
2. Check the machine and house fuses. If necessary change the fuses and investigate why they have blown.
3. Check the main power switch.
4. Check the door switch.

## The washing lid is difficult to close or will not close

1. Check the door switch, it may be faulty.
2. Check that the lid seal is located correctly.

## The washing lid leaks

1. Check and if necessary change the lid seal.

## The washing lid will not open

1. Check the machine and house fuses.

If the lid will not open in the normal manner, it can be opened in an emergency as follows:

1. Check first if there is any water still in the machine.
2. Then open the cover panel for the drain pump, using either the partition for the detergent compartment or a screwdriver.
3. Empty out any water that may be in the machine by disconnecting the drain hose.

## IMPORTANT

Make sure you have a large container ready to catch the water if there is still water in the drum.

4. Unscrew the emergency opening handle and open the lid by pulling it.
5. Screw the emergency opening handle back again.

## Temperature and speed cannot be selected (W600 and W620)

1. Check the selector knobs, see the electrical schematic diagrams to find the measuring points.

## The machine does not perform washing rotation or does not reverse the direction of washing rotation

1. Check that the drive belt is located correctly.
2. Check and repair or change the programmer (W600 and W620) or the motor control board (W640, W650 and W660), see the electrical schematic diagrams to find the measuring points.
3. Check or change the motor.
4. Check the level switch.

## The drum turns slowly during washing rotation

1. Check that the drive belt is tight and that the adjustment screw for motor suspension is screwed tight.

## The machine does not spin dry (W640, W650 and W660)

If 0000 is flashing in the top right corner of the display the machine has not spin dried. The machine has a built-in out-of-balance sensor that will reduce the spin drying speed or stop spin drying altogether if the load is too unbalanced.

1. Open the washing lid and redistribute the laundry.
2. Run the "Spin drying" program to check that the problem has been solved.

## The machine does not empty

1. Check the drain system.
2. Check the level switch.
3. Check and repair or change the programmer (W600 and W620) or the motor control board (W640, W650 and W660), see the electrical schematic diagrams to find the measuring points.
4. Check or change the drain pump.

## FAULT TRACING

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### **Metallic sounds are heard from the rear of the machine.**

1. Remove the rear cover plate and investigate the cause.

### **The programmer does not work (W600 and W620)**

1. Check that the programmer motor runs.

### **The machine does not fill with water**

1. Check for error messages.
2. Check that the water stop cock is open.
3. Measure the voltage at the inlet valve and the outputs from the program control board, see the electrical schematic diagrams.
4. Check the level switch and its hose.
5. Check and repair or change the level sensor, see the electrical schematic diagrams to find the measuring points.

### **The machine continues to fill up with water and the program stands still**

1. Check the level switch and its hose.
2. Switch off the electrical supply to the machine. If water continues to come into the machine, the valve is stuck. In this case, remove and clean the valve. Also clean the filter thoroughly.
3. Check and repair or change the level sensor, see the electrical schematic diagrams to find the measuring points.

### **The machine does not pump water out**

1. Check the drain system.
2. Check that the pump rotor in the drain pump moves freely.
3. Adjust or change defective parts.

### **The machine vibrates more than usual during spin drying**

1. Check that the machine is standing fair and square on the floor.
2. Check the shock absorbers.

## COMMON QUESTIONS AND PROBLEMS

### The lid will not open

Check that the main power switch is on.

### The machine will not start

If the lid is closed, check the house fuses.

### The machine will not take in water

1. Is the stop cock open?
2. Check that the inlet hose filter is not blocked.

### Foam in the last rinse, water remains in the machine

1. Check that the drain hose is not blocked or sharply kinked.
2. Check to see if the drain pump is blocked.

### Water leaks

Check the hoses and seal at least once a year and change them if they show signs of wear.

### Vibration during spin drying

1. Check that the transport supports have been removed.
2. The machine must stand firmly on the floor. Adjust the machine feet and tighten the lock nuts.

### Too much foam

1. Use only low-foam detergent.
2. Too much detergent, use only the dose stated on the detergent packet.

### The machine stops in the middle of the program

It is normal for the machine to "pause" during the program, especially between the different cycles, and during the Wool wash program.

### Yellow laundry

Can be caused by body fluids that have not been entirely washed out.

1. Use the highest possible temperature for this load of washing. Try putting in more detergent than usual.

Can also be caused by iron or magnesium in the water.

1. Install a filter.

### Grey laundry

1. If the washing is very dirty, has oil stains or the water is very hard, put in more detergent than usual.
2. Choose the correct temperature for each washing load.
3. Sort the washing according to its colour. Never mix light and dark materials in the same load.
4. Use detergent that contains whitener for white textiles, and detergent without whitener for coloureds.

### Fluff, stains on the laundry

1. Detergent that does not contain phosphates can, when combined with the minerals in hard water, build up a substance that can cause "fluff". If possible, install a water purifier.
2. Stains on laundry can occur if it comes into contact with undiluted rinsing agent. Put the rinsing agent dose into the compartment for rinsing agents. **Never** add rinsing agent directly to the washing.
3. Burls normally occur on cotton/polyester material. For the best results, turn the garment inside out and use the delicate washing program.

### Creased laundry

1. Follow the washing advice.
2. Do not overload the machine.
3. Don not let the washing stay for a long time in the machine after the program has finished.
4. Certain materials such as linen and cotton crease naturally, regardless of how they are washed.

### Torn or damaged material

Material can be damaged by sharp objects, such as metal parts on clothes or objects in pockets.

1. Empty all pockets and turn the garment inside out.
2. Close hooks and zips.
3. Turn inside out for washing.

## PROBLEMS

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### **Chemicals**

Textiles that have been in contact with chemicals, such as battery acid, solution for perming hair, bleach, lavatory cleaner or acne-removing agent, must be rinsed as quickly as possible to prevent holes or stains. Do not let unrinsed textiles come into contact with other material.

### **Iron-free garments**

Wash these in a half-full machine. These garments should not be mixed in with heavier washing such jeans or large bath towels.

### **Fading, discoloration**

1. Follow the washing advice.
2. Dark cotton textiles should be washed for the first time at 60°C to wash out the surplus colour.
3. Garments should be sorted according to their colour and material.
4. Empty all pockets.

### **Stains remaining after washing**

1. Protein stains, from milk, eggs or blood, should first be soaked in cold water.
2. Oil stains are removed by washing in the hottest water the material can take.

Stains should be dealt with as quickly as possible. The longer a stain remains, the harder it is to remove.

## **OTHER COMMON QUESTIONS**

### **Which detergent should I use?**

Any low-foam detergent of good quality.

### **Should I use a rinsing agent?**

Yes, use a good quality product.

### **Should I use whitener?**

Extra amounts of whitener are not necessary. Use a detergent that includes whitener for white washing, and a detergent without whitener for colour-eds.

### WASHING MOTOR

#### W600/W620, 50 Hz

**Part no.:** 80 617 71

Resistances:

Pins 1-3 0.9  $\Omega$

Pins 2-3 1.5  $\Omega$

Pins 4-5 3.8  $\Omega^*$

Pins 6-7 68.1  $\Omega$

\*) 1.8  $\Omega$  measured diagonally across the collector

#### W600/W620, 60 Hz

**Part no.:** 80 617 72

Resistances:

Pins 1-2 69.4  $\Omega$

Pins 3-4 5.4  $\Omega^*$

Pins 5-6 1.7  $\Omega$

Pins 5-7 0.7  $\Omega$

\*) 1.7  $\Omega$  measured diagonally across the collector

#### W640/W650/W660, 50 Hz

**Part no.:** 80 617 73

Resistances:

Pins 1-3 0.8  $\Omega$

Pins 2-3 1.4  $\Omega$

Pins 4-5 3.3  $\Omega^*$

Pins 6-7 68.1  $\Omega$

\*) 1.9  $\Omega$  measured diagonally across the collector.

The motor is a universal motor controlled by an external motor control unit (MCU).

The rotation speed is stepless and controlled by a tachogenerator on the motor. The maximum speed is 1600 rpm.

### MOTOR CONTROL (W640, W650 AND W660)

**Part no.:** 80 613 99

Motor control is via an external unit (MCU) located in the base and connected to the program control board (PCU), see the electrical schematic diagram.

### HEATING ELEMENT

#### 2000 W

**Part no.:** 80 617 06

Resistance: 28.4  $\Omega$

#### 1000 W

**Part no.:** 80 617 07

Resistance: 56,7  $\Omega$

### THERMISTOR

**Part no.:** 80 616 63

Resistance: 40-60 k $\Omega$

Room temperature 20-30  $^{\circ}\text{C}$

The thermistor for temperature measurement is located between the motor cradle and the holder. The thermistor measures and controls the water temperature, which can range from 0-90  $^{\circ}\text{C}$ . The heating element is switched out if the thermistor short-circuits or is disconnected from the program control board or programmer.

### DRAIN PUMP

#### 50 Hz

**Part no.:** 80 616 96

NOTE! Ordered as part no. 88 011 66.

Resistance: 144  $\Omega$

Current: 0.2 A, 23 W on load

#### 60 Hz

**Part no.:** 80 619 37

NOTE! Ordered as part no. 88 011 67.

Resistance: 76  $\Omega$

Current: 0.3 A, 28 W on load

The drain pump is combined with an integrated needle trap, which can be cleaned by the user. If the drain pump has run for 180 seconds during emptying, the programme is stopped, reset to zero and a fault code is indicated on the display.

## COMPONENTS AND MEASUREMENT VALUES

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### RINSE SENSOR, WPS (W660)

**Part no.:** 80 628 16

ASKO Rinse sensor type 6622.

The rinse sensor is installed connected to the drain pump and checks the clarity of the draining rinse water. The sensor is connected to the PCU, see the electrical schematic diagram.

### LEVEL SWITCH

**Part no.:** 80 617 47

An electromechanical level switch operates at two levels, see the electrical schematic diagram. It checks the water level and starts the drain pump if overfilling is indicated.

### LEVEL SENSOR

**Part no.:** 80 616 64

ASKO Level sensor type 1166.

Voltage:

**To sensor in W620:**

0.5 V out from the sensor at zero pressure and 230 V mains voltage

**To sensor in W640/W650:**

0.5 V out from the sensor at zero pressure and 230 V mains voltage

Measurement at programmer/control unit

The level sensor is located on the electrical component bridge and connected to the PCU, see the electrical schematic diagram.

### RELAY (CONTACTOR)

**50 Hz**

**Part no.:** 73 829 48

Resistance: 2.01 k $\Omega$

Current: 0,01 A, 6 W

**60 Hz**

**Part no.:** 80 603 79

Resistance: 1.505 k $\Omega$

Current: 0.02 A, 7 W

The relay is controlled by the level switch and opens the connection to the heating element.

### RADIO INTERFERENCE FILTER

**50/60 Hz**

**Part no.:** 80 585 58

Leakage Current 230 V/ 50 Hz 0.3-0.4 mA

Leakage Current 240 V/ 60 Hz 0.3-0.4 mA

The filter eliminates radio interference generated by the machine.

### INLET VALVES

**3-way inlet valve**

**Part no.:** 80 617 57

Resistance: 3.7 k $\Omega$   $\pm$  0.5 k $\Omega$

Current: 0.02 A, 5 W

**Inlet valve for hot water (option)**

**Part no.:** 80 617 29

Resistance: 3.7 k $\Omega$   $\pm$  0.5 k $\Omega$

Current: 0.02 A, 5 W

There are two inlet valves, one 3-way and one for hot water connection.

### INDICATION LAMP

**Part no.:** 80 070 73

Current: 1.7 mA

230 V, 50 Hz

The lamp indicates that the main power switch is set to on.

### DOOR LOCK

**Part no.:** 80 616 79

Resistance: 122  $\Omega$

Current: approx. 2 A

The door lock is mechanical and equipped with a pull magnet. This function is controlled by the door opening button and various safety devices.

### TEST PROGRAM FOR W600 AND W620

1. Insert a jumper into E10 on the programmer.
2. Start program 3 (Fast wash).
3. EV2 and EV3 (inlet valves for main wash hot and cold water) allow water into the machine up to the washing level.
4. Press the **✓** button
5. Heat up for 10 minutes or by 10°C.
6. Press the **■** button.
7. Add more water to the wool level, about 4 cm up the door.
8. Wash for 4 minutes.
9. Wash for 16 minutes, or until the # button is pressed in again.
10. Long spin drying.

### FAULT INDICATIONS

If a fault occurs during a program cycle, this is indicated by the program knob stopping in position C or S after the program has finished or been interrupted.

#### **The program knob stops in position C after the program has finished or been interrupted**

**This indicates that one of the following problems has occurred during the program cycle:**

##### **Thermistor fault**

The washing program has finished without heating.  
Check the fuses.

##### **Heating element fault**

The washing program has finished without heating.  
Check the fuses.

##### **Programmer fault**

The washing program has been interrupted.  
Check the fuses.

##### **Water inlet fault**

Fault in the water supply.  
Check that the filter in the machine water inlet is not blocked.

##### **Draining fault**

Draining has taken too long. Check the drain hose and the drain pump as follows:

1. Has any object stuck in the drain hose outlet?  
Clean out the hose.
2. Is the drain pump blocked by foreign objects?  
Clean out the pump.
3. Is the drain hose kinked?
4. After solving the problem, run program 10 (Emptying).

## TEST PROGRAM AND FAULT INDICATIONS

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### The program knob stops in position S after the program has finished or been interrupted

This indicates that a motor fault, a level sensor fault or a programmer fault has occurred during the program cycle.

### TEST PROGRAM FOR W640, W650 AND W660

Press **P1** 5 times within 15 seconds.

- P2** Inlet valve 1 (compartment for Pre-wash)
- P3** Inlet valve 2 (compartment for main wash)
- P4** Inlet valve 3 (hot water)
- Menu** Inlet valve 4 (compartment for rinsing agent)
- ◀** Door pull magnet
- ▶** Heater relay (separate or under control)

Press **Enter** to get to level 2, press **Enter** to return to level 1.

- P2** Drain pump
- P3** Motor, normal operation
- P4** Motor, delicate operation
- Menu** Long spin drying
- ◀** Rinse sensor (W660)

Starts by the inlet valve filling to a predetermined level.

Checks opacity and conductivity every 10 seconds. Display shows 5 different values.

During the test program all safety functions are operational.

**Start/Stop** ends the test program.

### FAULT INDICATIONS

If a fault occurs during a program cycle, this is indicated on the display after the program has finished or been interrupted.

### Water inlet fault

Check that the filter in the machine water inlet is not blocked.

### Overfilling

Too much water in the drum due to a fault in the level sensing system or the inlet valve.

### Draining fault

Draining has taken too long. Check the drain hose and the drain pump as follows:

1. Has any object stuck in the drain hose outlet? Clean out the hose.
2. Is the drain pump blocked by foreign objects? Clean out the pump.
3. Is the drain hose kinked?
4. After solving the problem, run program 10 (Emptying).

### Thermistor fault

The thermistor is faulty or short-circuited. The washing program has finished without heating.

### Temperature stop fault

Check the fuses and the heating element. The washing program has finished without heating.

### Motor fault

Wiring open-circuit or motor fault has been indicated and the washing program has been interrupted.

### Pressure sensor fault

A drop in pressure has been detected in the first rinse. This could be due to leakage in the level sensor or in the hose leading to it. The washing program has been interrupted.



### Foam check

Indicated after the program has finished. Via the level sensor the machine has "felt" that there is a lot of foam left after the main wash. Run the Rinse program once.

### TEST PROGRAM FOR THE RINSE SENSOR (W660)

1. Press **P1** 5 times within 15 seconds.
2. Press **Enter** and then **◀**. Read the value, which will stabilise after about 30 seconds.
3. Put about 1 dessert spoonful of detergent into the detergent compartment and fill with water to the normal level with inlet valve 2.
4. Press **Enter** and then **P3**, normal operation, to dissolve the detergent.
5. Let the machine run for about 2 minutes and then press **◀** for a new reading. If a different value than that shown at the beginning is shown, the rinse sensor is working.

### WRONG LANGUAGE ON THE DISPLAY

The languages that can be shown on the display are Danish, German, English, Spanish, French, Italian, Dutch, Norwegian, Portuguese, Finnish and Swedish. If the language in the display has changed, you can go back to the original language like this:

1. Switch off the mains power button, **⊖** and press it again to restart the machine.
2. Press the **Enter** button five times, then press the **P1** button five times. These 10 button presses must be done within 15 seconds.
3. Within 3 seconds of last pressing the **P1** button, use the **◀▶** button to step through to the language you want.

## CONSUMPTION VALUES

The following conditions apply for the consumption values stated below:

Incoming water temperature: 15 °C.

Heating element power: 2000 W.

Options: None.

### W600 AND W620:

PROGRAM	MATERIAL/ WASHTEMPERATURE	LOAD	WATERCONSUMPTION (approx. litres)		ENERGYCONSUMPTION (approx. kWh)	PROGRAMTIME (approx. minutes)	
			3 rinse.	5 rinse.		3 rinse.	5 rinse.
1 Heavy wash	Cotton, linen, 60 C	1/1 (5,0 kg)	54	64	1,15	138	146
2 Normalwash	Cotton, linen, 60 C	1/1 (5,0 kg)	49	59	0,92	114	122
3 Fast wash	Cotton, linen, 40 C	1/1 (5,0 kg)	49	59	0,30	59	67
6 Synt. wash	Polyester, cotton/ polyester, nylon, 40 C	1/2 (2,5 kg)	28	28	0,3	60	60
7 Min. wash	Non-iron, Polyester/ cotton, 40 C	1/2 (2,5 kg)	22	22	0,3	35	35
9 Wool-/Hand- wash	Wool-/Handwash, IWS, Superwash, 30 C	1/3 (1,7 kg)	53	53	0,25	39	39

### W640, W650 AND W660:

PROGRAM	MATERIAL/ WASHTEMPERATURE	LOAD	WATERCONSUMPTION (approx. litres)		ENERGYCONSUMPTION (approx. kWh)	PROGRAMTIME (approx. minutes)	
			3 rinse.	5 rinse.		3 rinse.	5 rinse.
P1 Norm. wash	Cotton, linen, 60 C	1/1 (5,0 kg)	49	59	0,95	120	128
P2 Norm. wash	Cotton, linen, 60 C	1/1 (5,0 kg)	49	59	0,40	100	108
P3 Min. wash	Cotton, linen, 40 C	1/2 (2,5 kg)	22	22	0,30	35	35
P4 Wool-/Hand- wash.	Wool-/Handwash, IWS, Superwash, 30 C	1/3 (1,7 kg)	53	53	0,25	39	39

## **LIST OF TOOLS**

### **"Torx" spanners:**

- T25
- T20
- T10

### **Ring spanners**

- 11/16"
- 16 mm
- 13 mm
- 10 mm

### **Socket screwdriver**

- 10 mm

**24 mm extended socket + locking handle**

**5 mm socket head cap screwdriver + small locking handle**

**Star socket head screwdriver**

# TOOLS

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## APPLICATION AREAS

### Top lid:

- torx T20

### Panel

- torx T20
- 6.5-7 mm wide blade screwdriver

### Front panel (model without front-loading door)

- torx T20

### Bottom cover (model without front-loading door)

- 6.5-7 mm wide blade screwdriver
- torx T20

### Front door removing/installing

- torx T20
- torx T10
- ring spanner 10 mm

### Front panel (model with front-loading door)

- torx T20
- ring spanner 10 mm

### Detergent compartment

- torx T20

### Washing lid removing/installing

- torx T25

### Changing lid seal/glass

- torx T25
- torx T20
- ring spanner 10 mm

### Cover plate

- torx T20
- ring spanner 10 mm

### Lock

- torx T20
- ring spanner 10 mm

### Front end plate and inner cover plate

- torx T20
- ring spanner 10 mm

### Drum

- torx T25
- torx T20
- ring spanner 16 mm
- ring spanner 10 mm
- special tool (Part no. 88 011 52)
- special tool (Part no. 88 011 53)

### Drain pump

- torx T20
- Star socket head screwdriver

### Change of complete holder

- torx T25
- torx T20
- 24 mm extended socket + locking handle
- 6.5-7 mm wide blade screwdriver
- ring spanner 16 mm
- ring spanner 13 mm
- Socket screwdriver 10 mm
- 5 mm socket head cap screwdriver + small locking handle
- special tool (Part no. 88 011 52)
- special tool (Part no. 88 011 53)

### Electrical component bridge piece

- torx T20

### Cross member

- torx T20
- ring spanner 11/16"
- ring spanner 13 mm

### Side panel

- torx T20

### Bottom

- torx T25
- torx T20
- 24 mm extended socket + locking handle
- 6.5-7 mm wide blade screwdriver
- ring spanner 16 mm
- ring spanner 13 mm
- Socket screwdriver 10 mm
- 5 mm socket head cap screwdriver + small

## SPECIAL TOOLS

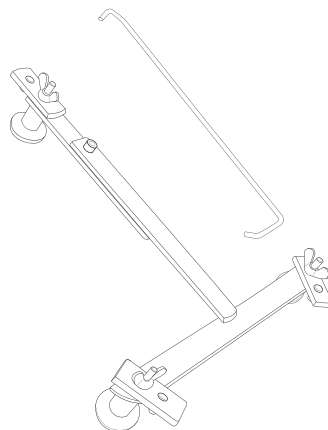
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### DRUM INSTALLATION

**Part no.: 88 011 52**

This tool is used for centring and is fastened to the drum edge when removing and installing the front end plate.

The hook is fitted between the holder and the bottom to facilitate removal and installation of the front end plate.



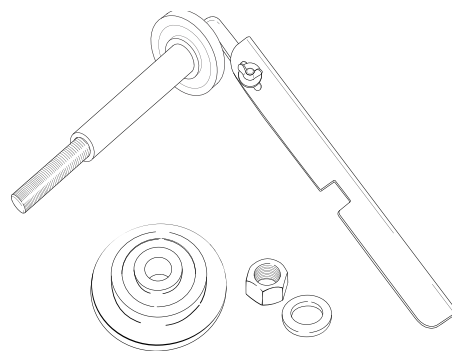
### INSTALLATION OF THE BEARING AND THE V-RING CASSETTE

**Part no.: 88 011 53**

#### Installing the bearing

The inner bearing is fitted to the tool, which is then put into the bearing housing.

The bolt is then loaded with the outer bearing, washer and nut, which are put on to the bolt behind the bearing housing.



#### Installation of the v-ring cassette

The tool is first put into the bearing housing from the rear of the machine. Then the white side of the v-ring cassette is placed facing the flat side of the washer, and they are put on the tool, inside the holder. The v-ring cassette is then forced into place by putting the nut on to the bolt and tightening it.

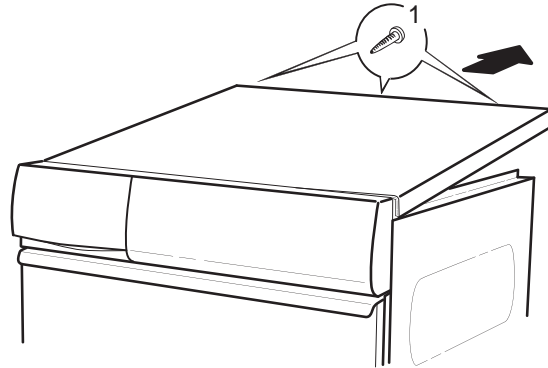
# SERVICE

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## TOP COVER

### Removing the top cover

1. Remove the 3 screws at the rear of the top cover.
2. Tilt the cover and pull it backwards.



### Installing the top cover

1. Ensure that the sealing strip is positioned along the edge of the top cover.
2. Push the front edge of the top cover under the panel and lower the cover.

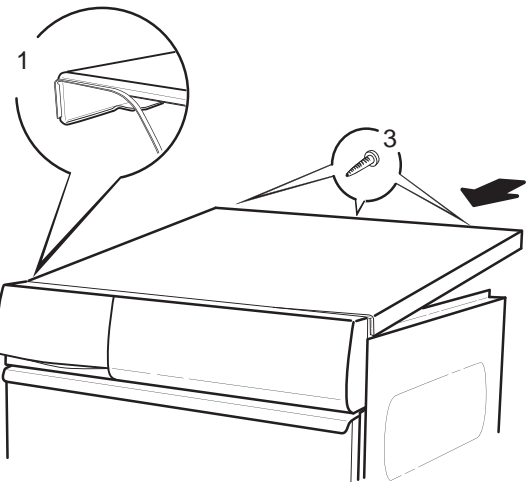
### IMPORTANT

Ensure the top cover is located by the guides.

3. Secure the top cover with the 3 screws at the rear.

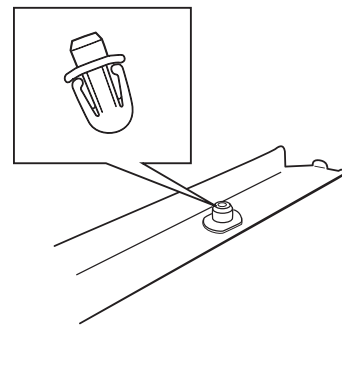
### IMPORTANT

Don't forget the 2 star washers for the outermost screws.



### Changing the top cover guides

1. Remove the top cover.
2. Squeeze the latches together and push the guide upwards.
3. Push the new guide into place.
4. Secure the top cover.



**DETERGENT INSERT**

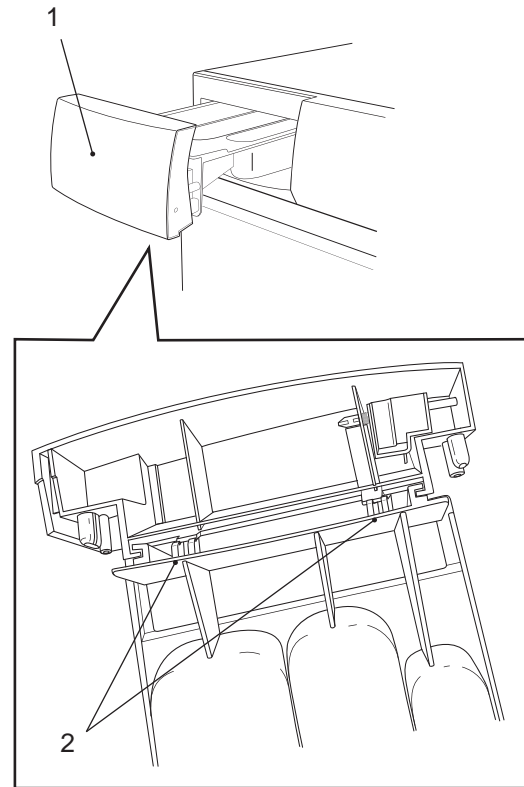
**Changing the detergent insert handle**

1. Pull forward and lift out the detergent insert.

**NOTE**

The detergent insert may have a child safety catch fitted. To pull out the detergent insert when the safety catch is set, you have to move the latch to the left at the same time as you pull out the tray.

2. Remove the 2 snap fasteners from the underside of the insert with the aid of a screwdriver.
3. Pull the handle away from the detergent insert.
4. Insert the new handle into the groove in the insert. Press it in until it snaps into place.
5. Put the detergent insert back in.



**Changing the child safety catch**

1. Pull forward and lift out the detergent insert.

**NOTE**

The detergent insert may have a child safety catch fitted. To pull out the detergent when the safety catch is set, you have to move the latch to the left at the same time as you pull out the tray.

2. Press in the child safety catch latches and remove it.

**IMPORTANT**

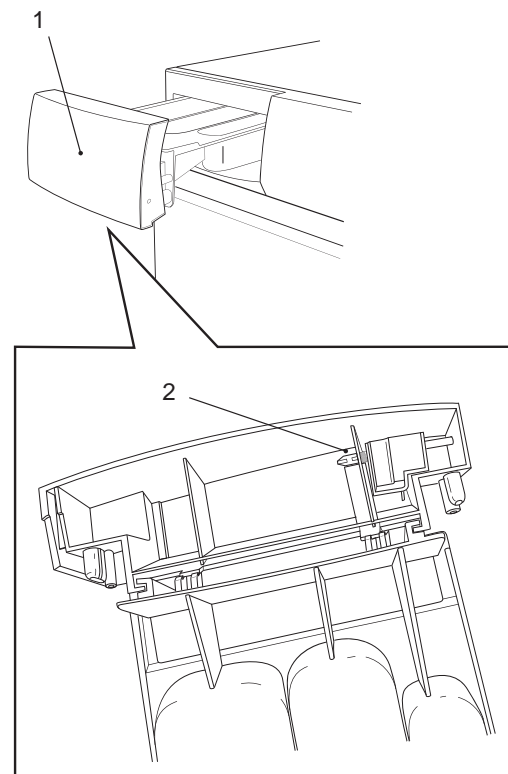
Take care not to break off the latches.

3. Fit the new catch by pressing it into the hole until it snaps into place.

**IMPORTANT**

Do not forget to install the spring together with the catch.

4. Put the detergent insert back in.



## SERVICE

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### PANEL

#### Removing the panel

1. Remove the top cover by first removing the 3 screws along the rear edge and then lifting it off.
2. Pull forward and lift out the detergent insert.

#### NOTE

The detergent insert may have a child safety catch fitted. To pull out the detergent insert when the safety catch is set, you have to move the latch to the left at the same time as you pull out the tray.

3. Remove the 2 screws for the detergent compartment in the panel and 1 above the compartment. Move the detergent compartment to one side.
4. W600 and W620: Remove the knob.

#### IMPORTANT

Turn the knob to its zero position before taking it off, to simplify refitting.

#### NOTE

It is possible to use a polygrip (mole wrench) to remove the knobs, but in that case remember to put some soft material in the jaws so as not to scratch the plastic.

5. Remove the 4 fasteners behind the panel by bending the clips open with a broad-bladed screwdriver (6.5 to 7 mm) and lifting off the panel.

#### IMPORTANT

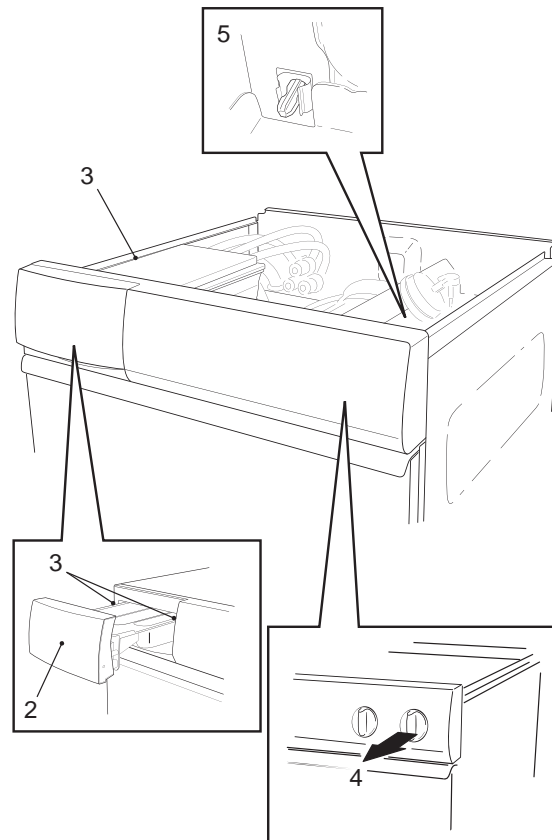
Be careful not to break the fasteners.

#### Installing the panel

6. Offer up the panel at the top edge and press it into place at the bottom edge.

#### IMPORTANT

Don't forget to put the indicator lamp back.





## NOTE

Press with a screwdriver behind the beam when the middle of the panel is being pressed into place.

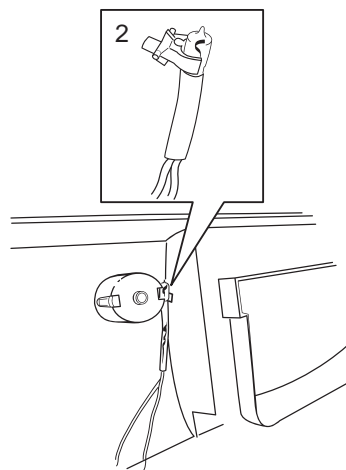
7. **W600 and W620:** Push the knobs back on.
8. Install the detergent compartment and secure the 3 screws.
9. Put in the detergent insert.
10. Fit the top cover.

## IMPORTANT

Don't forget the 2 star washers for the outermost screws.

### Changing the indication lamp/symbol lens

1. Remove the panel in accordance with the section "Panel - removing...".
2. Change the indication lamp/symbol lens.
3. Install the panel in accordance with the section "Panel - installing...".

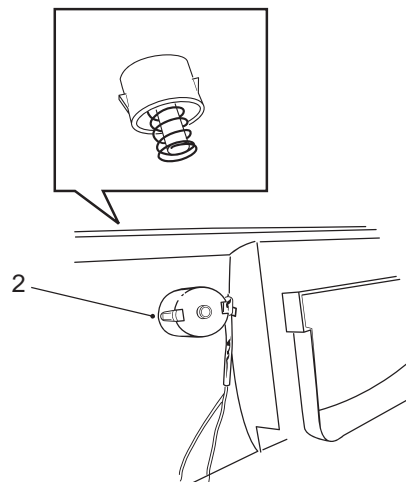


### Changing the main power button

1. Remove the panel in accordance with the section "Panel - removing...".
2. Press in the latches with a screwdriver and pull out the button.
3. Install the new button.

## IMPORTANT

Ensure that the spring is located in the button before installing.



4. Install the panel in accordance with the section "Panel - installing...".

## SERVICE

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### Changing the push-button switches

1. Remove the panel in accordance with the section "Panel - removing...".
2. Get hold of the switch inside the machine and pull on it, while at the same time bending the wings at the front of the switch inwards with a screwdriver.

#### **IMPORTANT**

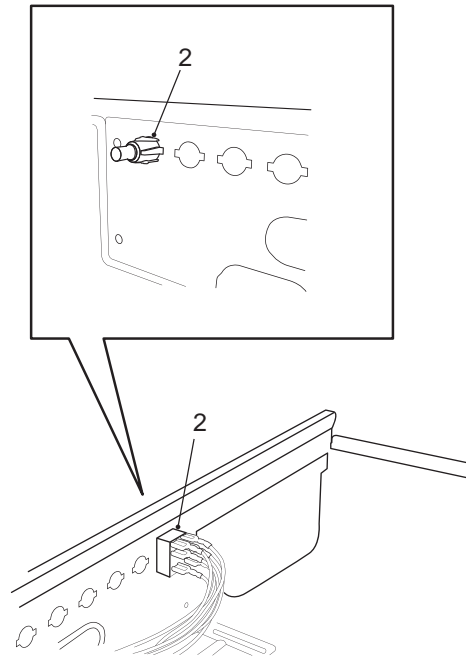
Don't pull on the wires. The button might come apart.

3. Press in the new push-button and check that the wings open out.

#### **IMPORTANT**

Connect the wires to the correct connector pins.

4. Install the panel in accordance with the section "Panel - Installing...".



### Changing the knobs (W600 and W620)

1. Remove the knobs by pulling them off.

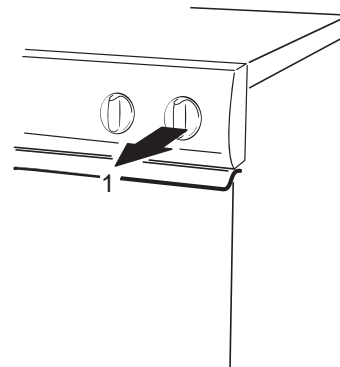
#### **IMPORTANT**

Turn knobs to their zero positions before taking them off, to simplify refitting.

#### **NOTE**

It is possible to use a polygrip (mole wrench) to remove the knobs, but in that case remember to put some soft material in the jaws so as not to scratch the plastic.

2. Install the new knob.



**Changing the temperature selector (W600 and W620)**

1. Remove the top cover by first removing the 3 screws along the rear edge and then lifting it off.
2. Remove the knob by first turning it to its zero position and then pulling it off.

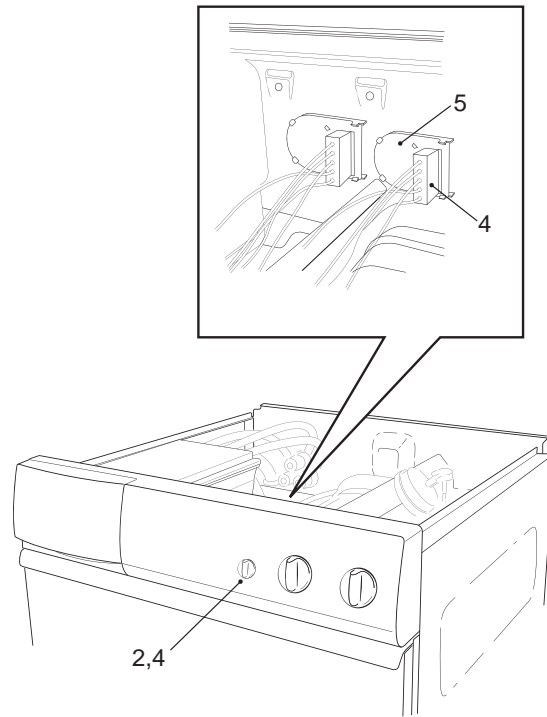
**NOTE**

It is possible to use a polygrip (mole wrench) to remove the knobs, but in that case remember to put some soft material in the jaws so as not to scratch the plastic.

3. Disconnect the terminal block.
4. Use a thin screwdriver through the hole in the panel to release the snap fasteners.
5. Move the selector to the side and take it out.
6. Install a new selector and reconnect the terminal block.
7. Refit the knob and install the top cover.

**IMPORTANT**

Don't forget the 2 star washers for the outermost screws.



**Changing the rotary selector (W600 and W620)**

1. Remove the top cover by first removing the 3 screws along the rear edge and then lifting it off.
2. Remove the knob by first turning it to its zero position and then pulling it off.

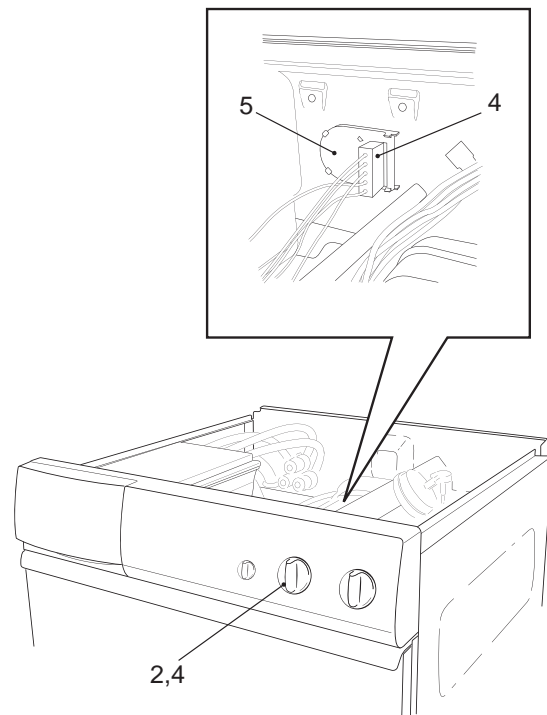
**NOTE**

It is possible to use a polygrip (mole wrench) to remove the knobs, but in that case remember to put some soft material in the jaws so as not to scratch the plastic.

3. Disconnect the terminal block.
4. Use a thin screwdriver through the hole in the panel to release the snap fasteners.
5. Move the selector to the side and take it out.
6. Install a new selector and reconnect the terminal block.
7. Refit the knob and install the top cover.

**IMPORTANT**

Don't forget the 2 star washers for the outermost screws.



## SERVICE

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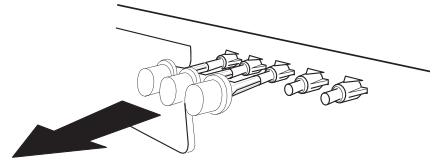
### Changing the push-buttons (W600 and W620)

1. Remove the panel in accordance with the section "Panel - Removing...".
2. Change the push-buttons.

#### NOTE

The buttons sit free on the push-button switches.

3. Install the panel in accordance with the section "Panel - Installing...".

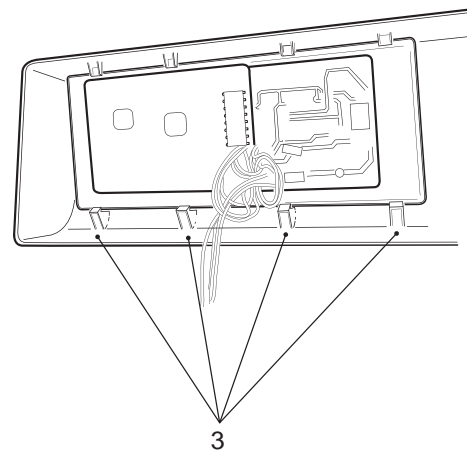


### Changing the DCU panel board (W640, W650 and W660)

#### WARNING

An earthed EMC wristband must be worn at all times when working with electronic components to prevent damage to them.

1. Remove the three screws at the rear edge and lift off the top cover.
2. Remove the panel in accordance with the section "Panel - Removing...".
3. Remove the panel board from the snap fasteners with the aid of a screwdriver.
4. Lift it out.
5. Install the panel board.
6. Install the panel in accordance with the section "Panel - installing...".
7. Fit the top cover.



#### IMPORTANT

Don't forget the 2 star washers for the outermost screws.

### Changing the push-buttons (W640, W650 and W660)

#### WARNING

An earthed EMC wristband must be worn at all times when working with electronic components to prevent damage to them.

1. Remove the three screws at the rear edge and lift off the top cover .
2. Remove the panel in accordance with the section "Panel - removing...".
3. Remove the panel board with snap fasteners.
4. Lift out the button sheet with the push-buttons.

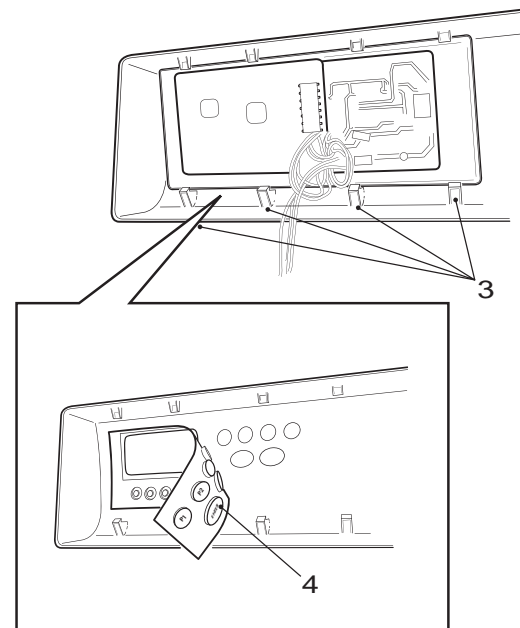
#### IMPORTANT

Take care when installing the push-buttons to get them in the correct locations.

5. Install the push-buttons and the panel board.
6. Install the panel in accordance with the section "Panel - installing...".
7. Fit the top cover.

#### IMPORTANT

Don't forget the 2 star washers for the outermost screws.



## SERVICE

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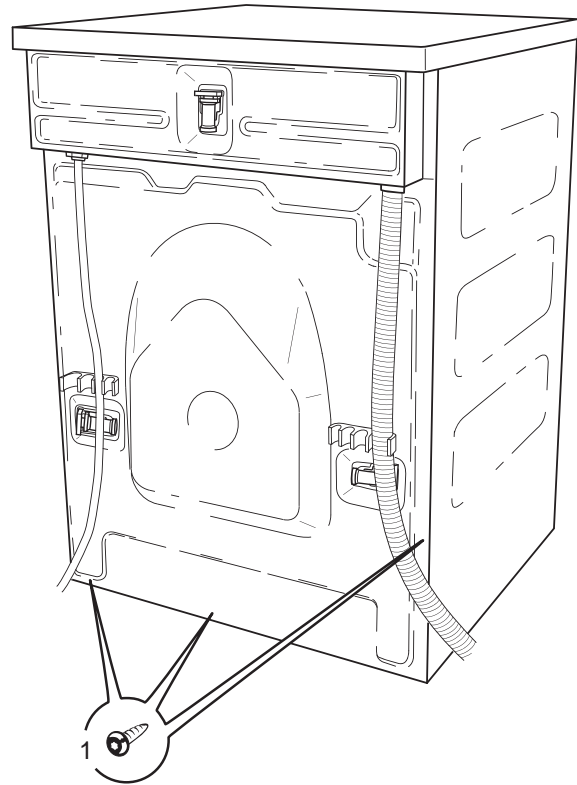
### REAR PANEL

#### Removing the rear panel

1. Remove the 12 screws around the rear panel.
2. Lift off the rear panel.

#### Installing the rear panel

3. Offer up the rear panel. Use the 2 hooks on the upper edge to assist.
4. Refit the 12 screws.



**MOTOR**

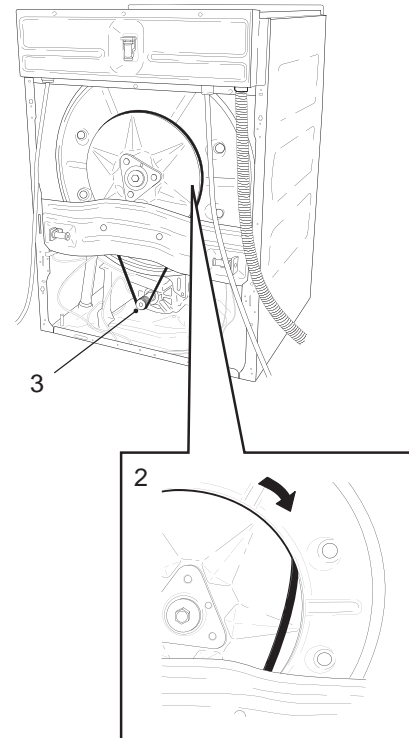
**Changing the drive belt**

1. Remove the rear panel by first removing the 12 screws around it and then lifting it off.
2. Take off the drive belt by lifting it off one side of the pulley and turning the pulley.
3. Install a new drive belt in the reverse order. Start by putting the belt under the motor pulley.

**IMPORTANT**

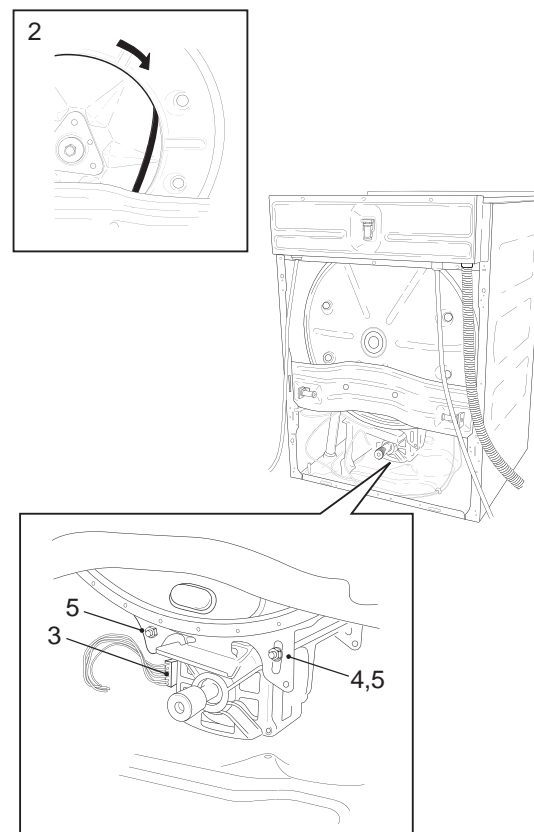
Take care that the drive belt lies centred on the top edge of the pulley. Turn the pulley to check this.

4. Install the rear panel by hanging it on the 2 hooks on the top edge and then securing its edges with the 12 screws.



**Changing the motor**

1. Remove the rear panel by first removing the 12 screws around it and then lifting it off.
2. Take off the drive belt by lifting it off one side of the pulley and turning the pulley.
3. Remove the terminal block from the motor.
4. Mark the locations of the nuts on the motor fixture.
5. Remove the nuts from the motor suspension bolts.
6. Hold the motor and pull out the bolts.
7. Take out the motor.
8. Move the distance piece to the new motor.
9. Offer up the motor and insert the motor suspension bolts.
10. Tighten the nuts.
11. Fit the terminal block.
12. Install a new drive belt in the reverse order. Start by putting the belt under the motor pulley.
13. Install the rear panel by hanging it on the 2 hooks on the top edge and then securing its edges with the 12 screws.

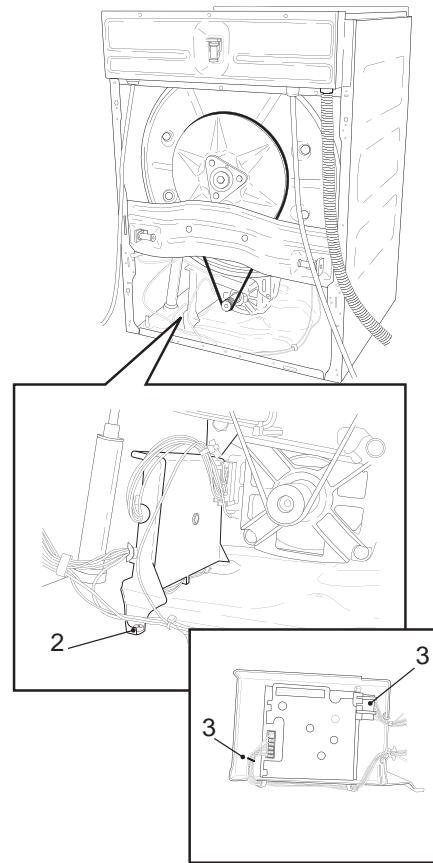


## SERVICE

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### Changing the motor control board (W640, W650 and W660)

1. Remove the rear panel by first removing the 12 screws around it and then lifting it off.
2. Remove the securing screw for the motor control board holder and lift it out.
3. Cut the cable tie and remove the terminal block.
4. Remove the motor control board by pressing in the 2 plastic clips that secure the board.
5. Remove the other terminal block and change the board.
6. Connect the wiring and the 2 terminal blocks.
7. Offer up the board to the holder and press it into place.
8. Refit the holder and secure it with the screw.
9. Secure the cable clamp.
10. Fit the rear panel.





**FRONT PANEL (MODELS WITHOUT FRONT LOADING DOOR)**

**Removing the front panel**

1. Pull forward and lift out the detergent insert.

**NOTE**

The detergent insert may have a child safety catch fitted. To pull out the detergent insert when the safety catch is set, you have to move the latch to the left at the same time as you pull out the tray.

2. Open the drain pump cover. Use the partition from the detergent insert or a screwdriver.
3. Disconnect the drain hose.

**IMPORTANT**

Take care not to break off the drain plug.

**NOTE**

There may be water left in the machine, that will run out through the drain hose.

4. Unscrew the emergency opening handle.
5. Remove the lower right hand screw from the panel, and the 2 screws beneath.
6. Remove the panel by moving its lower edge outwards and then pulling it down.

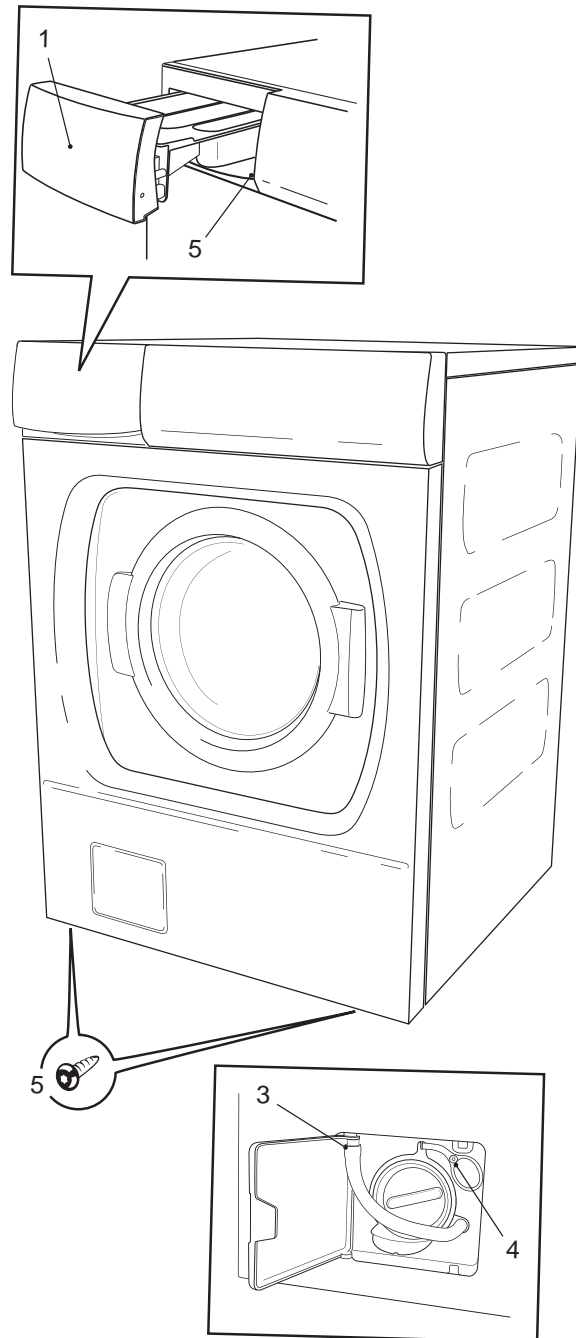
**Installing the front panel**

7. Transfer the securing clips from the side panels to the front panel.
8. Press the panel into place.
9. Secure the panel with screws at the detergent compartment and on the lower edge.

**IMPORTANT**

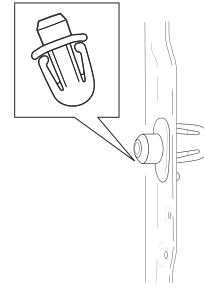
Don't forget the 2 star washers for the screws at the lower edge.

10. Screw back the emergency opening handle and reconnect the drain hose.
11. Refit the detergent insert.



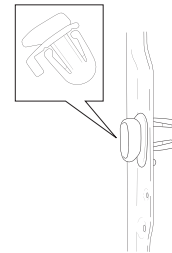
## Changing the plastic lockings on the front panel

1. Remove the front panel in accordance with the section "[Front panel - Removing...](#)".
2. Remove the control unit by squeezing the latches and pulling it out.
3. Push the new control unit in until it latches into place.
4. Refit the front panel in accordance with the section "[Front panel - Installing...](#)".



## Changing the front panel securing clips

1. Remove the front panel in accordance with the section "[Front panel - Removing...](#)".
2. Remove the securing clips by squeezing the latches and pulling it out.
3. Install new clips by inserting them into the holes in the front panel and pushing them down.
4. Install the front panel in accordance with the section "[Front panel - Installing...](#)".



## BOTTOM COVER (MODELS WITH FRONT LOADING DOOR)

### Removing the bottom cover

1. Open the drain pump cover. Use the partition from the detergent compartment or a screwdriver.
2. Disconnect the drain hose.

### IMPORTANT

Take care not to break off the drain plug.

### NOTE

There may be water left in the machine, that will run out through the drain hose.

3. Unscrew the emergency opening handle.
4. Remove the 2 screws at the bottom.
5. Remove the cover, starting at the lower edge.

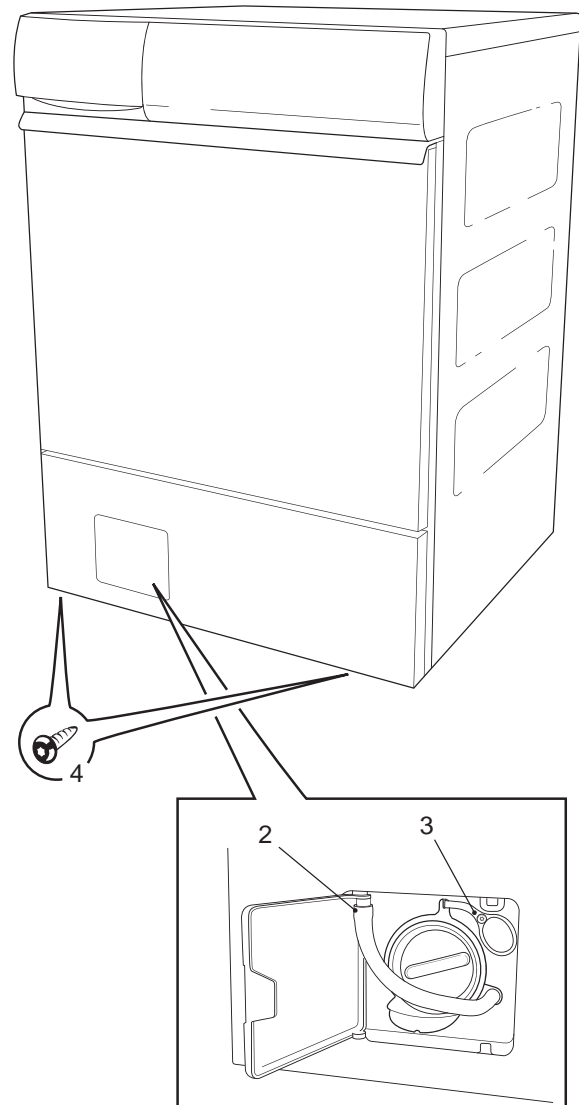
### Installing the bottom cover

6. Align both guides with the top of the cover.
7. Lift the cover into place and press the lower edge in.
8. Secure the cover with the 2 screws at the bottom.

### IMPORTANT

Don't forget the 2 star washers for the screws at the lower edge.

9. Screw back the emergency opening handle and reconnect the drain hose. Close the cover.



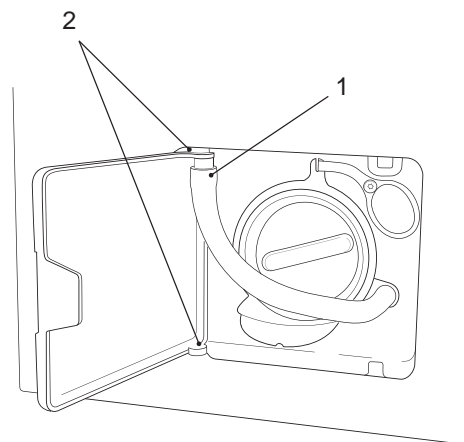
### Changing the drain pump cover

1. Open the drain pump cover and disconnect the drain hose.

### IMPORTANT

Take care not to break off the drain plug.

2. Insert a screwdriver into the fixing on the upper or lower edge and carefully lever off the cover.
3. Offer up the new cover and carefully press it until it clicks into place.



## SERVICE

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### FRONT LOADING DOOR (ONLY MODELS WITH FRONT LOADING DOOR)

#### Removing the front loading door

1. Remove the bottom cover in accordance with the section "[Bottom cover - Removing...](#)"
2. Unscrew the 2 nuts in the door hinges.
3. Release the spring that holds the door.
4. Hold the door and remove the 2 screws.

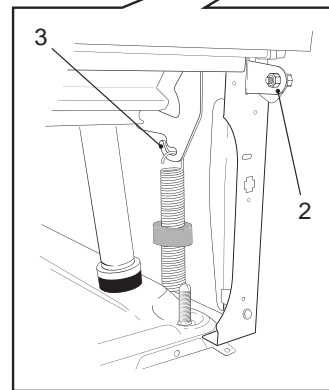
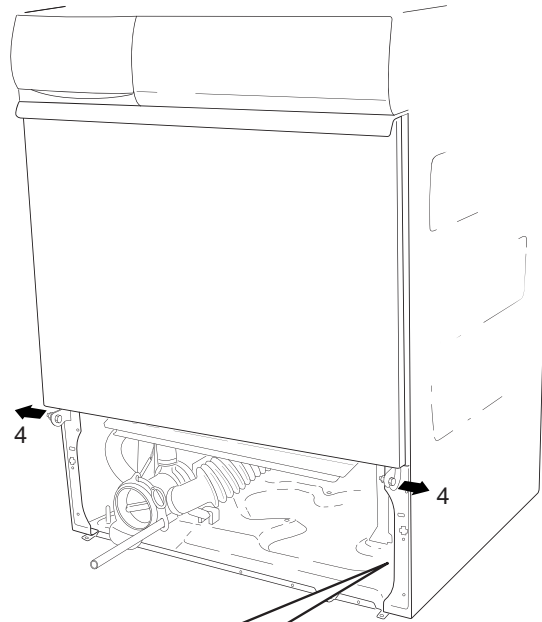
#### IMPORTANT

Keep the 2 nylon washers that are located between the fixture and the hinge.

5. Remove the door by pulling it outwards and upwards.

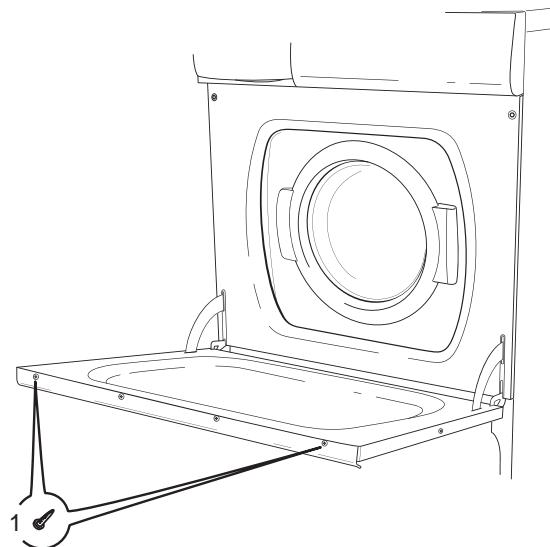
#### Installing the front loading door

6. Install the door.
7. Install the nylon washers and insert the screws.
8. Put the spring back.
9. Tighten the nuts.
10. Install the bottom cover in accordance with the section "[Bottom cover - Installing...](#)".



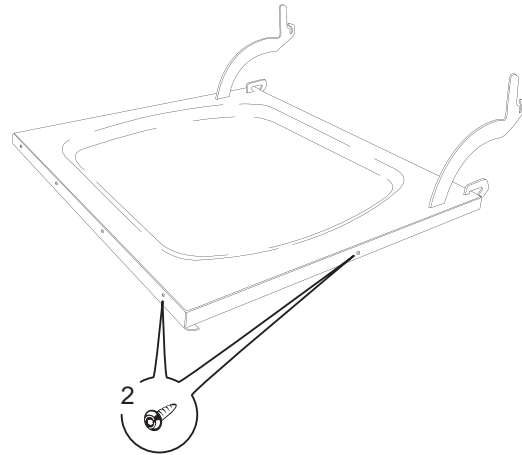
#### Changing the front loading door handle

1. Unscrew the 4 screws that secure the handle to the front loading door.
2. Secure the new handle with the 4 screws.



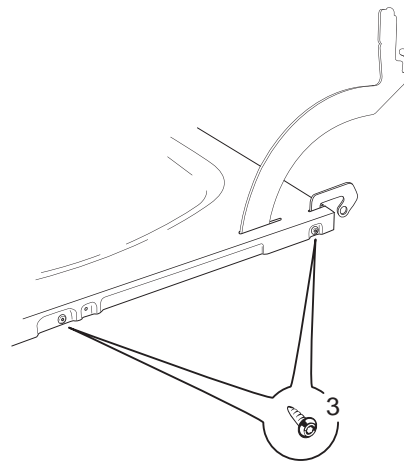
### Changing the inner door

1. Remove the front loading door in accordance with the section "[Front loading door - Removing...](#)".
2. Remove the 4 screws at the handle, 1 screw at each side and the 3 at the bottom edge. Take the door off.
3. Change the inner door and refit the 9 screws.
4. Install the front loading door in accordance with the section "[Front loading door - Installing...](#)".



### Changing the hinge

1. Remove the front loading door in accordance with the section "[Front loading door - Removing...](#)".
2. Remove the 4 screws at the handle, 1 screw at each side and the 3 at the bottom edge. Take the door off.
3. Remove the 2 screws that secure the hinge to the inner door.
4. Secure the new hinge with the 2 screws.
5. Reassemble the door and secure the 9 screws.
6. Install the front loading door in accordance with the section "[Front loading door - Installing...](#)".



## FRONT PANEL (MODELS WITH FRONT LOADING DOOR)

### Removing the front panel

1. Remove front loading door in accordance with the section "[Front loading door - Removing...](#)".
2. Pull forward and lift out the detergent compartment.

### NOTE

The detergent compartment may have a child safety catch fitted. To pull out the detergent compartment when the safety catch is set, you have to move the latch to the left at the same time as you pull out the tray.

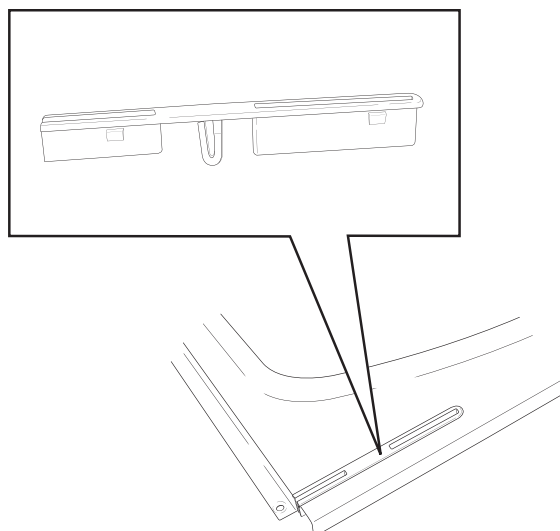
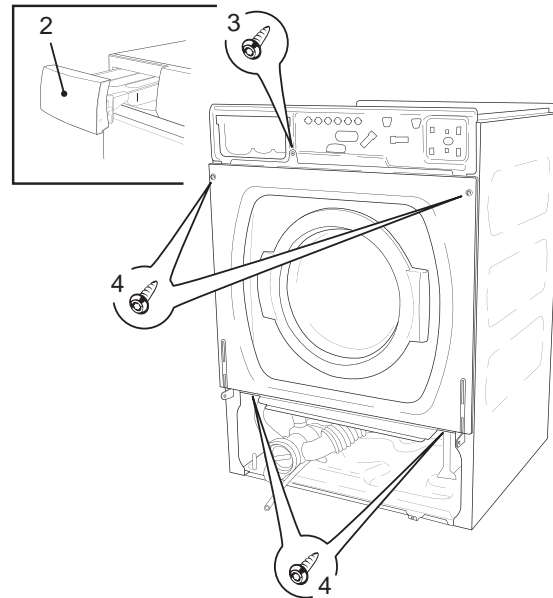
3. Remove the lower right hand screw from the panel and then remove the panel in accordance with the section "[Panel - Removing...](#)".
4. Remove the 2 screws behind the rubber dampers and the 2 screws beneath.
5. Remove the front panel.

### Installing the front panel

6. Offer up the panel and secure it with the 2 screws at the bottom and the 2 at the top. Refit the rubber dampers.
7. Install the panel in accordance with the section "[Panel - Installing...](#)".
8. Secure the panel screws.
9. Install the front loading door in accordance with the section "[Front loading door - Installing...](#)".

### Changing the hinge bearing

1. Remove the front panel in accordance with the section "[Front panel \(models with front loading door\) - Removing...](#)".
2. Remove the hinge bearing by pushing the latches at the rear inwards with the aid of a screwdriver.
3. Carefully remove the bearing.
4. Install a new bearing by putting it into place and pressing it in.
5. Refit the front panel in accordance with the section "[Front panel \(models with front loading door\) - Installing...](#)".



**DETERGENT COMPARTMENT**

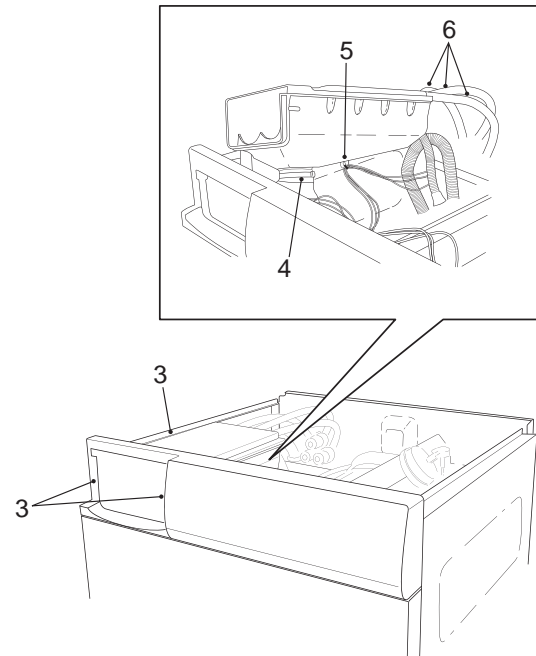
**Removing the detergent compartment**

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Pull forward and lift out the detergent compartment.

**NOTE**

The detergent compartment may have a child safety catch fitted. To pull out the detergent insert when the safety catch is set, you have to move the latch to the left at the same time as you pull out the tray.

3. Remove the 2 uppermost screws from the panel and the screw on the upper side.
4. Remove the hose clip and detach the corrugated hose from the detergent compartment.
5. Detach the wires from the underside of the compartment by cutting the cable tie.
6. Detach the inlet hoses by cutting the cable tie. Detach the air hose by releasing the hose clip.



**Installing the detergent compartment**

7. Secure the wiring under the detergent compartment with a cable tie.

**NOTE**

The wires must not be pulled tight.

8. Put a hose clip on to the corrugated hose.
9. Put one hand into the detergent compartment and take hold of the corrugated hose. Lift the hose with your fingers.

**NOTE**

Soapy water can be used to facilitate connection of the corrugated hose to the detergent compartment.

10. Tighten the hose clip.
11. Secure the 3 inlet hoses with cable ties and the air hose with a hose clip.
12. Secure the compartment with the 3 screws.
13. Refit the detergent insert.
14. Fit the top cover.

**IMPORTANT**

Don't forget the 2 star washers for the outermost screws.

## SERVICE

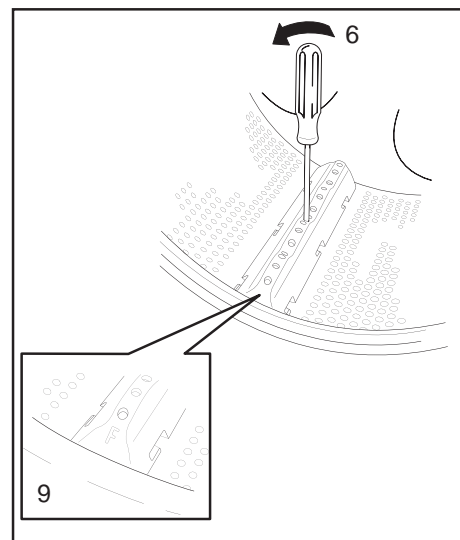
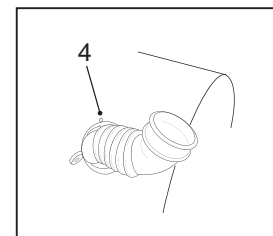
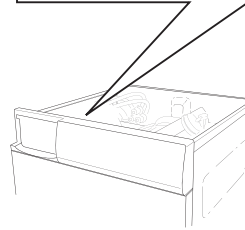
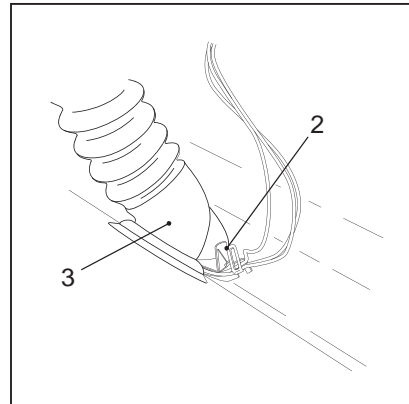
### Changing the detergent compartment corrugated hose

1. Carry out steps 1 to 4 under the heading "Detergent compartment - Removing..." above.
2. Unhook the door lock protection from the hose.
3. Remove the hose from the drum holder.
4. Install the new hose on the drum holder.

### IMPORTANT

It is important for the corrugated hose to be installed with the hose marking facing the drum holder marking.

5. Hook the door lock protection on to the hose.
6. Remove a wash ridge by inserting a screwdriver (or similar thin tool) into the centre ridge hole and angling it carefully to the left.
7. Pull the ridge towards the drum opening and lift it up.
8. Check that the corrugated hose is fitted correctly.
9. Place the ridge in the securing hole with the F marking facing the drum opening. Push the ridge inwards until it is secured in place.
10. Carry out steps 8 to 11 under the heading "Detergent compartment - Installing..." above.

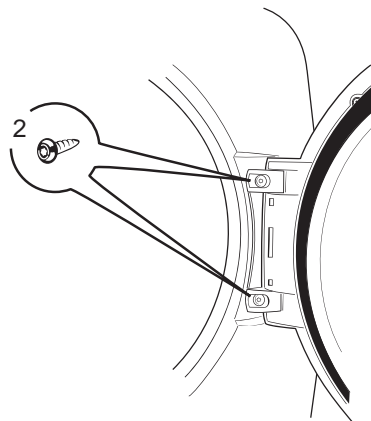




## WASHING LID

### Removing the washing lid

1. Open the washing lid either by pressing the lid opening button or with the emergency opening handle behind the drain pump cover.
2. Remove the 2 screws securing the lid and take it off.

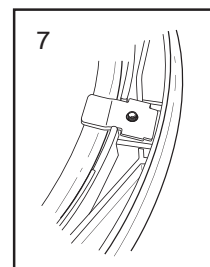
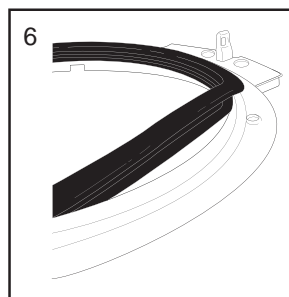
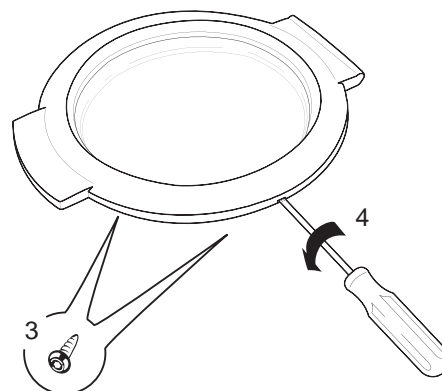
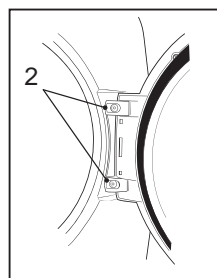


### Installing the washing lid

3. Hook on the lid.
4. Secure the lid with the 2 screws.

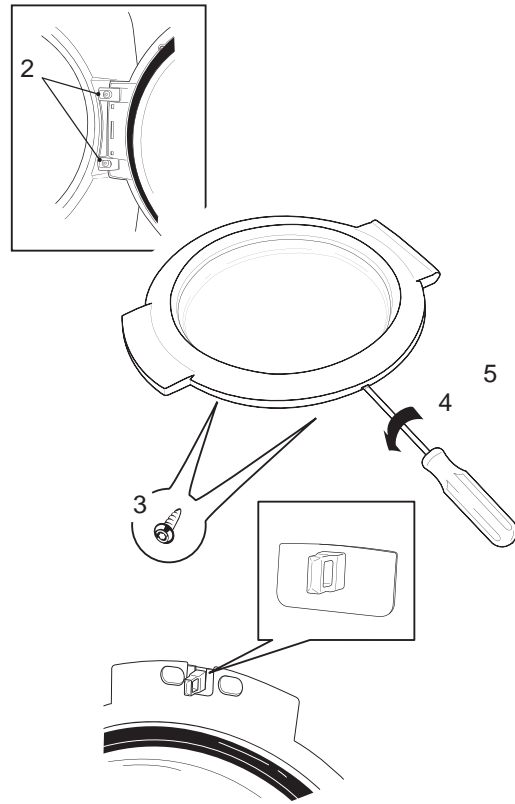
### Changing the lid seal/glass

1. Open the washing lid either by pressing the lid opening button or with the emergency opening handle behind the drain pump cover.
2. Remove the 2 screws securing the lid and take it off.
3. Remove the four screws around the glass.
4. Take off the frame by inserting a screwdriver into the opening of the underside of the lid and turning it.
5. Remove the glass.
6. Changing the seal: Pull off the seal and press a new one on.
7. Install 2 of the fixings.
8. Slide the glass in under the fixings.
9. Install the other 2 fixings. Partly tighten the screws.
10. Install the frame, starting at the rear edge, and press it in.
11. Finally tighten the 4 screws fully.
12. Install the washing lid.



## Changing the lid catch

1. Open the washing lid either by pressing the lid opening button or with the emergency opening handle behind the drain pump cover.
2. Remove the 2 screws securing the lid and take it off.
3. Remove the four screws around the glass.
4. Take off the frame by inserting a screwdriver into the opening at the side and turning it.
5. Pull the catch straight out.
6. Push in the new catch.
7. Install the frame, starting at the rear edge, and press it in.
8. Install the washing lid.



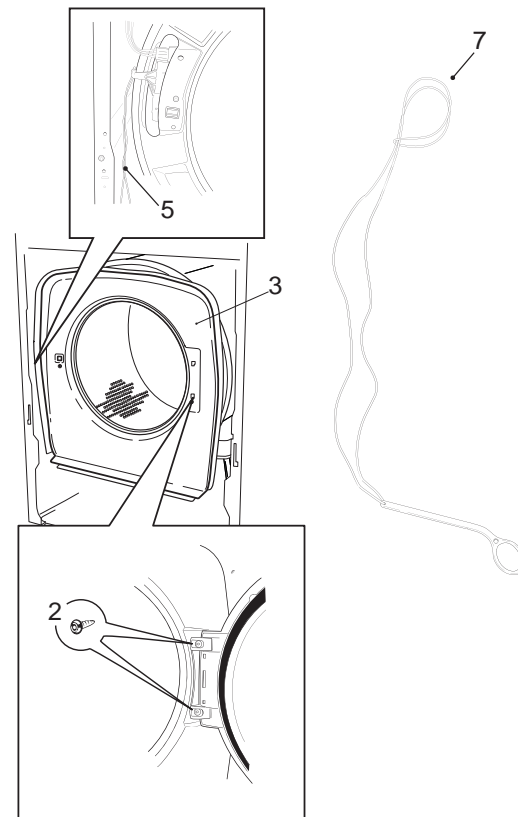
### Changing the emergency opener

1. Open the washing lid either by pressing the lid opening button or with the emergency opening handle behind the drain pump cover.
2. Remove the 2 screws securing the lid and take it off.
3. Remove the cover plate in accordance with the section "[Cover plate - Removing...](#)".
4. Remove the protection.
5. Detach the emergency opening cord from the lock.
6. Take out the handle from the pump housing and detach the cord from its eye.
7. Make a loop in the new cord and secure it to the lock.
8. Hook the cord on the eye in the pump housing and secure the handle.

### IMPORTANT

Ensure that cord is free from any obstructions all the way from the catch to the pump housing, and that it is free through the eye in the pump housing.

9. Install the cover plate in accordance with the section "[Cover plate - Removing...](#)".
10. Install the washing lid.



## SERVICE

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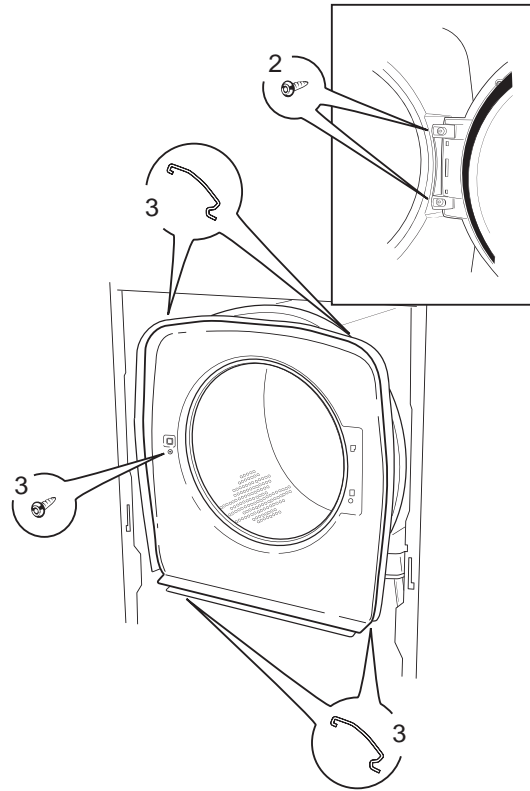
### COVER PLATE

#### Removing the cover plate

1. Open the washing lid either by pressing the lid opening button or with the emergency opening handle behind the drain pump cover.
2. Remove the 2 screws securing the lid and take it off.
3. Unhook the 4 springs and the lid catch screw.
4. Lift off the cover plate.

#### Installing the cover plate

5. Offer up the plate and secure it with the screw at the lid catch.
6. Hook on the 4 springs.
7. Hook on the lid and secure it with the 2 screws.



## CATCH

### Removing the catch

1. Remove the cover plate in accordance with the section "[Cover plate - Removing...](#)"
2. Release the protection.
3. Disconnect the wires from the catch.
4. Remove the lid catch screws.
5. Pull out the catch.
6. Remove the emergency opening cord.

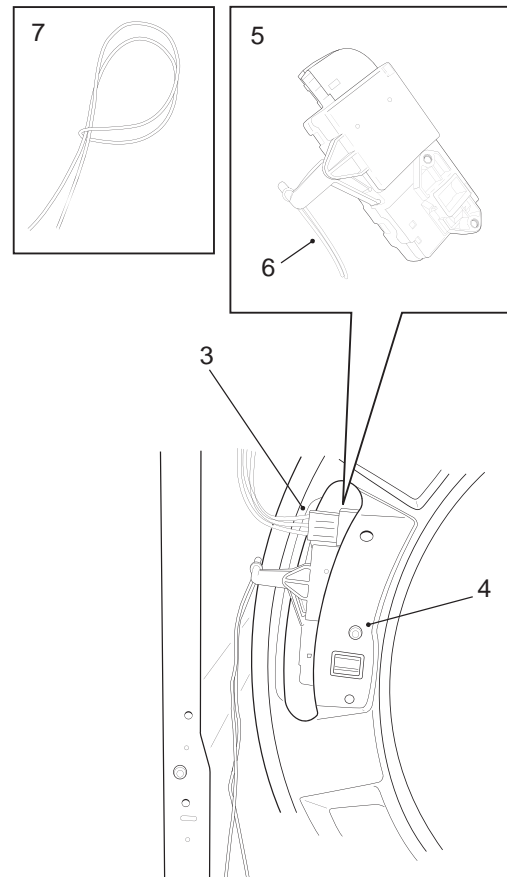
### Installing the catch

7. Make a loop in the emergency opening cord and hang it on the hook. Pull the loop.
8. Put the latch back and secure it.
9. Reconnect the wiring to the latch.
10. Refit the protection.

### IMPORTANT

Make sure the emergency opening cord does not get trapped between the protection and the holder.

11. Refit the cover plate in accordance with the section "[Cover plate - Installing...](#)".



## FRONT END PLATE AND INNER COVER PLATE

### Removing the front end plate and inner cover plate

1. Remove the protection and catch in accordance with the section "Catch - Removing...".
2. Fit the special centring tool (part no. 88 011 52).
3. Unhook the rear balancing spring from the top side of the holder.
4. Install the hook at the bottom, between the cradle and the bottom panel. First put the small hook in the cradle and then push the holder down to hook the other end in the bottom.
5. Undo the tensioning ring and remove it.

### IMPORTANT

Do not lever the tensioning ring off. Undo one end and turn it round the holder to remove it.

6. Lift off the front end plate.

### NOTE

If the end plate is stuck, a screwdriver can be used to lever the front end plate away from the inner cover plate.

7. Remove the special tool.
8. Remove the inner cover plate.

### NOTE

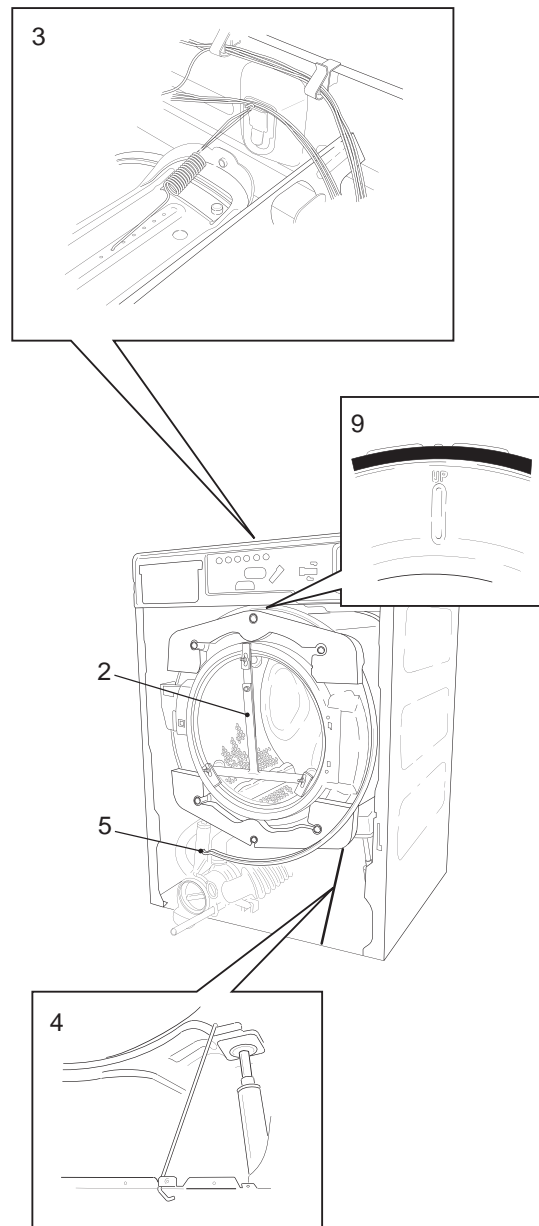
If the inner cover plate is stuck, a screwdriver can be used to lever it away from the drum holder. Take care not to damage the rubber strip.

### Installing the front end plate and inner cover plate

9. Start by installing the inner cover plate and special tool (part no. 88 011 52).

### IMPORTANT

It is important for the cover plate to be positioned with the marking UP in line with the centre bulge on the holder.



10. Install the front end plate and tension the special tool's two lower parts to it.

## IMPORTANT

It is important for the front plate to be located in the groove in the holder panel.

## NOTE

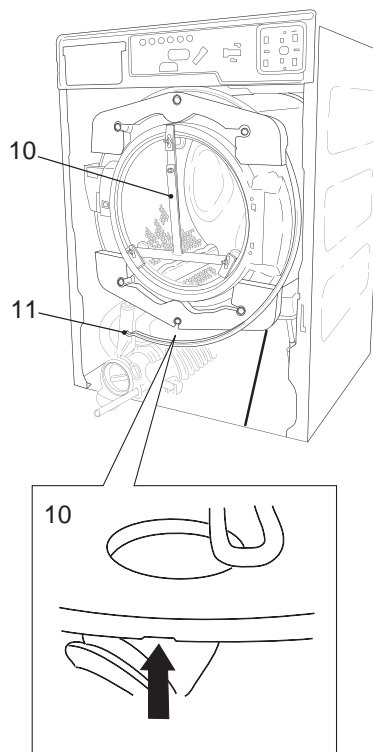
Use the special tool's upper fixing to hang the end plate on.

11. Install the tensioning ring by turning it to the right place and then securing the screw.

## IMPORTANT

Be sure that the tensioning ring is properly located over the edges of the end plate.

12. Tighten the screw fully.
13. Use a rubber mallet to knock the tensioning ring into place on the upper edge and sides. Also move it to the edge of the end plate with pliers.
14. Tightly secure the tensioning ring.
15. Remove the lower hook.
16. Hook the balancing spring to the top side of the holder.
17. Remove the special tool.
18. Refit the protection and catch in accordance with the section "[Catch - Installing...](#)".



# SERVICE

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## DRUM

### Removing the drum

1. Remove the end plate and inner cover plate at the front in accordance with the section "[Front end plate holder... - Removing...](#)".
2. Remove the rear panel by first removing the 12 screws around it and then lifting it off.
3. Take off the drive belt by lifting it off one side of the pulley and turning the pulley.
4. Remove the pulley screw and remove the pulley and the wavy washer.
5. Pull out the drum.

### Installing the drum

6. Install an O-ring on the drum shaft
7. Install the drum.
8. Install the wavy washer on the drum shaft.

### WARNING

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A missing wavy washer can lead to leakage, drum shaft failure and bearing failure.

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9. Install the pulley and tighten the screw.
10. Install the drive belt in the reverse order. Start by putting the belt under the motor pulley.

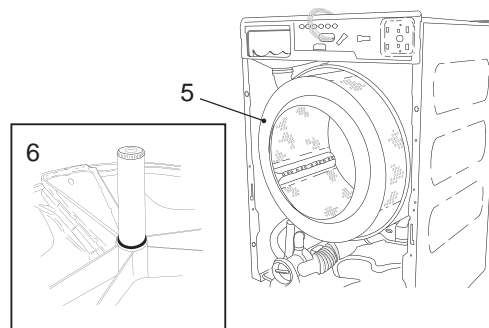
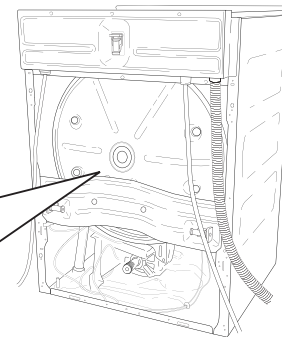
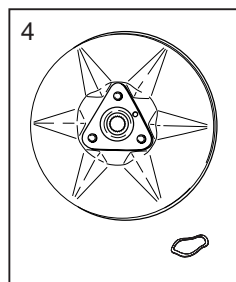
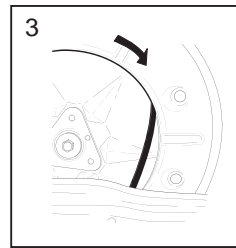
### IMPORTANT

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Take care that the drive belt lies centred on the top edge of the pulley. Turn the pulley to check this.

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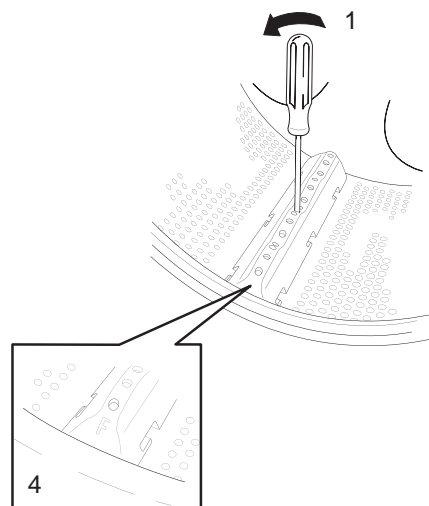
11. Install the rear panel by hanging it on the 2 hooks on the top edge and then securing its edges with the 12 screws.
12. Refit the end plate and inner cover plate in accordance with the section "[Front end plate... - Installing](#)".





**Changing the wash ridge**

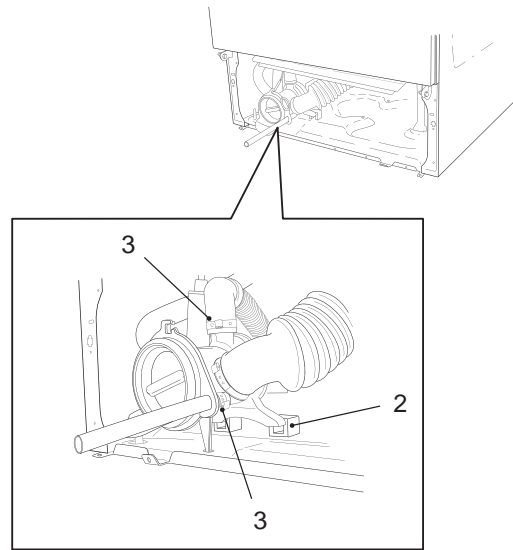
1. Insert a screwdriver (or similar thin tool) into the centre ridge hole and angle it carefully to the left.
2. Pull the ridge towards the drum opening.
3. Lift up the ridge.
4. Place the new ridge in the securing hole with the F marking facing the drum opening.
5. Push the ridge inwards until it is secured in place.



## DRAIN PUMP

### Removing drain pump and pump housing

1. Models with front loading door: Remove the bottom cover in accordance with the section ["Bottom cover \(models with front loading door\) - Removing..."](#).  
Models without front loading door: Remove the front panel in accordance with the section ["Front panel \(models without front loading door\) - Removing..."](#).
2. Remove the pump and pump housing from the rubber fixings in the bottom plate.
3. Release the 3 hose clips and remove the hoses. Also remove the hose clip for the drain hose and remove this.
4. Disconnect the terminal block.
5. Detach the emergency opening cord.



### Installing the drain pump and pump housing

6. Secure the emergency opening cord.

### IMPORTANT

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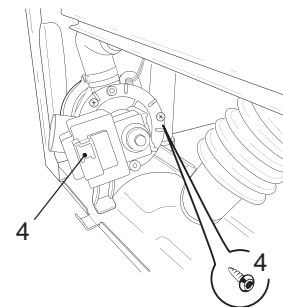
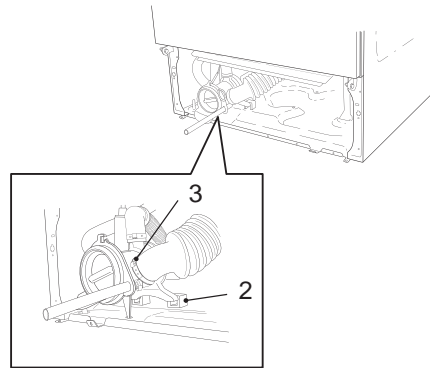
It is important for the emergency opening cord to be securely fastened to the pump housing and that the cord is free from obstructions.

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7. Secure the terminal block.
8. Connect the 3 hoses and secure them with hose clips. Also connect the drain hose and secure it with a hose clip.
9. Secure the pump housing to the fixings on the bottom plate.
10. **Models with front loading door:** Install the bottom cover in accordance with the section ["Bottom cover \(models with front loading door\) - Installing..."](#).  
**Models without front loading door:** Install the front panel in accordance with the section ["Front panel \(models without front loading door\) - Installing..."](#).

### Changing the drain pump

1. **Models with front loading door:** Remove the bottom cover in accordance with the section "[Bottom cover \(models with front loading door\) - Removing...](#)".  
**Models without front loading door:** Remove the front panel in accordance with the section "[Front panel \(models without front loading door\) - Removing...](#)".
2. Remove the pump and pump housing from the rubber fixings in the bottom plate.
3. Disconnect one hose by removing the hose clip, and then turn it to remove it from the rear of the pump.
4. Disconnect the terminal block and the 3 screws that secure the pump to the pump housing.
5. Take out the pump.
6. Secure the terminal block to the new pump.
7. Secure the pump in the pump housing with the 3 screws.
8. Fit the hose and secure it with the hose clip.
9. Secure the pump and pump housing top the fixtures in the bottom plate.
10. **Models with front loading door:** Install the bottom cover in accordance with the section "[Bottom cover \(models with front loading door\) - Installing...](#)".
11. **Models without front loading door:** Install the front panel in accordance with the section "[Front panel \(models without front loading door\) - Installing...](#)".



## SERVICE

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### Changing the drain pump rubber ring

1. Open the drain pump cover. Use the partition from the detergent compartment or a screwdriver.
2. Disconnect the drain hose.

#### IMPORTANT

Take care not to break off the drain plug.

#### NOTE

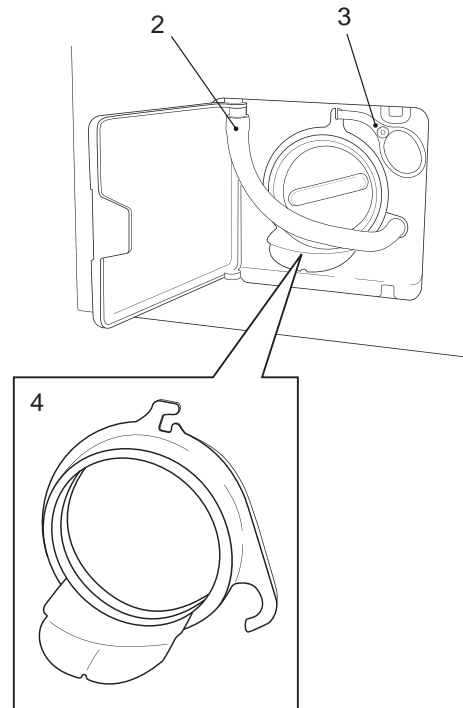
There may be water left in the machine, that will run out through the drain hose.

3. Remove the screw to detach the emergency opening handle.
4. Pull the rubber ring from the pump housing.
5. Put the new ring on to the pump housing.

#### IMPORTANT

The tab on the ring must be upwards and in line with the tab on the pump housing.

6. Secure the emergency opening handle with the screw and refit the drain hose.
7. Close the cover.



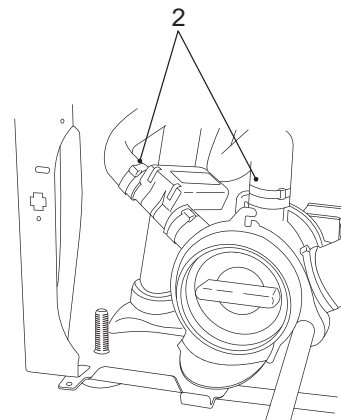
### Changing the rinse sensor (W660)

1. **Models with front loading door:** Remove the bottom cover in accordance with the section "[Bottom cover \(models with front loading door\) - Removing...](#)".

**Models without front loading door:** Remove the front panel in accordance with the section "[Front panel \(models without front loading door\) - Removing...](#)".

2. Remove the 2 hose clips that hold the sensor and remove the sensor from the hose.
3. Disconnect the terminal block.
4. Insert the terminal block into the socket on the new sensor.
5. Thread the hose clips along the 2 water hoses and secure them to the sensor.
6. **Models with front loading door:** Install the bottom cover in accordance with the section "[Bottom cover \(models with front loading door\) - Installing...](#)".

**Models without front loading door:** Install the front panel in accordance with the section "[Front panel \(models without front loading door\) - Installing...](#)".



## COMPLETE HOLDER ASSEMBLY

### Changing the complete holder assembly (holder, cradle and rear end plate)

1. Remove the detergent compartment in accordance with the section "[Detergent compartment - Removal...](#)".

#### NOTE

The detergent compartment may have a child safety catch fitted. To pull out the detergent compartment when the safety catch is set, you have to move the latch to the left at the same time as you pull out the tray.

2. Remove the electrical component bridge piece in accordance with the section "[Electrical component bridge piece - Removal...](#)".
3. Remove the drum in accordance with the section "[Drum - Removal...](#)".
4. Remove the motor in accordance with steps 3 to 7 in the section "[Motor - Changing motor](#)".

#### IMPORTANT

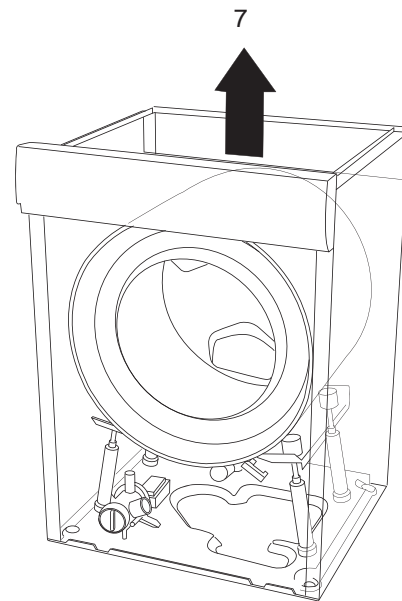
The motor can stay in place while dismantling the holder. Remember to put the holder down gently to prevent the motor being damaged.

5. Remove all the necessary hoses and wiring.
6. Remove the holder and cradle.
7. Lift the holder straight up.
8. Transfer the piston rods and rubber dampers to the shock absorbers.
9. Lower the new holder into the machine and the piston rods and rubber dampers to the shock absorbers.

#### NOTE

Soapy water can be used to make it easier to fit the rubber dampers.

10. Refit the hoses and wiring.
11. Install the motor in accordance with steps 8 to 11 in the section "[Motor - Changing motor](#)".
12. Install the drum in accordance with the section "[Drum - Install...](#)".
13. Install the electrical component bridge piece in accordance with the section "[Electrical component bridge piece - Install...](#)".
14. Install the detergent compartment in accordance with the section "[Detergent compartment - Install...](#)".



## SERVICE

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### Changing the bearing

1. Remove the drum in accordance with the section "[Drum - Removing...](#)".
2. Remove the v-ring cassette with a screwdriver.
3. Knock out both bearings.

### NOTE

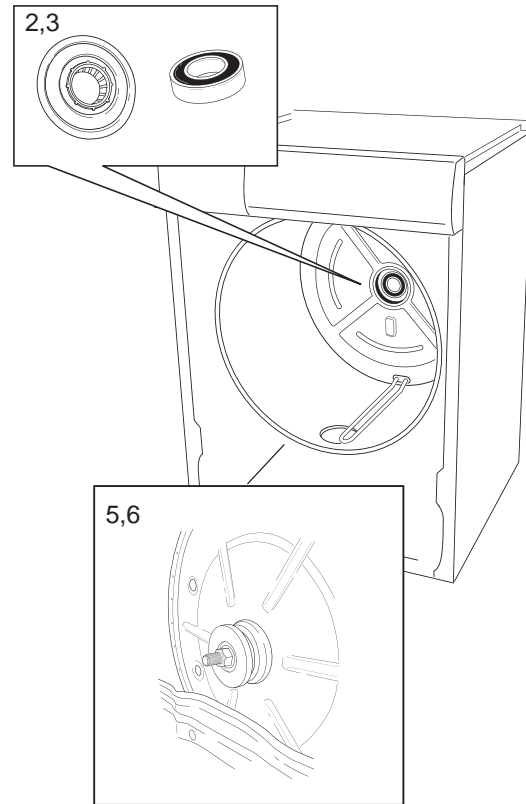
Discard the bearings after removal.

4. Place the inner bearing on the special tool (part no. 88 011 53) and put it inside the holder.

### IMPORTANT

Position the special tool support between the heating element loops.

5. Put the outer bearing and washer on to the tool, at the rear of the bearing housing.
6. Tighten the nut.
7. Insert the bearing into place with the special tool.
8. Remove the nut and remove the special tool.
9. Install the drum in accordance with the section "[Drum - Installing...](#)".



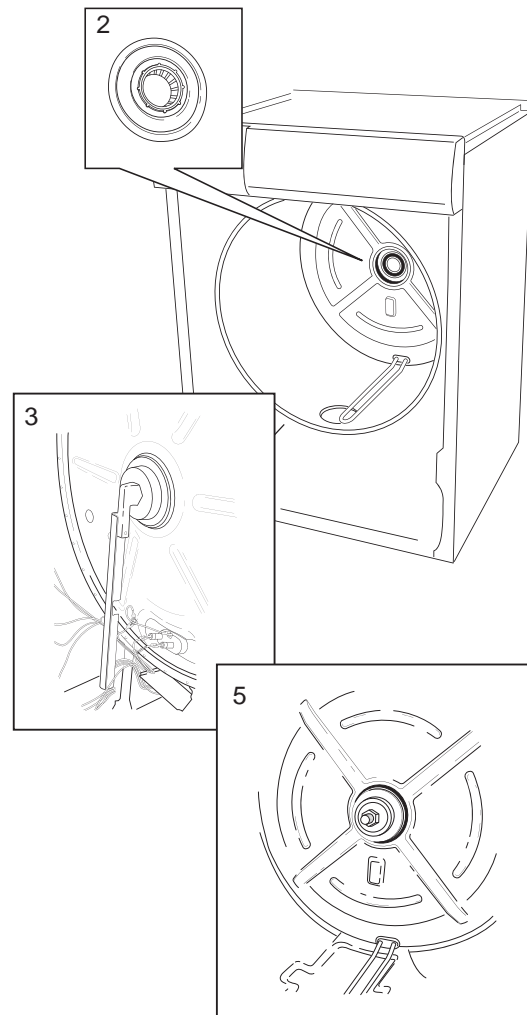
**Changing the v-ring cassette**

1. Remove the drum in accordance with the section "[Drum - Remove...](#)".
2. Remove the v-ring cassette with a screwdriver.
- 3 Put the tool into the bearing housing from the rear of the machine.
- 4 Put the new v-ring cassette on to the special tool, inside the holder with its white side faces outwards. Then put the washer on the tool with the flat side facing the cassette.
- 5 Fit the nut and force the v-ring cassette into place by tightening the nut.

**IMPORTANT**

The v-ring cassette must be properly pressed in, to prevent leakage or v-ring squeaking.

6. Remove the nut and remove the special tool.
7. Install the drum in accordance with the section "[Drum - Installing...](#)".

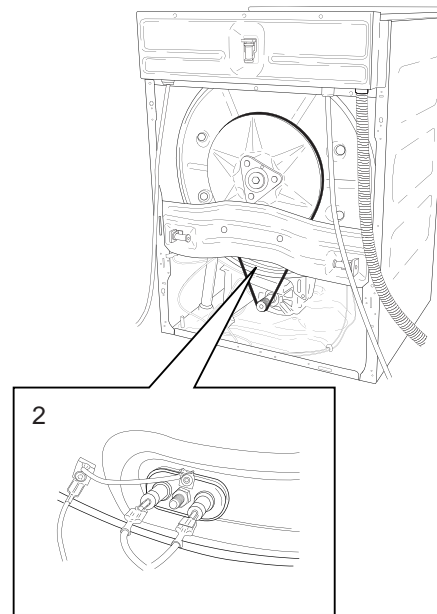


## SERVICE

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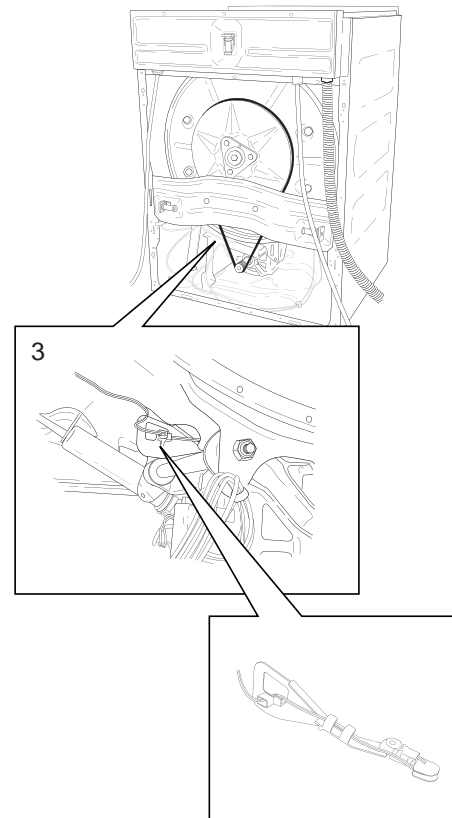
### Changing the heating element

1. Remove the rear panel by first removing the 12 screws around it and then lifting it off.
2. Disconnect the wiring and unscrew the nut as far as possible.
3. Tap the screw so that the seal on the inside is separated from its flat washer.
4. Let the seal shrink and then pull out the element.
5. Install the element by pushing it in as far as possible.
6. Tighten the nut and connect the wiring.
7. Install the rear panel.



### Changing the thermistor

1. Remove the 3 screws at the rear edge of the top lid and lift off the lid.
2. Remove the 12 screws around the rear piece and lift it off.
3. Pull the thermistor out to the left to remove it.
4. **W600 and W620:** Remove the thermistor header connector from the temperature selector.  
**W640, W650 and W660:** Remove the thermistor header connector from the program control board.
5. Install the new thermistor by threading it through the hole between the cradle and holder.
6. **W600 and W620:** Connect the thermistor to the temperature selector.  
**W640, W650 and W660:** Connect the thermistor to the program control board.
7. Refit the rear piece and top lid.



### IMPORTANT

Don't forget the 2 star washers for the top lid outer screws.

---



## Changing the tensioning ring

1. Remove the cover plate in accordance with the section "[Cover plate - Removing...](#)".
2. Install the special tools (part no. 88 011 52 and ).

### IMPORTANT

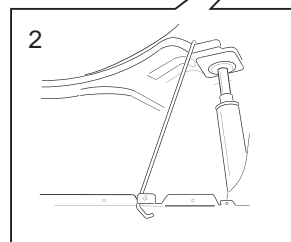
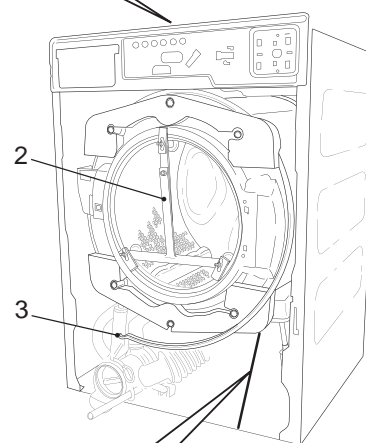
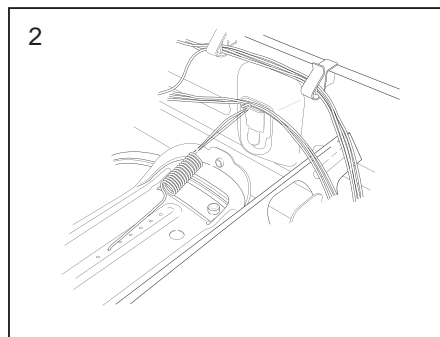
Fasten the special tool's 3 fixings in the drum end.

3. Slacken the tensioning ring and remove it.

### IMPORTANT

Do not lever the tensioning ring off. Undo one end and turn it round the holder to remove it.

4. Install the new tensioning ring by turning it to the right place and then securing the screw.
5. Tighten the screw fully. Use a rubber mallet to knock the tensioning ring into place on the upper edge. Also move it to the edge of the end plate with pliers.
6. Tighten the tensioning ring more.
7. Remove the special tool.
8. Refit the cover plate in accordance with the section "[Cover plate - Installing...](#)".



## SERVICE

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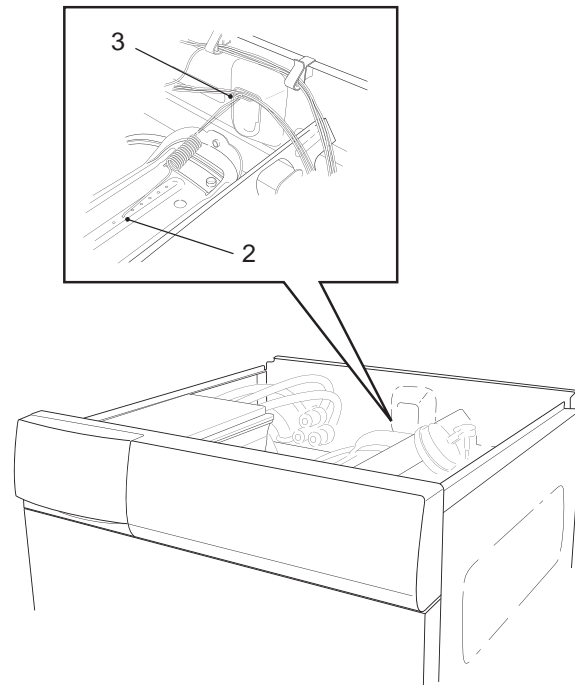
### Changing the balancing spring

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Use pliers to unhook the balancing spring from the holder.
3. Front spring: Unhook the spring from the front rail.  
Rear spring: Unhook the spring from the cross member.
4. Install a new spring by first hooking it to the member and then to the holder.
5. Fit the top cover.

### **IMPORTANT**

Don't forget the 2 star washers for the outermost screws of the top cover.

---



**ELECTRICAL COMPONENT BRIDGE PIECE**

**Removing the electrical component bridge piece**

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Remove the panel in accordance with the section "[Panel - Removing...](#)".
3. Remove the 2 screws at the rear from the cross member.
4. Remove the 2 screws in the front rail.
5. Remove the wiring as necessary.
6. Lift out the bridge piece.

**Installing the electrical component bridge piece**

7. Lay the bridge piece in place.
8. Secure the 2 screws to the cross member and the 2 to the front rail.
9. Reconnect the wiring.

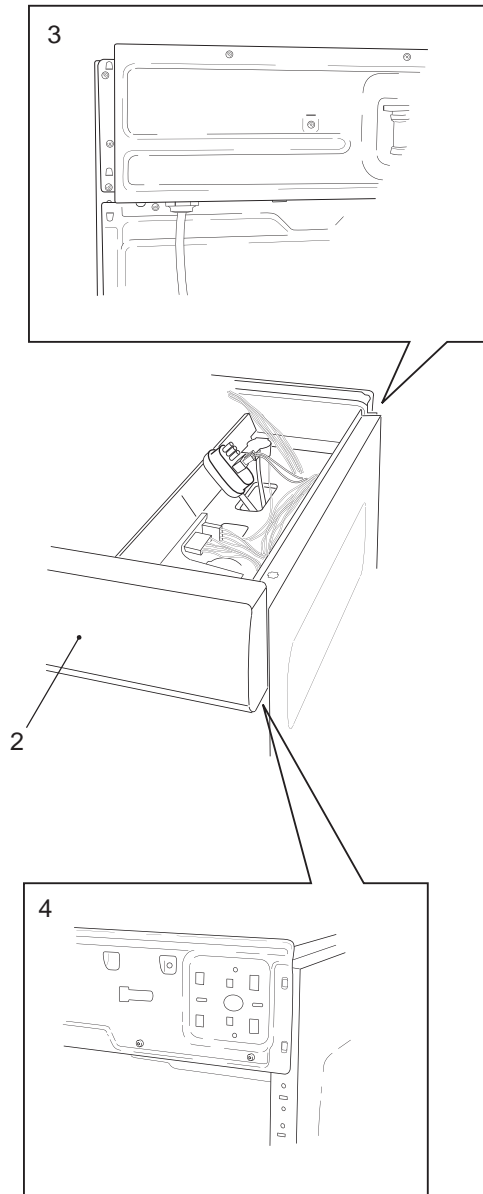
**IMPORTANT**

Ensure that the wiring is correctly connected.

10. Install the panel in accordance with the section "[Panel - Installing...](#)".
11. Fit the top cover.

**IMPORTANT**

Don't forget the 2 star washers for the outermost screws of the top cover.



## SERVICE

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### Changing the level switch

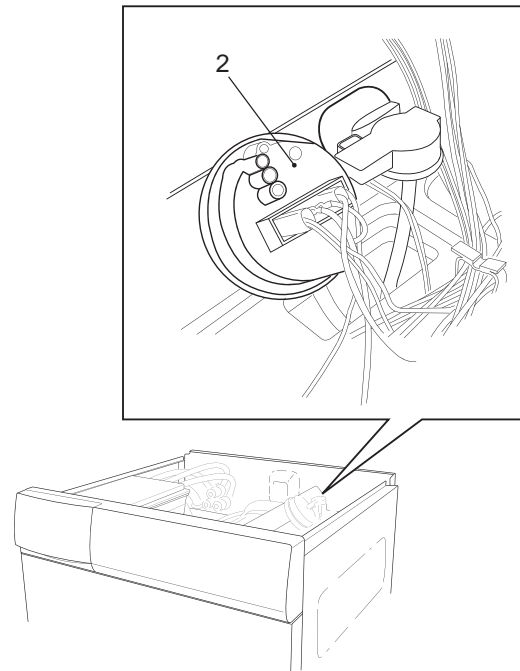
1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Squeeze the level switch securing clips, if necessary with pliers, and remove it from the bridge piece.
3. Remove the wiring and connector pins.
4. Remove the rubber hose from the underside.
5. Put the rubber hose on to the new level switch.
6. Connect the wiring and connector pins.
7. Insert and push the level switch to secure it on the bridge piece.
8. Fit the top cover.

### IMPORTANT

---

Don't forget the 2 star washers for the outermost screws.

---



### Changing the level sensor

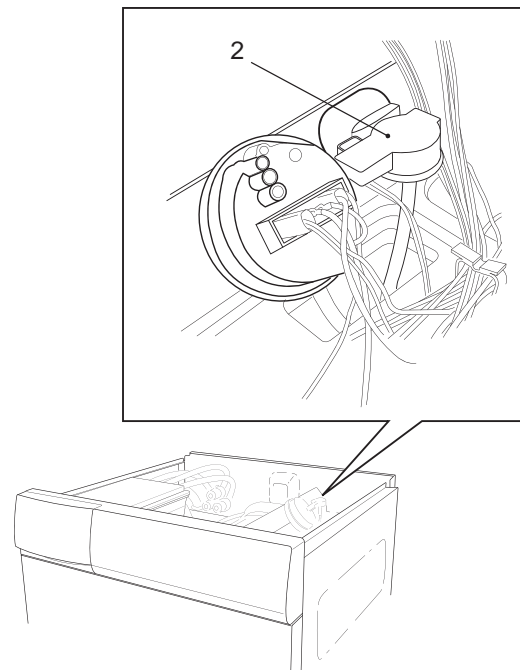
1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Squeeze the level sensor securing clips, if necessary with pliers, and remove it from the bridge piece.
3. Remove the connector pins.
4. Remove the rubber hose from the underside.
5. Put the rubber hose on to the new level sensor.
6. Reconnect the terminal block.
7. Insert and push the level sensor to secure it on the bridge piece.
8. Fit the top cover.

### IMPORTANT

---

Don't forget the 2 star washers for the outermost screws.

---



### Changing the programmer (W600 and W620)

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Remove the knob from the front of the panel.

#### IMPORTANT

Turn the knob to its zero position before taking it off, to simplify refitting.

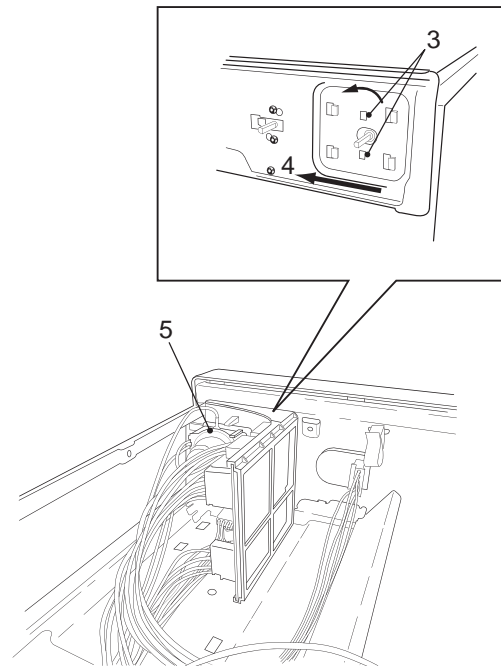
#### NOTE

It is possible to use a polygrip (mole wrench) to remove the knobs, but in that case remember to put some soft material in the jaws so as not to scratch the plastic.

3. Insert a screwdriver through the knob hole and release the 2 clips that secure the programmer.
4. Move the programmer to one side and lift it out.
5. Offer up the new programmer and press it in.
6. Refit the knob.
7. Fit the top cover.

#### IMPORTANT

Don't forget the 2 star washers for the outermost screws.



## SERVICE

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### Changing the PCU program control board and its holder (W640, W650 and W660)

#### **WARNING**

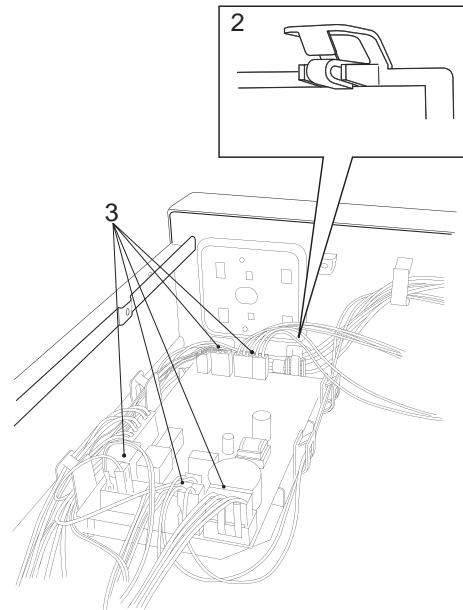
An earthed EMC wristband must be worn at all times when working with electronic components to prevent damage to them.

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Remove the board by pressing in the 2 plastic clips.
3. Remove the terminal block.
4. Lift up the program control board.
5. Remove the 2 plastic catches on the underside of the bridge piece and lift up the holder.
6. Install the holder by pushing it in until the catches clip on to the plate..
7. Offer up the new board and press it into place.
8. Connect the wiring and terminal block.
9. Fit the top cover.

#### **IMPORTANT**

Don't forget the 2 star washers for the outermost screws.

---



**CROSS MEMBER****Changing the input terminal block**

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Remove the earthing screw.
3. Disconnect all the wiring.
4. Press the latches in with a screwdriver and pull out the input terminal block.

**NOTE**

Make sure that the wires are connected correctly when changing the input terminal block and the connection cables.

5. Install the new input terminal block, the latches must clip on to the edge of the plate.
6. Install the wiring in accordance with the electrical schematic diagram.
7. Secure the earthing screw.

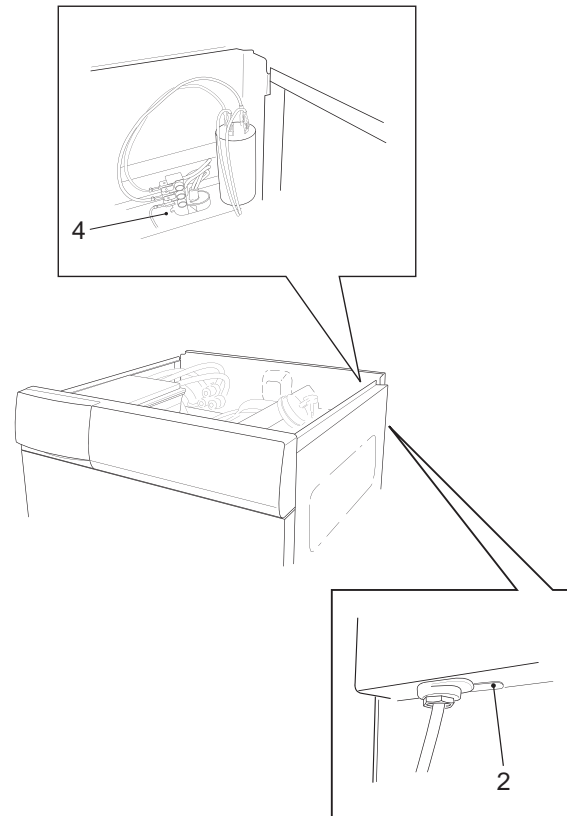
**IMPORTANT**

Don't forget to put the earthing screw back.

8. Fit the top cover.

**IMPORTANT**

Don't forget the 2 star washers for the outermost screws.



## SERVICE

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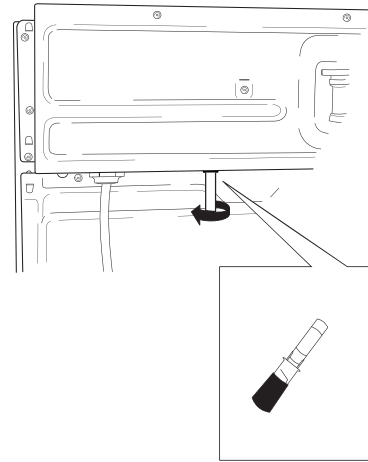
### Changing the fuse

1. Remove the fuse holder insert with a screwdriver (1/4 turn).
2. Change the fuse.

### IMPORTANT

The fuse must be of 250V and 6.3 Ampere type.

3. Fit the fuse holder insert with the fuse into the fuse holder.

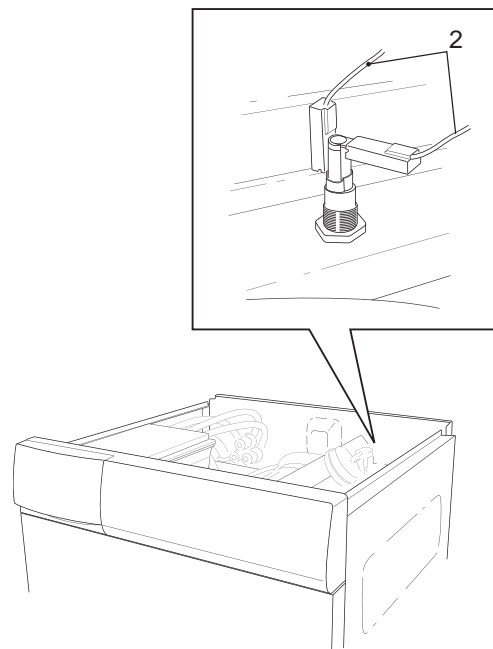


### Changing the fuse holder/insert

1. Remove the three screws at the rear edge and lift off the top cover.
2. Remove the wiring that goes to the fuse holder.
3. Remove the fuse holder insert with a screwdriver (1/4 turn).
4. Unscrew the fuse holder.
5. Fit the new fuse holder.
6. Connect the wiring.
7. Install the fuse holder and its insert.
8. Fit the top cover.

### IMPORTANT

Don't forget the 2 star washers for the outermost screws.





## Changing the radio interference filter

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Disconnect the wiring from the radio interference filter.
3. Unscrew the nut securing the filter and take it out.
4. Install the new radio interference filter.
5. Install the wiring in accordance with the labels on the wires.

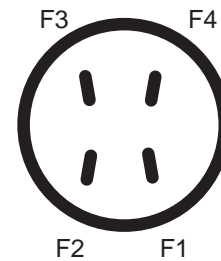
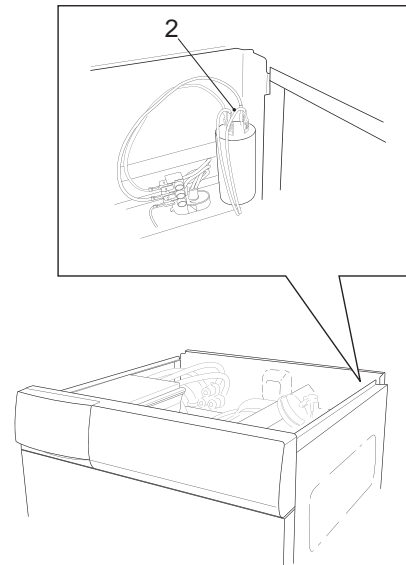
### IMPORTANT

Connect the wires to the correct flat pin connectors.

6. Fit the top cover.

### IMPORTANT

Don't forget the 2 star washers for the outermost screws.



# SERVICE

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## Changing the cable stand

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Remove the wiring.
3. Route the new wiring and secure it.

### IMPORTANT

---

Make sure that the wires are connected correctly.

---

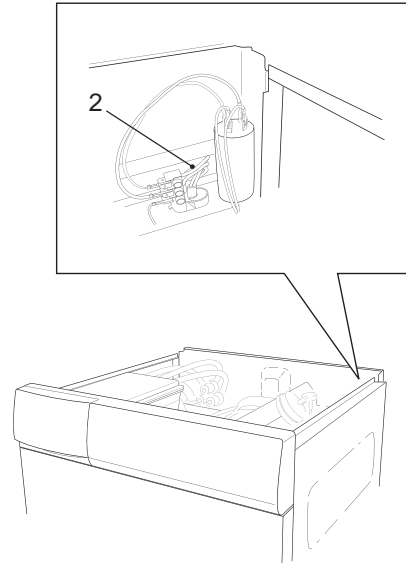
4. Fit the top cover.

### IMPORTANT

---

Don't forget the 2 star washers for the outermost screws.

---



## Changing the inlet valve

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Disconnect the water supply connection from the inlet valve.
3. Remove the 2 screws under the cross member and lift up the valve.
4. Remove the hoses and wiring.
5. Install the wiring in accordance with the electrical schematic diagram and secure the hoses.
6. Install the inlet valve in the cross member and secure it with the 2 screws.

### IMPORTANT

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The wiring to the lid catch must run between the inlet valve and the cross member.

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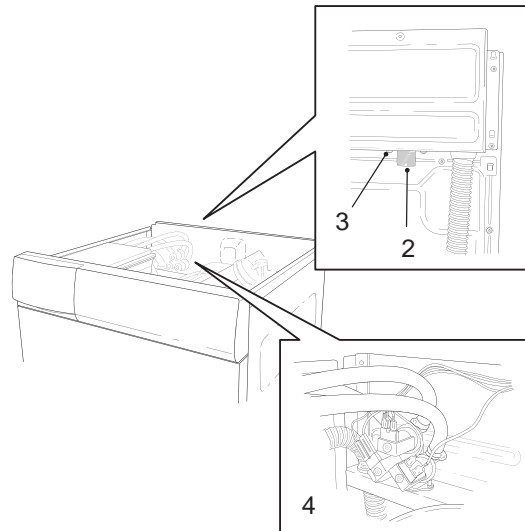
7. Install the water supply connection.
8. Fit the top cover.

### IMPORTANT

---

Don't forget the 2 star washers for the outermost screws.

---



## Changing the volume chamber (W660)

1. Remove the top cover by first removing the 3 screws at the rear edge and then lifting the cover off.
2. Remove the rear panel by first removing the 12 screws around it and then lifting it off.
3. Remove the drain hoses by undoing the hose clips.
4. Remove the air hose.
5. Remove the volume chamber by first removing the screw in the cross member and then lifting out the volume chamber.

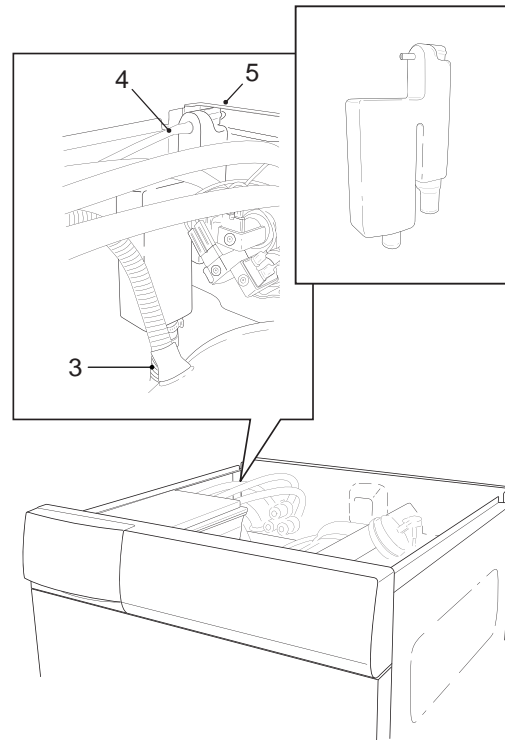
### IMPORTANT

There will be water in the volume chamber that cannot be emptied out by draining the machine.

6. Place the new volume chamber in the hole in the cross member and secure it with the screw.
7. Install the air hose.
8. Secure the drain hoses to the volume chamber with hose clips.
9. Install the rear panel by hanging it on the 2 hooks on the top edge and then securing its edges with the 12 screws.
10. Fit the top cover.

### IMPORTANT

Don't forget the 2 star washers for the outermost screws.



## SIDE PANELS

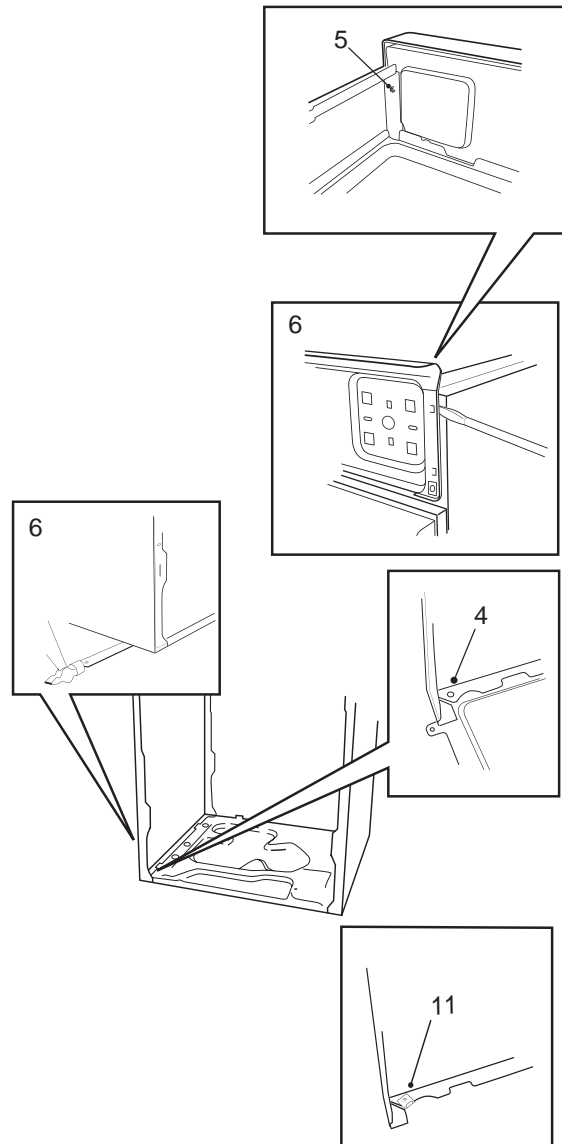
### Changing the side panels

1. Remove the rear panel by first removing the 12 screws around it and then lifting it off.
2. **Models with front loading door:** Remove the front panel in accordance with the section "[Front panel \(models with front loading door\) - Removing...](#)".  
**Models without front loading door:** Remove the front panel in accordance with the section "[Front panel \(models without front loading door\) - Removing...](#)".
3. Remove the panel in accordance with the section "[Panel - Removing...](#)".
4. **Early models:** the hole is marked out on the bottom.
5. **Early models:** the hole is marked out on the front rail.
6. Using a narrow chisel, cut off the rivet heads (7) and break those on the front rail off with a screwdriver (2).
7. Lift away the side panel.
8. File or grind smooth the places where the rivets were in the bottom and use a polygrip to flatten the front rail.

### WARNING

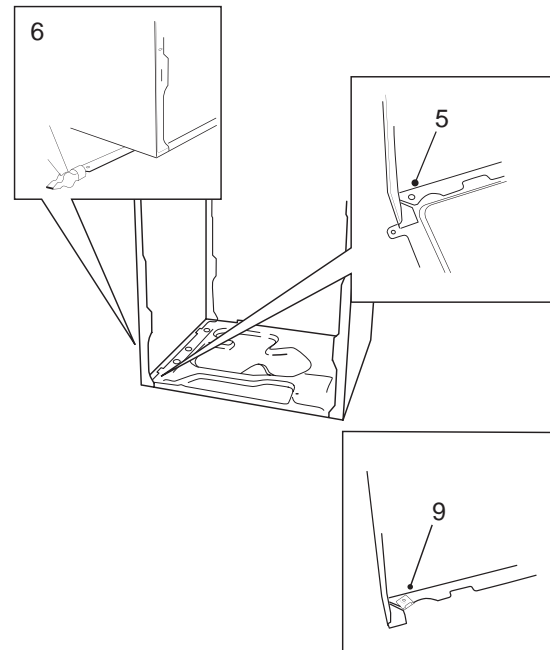
The edges of the bottom and the front rail where the rivets were placed must be completely flat and smooth.

9. **Early models:** Drill a 6.5 mm diameter hole in the bottom at the marking.
10. **Early models:** Drill a 5 mm diameter hole in the front rail at the marking.
11. Install 3 clips at the bottom of the side panels.
12. Lift the side panel into place.
13. Secure the cross member, transport beam and the front rail to the side panels.
14. Secure the side panels to the new bottom.
15. **Models with front loading door:** Install the front panel in accordance with the section "[Front panel \(models with front loading door\) - Installing...](#)".  
**Models without front loading door:** Install the front panel in accordance with the section "[Front panel \(models without front loading door\) - Installing...](#)".
16. Install the rear panel.
17. Install the panel in accordance with the section "[Panel - Installing...](#)".



**BOTTOM****Change of bottom**

1. Remove the holder complete in accordance with the section "Holder complete - Changing holder complete" point 1-7.
2. Dismantle the shock absorbers in accordance with steps 2 to 6 in the section "Bottom - Changing the shock absorbers".
3. **W640, W650 and W660:** Dismantle the motor control board in accordance with steps 2 to 5 in the section "Motor - Changing motor control board".
4. **W660:** Dismantle the overflow protection in accordance with steps 1 to 3 in the section "Bottom - Changing overflow protection".
5. **Early models:** the hole is marked out on the bottom.
6. Cut off the rivets between the bottom and side panels.
7. Remove the two screws which secure the lower cover or the front plate in the bottom.
8. Lift the side panels with the front plate etc.
9. Install 6 clips on the side panel bottom edges.
10. **Early models:** Drill a 6.5 mm diameter hole in the bottom at the marking.
11. Secure the side panels to the new bottom.
12. **W660:** Install the overflow protection in accordance with steps 4 to 6 in the section "Bottom - Changing overflow protection".
13. **W640, W650 and W660:** Install the motor control board in accordance with steps 6 to 9 in the section "Motor - Changing the motor control board".
14. Install the shock absorbers in accordance with steps 7 to 9 in the section "Bottom - Changing the shock absorbers".
15. Install the holder complete in accordance with the section "Holder complete - Changing holder complete" point 9-14.



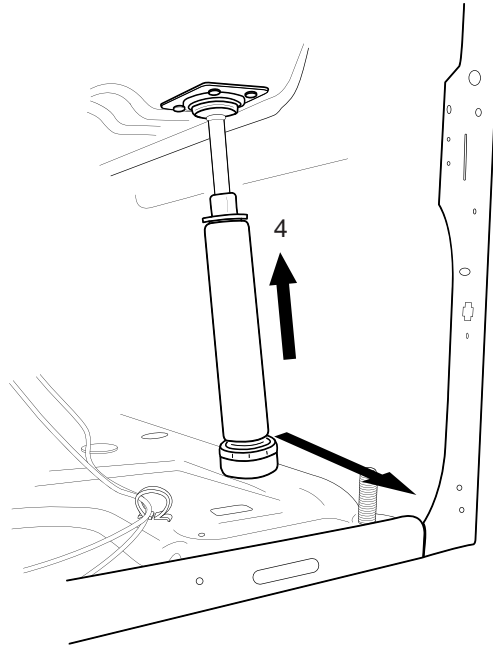
## Changing the shock absorbers

1. **Front shock absorbers:** Remove the front panel in accordance with the section "[Front panel \(models without front loading door\) - Removing...](#)" or else the bottom cover in accordance with the section "[Bottom cover - Removing...](#)".

**Rear shock absorbers:** Remove the rear panel by first removing the 12 screws around it and then lifting it off.

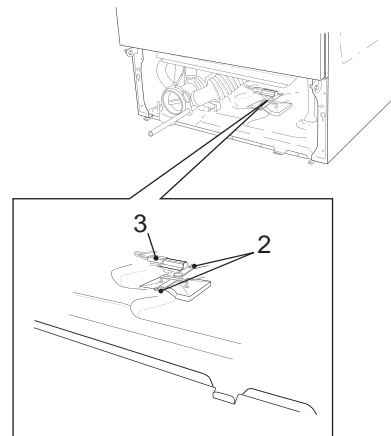
2. Remove the shock absorber nuts under the bottom plate.
3. Support the holder from underneath or secure it with a hook from above.
4. Compress the shock absorber. Angle it outwards and pull it off downwards.
5. Take off the piston rods.
6. Remove the rubber bushes.
7. Install new rubber bushes, piston rods and shock absorbers.
8. Compress the shock absorber and put it into position in the bottom plate.
9. Fit the nut on the underside and tighten it.
10. **Front shock absorbers:** Install the front panel in accordance with the section "[Front panel \(models without front loading door\) - Installing...](#)" or else the bottom cover in accordance with the section "[Bottom cover - Installing...](#)".

Install the rear panel by hanging it on the 2 hooks on the top edge and then securing its edges with the 12 screws.



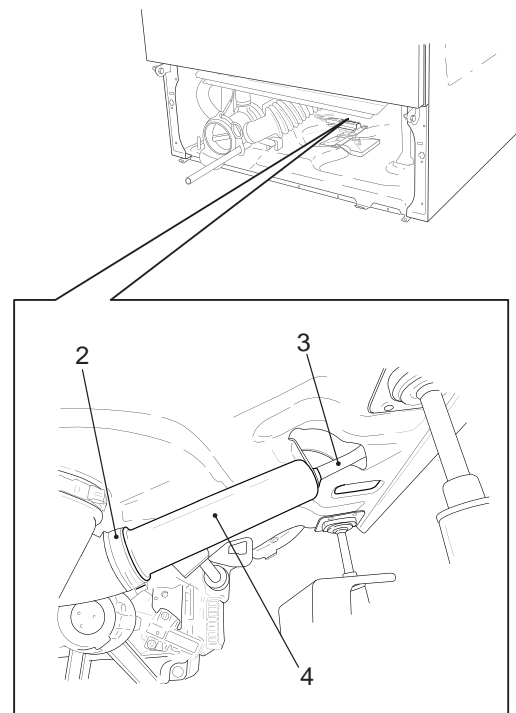
### Changing the overflow protection device (W660)

1. **From the rear:** Remove the rear panel by first removing the 12 screws around it and then lifting it off.  
**From the front:** Remove the bottom cover in accordance with the section "[Bottom cover - Removing...](#)".
2. Remove the protection device by squeezing the 2 plastic clips that secure it to the bottom plate.
3. Remove the wiring.
4. Connect the wiring to the new overfilling protection device.
5. Offer it up and press it into the clips.
6. **From the rear:** Install the rear panel by hanging it on the 2 hooks on the top edge and then securing its edges with the 12 screws.  
**From the front:** Install the bottom cover in accordance with the section "[Bottom cover - Installing...](#)".



### Changing pressure chamber

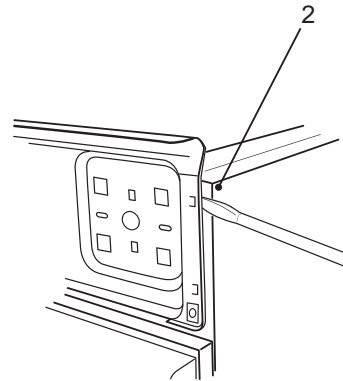
1. Models with front-loading doors: Remove the bottom cover in accordance with the section "[Bottom cover - Removing...](#)".  
Models without front-loading doors: Remove the front panel in accordance with the section "[Front panel \(models without front-loading doors\) - Removing...](#)".
2. Remove the hose clip securing the pressure chamber to the corrugated hose and remove the chamber.
3. Remove the rubber hose that leads to the level switch and level sensor.
4. Twist the pressure chamber 1/4 turn and take it out of the bracket.
5. Secure the new chamber by inserting it into the bracket and twisting it 1/4 turn.
6. Join the rubber hose and the corrugated hose together with a hose clip. Tighten the hose clip.
7. **Models with front-loading doors:** Install the bottom cover in accordance with the section "[Bottom cover - Installing...](#)".  
**Models without front-loading doors:** Install the front panel in accordance with the section "[Front panel \(models without front-loading doors\) - Installing...](#)".



## FRONT RAIL

### Changing the front rail

1. Remove the panel in accordance with the section "[Panel - removing...](#)".
2. **Early models:** the hole is marked out on the front rail.
3. Remove the rivets with a screwdriver and flatten with a polygrip.
4. **Early models:** Drill a 5 mm diameter hole in the front rail at the marking.
5. Secure the new front rail.
6. Install the panel in accordance with the section "[Panel - installation...](#)".





### **HOT WATER CONNECTION**

These machines can be modified to include a hot water connection and thus use a mixed water inlet.

#### **Installation of hot water connection**

1. Remove the 3 screws at the rear edge of the top lid and lift off the lid.
2. Knock out the plug in the cross-member.
3. Fit a 1-way hot water valve into the hole and connect the hot water piping to it.
4. Install a hose between the inlet valve and the free connecting flange on the detergent container.

#### **IMPORTANT**

---

Knock out the plug in the flange on the detergent container.

---

5. Fit an electrical jumper between the new inlet valve and the 3-way valve, see the electrical schematic diagram.
6. Install a new wire from IV3 on the inlet valve to the programmer header connector E4-4, see the electrical schematic diagram.
7. Cut the jumpers J-C and J-E.
8. Refit the top lid.

#### **IMPORTANT**

---

Don't forget the 2 star washers for the top lid outer screws.

---

# MODIFICATION OF W640, W650 AND W660

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## HOT WATER CONNECTION

These machines can be modified to include a hot water connection and thus use a mixed water inlet or a hot water inlet.

### Installation of hot water connection






1. Remove the 3 screws at the rear edge of the top lid and lift off the lid.
2. Knock out the plug in the cross-member.
3. Fit a 1-way hot water valve into the hole and connect the hot water piping to it.
4. Install a hose between the inlet valve and the free connecting flange on the detergent container.

### IMPORTANT

---

Knock out the plug in the flange on the detergent container.

---

5. Fit an electrical jumper between the new inlet valve and the 3-way valve, see the electrical schematic diagram.
6. Install a new wire from IV3 to the programmer header connector E4-3, see the electrical schematic diagram.
7. Reprogram the program controller. Press the  button 5 times and then the  button 5 times. Within the next 3 seconds press one of the following buttons to make your choice:
  -  Cold water (C shown on the display)
  -  Hot water (H shown on the display)
  -  Mixed supply (E shown on the display)3 seconds after the last button press, the program will return to its original state.
8. Refit the top lid.

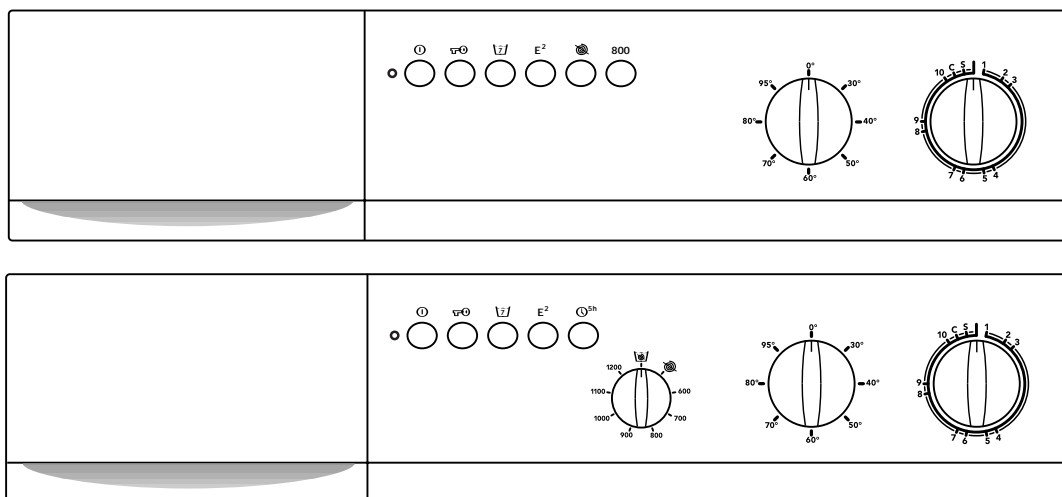
### IMPORTANT

---

Don't forget the 2 star washers for the top lid outer screws.

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## PROGRAMS AND OPTIONS FOR THE W600 AND W620



### PROGRAMS

#### 1. Heavy wash

Prewash - main wash - 3-5 rinses- (depending on the market) - short spin dry after main wash and the two first rinses- long spin dry after last rinse.

#### 2. Normal wash

Main wash - 3-5 rinses (depending on the market) - short spin dry after main wash and the two first rinses- long spin dry after last rinse.

#### 3. Fast wash

Short main wash - 3-5 rinses (depending on the market) - short spin dry after main wash and the two first rinses- long spin dry after last rinse.

#### 4. Rinse program

1 rinse - long spin dry.

#### 5. Long spin dry

Emptying - long spin dry.

#### 6. Synthetic wash

Main wash - 3 rinses - short spin dry after last rinse.

#### 7. Minimum wash

Short main wash - 2 rinses - short spin dry after last rinse.

#### 8. Short spin dry

Emptying - short spin dry.

#### 9. Wool/Hand wash

Gentle main wash, high water level - 3 rinses - short spin dry after last rinse.

#### 10. Emptying


Draining machine.


C, see the ["Test program and fault indications"](#) section.

S, see the ["Test program and fault indications"](#) section.

### OPTIONS

#### Spin drying (W620)

Set the spin dry knob to the position you want. If you choose  the program will stop with the last rinse water still in the machine, without spin drying. This is a good choice if you cannot take the washing out immediately after the wash program has finished. The washing will then remain floating in the rinse water and not get creased. After the program has finished you then choose either spin dry program 5 or 8, or emptying program 10 to empty out the rinse water.

If you choose , the program will finish by emptying the water out without spin drying.


## PROGRAMS AND OPTIONS FOR THE W600 AND W620

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### Spin drying (W600)

The normal spin drying speed is 1 000 rpm.

With the **800** button you can select the lower spin dry speed of 800 rpm.

If you want the program to run without spin drying, press the  button.

### Super rinse

Adds from 2 to 4 extra rinses (depending on the market) to the programs Heavy wash, Normal wash and Fast wash. Adds 2 extra rinses to the other programs.

### **E<sup>2</sup>** = Economy and Efficiency

If you choose this option you lengthen the time of the main wash by about 22 minutes. You can either choose an energy-saving variant without affecting the quality of the wash, or you can choose another variant that provides an extremely efficient program.

You can increase the washing power without increasing the wash temperature by pressing **E<sup>2</sup>**.

This gives you an energy-saving program that in no way reduces the quality of the wash.

Press **E<sup>2</sup>** and select a higher temperature. Then you get an even more efficient wash program.


Can only be selected for the Heavy wash, Normal wash and Fast wash programs.

### **Delayed starting (W620)**

If you press this button the machine will start 5 hours after you start the wash program.

### **IMPORTANT**

---

To register this option you must first press the main power button, then press  and after that choose your program. The program knob has to be at the zero position (straight up) when the main power button is pressed.


---

### Altering settings or changing the program

Press the option buttons in or out to make the alterations, and turn the program knob to the desired program.

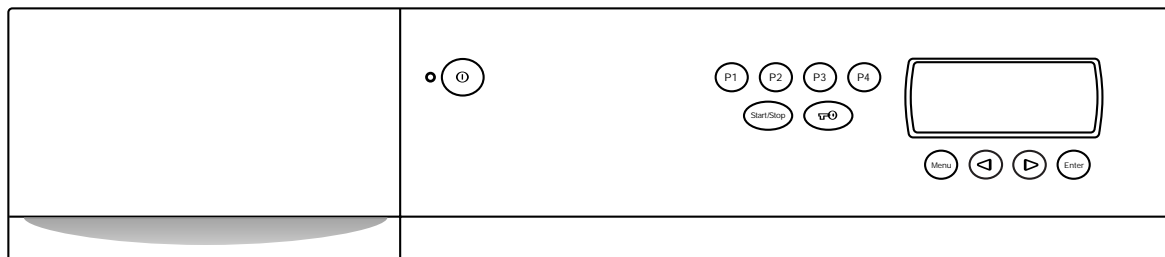
### **IMPORTANT (W620)**

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To change the Delayed starting option you must first set the program knob to the zero position (pointing straight up), then press the  button, and after that turn the program knob to the desired program position.


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## PROGRAMS AND OPTIONS W640, W650 AND W660




### PROGRAM


#### **P1** Program

Normal wash, , 1400, 1500 or 1600 rpm, depending on model, main wash, 3-5 rinses (depending on market), short spin dry after main wash and the two first rinses and a long spin dry after last rinse.


#### **P2** Program

Normal wash, , 1400, 1500 or 1600 rpm depending on model. Main wash, 3-5 rinses (depending on market), short spin dry after main wash and the two first rinses and a long spin dry after last rinse.

#### **P3** Program

Fast wash, , 800 rpm. Main wash, 2 rinses and short spin dry after last rinse.

#### **P4** Program

Wool/Hand wash, , 800 rpm. Main wash, 3 rinses and short spin dry.

#### Door opening



The door lock is mechanical, equipped with a pull magnet.

### OPTIONS


#### Menu

With this button you can step forward through the menu to reach the menu heading where you want to make a change. The menu headings are: Program, Temperature, Spin drying speed, Delayed starting time, Options and Sensor. The Options consist of the sub-headings Soaking, Shortened main wash, Eco, Super rinse, Short spin dry, Spin dry and Emptying.





With the   buttons you step forward or backward through the menu to reach the menu heading where you wish to make an alteration.



When you have reached the setting you want, you confirm your choice by pressing the  button once.

### RESTORING THE PRESET PROGRAMS

#### Do this:

1. Press and hold down the button for the program you want to restore.
2. Keeping the program button pressed in, press and hold down the  button as well for 3 seconds.
3. Release first the  button and then the program button.

#### Soaking

This option is good if you have heavily soiled washing that needs to lie and soak before being washed. The washing will be soaked for 2 hours before the washing program starts.

#### Short main wash

The short main wash shortens the selected program's main wash by 31 minutes. This option can only be selected for the Heavy wash and Normal wash programs.

#### Eco

Eco prolongs the main wash in the Heavy wash, Normal wash and Fast wash programs by 22 minutes.

## PROGRAMS AND OPTIONS W640, W650 AND W660

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### Super rinse



Adds 4 extra rinses to the Heavy wash, Normal wash and Fast wash programs. 2 rinses are added to the other programs.

### Temperature




The tolerance for temperature measurement is  $\pm 1^{\circ}\text{C}$ . The water temperature range is  $0^{\circ}\text{C} - 95^{\circ}\text{C}$  ( $70^{\circ}\text{F} - 200^{\circ}\text{F}$ ). A temperature that is selected to be greater than  $85^{\circ}\text{C}$ , ( $185^{\circ}\text{F}$ ) is indicated by the selected temperature, but the water will only be heated to a maximum of  $85^{\circ}\text{C}$  ( $185^{\circ}\text{F}$ ).

In case of a thermistor fault the heating element is set to the AV position and a fault indication is shown on the display.

### Spin drying speed

The spin drying speed can be raised or lowered by  , in steps of 100 rpm, from 600 rpm to 1600, 1500, or 1400 rpm depending on the model.

### Delayed start time






With the   button the start can be delayed from 1-12 hours. Each button press reduces or increases the delay by one hour. On the thirteenth button press the hours are reset to zero. Delayed start time is started/stopped with .

### Display of remaining time

This is always on after a program has been selected, unless the digital numbers are being used to present other information.

## CHOICE OF FUNKTIONS

### Program change after start

It is possible to make changes in the washing program even after the program has started. To prevent a change being made by mistake, the  button must first be held pressed in for 3 seconds to activate the program change function. By then using ,  and  the desired settings can be selected and confirmed. After the  has been activated by this long press, the changes and return to the main program must be made within 15 seconds. After a change has been made, the new program is shown on the display.

A change can only be made however if that part of the program you want to change has not yet

been run. It is also necessary for the change to be acceptable to the program that is running.

The following settings can be changed:

### Economy and Efficiency (E2)

Before cooling or, if the program does not include cooling, before discharge of the main wash water has begun.

### Super rinse

Before the final rinse has begun.

Short spin drying

Before the final spin drying cycle has begun.

### No spin drying

Before the first spin drying cycle.

### Temperature

Before the heating cycle.

### Spin drying speed

Before the final spin drying cycle has begun.

### Rinse sensor (W660)





Before the first rinse has begun.

### OTHER CHOICES




#### Rinse sensor (W660)

The sensor function minimises water consumption and optimises the rinsing results. Thorough rinsing is particularly important for people with sensitive skin, such as those with allergies, and babies.

The sensor function cannot be selected for the Fast- and Minimum wash programs.

1. Press the  button once.
2. Use the   button to select Sensor program On or Off.
3. Confirm and save your choice by pressing the  button once.

The first time you use the machine the sensor will detect what characteristics the incoming water has. If you move the machine to a place with a different water supply you must therefore reset the rinse sensor before washing for the first time after the move. Do this:

1. Switch off the mains power button,  and press it again to restart the machine.
2. Press the  button 5 times. These 5 button presses must be done within 15 seconds.
3. Press the  button once.

The rinse sensor is now reset. Ignore what is shown on the display.

4. Press the  button once to return to the program.

# MAKING YOUR OWN PROGRAMS (W640, W650 AND W660)

You can make your own wash programs that would perhaps suit your own needs better than the four preset programs.

You can always get the preset programs back again. See the heading "Restoring preset wash programs" at the end of this section.

The diagram below shows all the parts of the program you can alter. There follows a step-by-step set of instructions guiding your way to making programs that you prefer.

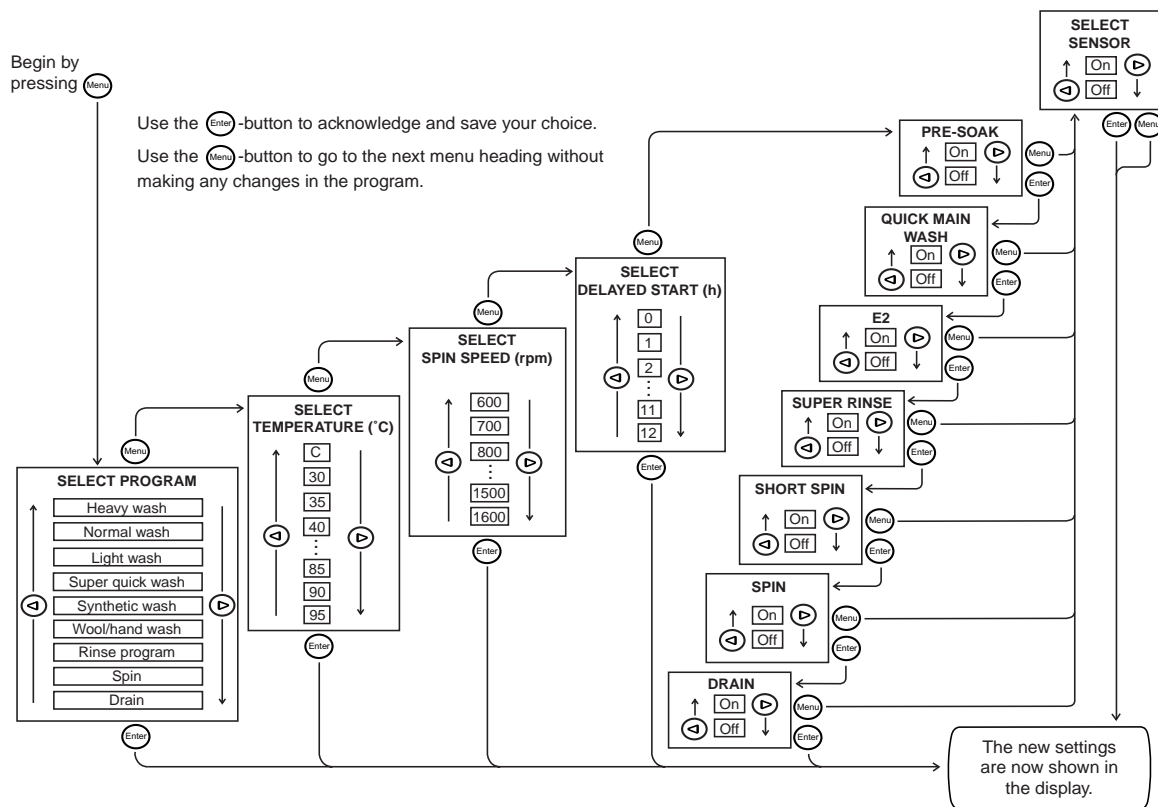
Each step begins with a description of the program, option or setting that you can choose. This is followed by a numbered sequence of instructions telling you what to do to obtain the changes you want.

The buttons that you will need to use for making your own programs are the **Menu**-, **Left** -, **Right** - and **Enter** buttons.

With the **Menu** button you step forward through the menu to reach the menu heading where you wish to make an alteration. The menu headings are: Program, Temperature, Spin drying speeds, Delayed starting, Options and Sensor. The options consist of the sub-headings Soaking, Short main wash, E2: Economical/Power, Super rinse, Short spin, Spin and Empty.

With the **Left** **Right** buttons you can step forwards or backwards in the respective headings to get the setting you want.

When you have reached the setting you want, you confirm your choice by pressing the **Enter** button once.



**USE **Menu**, **Left**, **Right**, **Enter** -BUTTONS TO MAKE YOUR OWN PROGRAMS.**



## MAKING YOUR OWN PROGRAMS (W640, W650 AND W660)

### SELECT THE INITIAL PROGRAM

Start by choosing one of the preset wash programs.

1. Press the button **P1**, **P2**, **P3** or **P4** to select the program you want to change.
2. Go to step 2.

### PROGRAM

The programs you can choose have the following sequences:

**Heavy wash:** Prewash - main wash - 3-5 rinses (depending on the market) - short spin dry after main wash and the two first rinses- long spin dry after last rinse.

**Normal wash:** Main wash - 3-5 rinses (depending on the market) - short spin dry after main wash and the two first rinses- long spin dry after last rinse.

**Minimum wash:** Short main wash - 2 rinses - short spin dry.

**Fast wash:** Short main wash - 3-5 rinses (depending on the market) - short spin dry after main wash and the two first rinses- long spin dry after last rinse.

**Synthetic wash:** Main wash - 3 rinses - short spin dry.

**Wool/Hand wash:** Main wash (gentle action, high water level) - 3 rinses - short spin dry.

**Rinse program:** 1 rinse - long spin dry.

**Spin dry:** 1 long spin dry.

**Emptying:** Only draining.

1. Press the **Menu** button once.
2. Press the **Left** **Right** buttons to select from Heavy wash, Normal wash, Fast wash, Minimum wash, Synthetic wash, Wool/Hand wash, Rinse program, Spin dry or Emptying.
3. Confirm and save your choice by pressing the **Enter** button once.

### TEMPERATURE

You can choose either temperature C (cold water), or between 30°C and 95°C. If you choose C the wash temperature will be the same as the incoming water temperature.

For the Wool/Hand wash program, the maximum temperature is 40°C.

1. Press the **Menu** button once.
2. Use the **Left** **Right** buttons to choose the desired temperature.
3. Confirm and save your choice by pressing the **Enter** button once.

### SPIN DRYING SPEEDS

You can choose spin drying speeds from 600 up to 1600 rpm.

For the Synthetic and Wool/Hand wash programs the maximum spin drying speed is 800 rpm.

1. Press the **Menu** button once.
2. Use the **Left** **Right** buttons to choose the desired spin drying speed.
3. Confirm and save your choice by pressing the **Enter** button once.

### DELAYED STARTING

You can delay the start of your wash program by up to 12 hours.

If you select Delayed starting, set for example to 5 hours, the machine will start 5 hours after you have pressed the start button.

As you step forward to the desired time, the time delay will be shown in the bottom right corner of the display, together with the **⊖** symbol.

1. Press the **Menu** button once.
2. Use the **Left** **Right** buttons to select the length of time you want to delay the start of the wash program.
3. Confirm and save your choice by pressing the **Enter** button once.

### OPTIONS

This heading has seven sub-headings (Option headings) with Options that you can add to your program.

The seven Options are: Soaking, Short main wash, E2: Economical/Power, Super rinse, Short spin, No Spin and No Empty.

#### Soaking

This Option is a good choice if you have heavily soiled washing that needs to soak before being washed. The washing will lie and soak for 2 hours before the wash program starts.

1. Press the **Menu** button once.
2. Use the **Left** **Right** buttons to decide whether you want Soaking On or Off.
3. Confirm and save your choice by pressing the **Enter** button once. You automatically go on to the next sub-heading:


## MAKING YOUR OWN PROGRAMS (W640, W650 AND W660)

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### Short main wash

With this Option you shorten the main wash time by about 31 minutes. Use this Option if your washing is not very dirty.

Can only be selected for the Heavy wash and Normal wash programs.


1. Use the ◀ ▶ buttons to decide whether you want Short main wash On or Off.
2. Confirm and save your choice by pressing the  button once. You automatically go on to the next sub-heading:

### E2: Economy/Power

If you choose this option you lengthen the time of the main wash by about 22 minutes. You can either choose an energy-saving variant (I) without affecting the quality of the wash, or you can choose variant (II) that provides an extremely efficient program.

- I. You can increase the washing power without affecting the wash temperature by choosing E2: Economy/Power On. This gives you an energy-saving program that in no way reduces the quality of the wash.
- II. Select E2: Economy/Power On and a higher temperature. This gives you a more efficient wash program.


Can only be selected for the Heavy wash, Normal wash and Fast wash programs.

1. Use the ◀ ▶ buttons to decide whether you want E2: Economy/Power On or Off.
2. Confirm and save your choice by pressing the  button once. You automatically go on to the next sub-heading, Super rinse.

### Super rinse

Gives you a wash program with extra rinses. With Super rinse you add four extra rinses to the wash programs Heavy wash, Normal wash and Fast wash, in other wash programs you add two extra rinses. (5-RINSE: Super rinse adds two extra rinses to the wash program.)


Choose Super rinse On whenever you want to be extra careful with your rinsing. Also use this choice if you are going to dye textiles.

1. Use the ◀ ▶ buttons to decide whether you want Super rinse On or Off.
2. Confirm and save your choice by pressing the  button once. You automatically go on to the next sub-heading, Short spin dry.

### Short spin dry


Gives a shorter spin drying time. Choose Short spin dry On for washing that may not be able to stand up to treatment that is too hard.

Short spin dry is always set to On in the Synthetic and Wool/Hand wash programs, and cannot be changed in these programs.

1. Use the ◀ ▶ buttons to decide whether you want Short spin dry On or Off.
2. Confirm and save your choice by pressing the  button once. You automatically go on to the next sub-heading, Spin dry.

### Spin dry

You can keep spin dry completely switched off. In that case, spin drying will not take place during the wash program.

1. Use the ◀ ▶ buttons to decide whether you want Spin dry On or Off.
2. Confirm and save your choice by pressing the  button once. You automatically go on to the next sub-heading, Emptying.


## MAKING YOUR OWN PROGRAMS (W640, W650 AND W660)




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### Emptying

Selected in combination with Spin dry Off. The wash program then finishes with the final rinse water still in the machine.

This is a good choice if you are doing delicate washing and cannot take the washing out immediately after the wash program has finished. The washing will then remain floating in the rinse water and not get creased.

To then empty the machine you can either run the Emptying program or press the  button. If you want the washing to be spin dried, you can also run the Spin dry program.

1. Use the   buttons to decide whether you want Emptying On or Off.
2. Confirm and save your choice by pressing the  button once.





Now you have gone through all the Options.

### RINSE SENSOR (W660)

A good rinse result is especially important for people with sensitive skin, for example people who are allergic, and babies.

The sensor ensures that the machine rinses all detergent residue out of the washing. It does this without using unnecessarily large amounts of rinse water.

Cannot be selected for the Fast and Minimum wash programs.


1. Press the  button once.
2. Use the   buttons to decide whether you want the Sensor program On or Off.
3. Confirm and save your choice by pressing the  button once.

You have now made your own wash program and saved it.

Next time you want to run this wash program you only need to press the program button you chose when you made the new settings.


### SHORT CUT

If you don't want to make changes in all of the menu headings for your program, you can skip the ones where you don't want to make changes.

To go to the next heading, without changing anything in the heading where you are now, press the  button once. In this case the settings of the heading you are leaving will not be changed.

### IMPORTANT

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This applies to the main menu headings. If you are in the Options headings, you have to confirm the present setting by pressing the  button before going on to the next Option heading.

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### RESTORING THE PRESET PROGRAM

You can always restore the preset wash program.

#### Do this:

1. Press and hold down the button for the program you want to restore.
2. Keeping the program button pressed in, press the  button as well.
3. Let go of both buttons. The preset program is now restored.

# PROGRAM OVERVIEW

## W600/620, WITH 3 RINSES

PROGRAM	PREWASH	MAIN WASH	SHORT SPIN.	RINSE	SHORT SPIN.	RINSE	SHORT SPIN.	RINSE/RINS DET.	LONG/SHORT SPIN
The Heavy wash	X	X	X	X	X	X	X	X	X
Normal wash	-	X	X	X	X	X	X	X	X
Fast wash	-	X	X	X	X	X	X	X	X
Rinse wash	-	-	-	-	-	-	-	X	X / X
Spin dry	-	-	-	-	-	-	-	-	X
Synthetic wash	-	X	-	X	-	X	-	X	/ X
Minimum wash	-	X	-	-	-	X	-	X	/ X
Wool/Hand wash	-	X	-	X	-	X	-	X	/ X
Emptying	-	-	-	-	-	-	-	-	-

## MACHINES WITH 5 RINSES

The Heavy wash, Normal wash and Fast wash programs in the diagram apply to machines with 3 rinses. Machines with 5 rinses have 1 more rinse after the main wash and 1 further rinse after the second short spin dry.

**W640/650/660, WITH 3 RINSES**

PROGRAM	PREWASH	MAIN WASH	SHORT SPIN.	RINSE	SHORT SPIN.	RINSE	SHORT SPIN.	RINSE/RINS DET.	LONG/SHORT SPIN
The Heavy wash	X	X	X	X	X	X	X	X	X
Normal wash	-	X	X	X	X	X	X	X	X
Fast wash	-	X	X	X	X	X	X	X	X
Rinse wash	-	-	-	-	-	-	-	X	X
Spin dry	-	-	-	-	-	-	-	-	X
Synthetic wash	-	X	-	X	-	X	-	X	/X
Minimum wash	-	X	-	-	-	X	-	X	/X
Wool/Hand wash	-	X	-	X	-	X	-	X	/X
Emptying	-	-	-	-	-	-	-	-	-

**MACHINES WITH 5 RINSES**

The Heavy wash, Normal wash and Fast wash programs in the diagram apply to machines with 3 rinses. Machines with 5 rinses have 1 more rinse after the main wash and 1 further rinse after the second short spin dry.


# WASHING WITH THE W600 AND W620

## 1. Sort the washing

## 2. Press the on/off button, , and open the door

## 3. Put the washing in

## 4. Put in the detergent and, if you wish, rinsing agent


Put the detergent (for the main wash) in the left compartment (2), pre-wash detergent (if any) in the centre compartment (1) and rinsing agent in the right compartment (). If you are using liquid detergent, the partition provided with the machine must be placed in the inner slot of the detergent compartment.

## 5. Select the options, settings and program


## 6. Close the door

The wash program will start.

## 7. When the wash program is complete

Press the  button and take the washing out.

## 8. After washing

Press the on/off button , to switch off the power and close the door.

WASHING	Heavily soiled material, e.g. overalls	Cotton, linen, white and light-coloured textiles	Cotton, linen, white and light-coloured textiles. High-efficiency program	Cotton, linen, white and light-coloured clothes. Economy program	Cotton, linen, Darker coloured clothes.	Cotton, linen, Darker coloured textiles. Economy program	Polyester, cotton/polyester, nylon. Less heavily soiled cotton or linen	Washing marked IWS, Superwash or Hand wash	Washing marked IWS, Superwash or Hand wash	Washing marked IWS, Superwash or Hand wash
SETTINGS:										
Program	1 Long wash	2 Long wash	2 Normal wash	2 Normal wash	2 Normal wash	2 Normal wash	3 Fast wash	6 Synthetic wash	7 Minimum wash	9 Wool/Handwash
Temperature (°C)	60-95	60-95	60	40	40-60	40	40	60	30-40	30-40
Option			/	/		/				
Spin drying speed rpm (W600)	800-1000	800-1000	800-1000	800-1000	800-1000	800-1000	800-1000	800	800-1000	800
Spin drying speed rpm (W620)	600-1200	600-1200	600-1200	600-1200	600-1200	600-1200	600-1200	600-800	600-1200	600-800
Washing load	1/1	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/3


# WASHING WITH THE W640, W650 AND W660

## 1. Sort the washing





2. Press the on/off button  and open the door .



## 3. Put the washing in

4. Put in the detergent and, if you wish, rinsing agent

Put the detergent (for the main wash) in the left compartment ( **2** ), pre-wash detergent (if any) in the centre compartment ( **1** ) and rinsing agent in the right compartment (  ). If you are using liquid detergent, the partition provided with the machine must be placed in the inner slot of the detergent compartment.

## 5. Select the program


The machine has four preset wash programs, , ,  and . Press the button for the program you want to use. You can temporarily change the program, however any changes you make only stay in the machine memory while the program is running. You can change

the temperature with the  button and the spin drying speed with the  button. Each time you press one of these buttons, the setting increases to the next higher temperature or speed.


6. Close the door and press the  button.

Push the door closed, don't slam it.

7. When the wash program is complete.

Press the  button and take the washing out.

8. After washing.

Press the on/off button , to switch off the power and close the door.

WASHING	<i>Cotton, linen, white and light coloured textiles</i>	<i>Cotton, linen. Darker coloured textiles</i>	<i>Washing needing only a quick freshening e.g. tracksuits</i>	<i>Clothes marked WWS. Superwash or Hand wash</i>
SETTINGS:				
Program	1 el. 2 Normal wash	1 el. 2 Normal wash	3 Fast wash	4 Wool/Hand wash
Temperature ( C )	60-95	40-60	30-40	30-40
Spin drying speed rpm (W640)	600-1400	600-1400	600-1400	600-800
Spin drying speed rpm (W650)	600-1500	600-1500	600-1500	600-800
Spin drying speed rpm (W660)	600-1600	600-1600	600-1600	600-800
Washing load	1/1	1/1	1/2	1/3

## CLEANING AND MAINTENANCE

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### CHECKING THE NEEDLE TRAP AND DRAIN PUMP

The washing machine has a needle trap to catch items such as coins, hairpins and similar objects. Clean the needle trap and drain pump like this:

1. Ensure that the main power switch is off.
2. Using the detergent compartment divider or a screwdriver, open the drain pump cover.
3. Disconnect the drain hose.

### IMPORTANT

Take care not to break off the hose plug.

### NOTE

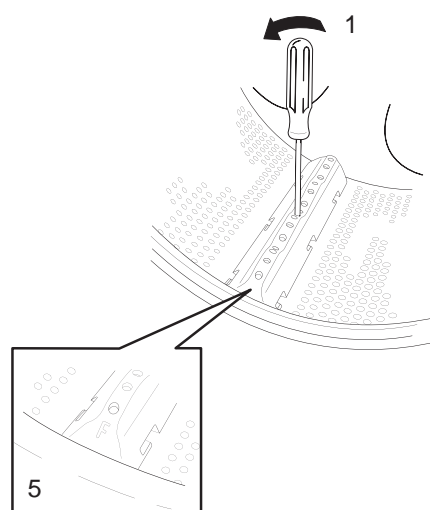
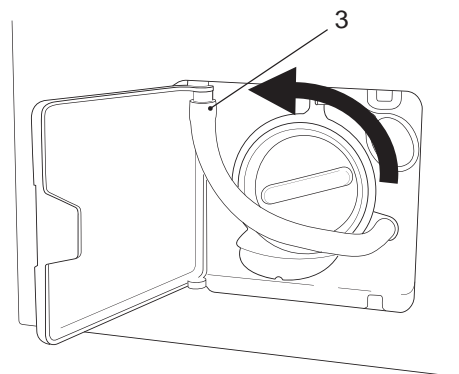
There may be water left in the machine, that will run out through the drain hose.

4. Open the pump by unscrewing its lid counterclockwise. Lift off the cover and the needle trap.
5. Clean out any objects or foreign matter from the pump housing. Also ensure that the pump blade, furthest in, can be turned freely.
6. Insert the needle trap, screw the pump lid back on and refit the drain hose. Close the drain pump cover.

### CLEANING THE HOLES UNDER THE RIDGES

If you suspect that objects such as nails, paper clips, pins, etc., may have fallen through the washing drum you should check the spaces beneath the ridges. Objects like this can corrode and stain or tear holes in your washing.

1. Insert a screwdriver or similar tool into the middle hole in the ridge and carefully push the handle to the left.
2. Pull the ridge towards the opening in the drum.
3. Lift the ridge up.
4. Remove any objects from underneath the ridge.
5. Place the ridge in its slot with the F marking facing the drum opening. Push the ridge inwards as far as possible, to secure it.





### **CLEANING THE DETERGENT COMPARTMENT**

1. Pull towards you and then lift out the detergent compartment.
2. Rinse and brush the compartment clean.

### **IMPORTANT**

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Do not wash the detergent compartment in a dishwasher.

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3. Put the detergent compartment back into the machine.

### **IF YOU LIVE IN AN AREA WITH HARD WATER**

If the washing machine is installed in an area with hard water the washer drum may become coated with a greyish-white deposit. To remove this, empty a packet of citric acid, about 20 grammes, into the drum and run the Normal wash program at 90° C.

Citric acid can often be found on the spice shelf in groceries.

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