

Repair Instructions –

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Concerning this document

1.1 Important information

Read and observe chapter 2 "Safety" before performing any work!

1.1.1 Purpose

These repair instructions form the basis for a systematic and safety conscious procedure for the repair of domestic appliances.

These repair instructions include information about troubleshooting and repair.

1.1.2 Target group

These repair instructions are intended for persons who are familiar with equipment technology and were instructed by BSH or an authorised body:

- Service technicians for the repair of domestic appliances
- Pre-assemblers in the spare part stockroom when determining required spare parts
- Call centre employees during order acceptance

1.1.3 Other applicable documents

The following documents include additional relevant repair information:

- General repair instructions
- Error codes and service programs
- Circuit diagrams
- Exploded drawings
- Parts lists
- Repair videos

1.2 Explanation of symbols

1.2.1 Danger levels

The warning levels consist of a symbol and a signal word. The signal word indicates the severity of the danger.

Warning level	Meaning
 DANGER	Non-observance of the warning message will result in death or serious injuries.
 WARNING	Non-observance of the warning message could result in death or serious injuries.
 CAUTION	Non-observance of the warning message could result in minor injuries.
 NOTICE	Non-observance of the warning message could result in damage to property.

Table 1: Danger levels

1.2.2 Hazard symbols

Hazard symbols are symbolic representations which give an indication of the kind of danger.

The following hazard symbols are used in this document:

Hazard symbol	Meaning
	General warning message
	Danger from electrical voltage
	Risk of explosion

Concerning this document

Hazard symbol	Meaning
	Danger of cuts
	Danger of crushing
	Danger from hot surfaces
	Danger from strong magnetic field
	Danger from non-ionizing radiation

Table 2: Hazard symbols

1.2.3 Structure of the warnings

Warnings in this document have a standardised appearance and a standardised structure.

	 Type and source of danger! Consequences of ignoring the warning. ► Actions to protect from danger.
--	--

The following example shows a warning that warns against electric shock due to live parts. The measure for avoiding the danger is mentioned.

	 Risk of electric shock due to live parts! ► Disconnect the appliance from the mains at least 60 seconds before starting the work .
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1.2.4 General symbols

The following general symbols are used in this document:

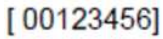
Gen. symbol	Meaning
	Identification of a special tip (text and/or graphic)
	Identification of a key or button
	Identification of a material number
	Identification of a condition (if ..., then ...)
	Identification of a simple tip (only text)

Table 3: General symbols

Safety

2.1 Qualification

In Germany, only qualified electricians trained by BSH or an authorised body may perform any repair work.

In other countries, only similarly trained qualified personnel is permitted to perform the repair work.

Appliances must only be repaired by persons that are qualified, **approved** and trained by BSH or an authorised body as instructed.

2.2 General safety information

2.2.1 All domestic appliances

Risk of electric shock due to live parts!

- Disconnect the appliance from the mains for at least 60 seconds before starting work.
- Do not touch the housing, components and cables.
- For tests on an energised system, use a residual current circuit breaker.
- Discharge high-voltage capacitors.

Risk of injury from sharp edges!

- Wear protective gloves.

Risk of injury when dealing with harmful substances!

- Observe the associated safety data sheet!

Risk to the appliance's safety / function!

- Only use original spare parts.

Risk of damage to electrostatically sensitive components (ESDs)!

- Before touching ESDs, use an electrostatic protection system (wristband with earth safe plug).
- Do not touch connections and conductor paths of the modules.
- Only transport ESDs in conductive materials or original packaging.
- Keep ESDs clear of electrostatically chargeable materials (i.e. plastic).

Safety

2.3 Product-specific safety information

2.3.1 Microwave ovens

Risk of scalding due to explosive escape of liquids in case of delayed boiling!

- Before heating place a metal spoon in the liquid.

Health hazard due to non-ionising radiation!

- After any work on the appliance, check the tightness with leak rate measurement.

2.3.2 Induction appliances

Induction appliances fulfil the relevant regulations for safety and electromagnetic compatibility (EN 50366).

Danger to life due to magnetic fields!

- People with pacemakers should stay clear during repairs on an open appliance!

Health hazard due to magnetic fields!

- People with medical devices (for example insulin pump / hearing aid) should stay clear of the opened appliance!

2.3.3 Gas appliances

Explosion hazard due to escaping gas!

- Cut off the gas supply before working on gas carrying connections.
- Check tightness following work on connections carrying gas.
- Only repair gas appliances with original parts that were tested and released for such use.

If you smell gas!

- Do not press any electrical switches.
- Extinguish / keep clear of open flames.
- Ensure that room is well ventilated.
- Close the gas isolating equipment.

2.3.4 Refrigerators and freezers

Risk of burns caused by refrigerants!

- Wear protective gloves and goggles.

Explosion hazard due to refrigerants!

- Do not solder pipe connections, only use Lokring connections.
- Do not press any electrical switches.
- Keep clear of thermal appliances.
- Extinguish / keep clear of open flames.
- Ensure that room is well ventilated.

2.3.5 Dryer with heat pump

Risk of burns caused by refrigerants!

- Wear protective gloves and goggles.

Explosion hazard due to refrigerants!

- Do not solder pipe connections, only use Lokring connections.
- Do not press any electrical switches.
- Keep clear of thermal appliances.
- Extinguish / keep clear of open flames.
- Ensure that room is well ventilated.

2.4 Measures after each repair

If the appliance is functional:

- Check according to VDE 0701 or country-specific regulations.
- Check external appearance, function and tightness.
- Document repair work, measured values and functional reliability.

If the appliance is **not** functional:

- Identify the appliance as “not functionally reliable”.
- Warn customers of commissioning and notify them in writing .

Design and function

3.1 Operating and power modules

Dishwashers have two control modules, an operating module (with display, lights & buttons) in the fascia (control) panel and a power module in the base on the right side. The power module controls the BLDC (Brushless DC) drain and heat pumps.

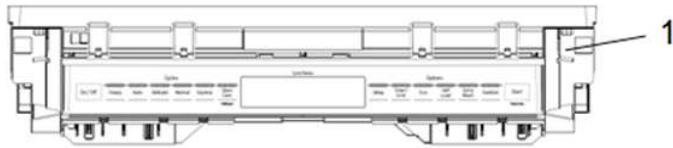


Fig. 1: Operating module

1 Operating module (in fascia panel)

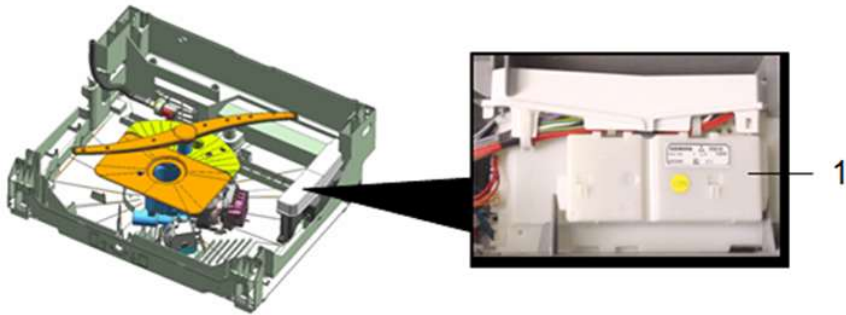


Fig. 2: Power module

1 Power module (in base)

The wire harness connected to the control module is a separate harness.

Design and function

3.2 Dispensers

The dispenser, located in the middle of the inner door, reliably dispenses detergent and rinse-aid.



Fig. 3: Dispenser front views

During each wash program, the dispenser operates twice, once to dispense detergent and again to dispense rinse-aid.

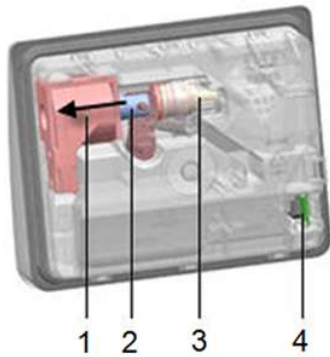


Fig. 4: Dispenser cutaway showing internal parts

- | | |
|------------------|----------------------------|
| 1 Coil | 4 Optical rinse-aid sensor |
| 2 Actuator | 5 Cover release lever |
| 3 Rinse-aid pump | |

The coil (1), powered by 165 VDC pulses from the control, moves the detergent cover actuator (2) to the left. A plastic link turns, rotating the detergent cover release lever (5), which opens the detergent cover. A mechanical link between the coil actuator and rinse-aid valve prevents rinse aid from being dispensed when the coil is first actuated. After the detergent cover has opened, the link moves and locks in place, allowing the rinse-aid pump to dispense rinse aid.

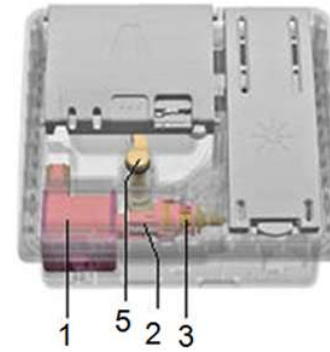


Fig. 5: Dispenser internal operating parts

- | | |
|------------------|----------------------------|
| 1 Coil | 4 Optical rinse-aid sensor |
| 2 Actuator | 5 Cover release lever |
| 3 Rinse-aid pump | |

Each 165 VDC control pulse dispenses 1 ml of rinse aid – the total amount depends on the dispenser setting. A vent equalizes internal pressure to dispense rinse-aid accurately. The rinse-aid chamber holds 125 ml of rinse-aid and triggers the "Add rinse-aid" LED when 45 ml is left.

The actuator is reset when the detergent door is opened so the detergent cover opens first the next time the coil is activated.

Detergent tablets dissolve more slowly if there's moisture left in the detergent dispenser. Two plastic ribs in the detergent cup prevent detergent tablets from "sticking" to the cup.



CAUTION

Sharp edges!

Cut injuries.

► Wear protective gloves.

Design and function

3.3 Heat pump

3.3.1 Heat pump basics

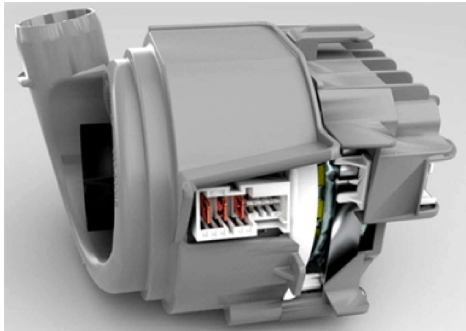


Fig. 6: Heat pump

The heat pump contains the heating element, motor speed sensor, two temperature sensors (NTC's), motor and pump (head). The component parts aren't available separately.

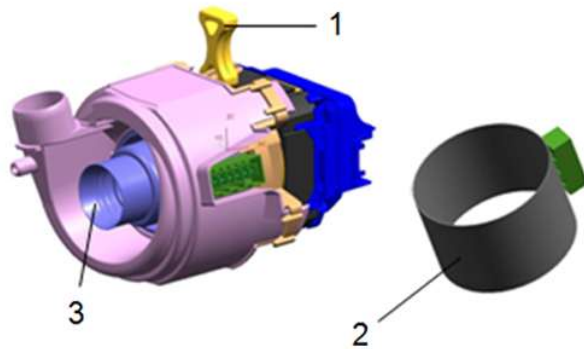


Fig. 7: Heat pump parts

- 1 Pump suspension strap
- 2 Heating element

- 3 Seal ring

There's no flow-through heater, flow switch or Hi-Limit cutout – the heat pump uses a flow-through heated cylinder. The 120 VAC, 1200 W heater cylinder provides more heating surface area and heats water quickly (about 2°F/minute).

The pump impeller is driven by a 3-pole BLDC motor controlled by the power module.

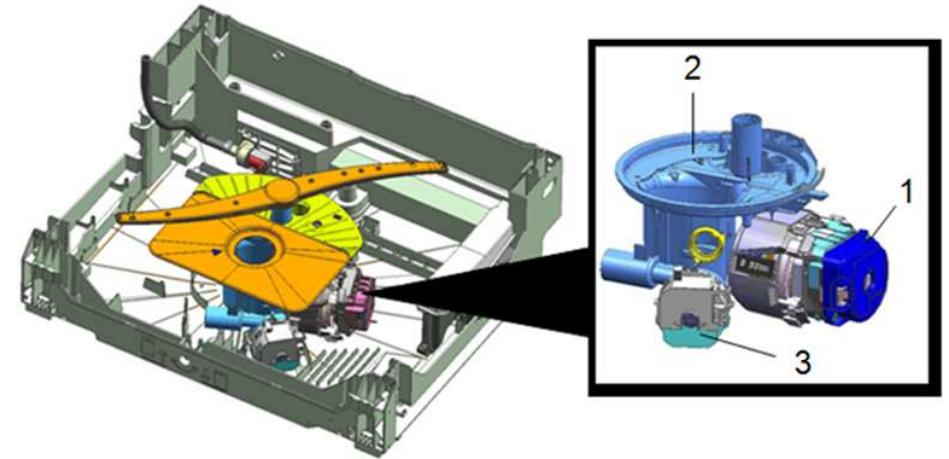


Fig. 8: Heat pump location

The heat pump is attached to the sump, to the right of the drain pump, accessible from the right side of the dishwasher.

- The dishwasher won't run if the heat pump is disconnected or disabled.
- The heat pump is best accessed by pulling out the dishwasher and placing it on its back.
- The motor and pump are isolated from each other to eliminate leaking or binding and the need for a shaft seal.
- Depending on the model and wash cycle, heat pumps speed up to provide more water pressure (for intensive cycles) or slow down to provide less water pressure (for delicate cycles). This is determined by the wash cycle software, not the aqua sensor, so it doesn't matter how clean or dirty the water is.

Design and function

- There are two terminal connectors:
 - 6-pin heater terminal on the side of the pump.
 - 3-pin motor terminal at the end of the motor.



Fig. 9: Heat pump terminals

- 1 6-pin heater terminal 2 3-pin motor terminal

- Ratings: 3-pole BLDC, 110-120 VAC, 150 Hz, 1200 W thick film heater, < 80 W motor, class F insulation, 5-blade impeller with guide wheel.

3.3.2 Heat pump operation

The impeller draws water into the pump and circulates it inside the cylindrical heating element. The guide wheel directs the water through the pump outlet to the water switch to be directed to the spray arms.

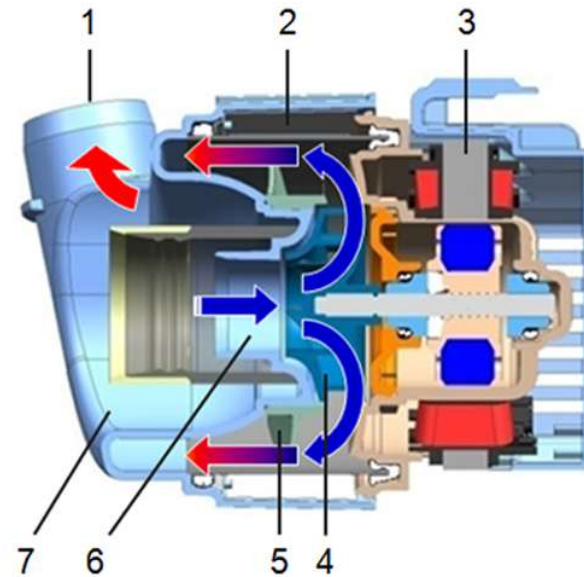


Fig. 10: Heat pump detail

- | | | | |
|---|---------------------------|---|-----------------|
| 1 | Outlet to water switch | 5 | Guide wheel |
| 2 | Heating cylinder w/ NTC's | 6 | Inlet from sump |
| 3 | BLDC motor | 7 | Pump housing |
| 4 | Impeller | | |

While water is being circulated, the BLDC (Brushless DC) motor senses the pump status based on the current (amp) draw of the motor windings:

- No water
- Too little water (cavitating)
- Proper water level
- Pump blockage

Safety-related issues, such as “heating without water” or “water too hot”, are detected and evaluated.

If the pump is blocked, the pump tries several times to loosen the blockage. If unsuccessful, the wash cycle ends and an error code is stored in memory.

Design and function

3.4 Drain pump

3.4.1 Drain pump basics

The BLDC (Brushless DC) 9-vane drain pump has variable speed and direction. The power control module controls pump speed and direction, detects end of draining and blocked rotor and corrects locked rotor conditions.

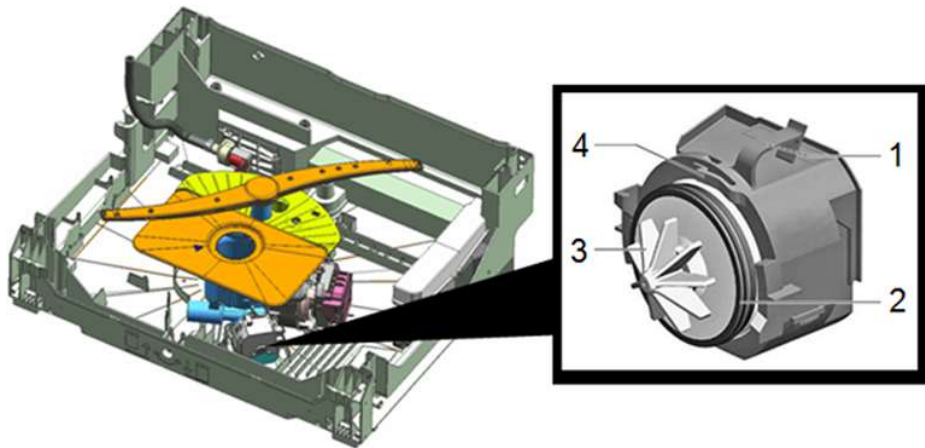


Fig. 11: Drain pump location

- | | |
|--------------|-------------|
| 1 Wire guide | 3 Impeller |
| 2 Seal | 4 Pump lock |

- The dishwasher won't run if the drain pump is disconnected or disabled.
- The drain pump is best accessed by pulling out the dishwasher and placing it on its back.
- Ratings: 3-pole BLDC, 54 VAC, 55 Hz, 2500 – 3500 RPM, 0.15 - 0.25 A, 10 – 25 W, class F insulation, 9-vane impeller.
- Resistances as follows:
 - 1 – 2: 130 Ω (@ 68 °F)
 - 2 – 3: 130 Ω (@ 68 °F)
 - 3 – 1: 130 Ω (@ 68 °F)

To remove the drain pump, rotate it clockwise and pull it out.

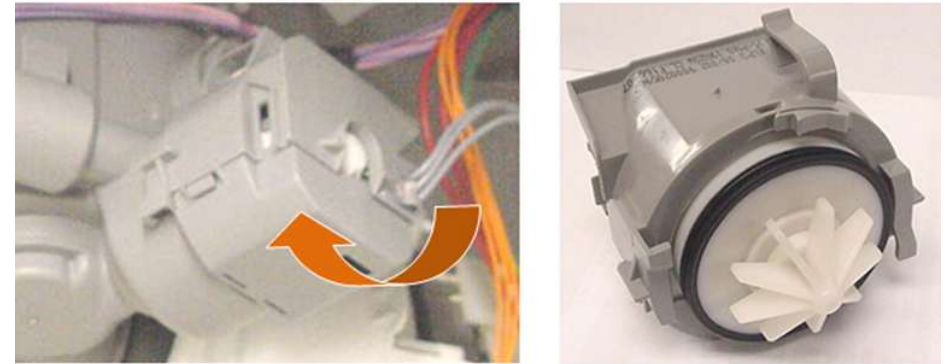


Fig. 12: Drain pump removal

3.4.2 Drain pump operation

The impeller draws water from the sump and pumps it through the non-return valve into the drain hose.

While water is being pumped, the BLDC (Brushless DC) motor senses the pump status based on the current (amp) draw of the motor windings:

- No water (idle – not pumping)
- No pressure build-up (missing pump cover)
- Pump blockage
- Blocked or kinked drain hose

If there is too little water in the sump, pumping is stopped.

If there is no drain pump cover in the sump, water pressure cannot build up and the pump cannot pump. An error code is stored in memory.

The motor senses if the pump is blocked. Using brief, intermittent bursts, the pump tries several times to loosen the blockage.

If draining is disrupted by a blockage or kink in the drain hose, draining is stopped and an error code is stored in memory.

Design and function

3.4.3 Solving installation issues

Often improper installations, not drain pump issues, cause dishwashers to not drain properly.

- Must have drain hoses with high loops (min. 33" high) or drains with air gaps.
- To avoid damaging drain hoses, place high loops inside cabinets near customer drain connections, not next to dishwasher tanks.
- Drain hoses are 92" long and can be up to 150" long (with [SGZ1010UC] / service # [00663105]) extension.
- Run drain hoses through left or right straps at rear of dishwasher bases.
- Make sure drain hoses aren't kinked.

3.4.4 Cavitating

Cavitating may occur in any type of pump when impellers spin faster from low inlet / outlet pressure, creating air pockets around impellers. Cavitating pumps can be noisy. Air gaps / high loops keep water contacting pump outlets, preventing air pockets from forming.

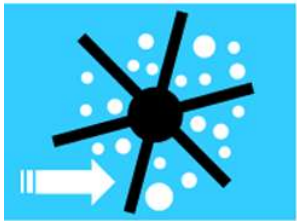


Fig. 13: Cavitating

3.4.5 Siphoning

Siphoning may occur in any type of drain pump when low water flow allows a siphon (suction) to develop, pulling waste water back into the pump. Sump check valves along with air gaps / high loops prevent siphons from being created.

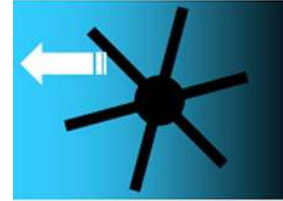


Fig. 14: Siphoning

3.4.6 Johnson Tee applications

For installations with a Johnson Tee, the Johnson Tee must be installed in the wall behind the dishwasher, no more than 50" (at its maximum height) above the floor. The connection must be $\frac{3}{4}$ " minimum – $\frac{1}{2}$ " must not be used. Dishwasher drain hose extensions must not be used.

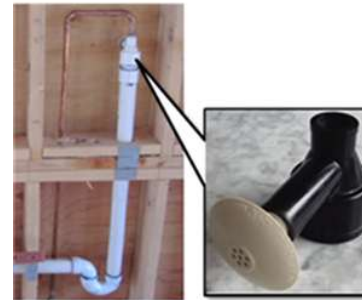


Fig. 15: Johnson Tee



Johnson Tee's are primarily used in Washington State, although some are used in California.

Design and function

3.5 Info light

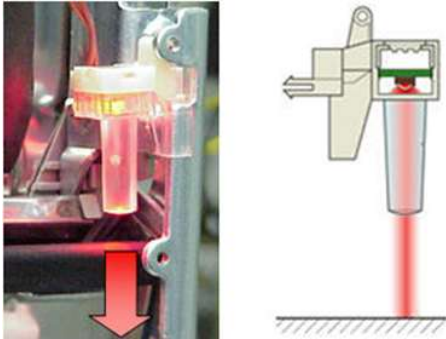


Fig. 16: Info light detail

A red or blue light (LED) in the info light shines on the floor to show the dishwasher is running. The door shouldn't be opened until the info light has gone out, showing the dishwasher wash cycle has completed.

Info lights can't be seen from the side – the only light seen is a warm glow on the floor.

Design and function

3.6.3 Unintentional operation

The dishwasher is protected from "unintentional operation" (i.e. accidentally resuming a wash cycle after the door has been opened). After the door has been opened for more than four (4) seconds, the dishwasher will be paused, requiring customers to deliberately resume the wash cycle by pressing **Start (Resume)** before closing the door.



If customers complain their dishwashers won't restart once the door has been opened, advise them to open the door and press **Start (Resume)** before closing the door.

Design and function

3.7 Door springs

The door spring mechanism uses a “sliding” pulley and cord to provide proper tension and enable self-closing. The fixed sliding pulley is attached by two screws (including one inside the bottom pulley). The cord slides on the pulley, using the friction between it and the cord to provide better control.

The spring slides into a slotted pocket in the side of the base and connects to the cord. Springs are color coded for specific tensions.

Fully integrated dishwashers with light wooden door panels will need door springs changed (from pink dot springs to black). The following chart shows when to replace door springs.

Spring Color	Spring Force	Replacement Kit #	Wooden Panel Weight	Dishwasher Type
Light Blue	Stronger	[12004115]	8.1 - 11.3 kg (18 - 25 lb.)	Use if pink springs aren't strong enough
Pink	-	[12004116]	6.3 - 8.1 kg (14 - 18 lb.)	Fully integrated
Green	-	None	4.5 - 6.3 kg (10 - 14 lb.)	Not used in the US
Black	-	[12004117]	3.2 - 4.5 kg (7 - 10 lb.)	Fully integrated
Blue	-	[12004118]	-	Evolution / Integra
Red	Weaker	[12004119]	-	Evolution / Integra

Table 4:

- Springs have mounting brackets which slide into bases.
- Springs have cord attachments on the other end.

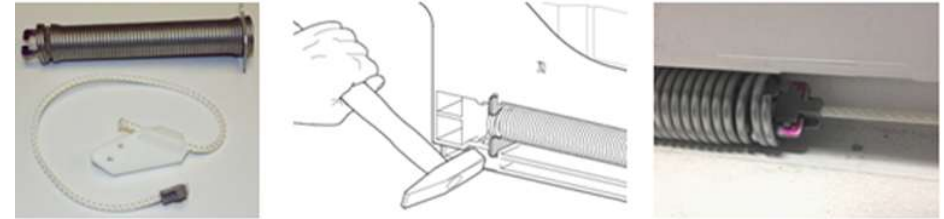


Fig. 20: Installing door springs



Many service calls have occurred from customers with dishwasher doors without wooden panels installed. Door springs are chosen to support the weight of most wooden panels – doors without panels are too light and close on their own.

NOTICE

Some installers have used long wood or drywall screws instead of the supplied toe kick screws.

Long, sharp screws cut hinge cords.

- Use the supplied toe kick screws.

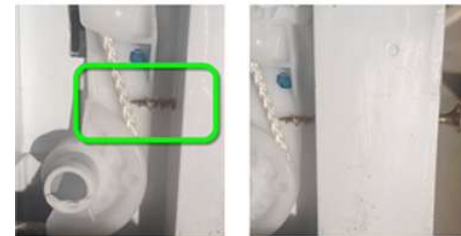


Fig. 21: Consequences of not using supplied toe kick screws

Design and function

3.8 Water inlet - condensation system

3.8.1 Water inlet system

The time-fill water inlet system lies next to the left side of the tank. It doesn't fill water into the bottom of the tank through the sump, but into the left side of the tank, near the bottom.

A vent on the left side of the tank aids water flow and allows condensation to exit during drying.

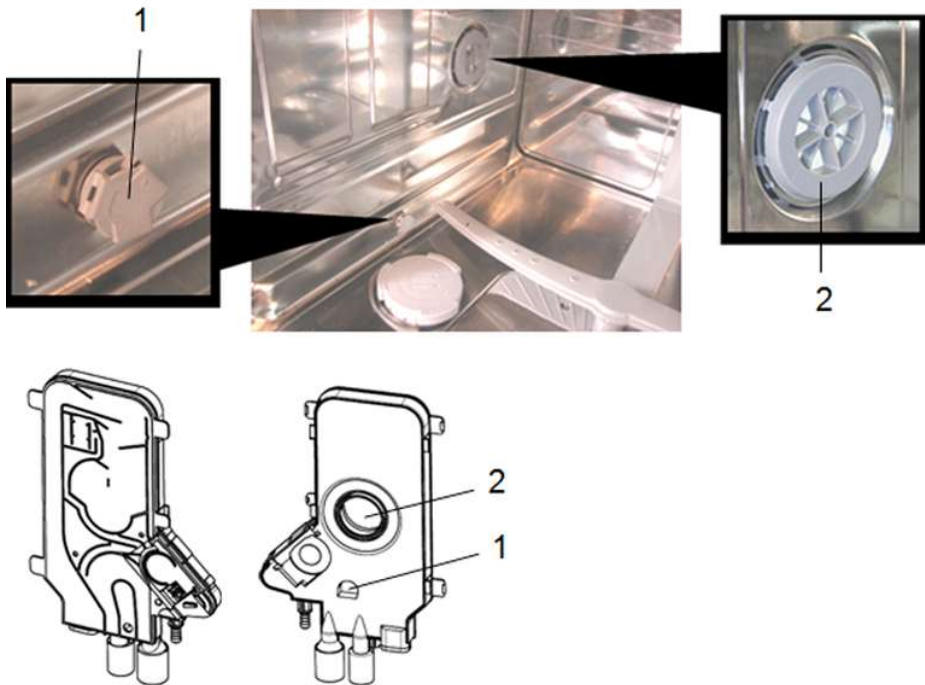


Fig. 22: Water inlet system

1 Water inlet (to tank)

2 Vent (to tank)

There are two hoses connected to the water inlet system, the water inlet hose (from the water supply hose) and drain hose. The total drain hose length is 92" (~ 7.67'), including the portion inside the dishwasher.

3.8.2 Water valve

A plastic holder secures hot water inlet valves onto the rear of bases.

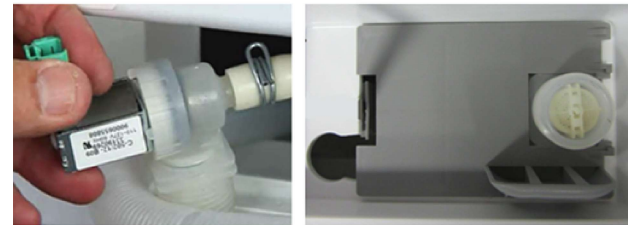


Fig. 23: Water inlet valve and valve holder

Inlet valves have a flow limiter to keep the incoming water pressure to specified levels, regardless of the water supply pressure.

Design and function

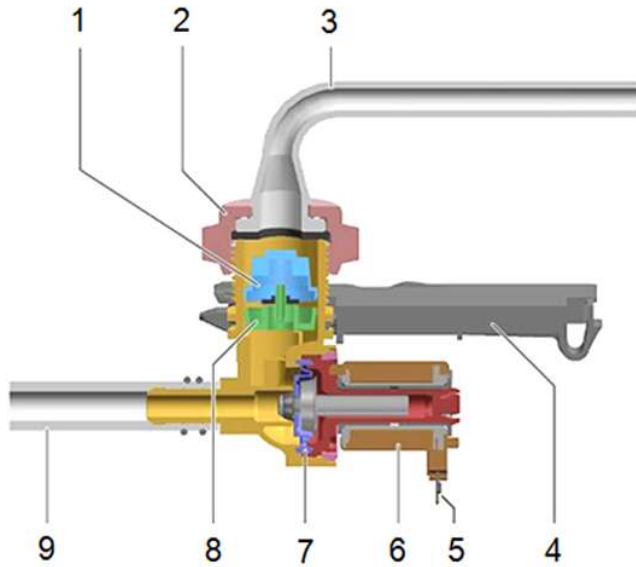


Fig. 24: Water valve detail

- | | |
|--------------------|------------------------------|
| 1 Inlet filter | 6 Coil (solenoid) |
| 2 Hose coupling | 7 Seal |
| 3 Supply hose | 8 Flow limiter |
| 4 Mounting bracket | 9 Inlet hose (to dishwasher) |
| 5 Terminal | |

3.8.3 Valve holder

Water inlet valves have grooved plastic flanges which slide into the right side of holders until they lock into place. Three springs molded into the holder securely hold valves in place.

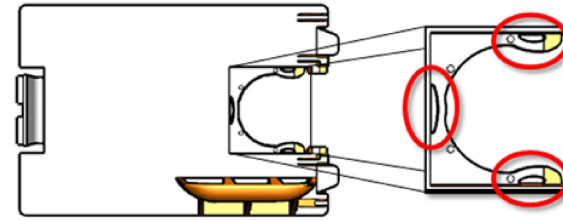


Fig. 25: Valve holder spring detail

Water inlet valves use a double inlet filter to help prevent clogging.

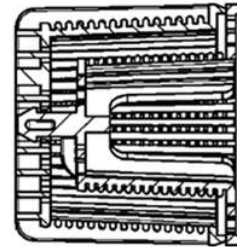


Fig. 26: Water valve double filter

Ratings: 110-127 VAC, 60 Hz, 4.7 W, 990 Ω , 0.2-10 bar, 2.5 l/min. (0.66 gal/min.).

Design and function

3.9 Sump

Filtered water drains into the sump, where it is pumped through the water switch into the spray arms or drained out. The sump provides mounts for the heat pump, drain pump, water switch, aqua sensor and backflow valve.

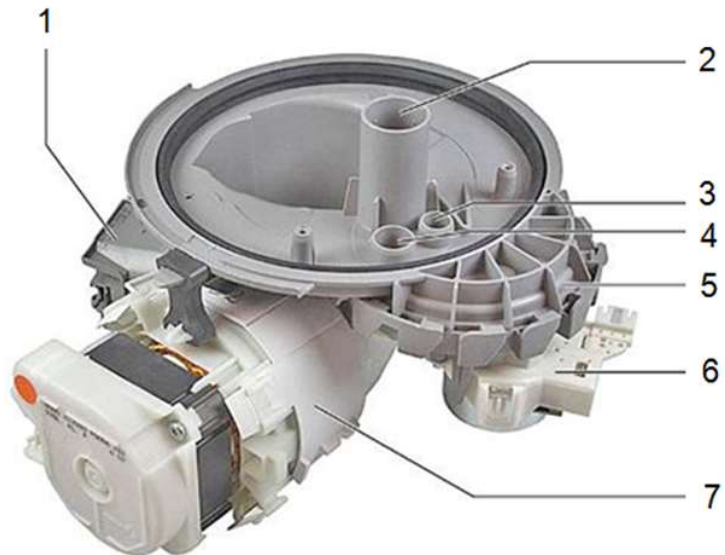


Fig. 27: Sump parts

- | | |
|-----------------------------|----------------------|
| 1 Drain pump | 5 Water switch |
| 2 Outlet to lower spray arm | 6 Water switch motor |
| 3 Outlet to top sprinkler | 7 Heat pump |
| 4 Outlet to upper spray arm | |

The inside of the sump has a couple of caps / covers to enhance water flow.



Fig. 28: Sump interior with drain pump cover and suction cap

- | | |
|--------------------|---------------|
| 1 Aqua sensor | 3 Suction cap |
| 2 Drain pump cover | |



For proper draining and pumping, the drain pump cover and suction cap must be securely snapped into place.

3.9.1 Suction cap

The suction cap provides proper water flow through the sump when the heat pump is running, prevents air or dirt from being drawn into the pump and provides access to the heat pump impeller. It should not be removed.

3.9.2 Drain pump cover

The drain pump cover directs waste water through the drain pump. Without it, the drain pump cannot build up any pressure.

Customers may remove the drain pump cover for cleaning, but must reinstall it. If the cover is not correctly attached, water cannot be pumped out.

Design and function



Snap in the drain pump cover tightly to avoid drain pump cavitating and to provide proper draining.

3.9.3 Backflow valve

The backflow valve is located inside the sump at the outlet to the drain hose. It allows waste water to exit the sump and prevents it from entering the sump.

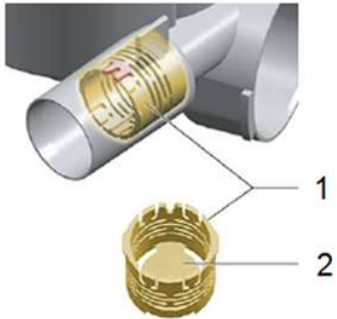


Fig. 29: Backflow valve detail

1 Backflow valve

2 Flap

3.9.4 Sump filters

The sump contains several types of filters: a fine filter screen, coarse filter and micro filter.

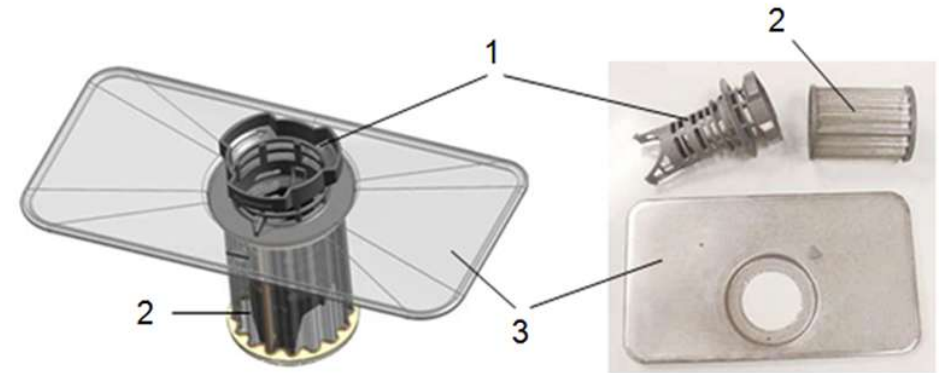


Fig. 30: Sump filters

1 Coarse filter

2 Micro filter

3 Fine filter screen

Design and function

3.10 Water switch

Mounted to sumps, water switches consist of a motor-operated disk with seven holes, which rotates under three sump ports (upper / lower spray arms, top sprinkler) to provide precise water control.

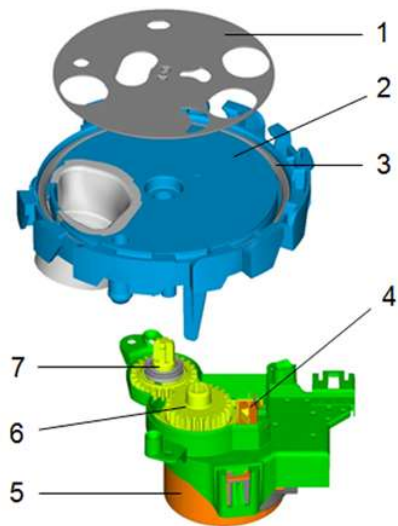


Fig. 31: Water switch detail

- | | | | |
|---|-----------------|---|-----------------|
| 1 | Disk | 5 | Drive motor |
| 2 | Housing | 6 | Gear with cam |
| 3 | Seal (to sump) | 7 | Gear with shaft |
| 4 | Pulse generator | | |

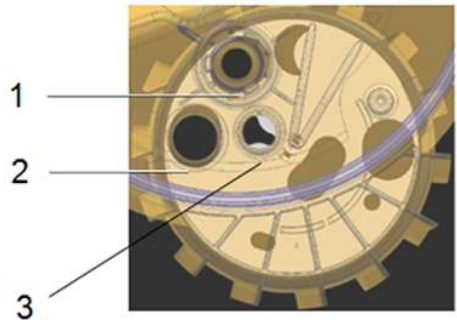


Fig. 32: Water shown directed to both spray arms / top sprinkler

- | | | | |
|---|--------------------|---|------------------|
| 1 | To lower spray arm | 3 | To top sprinkler |
| 2 | To upper spray arm | | |

Water switch disks do **not** rotate continually, but counterclockwise (ccw) based on the wash program and water clarity (i.e. directed by the power module and aqua sensor). When water is clear, the water switch directs water to the upper or lower spray arm. When water is dirty, the switch directs water to both spray arms.

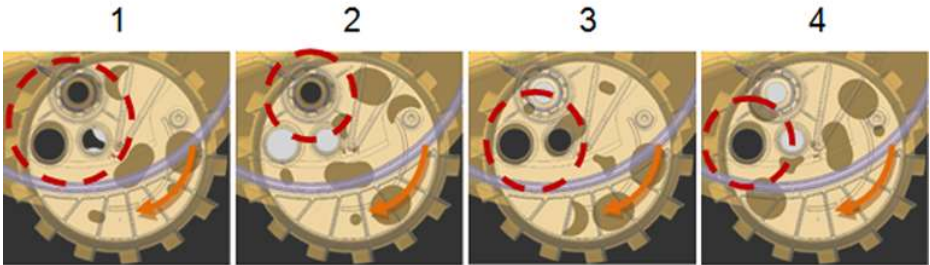


Fig. 33: Water switch rotation

- | | | | |
|---|------------------------------------|---|------------------------------------|
| 1 | To both spray arms / top sprinkler | 3 | To upper spray arm / top sprinkler |
| 2 | To lower spray arm | 4 | To upper spray arm |

Motor ratings: 110 - 127 VAC, 60 Hz, synchronous, 4.8 RPM (ccw), class E insulation.

Design and function

3.11 Safety systems

Several safety systems in dishwashers guard against leaking. Leaking water is directed into the base where it's detected by the float switch, which stops the wash cycle, turns off the water valve (if it's on) and turns on the drain pump.

Even when the dishwasher is off, the float switch detects water, turning on the drain pump and generating an error code (e.g. E:15). The dishwasher cannot be run until the leaky part is fixed, the water is removed from the base and the control is reset.

3.11.1 Float

The float is a safety device, located next to the sump, which activates if there's too much water in the base. If water collects in the base, a styrofoam float rises and engages a microswitch, stopping the wash program and starting the drain pump.

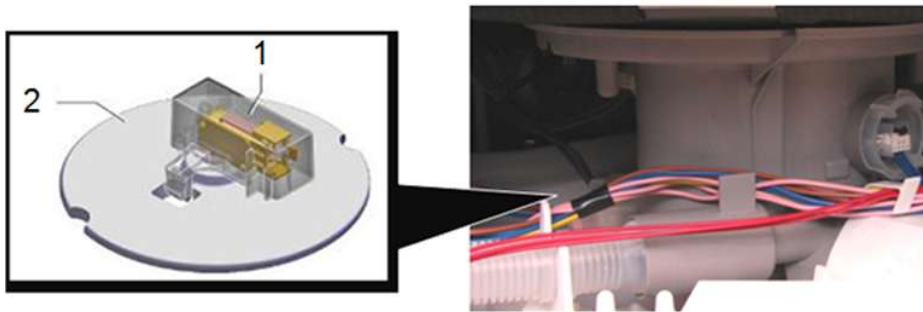


Fig. 34: Float and float switch location and details

1 Float assembly with float switch

2 Float

3.11.2 Overflow channel

The overflow channel (gutter) directs any water escaping past the door into the base where it's detected by the float switch.

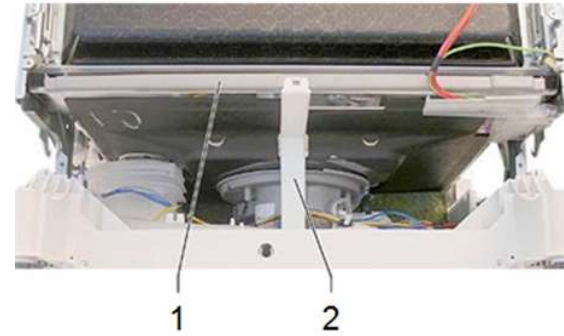


Fig. 35: Overflow channel

1 Overflow channel

2 Support / drain tube

3.11.3 Water inlet valve

The water inlet valve holder has a drain channel to direct any leaking water to the base where it's detected by the float switch.

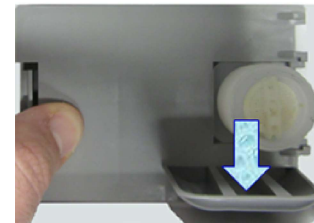


Fig. 36: Water valve safety drain

Design and function

3.12 Aqua sensor

The aqua sensor, located above the drain pump, senses water cleanliness, allowing the power module to shorten wash / rinse cycles to save energy.

The circuit board has an LED and sensor. The LED sends light across to the sensor - dirty water blocks the light and clean water allows the light to pass through. The sensor signal varies depending on how clean the water is and the power module adjusts wash cycles accordingly.

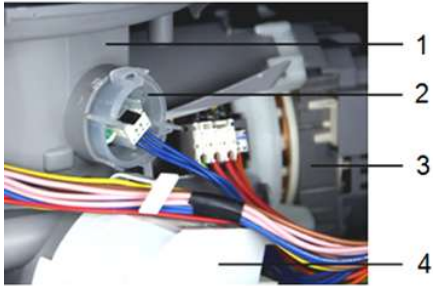


Fig. 37: Aqua sensor in sump

- | | |
|---------------|--------------|
| 1 Sump | 3 Heat pump |
| 2 Aqua sensor | 4 Drain pump |

If the water is clean, the aqua sensor shortens wash and rinse cycles. If not, the aqua sensor keeps the original cycles.

Dishwashers still operate if aqua sensors fail, defaulting to the longest / hottest wash cycle with longer wash times and reduced water savings.

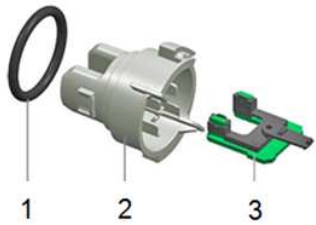


Fig. 38: Aqua sensor parts

- | | |
|-----------|-------------------------------------|
| 1 O-ring | 3 Circuit board with LED and sensor |
| 2 Housing | |

Design and function

3.13 Drain hose

The drain hose is connected to the water level control, exiting the rear of the dishwasher near the water inlet valve.

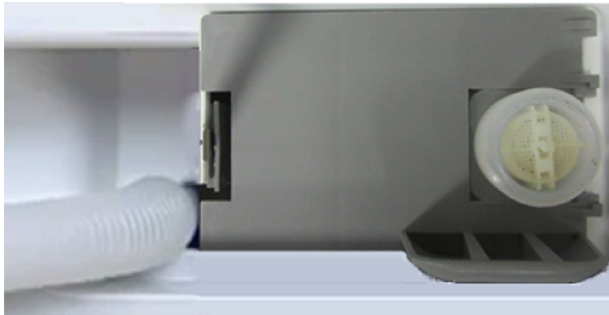


Fig. 39: Drain hose exiting rear of dishwasher base

The drain hose connects directly to the customer drain without an adapter.

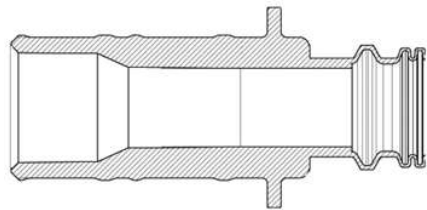


Fig. 40: Drain hose end detail

Straps in the rear corners of the base hold drain and inlet hoses in place so dishwasher racks can be deeper, while still allowing dishwashers to mount against walls and dishwasher doors to be flush with cabinets.



Fig. 41: Base strap holding drain hose and supply lines

Design and function

3.14 Base

The plastic base assembly is cast into one piece and contains mounting provisions for all parts mounted to it.

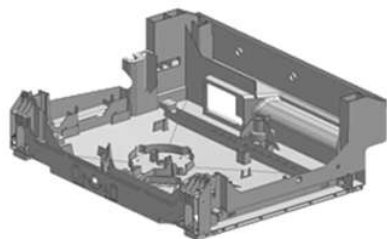


Fig. 42: Base detail

Design and function

3.15 Tank

The ss tank isn't available as a service part. The top, bottom and sides are made from 304 ss alloy and the back is made from 430 ss alloy.

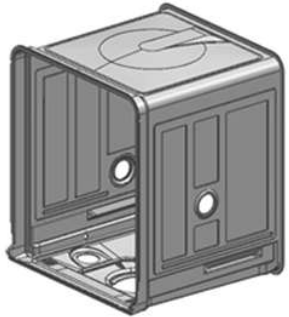


Fig. 43: Tank detail

Design and function

3.16 Electrical connections

3.16.1 Junction box

All dishwashers have junction boxes with covers, conduit / cord exits and dishwasher cords for hard-wired installations. The dishwasher cord plugs into the power module, accessed through the left rear of the dishwasher base.

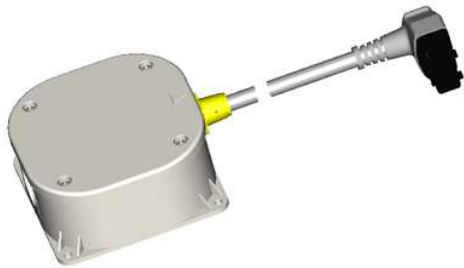


Fig. 44: Junction box with cord

The plug has notches which keep it plugged into the power module.

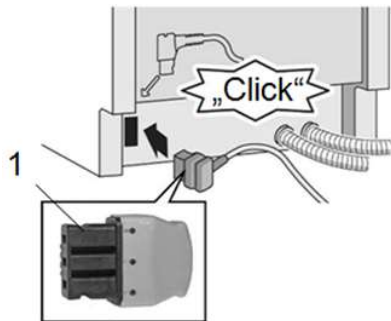


Fig. 45: Plugging into power module

1 Notch

3.16.2 Terminal block

Terminal blocks clearly show line (L), neutral (N) & ground ($\perp$) connections. Dishwasher cords have spade terminals which connect to terminals on the terminal block.

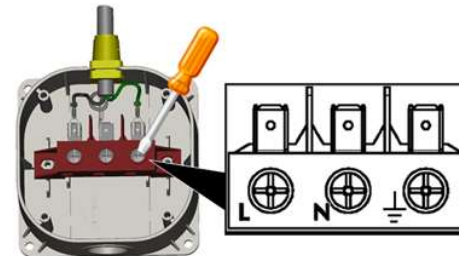


Fig. 46: Terminal block connections



An optional power cord is available for installations with outlets – plugging into power modules and customer outlets, replacing the junction box with cord provided with the dishwasher for hard-wired installations [SMZPC002UC] / service # [00747210] .

Design and function

3.17 Water spray system

The spray system consists of 3 spraying levels: lower / upper spray arms and a top sprinkler. Water is supplied to the upper spray arm and the top sprinkler by the fill tube at the rear of the tank.

The fill tube has 2 separate water channels so the upper spray arm and top sprinkler can be operated separately.

The upper spray arm is attached by its feed tube directly to the upper rack. The feed tube has an adjustable coupling to allow it to move up and down as the upper rack is raised or lowered.

The lower spray arm is connected by directly to the sump. It has a nozzle underneath it to clean the sump filters and to rinse food debris into them.

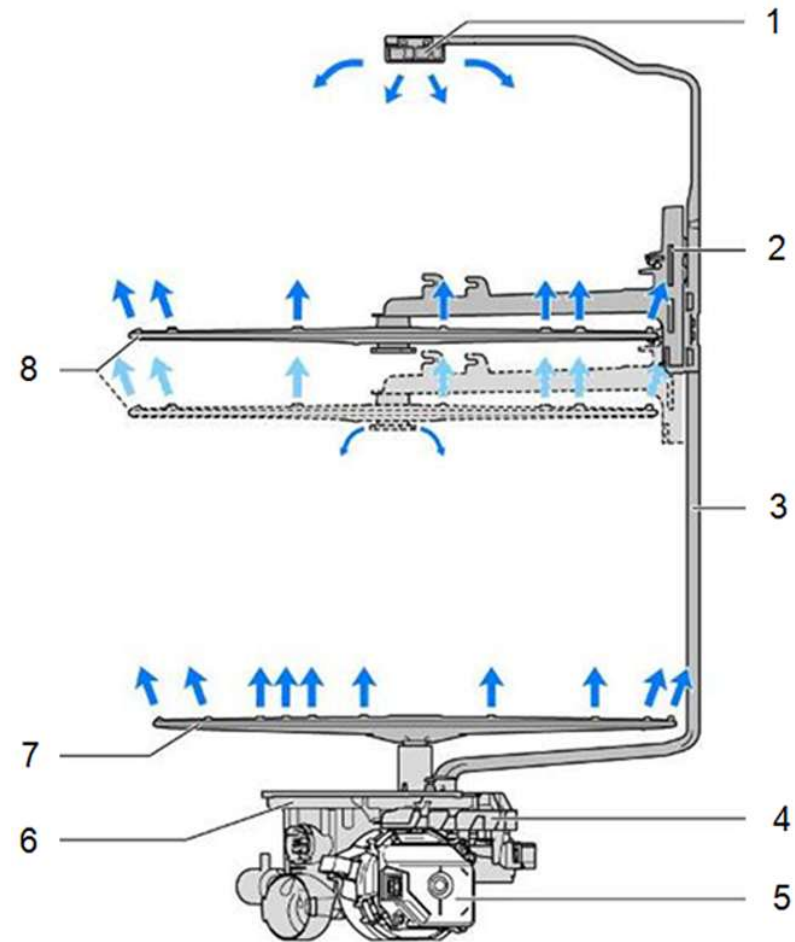


Fig. 47: Water spray system

- | | | | |
|---|--------------------------|---|-----------------|
| 1 | Top sprinkler | 5 | Heat pump |
| 2 | Upper spray arm coupling | 6 | Sump |
| 3 | Feed tube | 7 | Lower spray arm |
| 4 | Water switch | 8 | Upper spray arm |

Design and function

3.18 Serial label (warranty information)

The serial label, located on the right side of the inner door, contains the dishwasher model, serial and index (KI) #'s.



Fig. 48: Serial label location and detail

3.18.1 Understanding the FD

This is the serial # used for customer and warranty repairs, commonly known as the "FD #". It's located under the model #.

FD9303 00001

The FD # shows the production date:

- The first 2 #'s represent the year: **93** = 2013
- The next 2 #'s represent the month: **03** = March
- The next 5 #'s represent the unit made that month: **00001** = 1st dishwasher made that month

	To find the year from the FD #, add 20. For example, 93 + 20 = 113, which is the 13th year after 2000, namely 2013. Similarly, FD # 80 + 20 = 100, namely 2000, and FD # 86 + 20 = 106, the 6th year after 2000, namely 2006.
--	---

3.18.2 Understanding the 17-digit serial

This is a more detailed serial # used by the factory for analysis of returned units. It's located in the bottom right corner of the label.

10 3 03 0090424 00001 3

This serial aids the factory in researching and verifying parts of the dishwasher:

- The first 2 #'s represent a factory code: **10** = New Bern dishwasher
- The 3rd # represents the last digit of the year: **3** = 2013
- The next 2 #'s represent the month: **03** = March
- The next 7 #'s represent the model: **0090424** = SHX7PT55UC
- The next 5 #'s represent the unit made that month: **00001** = 1st dishwasher made that month
- The last # represents a check digit = **3** (which is dependent on all preceding #'s)