

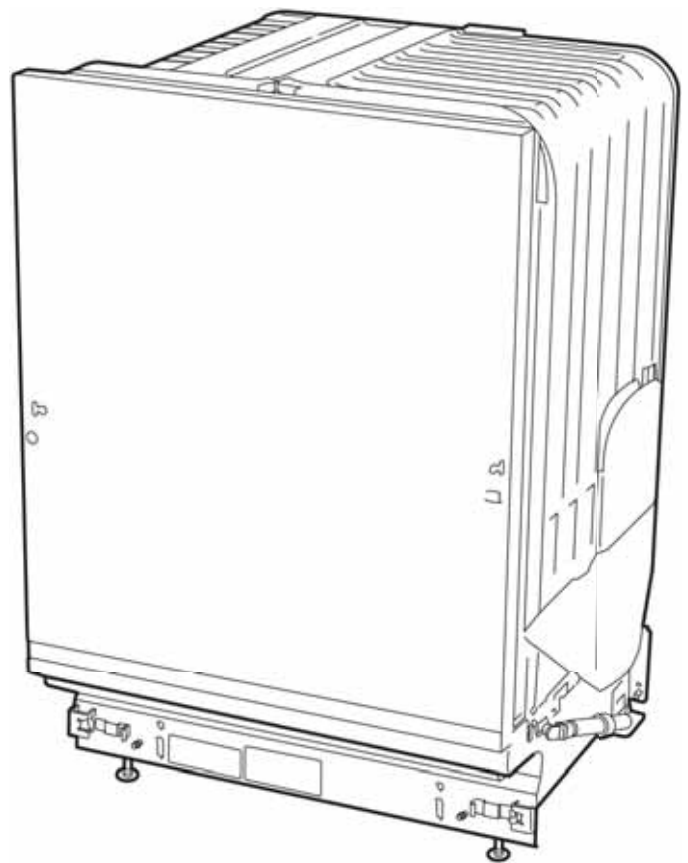
GE Appliances

# Technical Service Guide

March 2011

## Monogram Dishwasher with Top Controls

ZBD9900R11



31-9207



GE Appliances  
General Electric Company  
Louisville, Kentucky 40225



### **IMPORTANT SAFETY NOTICE**

The information in this service guide is intended for use by individuals possessing adequate backgrounds of electrical, electronic, and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

### **WARNING**

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

### **RECONNECT ALL GROUNDING DEVICES**

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

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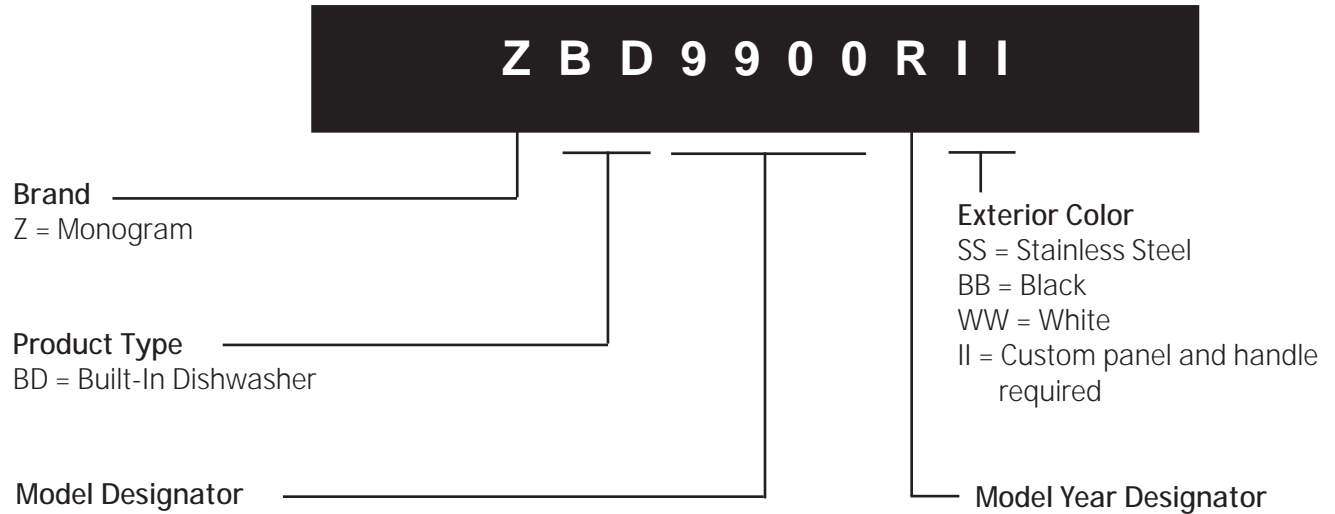
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# Nomenclature

## Model Number



The serial plate of your dishwasher is located on the tub wall, just outside the door.

The mini manual is located on the inside of the outer door panel.

## Serial Number

The first two characters of the serial number identify the month and year of manufacture.

*Example:* **FV123456S** = March, 2011

F - MAR	2011 - V
G - APR	2010 - T
H - MAY	2009 - S
L - JUN	2008 - R
M - JUL	2007 - M
R - AUG	2006 - L
S - SEP	2005 - H
T - OCT	2004 - G
V - NOV	2003 - F
Z - DEC	2002 - D
A - JAN	2001 - A
B - FEB	2000 - Z

The letter designating the year repeats every 12 years.

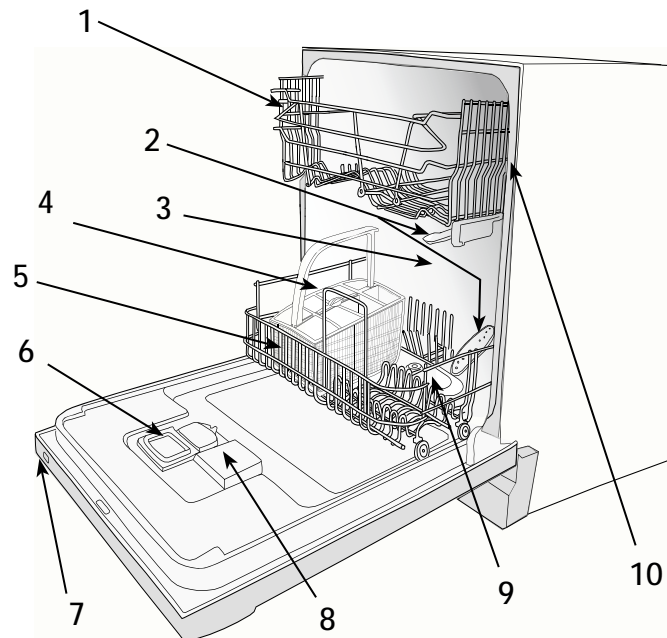
*Example:*  
V - 2011  
V - 1999  
V - 1987

# Introduction

The new Monogram dishwasher is a brand new design with these following features:

- Hidden touch pad control panel on the top edge of the tall front door
- Larger tub with a height-adjustable upper basket and new cutlery basket
- New location for inlet valve, flow meter, and pressure sensor
- New dishwashing programs
- New Diagnostics to aid in troubleshooting problems
- New water level control

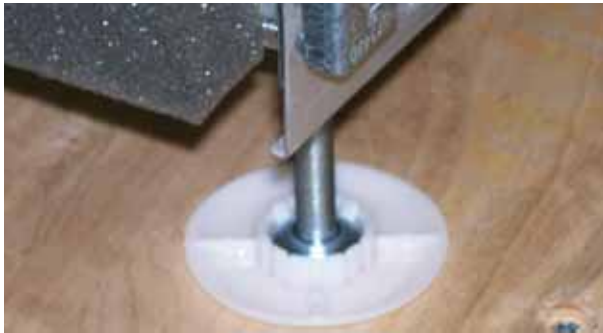
1. Upper basket
2. Spray arms
3. Lamp
4. Cutlery basket
5. Lower basket
6. Dishwasher detergent compartment
7. Main power switch
8. Rinse Aid Compartment
9. Filter
10. Rating plate



# Installation

The installation manual and hardware packet are located inside the machine. The toe kick plate comes packaged on the top of the Styrofoam packaging inside the shipping carton.

Snap the plastic glide feet onto the leveling legs to prevent damage to the floor. Please note that the unit weight is 101 lbs. and the glide feet can mar some soft wood floors. Caution should always be used when moving a unit into place.



## Adjust the door springs

The door should remain balanced once opened. Both spring ends are turned clockwise to increase tension, and counterclockwise to decrease tension.



## Specifications

Height	33-7/8" – 36"
Width	23 5/8"
Depth	22 7/8" (without door)
Weight	101 lbs
Water Pressure	4.2 – 140 psi 0.03 – 1.0 Mpa 0.3 – 10 Bar
Connection	Single phase, 120 V, 60 Hz, 15 A
Max output	1200 W

## PEX water fill line

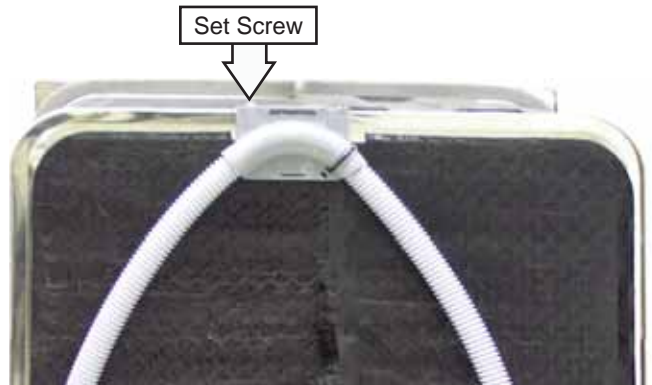
The PEX water fill line comes with a 3/8-in. compression nut that is intended to be connected to a shutoff valve with compression threads. If the home shutoff valve has a solder fitting, cut the copper water line under the sink and join the copper and PEX materials with a 3/8-in. compression union.



## Drain line

The high loop bracket comes attached to the unit at the ideal height. It should **not** be removed.

The drain line bracket can be repositioned to accommodate an installation or gain hose length by loosening the set screw and sliding the bracket along the back top ridge.



The drain line comes with a graduated boot installed. This graduated boot is designed to accommodate 1/2-, 5/8-, 23/32-, and 7/8-in. connections.



The power cord (approximately 42-in. long) comes already attached to the unit. The terminal block is set up so that the unit can be hardwired or a longer cord installed if needed.

# Control Panel Features



Select a cycle by pressing the **CYCLE** button until the required option is selected.

1	<i>AUTO WASH</i>	The dishwasher detects how soiled the dishes are and adjusts water consumption and temperature accordingly.
	<i>HEAVY WASH</i>	The <i>HEAVY WASH</i> program should be used for heavily soiled dishes, e.g. saucepans, pots and gratin dishes. If there is still space in the machine after loading such items, you can add plates etc.
	<i>NORMAL WASH</i>	Used for washing normally soiled dishes such as plates, serving dishes, cups and glasses, etc.
	<i>LIGHT WASH</i>	If the dishes are not heavily soiled, you can select the Light Wash cycle. This cycle is intended for glass and china which has just been used and therefore does not need a more powerful cycle.
	<i>SPEED WASH</i>	Select <i>SPEED WASH</i> if the dishes are very lightly soiled. This program is used for very lightly soiled glass and china, e.g. coffee cups.
	<i>RINSE ONLY</i>	For rinsing partial loads that will be washed later. Do not use detergent with this cycle.
2	<i>TEMP BOOST</i>	When selected, the cycle will run with a heating element on longer and may increase cycle time to improve both wash and dry performance.
3	<i>DELAY START</i>	If you want the machine to start later, press the <i>DELAY START</i> option button. The clock symbol on the button lights up. Then press the <i>START/RESET</i> button and the machine will start the program 5 hours later. To cancel <i>DELAY START</i> , hold down the <i>START/RESET</i> button for three seconds.
4	<i>HEAT DRY</i>	Select this option to improve drying results.
5	<i>LOW RINSE AID</i>	Displayed when the rinse agent dispenser needs to be refilled.



**6****START/RESET  
START -**

After selecting the cycle and desired enhancements, press the START/RESET pad one time to ready the dishwasher to begin the cycle. Close the door to start the cycle or begin the DELAY HOURS countdown. When the cycle starts, the water fill begins and approximately 60 seconds later the wash action begins.

The dishwasher will always display your last selection and enhancements. If you don't want to change the settings, simply press the START/RESET pad one time to ready the dishwasher and close the door to begin the cycle.

**NOTE:** *If the START/RESET light is flashing, the cycle has been interrupted. Light will stop flashing after the dishwasher automatically pumps out the water. Close the door to allow the water to pump out (this takes approximately 70 seconds). When the light stops flashing, the dishwasher can be reprogrammed and restarted.*

Also, if a power failure occurs, NORMAL and HEATED DRY will automatically be programmed. Make any new selections and press the START/RESET pad to begin the new cycle.

**7****POWER**

Once the dishwasher has finished, it only draws standby current. Should you wish to disconnect power, just switch off at the main power switch. (The overflow function in the dishwasher remains active.)

PROGRAMS	Average Total Cycle Time (Min)	Water Consumption (Gallons)
Auto	115 - 170	3.4 - 6.3
Heavy	190 - 210	5.3
Normal	105 - 140	4.0 - 5.8
Light	100 - 127	2.9
Speed	20 - 64	2.6
Rinse	4 - 22	0.8

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## Lighting Features

### Interior Lights

The interior *Halogen* lights provide better visibility for loading and unloading. They turn on when the door is opened and turn off when the door is latched.

Do not attempt to replace the bulbs. If light bulb replacement is necessary, please contact the GE Answer Center for service by calling 1.800.626.2000.

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## Water Temperature

The entering water must be at least 120°F (49°C) and not more than 150°F (66°C), for effective cleaning and to prevent dish damage.

Check the water temperature with a candy or meat thermometer. Turn on the hot water faucet nearest the dishwasher, place the thermometer in

a glass and let the water run continuously into the glass until the temperature stops rising.

**NOTE:** This Dishwasher can be plumbed to the cold water faucet, but this is not recommended.

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## Use a Rinse Agent

A rinse agent improves dry performance, reduces spots and prevents new film buildup on your dishes, glasses, flatware, cookware and plastic. Cascade Crystal Clear® is the recommended rinse agent for Monogram Dishwashers.

The rinse agent dispenser holds 4.7 oz. of rinse agent. Under normal conditions, this will last approximately one month. Try to keep it full, but do not overfill.

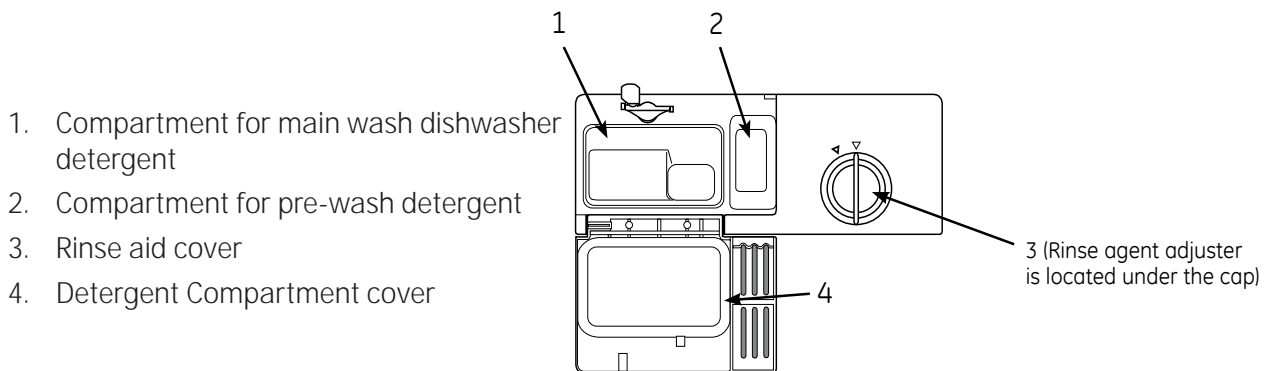
To fill the rinse agent dispenser, make sure the dishwasher door is fully open.

Rotate the dispenser cap counterclockwise and lift it out. Add rinse agent until the indicator window shows full.

Clean up any spilled rinse agent with a damp cloth. Replace the dispenser cap.

The amount of rinse agent released into the final wash can be adjusted. The factory setting is at the midpoint. If there are rings of calcium (hard water) spots on dishes, try a higher setting. If there is foaming, use a lower setting.

To adjust the setting, remove the dispenser cap; then turn the adjuster counterclockwise to increase the amount of rinse agent or clockwise to decrease the amount of rinse agent dispensed.



## Detergent Dosage

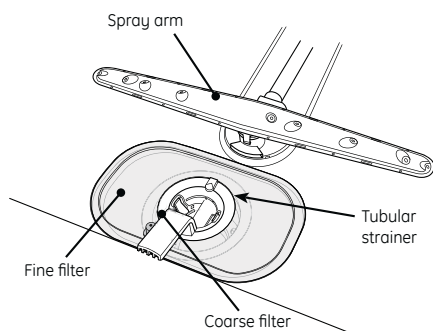
### Recommended Detergent Amounts based on Water Hardness

Water hardness	Detergent amounts
Soft (0-3 grains per gallon)	Prewash 1 teaspoon Main wash 1 to 1-1/2 tablespoons
Medium (4-8 grains per gallon)	Prewash 1 teaspoon Main wash 1 to 2 tablespoons
hard (9+ grains*)	Prewash 1 teaspoon Main wash 2 to 3 tablespoons
* 12 grains and higher is extremely hard water.	

The dishwasher's inner container is made of stainless steel and is kept clean through normal use. However, if you have calciferous (hard) water, lime deposits can form in the dishwasher. In this case, run a normal wash program with two tablespoons of citric acid in the dishwasher detergent compartment.

### Filters

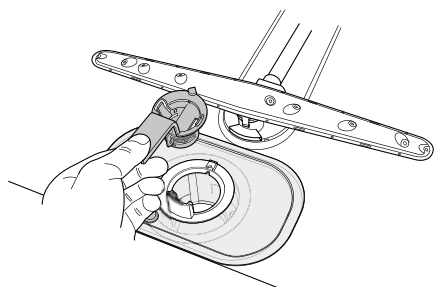
The dishwasher utilizes a coarse filter and a fine filter.



### Coarse filter

The coarse filter traps larger food particles, which cannot get past the drain pump. Empty the coarse filter as necessary.

1. Lift the coarse filter by the handle
2. Empty the coarse filter and replace it.

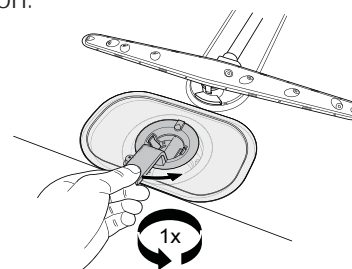


### Fine filter

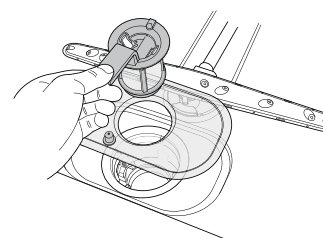
Debris that collects on the fine filter is automatically rinsed away during each wash. However, the fine

filter and its pipe section should be cleaned once or twice a year.

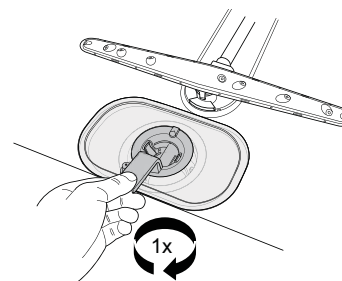
1. Turn the handle 1 full turn counterclockwise.
2. Lift the pipe section straight up by the handle and then lift the coarse filter to clean the pipe section.



3. Remove and clean the fine filter.
4. Replace in reverse order. Ensure that the edges are properly sealed when replacing the fine filter.



5. Lock the filter in place by turning the handle clockwise to the stop position. The handle should point out from the dishwasher.



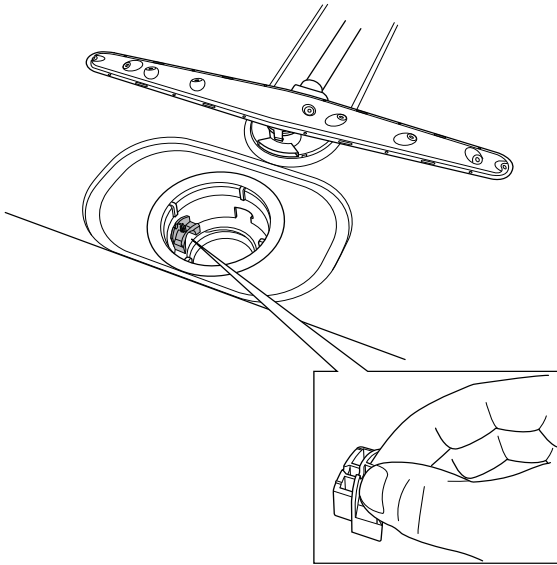
**Note:** The dishwasher must not be used without the filter in place! An improperly fitted coarse filter may affect the dishwashing result.

## Drain pump

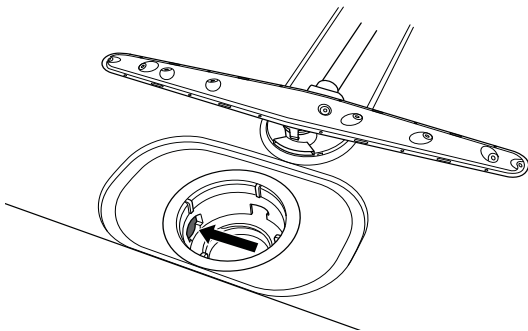
The pump can be accessed from inside the machine.

**WARNING:** Disconnect the power from the machine

1. Remove the coarse filter and pipe section.
2. Remove the small fitted piece at the left of the sump (see the image below).

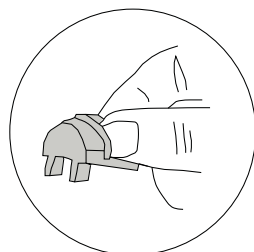


3. The impeller blade can be checked and accessed from inside this sump opening.
4. Reinstall the fitted piece and filters.
5. Insert the plug into the wall socket.



If the machine still does not start and a buzzing sound is heard, the overflow guard has been activated.

- Shut off the water.
- Pull the plug out from the wall socket.
- Call for service.

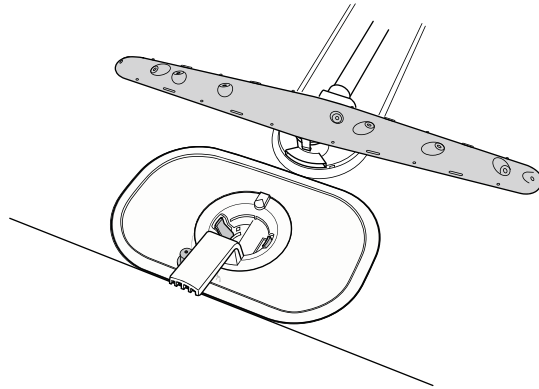


**Note:** Be sure to reinstall the fitted piece.

## The spray arms

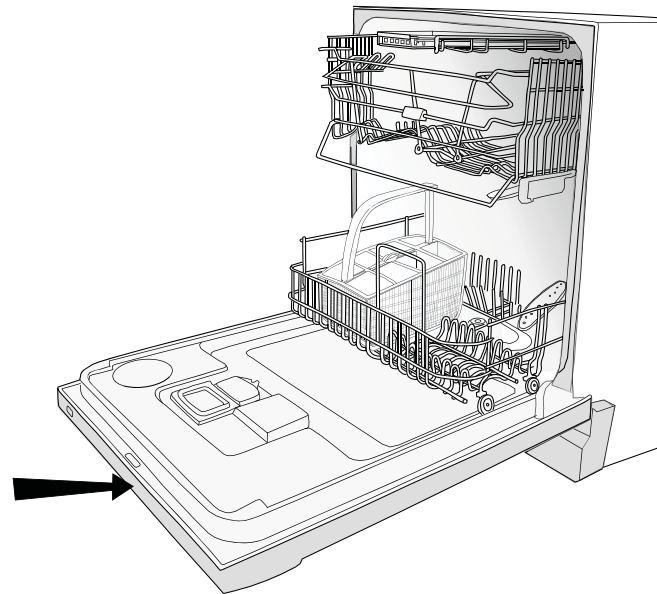
Holes and bearings can sometimes become blocked.

1. Pull the lower washer arm straight up to release it.
2. Remove any deposits. The washer arms also have holes underneath.
3. Reassemble the washer arm before using the dishwasher.



## Door

When cleaning the edge around the door, use a slightly damp cloth. Do **not** use a spray bottle around the door catch. This is to ensure that water does not come into contact with the electrical components in the door catch.



## Program Selection

Some of the dishwasher's programs can be changed by using the keypad. The new selection will be retained until the next time you use the keypad to reset this function.

Even if the machine is turned off at the main switch or loses power for any other reason, all selections registered before the interruption of power will be retained.

### Child-safe button lock

You can prevent a child starting the machine by accident or changing the settings by programming the machine with a button lock, which requires the **TEMP BOOST** and **HEAT DRY** buttons to be pressed simultaneously to start up the machine. The button lock will automatically be reactivated after 3 minutes.



1. Switch off the dishwasher with the main switch.
2. Hold in the **TEMP BOOST** and **HEAT DRY** buttons while pressing the main switch. The Temperature, Drying, and Start symbols will flash. Release the **TEMP BOOST** and **HEAT DRY** buttons.
3. Press the **CYCLE** button – when the **AUTO** wash symbol is lit, the button lock has been activated.
4. Then press the **START/RESET** button to store the setting.

or Reset:



1. Switch off the dishwasher with the main switch.
2. Hold in the **TEMP BOOST** and **HEAT DRY** buttons at the same time as pressing the main switch.
3. Press the **CYCLE** button – when the **AUTO** wash symbol goes out, the button lock has been deactivated.
4. Then press the **START/RESET** button to confirm the setting.

## Setting a Signal

If you want the machine to signal when the wash is complete, you can program it to do this. The machine is set without a signal by default.

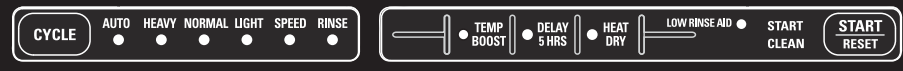


1. Switch off the dishwasher at the main switch.
2. Hold in the **DELAY** start button at the same time as you press the main switch. The button flashes. Release the button.
3. Press the **CYCLE** button – when the **AUTO** wash symbol lights, the signal is activated.
4. Press the **START/RESET** button and the setting will be stored until next time you want to make a change.

or Reset



1. Switch off the dishwasher with the main switch.
2. Hold in the **DELAY** start button at the same time as you press the main switch. The button flashes. Release the button.
3. Press the **CYCLE** button – when the **AUTO** wash symbol goes out, the signal is deactivated.
4. Press the **START/RESET** button and the setting will be stored until next time you want to make a change.



## Child Lockout

1. Turn off main **ON/OFF** power switch.
2. Wait at least 5 seconds.
3. Press and hold the **TEMP BOOST** and **HEAT DRY** option pads.
4. Switch on main **ON/OFF** power switch.
5. Release **TEMP BOOST** and **HEAT DRY** pads after any indicator light comes on (approximately 3 seconds).
6. Use the **CYCLE** pad to select status.  
**AUTO** LED lit = child lockout is activated.  
**AUTO** LED unlit = child lockout is deactivated.
7. Confirm the selection by pressing the **START/RESET** pad.

Temporary deactivation of the child lockout feature is achieved by pressing the **TEMP BOOST** and **HEAT DRY** pads together. Both indicator lights will flash if customer tries to start a cycle in the child lockout mode. After three minutes, child lockout is automatically reactivated.

## Model Select Setting

The service technician **must** run a model select setting or the machine will not function. If the control is replaced, the machine will automatically be in the model select setting menu when the power supply is switched on for the first time.

### To Set Model

1. Press the **CYCLE** pad repeatedly until the desired model setting is selected. (**AUTO** LED lit)
2. Confirm your selection by pressing the **START/RESET** pad.

**Note:** Press the **CYCLE** pad to scroll through the model selections, and the **START/RESET** pad to confirm your selection. Once confirmed, the program exits service mode and returns to main menu.

### To get back into Model Select if needed:

1. Turn off main power switch and wait at least 5 seconds.
2. Hold down both the **CYCLE** and **START/RESET** pads, while simultaneously turning on the main power **ON/OFF** switch.
3. Release the **CYCLE** and **START/RESET** pads.
4. Within 5 seconds of completing step 4, press and release the **START/RESET** pads 3 times rapidly until the LEDs start to blink.
5. Select desired model with the **CYCLE** pad.
6. Press **START/RESET** to confirm and lock in the selection.

### Total Reset

To reset machine to its factory settings:

1. Turn main **ON/OFF** power switch off.
2. Wait at least 5 seconds.
3. Press and hold the **CYCLE** pad.
4. Turn main **ON/OFF** power switch on.
5. Release the **CYCLE** pad.

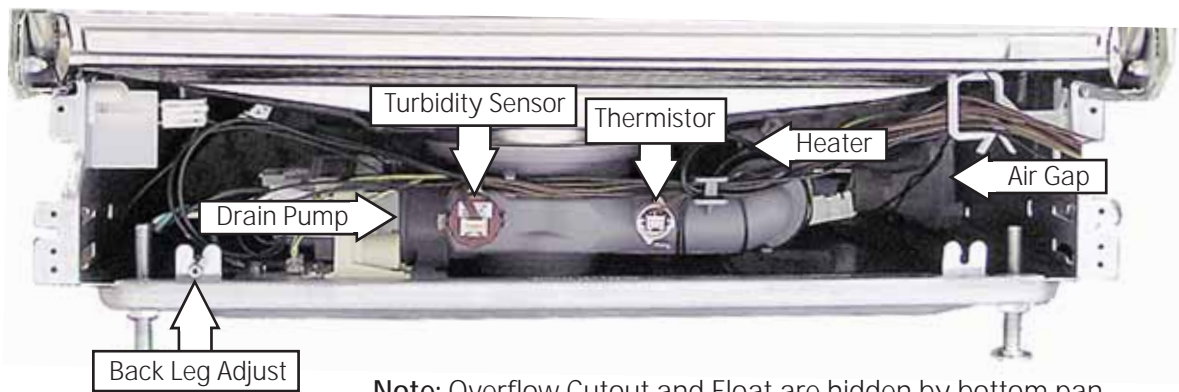
Total reset will clear service mode error codes. It will also reset various settings, although not model select and water intake volume. The machine then automatically returns to the main menu.

# Component Locator Views

Interior View (With 2 Racks Removed for Clarity)



Lower Front View (Shown with Toe Kick Plate Removed)



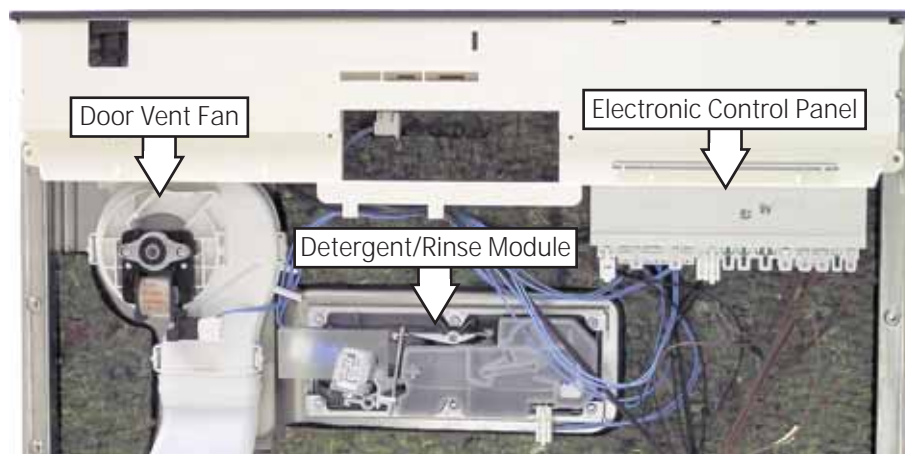
Note: Overflow Cutout and Float are hidden by bottom pan.



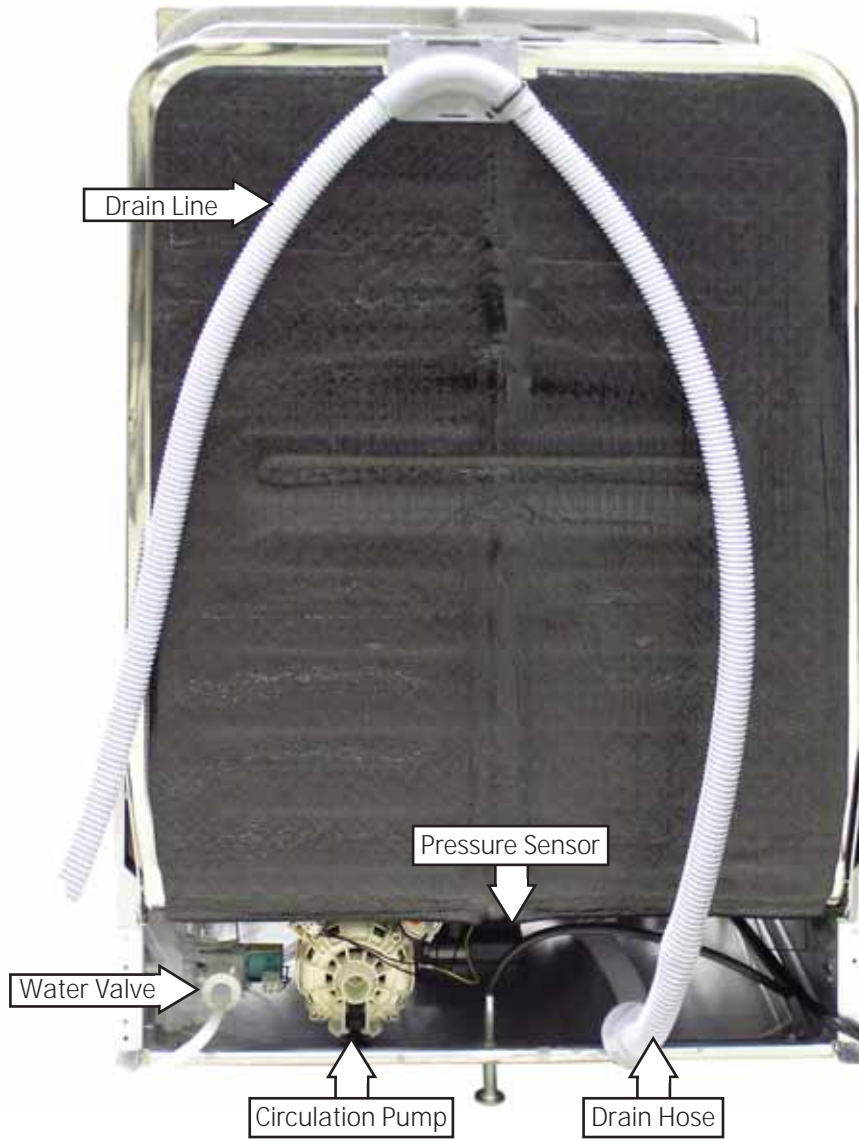
Right and Left Side View



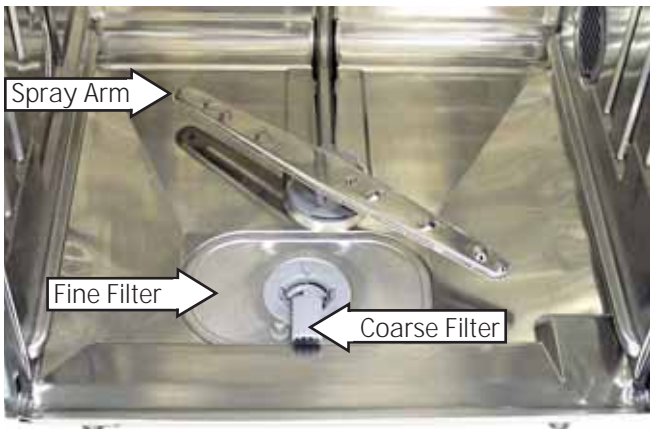
Front View (Outer Door Panel Removed)



Rear View (Back Access Panel Removed)



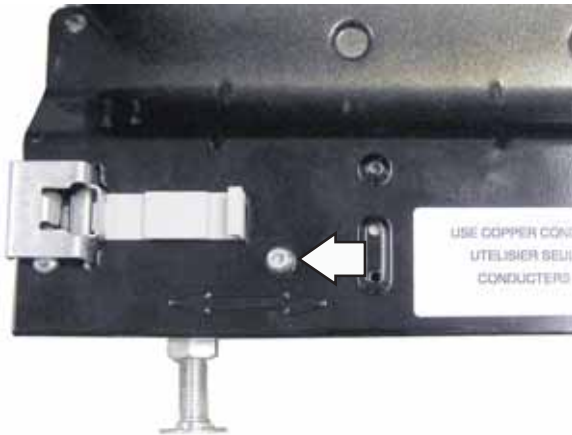
Interior View of Basin (With Racks Removed)



# Dishwasher Components

**WARNING:** Sharp edges may be exposed when servicing the dryer. Use caution to avoid injury. Wear Kevlar gloves or equivalent protection.

**Note:** This dishwasher has a fully closed bottom pan. To access lower components, the dishwasher must be removed from installation. Turn the leg adjustment screw clockwise to lower the rear leg and uninstall the dishwasher.



*Throughout this manual, features and appearance may vary from your model.*

## Special Tool

### Component Removal Tool

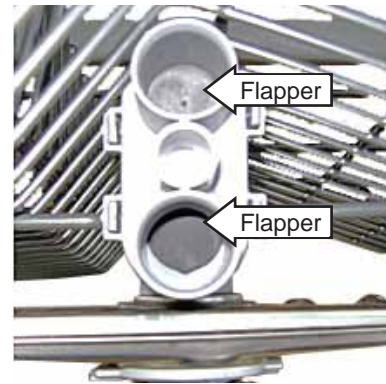
This tool is used to remove 5 specific components on this dishwasher:

1. Sump lock ring (inside bottom of tub).
2. Door vent fan lock ring (inside door).
3. Center hub lock ring (under tub at sump).
4. Light cover (inside tub).
5. Air gap lock ring (inside tub).



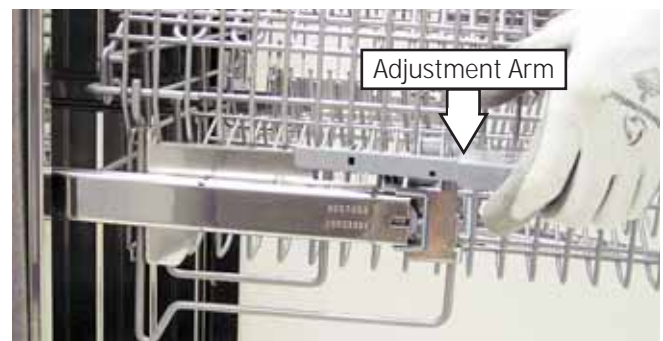
## Upper Basket

**Note:** Two ports are built into the upper shower support to accommodate either position. Flappers are used to direct the flow of water to the upper shower arm. Check for a leaking flapper if poor upper basket wash is reported.



When the upper rack is in the low position, grab the rack on both sides and pull it straight up. It will automatically lock in the high position.

When the upper rack is in the high position, pull out on both of the adjustment arms and the rack will drop down to the lower position.

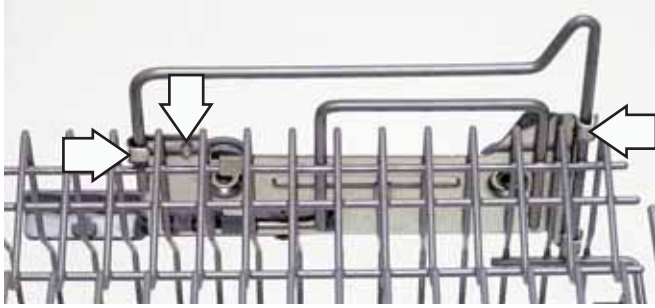


## Upper Rack Removal

Rotate both end caps 90° to the outside and slide the rack assembly forward and out.



To replace either adjustment bracket assembly, push the retaining pin out, unhook the single grip, and release from the other end.



### Upper Track Removal

To remove the upper track, pry slightly up and out at the bottom of the end cap with a flat blade screwdriver. To install, insert the notch at the top of the tab first and then push the end cap in place at the bottom.



With the track removed, the insert with rollers is accessible to be removed.



### Upper Shower Arm Removal

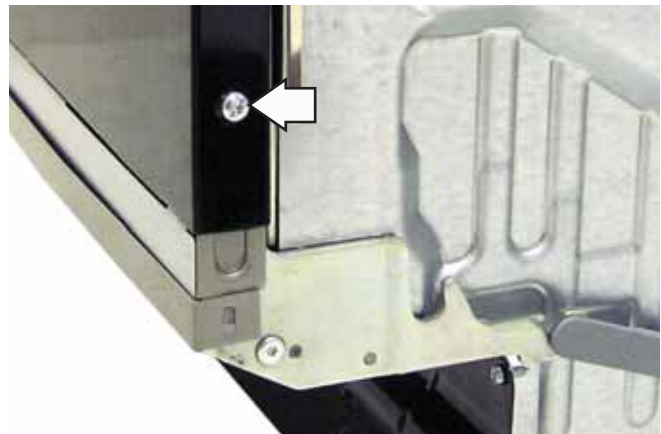
To remove the upper shower arm, unscrew the upper shower arm bearing.



### Outer Door Panel

To remove the outer door panel:

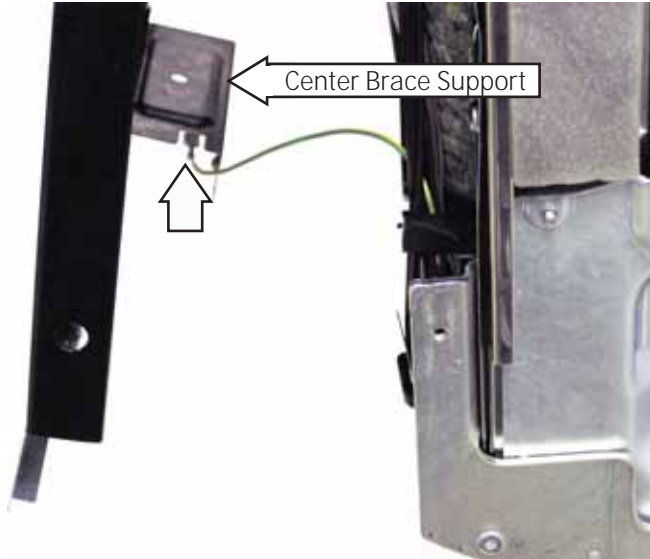
1. Remove two T-25 Torx screws (1 on each side) to lower adjustment brace and remove the lower frame.



2. Remove three T-20 Torx screws on each side of the inner door.



3. Gently pry outer panel over lower bracket sides on both sides.
4. Reach under outer door panel and push up on center support brace to clear lip of tub.
5. Remove ground wire attached to center brace support.



6. Roll bottom of outer panel out approximately 45 degrees to clear tabs on upper escutcheon at top and remove panel.



### Main Control Testing

**Note:** Testing can be done without removing the main control. To test the main control, remove the outer door panel. (See *Outer Door Panel*.)

#### Testing Example: Pressure Sensor

Testing is made difficult due to the same color wires, and small wiring connections. To test, isolate the connections as much as possible, and pull down slightly on the wire harness. This will expose enough

of the control connectors to permit meter lead access for readings.

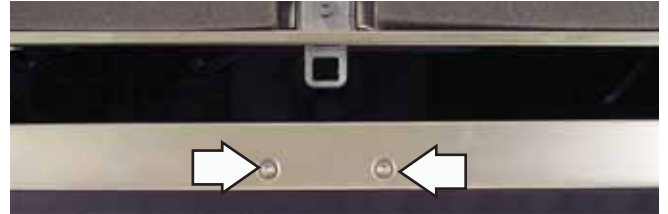


**Note:** The service technician **must** run a model select setting if a new control is installed or the machine will not function properly. (See Model Select Setting in *Control Panel Features*.)

### Escutcheon

To remove the escutcheon:

1. Remove the outer door panel. (See *Outer Door Panel*.)
2. Remove two T-20 Torx screws on the top of the inner door.



**Note:** The wiring is routed on 2 plastic wire harness clips.

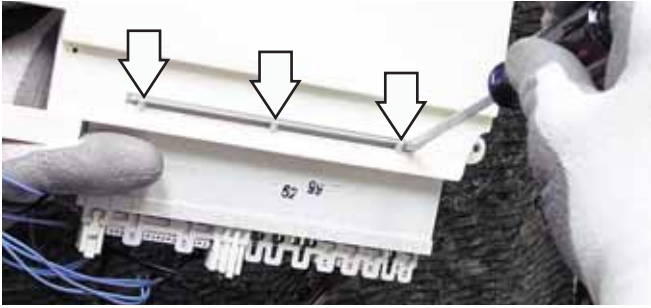
3. Grasp escutcheon at bottom and roll out about 25 degrees while lifting slightly upward to disengage 5 tabs at the top.



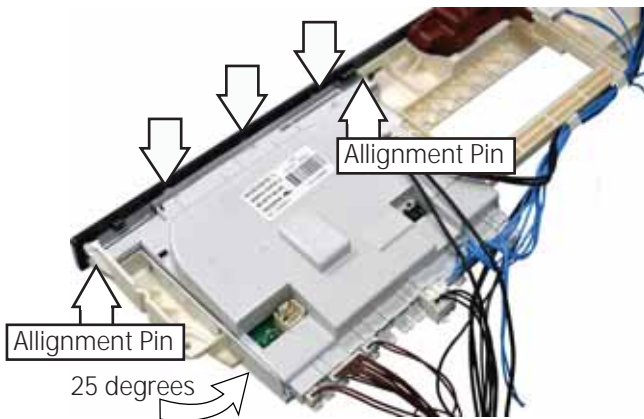
## Main Control

To remove the main control:

1. Remove outer door panel. (See *Outer Door Panel*.)
2. Remove escutcheon panel. (See *Escutcheon*.)
3. Using a putty knife or screwdriver, disengage the 3 front plastic control tabs.



4. Rotate bottom of control out approximately 25 degrees while using a flat blade screwdriver to disengage top tabs. (Note alignment pins on control at top corners.)



5. Remove the top push button cover (with the program graphics) by pulling the cover straight off.



## Control Interface

To remove the control interface:

1. Remove main control. (See *Main Control*.)
2. With the escutcheon in your hand and turned upside down, use a flat blade screwdriver to press on the small release arm.
3. While pressing the **ON/OFF** switch down, simultaneously slide the top trim in the direction of the **ON/OFF** switch.



## Main ON/OFF Switch

To remove the main ON/OFF switch:

1. Remove escutcheon panel. (See *Escutcheon*.)
2. Gently pry down on locking tab at the left.
3. Slide switch slightly to the left to release from mounting on top right corner.



## Latch Assembly

To remove the latch assembly:

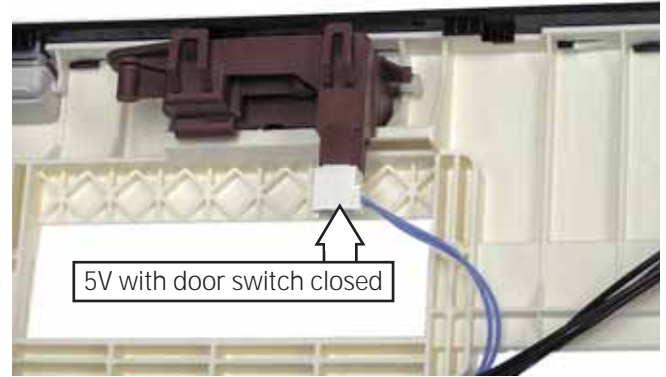
1. Remove escutcheon panel. (See *Escutcheon*.)
2. With a flat blade screwdriver, slightly pry up at the bottom of the latch assembly to release the 2 tabs at the bottom of latch.
3. Pull the latch out on the right side to clear the support post on the left.



## Door Interlock Switch Testing

The interlock switch is a micro switch that connects to the main board. The board looks for a closed circuit (5V). Failure in the closed position could result in the dishwasher operating if the door were opened.

Use a small flat blade screwdriver to activate the door switch.

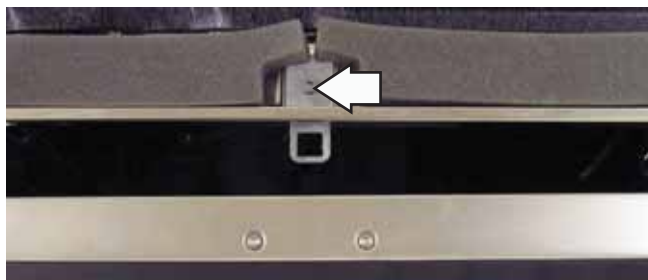


To install latch:

With the top trim toward you, insert the post on the right side of the escutcheon into the hole in the latch and snap the latch into place.



**Note:** The door catch is adjustable with a single T-20 Torx screw.



## Door Vent Fan

The fan extracts the damp air from the machine during the drying phase of the program. The fan system has a fan motor that drives a double-sided fan wheel. Dry air is drawn in from the opening on one side of the fan wheel.

Dry and damp air are mixed in a conduit that ends at the top of the door, where the air is expelled through a nozzle.

### To remove the door vent fan:

Under normal conditions, grab the fan cover and turn it 1/4-turn counterclockwise and remove the outer cover assembly.



If soap buildup causes the lock ring to be too tight to turn by hand, remove the cover screws and cover.

Once the lock ring is exposed, the special tool could be used to remove the door vent fan. (See *Special Tool*.)

**Note:** An open-end wrench, or other flat tool, could also be used to remove the door vent fan.



## Detergent/Rinse Aid

The dishwasher has a combined detergent and rinse aid dispenser. The dispenser is controlled by a solenoid and has a rinse aid level indicator.

### To remove the detergent/rinse aid:

Remove the outer door cover. (See *Outer Door Cover*.) Remove the six T-20 Torx screws (3 on top and 3 on the bottom) and remove the detergent/rinse aid dispenser from inside the door.





## Door Springs

Position front of spring in hinge slot. Position rear support of spring in selected position. Turn to adjust. Clockwise turning increases tension.

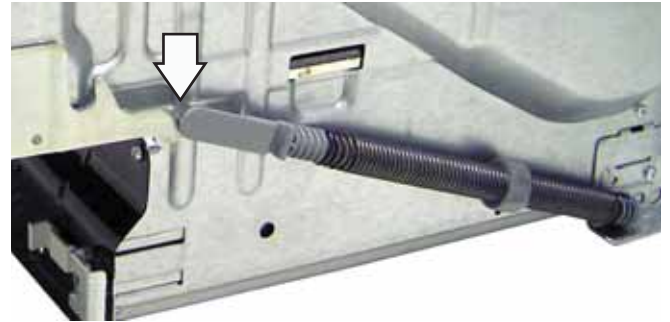
Stronger springs are available for custom wooden door panels.



## Inner Door Panel

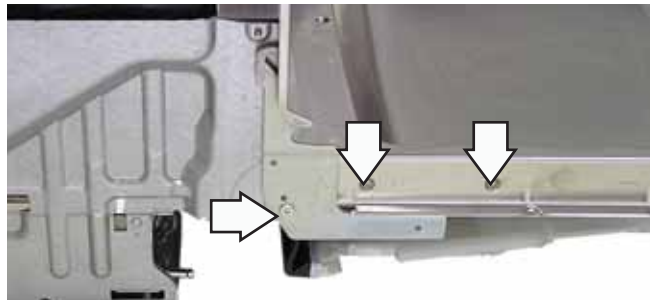
To remove the inner door panel:

1. Remove the outer door panel. (See *Outer Door Panel*.)
2. Unhook the front of each of the 2 door springs from the hinge slots.

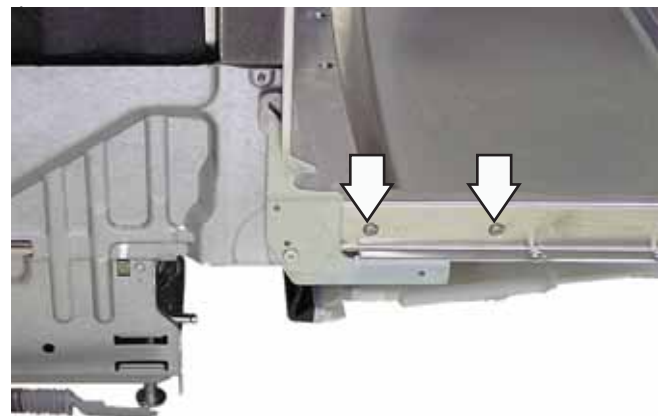


## Door Hinge

To remove the door hinge, disconnect spring and remove three T-20 Torx screws.



3. Remove two T-20 Torx screws on both sides of the inner door.



4. Lift door up and off.

**Note:** The wire harness support will fall out of place when the inner door is removed. Assure it is in place before reassembly. It sets on the right side hinge. The inner panel holds it in place (see photo).



## Inside Tub Components

### Sump

Access to foreign objects in the drain pump can be accomplished by removing the small yellow fitted coupling. Once removed, you have access to the impeller blade area (approximately 3/4 in. into the opening) to remove any debris.

**Note:** Operating the dishwasher without the yellow coupling or the filters will produce poor washability.



### To remove the sump:

**Note:** This would need to be done only to replace a cracked or damaged sump.

1. Position the special tool down tightly on sump lock ring. (See *Special Tool*)
2. If lock ring is extremely tight, insert a screwdriver in the holes in the tool and turn counterclockwise.



**Note:** The sump itself will drop down below the floor of the tub.

3. Remove the sump from underneath.



### Light

The tub interior light is a Halogen 5W, 12V bulb. The light turns on when the door is opened more than 5 degrees. The switch is activated by the left hinge.

To remove the light cover and bulb, insert the 5-tab side of the special tool into the notches in the light cover and turn counterclockwise.



Tub interior light bracket seen from outside of tub.

**Upper Spray Arm Guide**

To remove the upper spray arm guide, pull straight out while pressing in on the notched tab on the top of the spray arm.



**Center Hub**

To remove the center hub, release the lock ring from underneath the tub using the special tool. (See *Special Tool*.)



**Overflow Drain Cap**

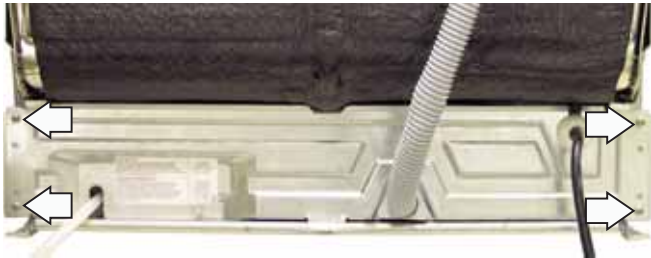
The overflow drain cap mounts on the center hub and must be in place to prevent water from leaking inadvertently into the base pan. Under normal conditions, the soap and water will not get into the base pan.



**Back Access Panel**

The water valve, circulation pump, and pressure sensor are located behind the back access panel.

To remove the back access panel, remove four T-20 Torx screws from the back access panel and remove the panel.



## Water Level - How does It Work?

Check the water level using the spray arm hub. The normal fill (0.85 gallon) will come to approximately the top of the flat raised area as indicated. (The normal fill for the total cycle is 5.3 gallons).

An Overfill condition (1.25 gallons) will be recognized closer to the locking lip.

### Normal Fill: (3.2L/0.85 gallon)

Fill takes approximately 45-52 seconds.

- Water valve opens and water passes through flow meter.
- Flow meter looks for 220 pulses per liter (approximately 1 quart).
- 704 pulses indicates proper fill ( $220 \times 3.2 = 704$ ).
- Main control board stops the fill.
- Maximum flow rate is 1 gallon per minute.

### What if the water pressure is low? (e.g., low house pressure, clogged valve, etc.)

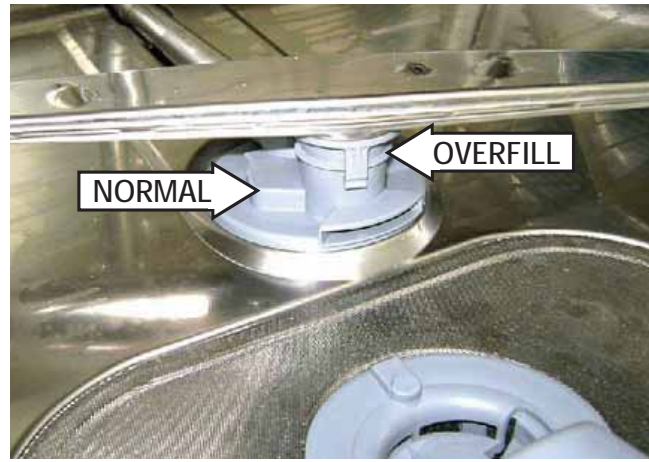
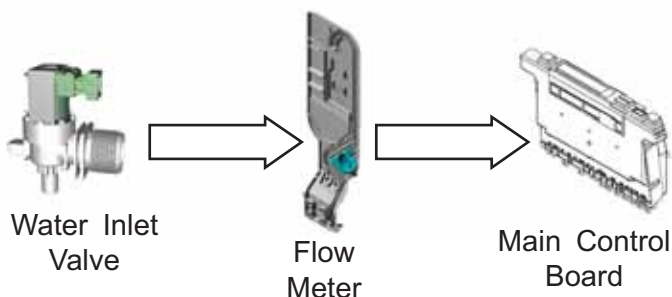
The flow meter requires 1/2-gallon per minute to operate. It utilizes an impeller with two magnets and is driven by water flow. If flow is less than 1/2 gpm., the board will stop the fill cycle and an error message will be displayed to the customer.

a) Normal is 220 pulses per liter (approximately 1 quart). The above would happen with less than 80 pulses in 60 seconds.

b) For low, 80 pulses is reached but the pressure is barely above that. An error would also be logged if overall fill time reached 255 seconds and the main control board did not see the 704 total pulses.

### What if the flow meter failed? (e.g., no signal to main control.)

Water could still enter the machine but the board would not see a signal from the flow meter. At that point, the pressure sensor takes control.



## Pressure Sensor

A pressure sensor is located in a pressure chamber in the bottom well. It measures the pressure which corresponds to the water level in the machine. It functions with a diaphragm and air channel.



It performs the following functions:

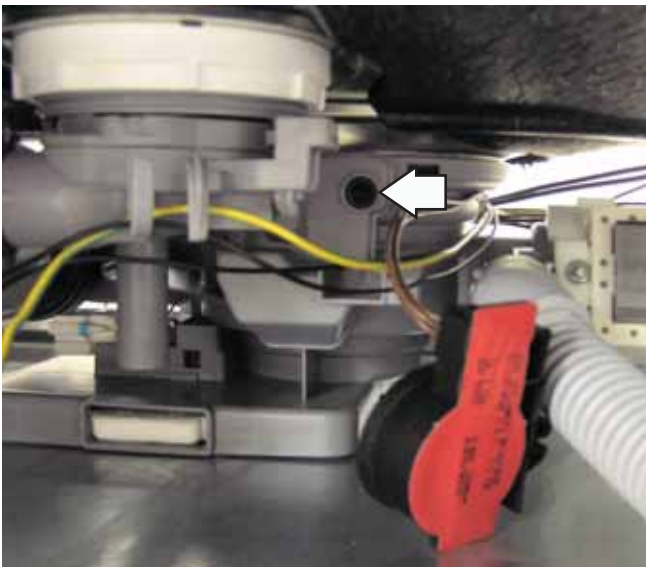
- Reports pressure reading to board.
- Acts like a safety device.
- If it sees an overfill condition for 5 consecutive seconds (approximately 4.7 liters/1 ¼ gallons) it stops the cycle and turns on the drain pump.
- Can add a pre-wash under certain conditions (clogged filter < 1 VDC reported to control).
- Can add water if a bowl has flipped over and catches some of the wash water.
- Can add time to drain (25 seconds to maximum of 3 minutes).
- Works as part of a 5 VDC circuit. Ranges from 0.5 - 3.5 VDC. (0.5 VDC = empty; 2.8 VDC = normal; 3.5 VDC = overfill; more than 4.8 VDC generates an error.) Voltages are approximate.

### To remove the pressure sensor:

1. Remove the back access panel. (See *Back Access Panel*.)
2. Note the location of the securing clip.
3. Pull the pressure sensor straight out of the location.



4. Note the opening of the air chamber where the sensor mounts.

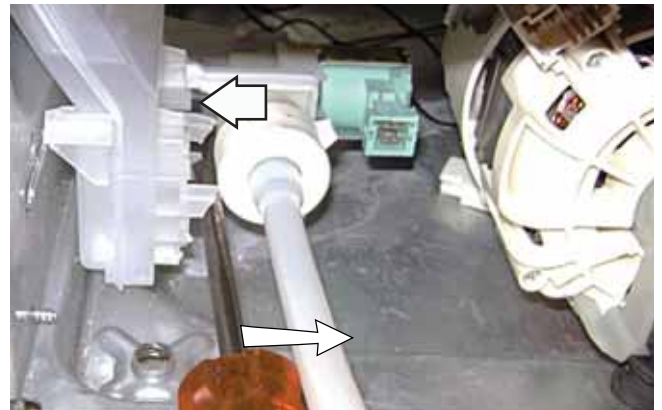


### Water Valve

The water valve is located in the back of the unit next to the circulating pump. It is rated at 1 gallon per minute and has a resistance of 0.95K  $\Omega$ .

### To remove the water valve:

1. Remove the back access panel. (See *Back Access Panel*.)
2. Disconnect the wiring harness to the water valve.
3. Insert a long flat blade screwdriver between the air gap and the valve body.
4. Pry the screwdriver towards the circulation pump until the valve bracket tabs release from the air gap.



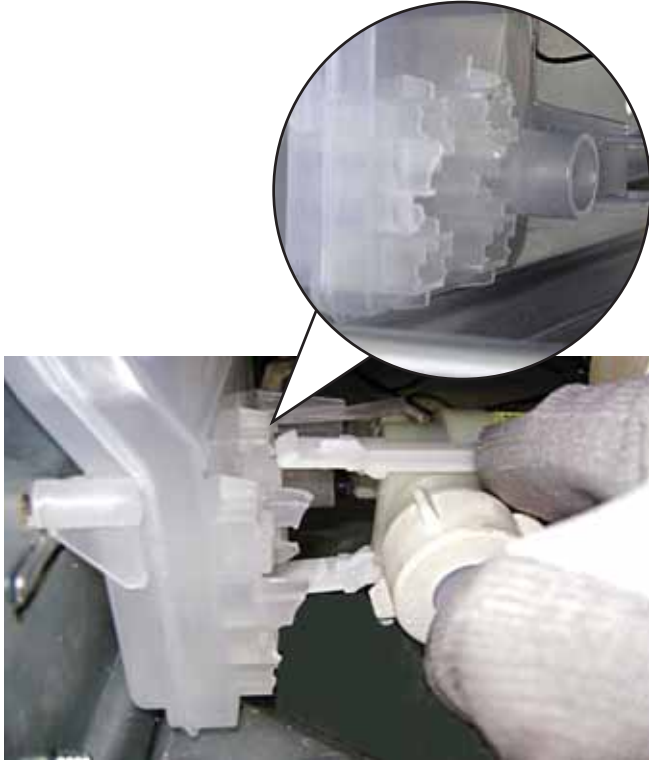
5. With the bracket tabs free, angle the valve towards the front of the machine and release the front tab while gaining clearance from the circulation pump.

**Note:** Clearance with the circulation pump is tight. The pump can be moved slightly to gain more clearance. In some situations, the pump may need to be removed.

### To install the water valve:

Align the tabs, while noting the front tab, and press the valve body into the air gap housing. The tabs will lock into place securing the valve.

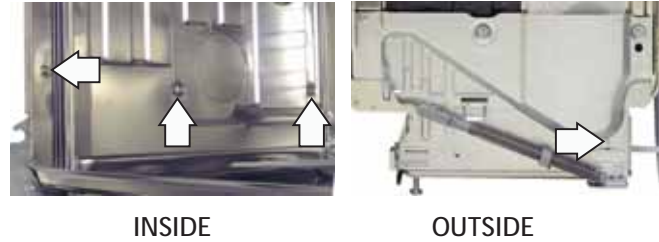
**Note:** Lubricant may be needed on the bracket tabs to help the tabs slide into place.



### Lower Frame

#### To remove the lower frame:

1. Remove the back access panel. (See *Back Access Panel*.)
2. From inside the tub, remove two T30 Torx screws from each side.
3. From inside the tub, remove one T-20 Torx screw from each side.
4. From outside the tub, remove one T-20 Torx



5. Lay dishwasher on the back side.
6. Remove small T-20 Torx door hinge screw on each side. Take care not to drop the small locking nut.



7. Lift the door to clear the lower frame from the door hinge.

#### To install lower base:

1. Open door slightly and start as many of the 6 screws as possible.
2. Stand dishwasher upright and install the remainder of screws.
3. Tighten all screws.

## Air Gap and Flow Meter

All dishwashers must have an air gap to prevent backflow. This unit has an anti-backflow device to prevent dirty water from being siphoned back into the water system if a vacuum develops. A flow meter is mounted inside the air gap assembly.

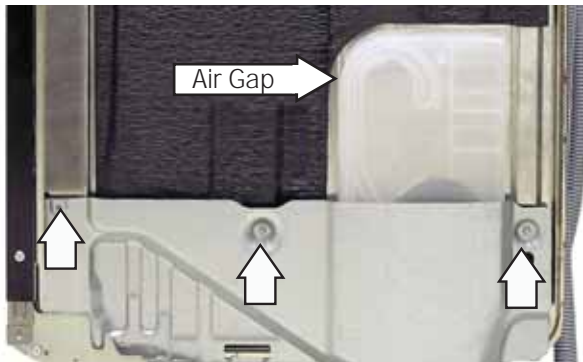
If the flow meter fails, the dishwasher can be set for **TIME FILL**. In **TIME FILL** mode, the flow meter is bypassed (See **Adjust Water Fill** in *Service Mode*.)

### To remove the air gap and flow meter:

Use the special tool to remove the air gap lock ring. (See *Special Tool*.) Insert the 5 tabs of the tool into the air gap grille and turn counterclockwise.



Remove 3 screws and the lower frame. (See *Lower Frame*.) Remove the single air gap mounting screw.



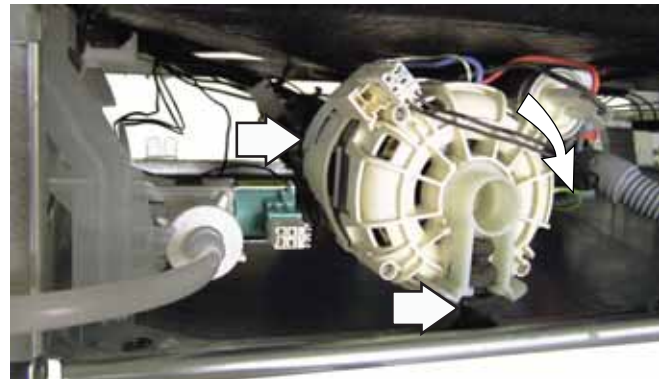
## Circulation Pump

The circulation pump has a motor (120 VAC, 32  $\Omega$ ) which can be tested at the main control. It also has a 7- $\mu$ F start capacitor that, if failed, causes the motor to hum.

The circulation pump must be replaced from the rear of the machine.

### To remove the circulation pump:

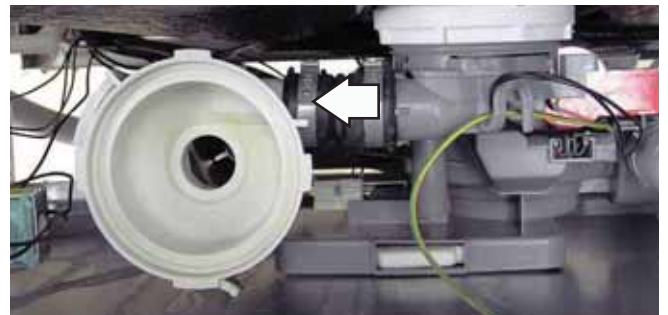
1. Remove the back access panel. (See *Back Access Panel*.)
2. Press the locking tab and twist the circulation pump clockwise (1/4 turn) to remove.
3. Release the rubber support in rear.



**Note:** The circulation pump comes as an assembly. The seal and impeller are not replaceable parts.



4. Remove the hose clamp.



## Heater

**WARNING:** The copper wire on the outside of the heater is a live wire when the unit is plugged in and the heater is operating.

This new heater is a flow-through type. The heater is comprised of a heating coil built in the walls of a water pipe. Water runs through the inside of the heated pipe but does not come in contact with the element. It is located between the bottom drain and the suction side of the circulation pump.



Water is heated at approximately 4°F per minute. To prevent overheating, the heater has a thermistor with a cut-out temperature of 208°F. The thermistor automatically resets when the temperature drops below 208°F. A safety fuse is in series and opens at 444°F. The heater specifications are: 1200 W, 12 Ω, 120 VAC.

### To remove the heater:

1. Remove the back access panel. (See *Back Access Panel*.)
2. Remove the circulation pump. (See *Circulation Pump*, follow steps 1-4.)
3. Remove the heater from the 2 triple-lip seals.



**Note:** Heater shown with side removed for clarity.

## Toe Kick Plate

Remove four T-20 Torx screws from the toe kick plate. Slide 2 latches toward the center. Remove the 2 latch pins and remove kick plate.



## Turbidity Sensor

Machines with an **AUTO** program have a turbidity sensor that measures the clarity of the water. The turbidity sensor is comprised of an LED and photo transistor that the circulating water flows between. The less light that reaches the photo transistor, the cloudier the water. The sensor is calibrated during the last rinse of the auto program. The output signal from the turbidity sensor provides data used to determine how the program will continue, such as the number of pre-washes, temperature, program time, and number of rinses. It only functions in the **AUTO** cycle.

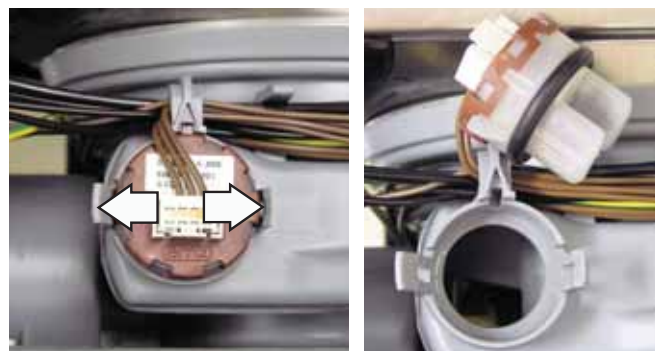
If the turbidity sensor fails, the machine assumes the water is very cloudy, which may result in a longer program time, pre-washes, additional rinses, and temperature.

**Note:** Failure of the turbidity sensor would result in a fault code being displayed in the service mode.

The turbidity sensor is located at the bottom edge of the bottom drain.

### To remove the turbidity sensor:

1. Remove the toe kick plate. (See *Toe Kick Plate*.)
2. Spread the tabs on either side of the turbidity sensor and pull the sensor straight out.





## Thermistor

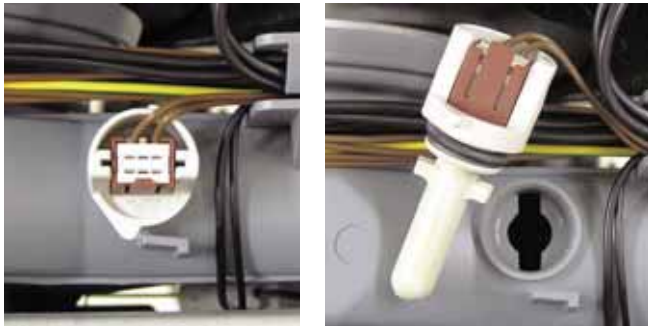
The thermistor is located at the front edge of the bottom drain and detects when the selected water temperature has been reached. If the thermistor is short-circuited or detaches from the circuit board, the heater turns off.

Water heats 4° per minute. If water is not heated 40° in 10 minutes, the machine advances out of heat mode. If the temperature reported exceeds 176°, the unit advances out of heat mode.

There is no time-out as long as the water is heating according to logic. The thermistor has a negative temperature coefficient (NTC) of approximately 70K  $\Omega$  at room temperature (70°F). As the temperature increases, the thermistor's resistance decreases. At 60°F, the NTC is approximately 113K  $\Omega$ , and at 140 °F, the NTC is approximately 12K  $\Omega$ .

### To remove the thermistor:

Remove the toe kick plate. (See *Toe Kick Plate*.) Press down on tab, turn counterclockwise, and pull straight out.

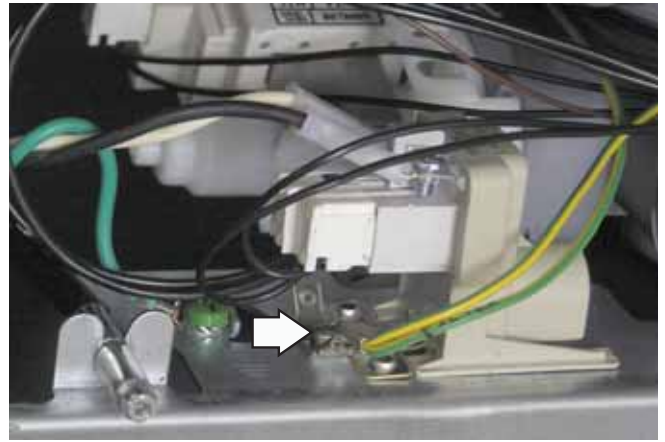


## EMI Filter

The EMI filter suppresses interference to ensure that the machine does not interfere with nearby electrical equipment. It is located at the front of the machine near the power cord inlet.

### To remove the EMI Filter:

1. Remove the toe kick plate. (See *Toe Kick Plate*.)
2. Note the 4 wire locations and disconnect.
3. Remove one T-20 screw.
4. Slide filter to the left to release the 4 bottom tabs out of the dishwasher frame.
5. Disconnect the 3 wire terminals.

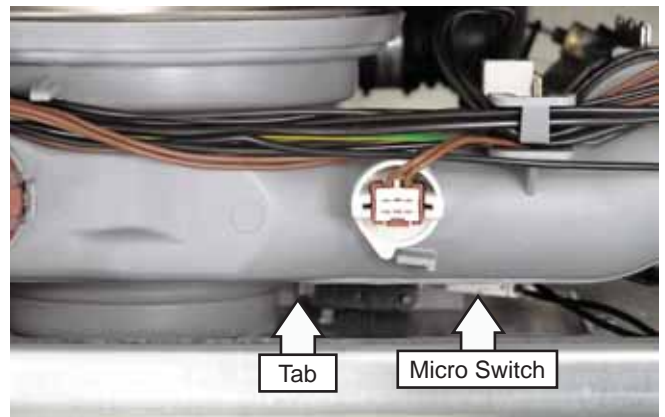


**Note:** The power cord can be attached using the connectors, as shown, or wired direct utilizing the Phillips-head screws next to the connectors.

## Overflow Cut Out

The overflow cut out is comprised of a float connected to a micro switch which turns off the inlet valve electrically and starts the drain pump. The protection remains in place even if the main power switch is turned off or if the door is opened.

To remove the overflow cut out, press the securing tab to the left and pull the switch off the two support tabs.



## Drain Pump

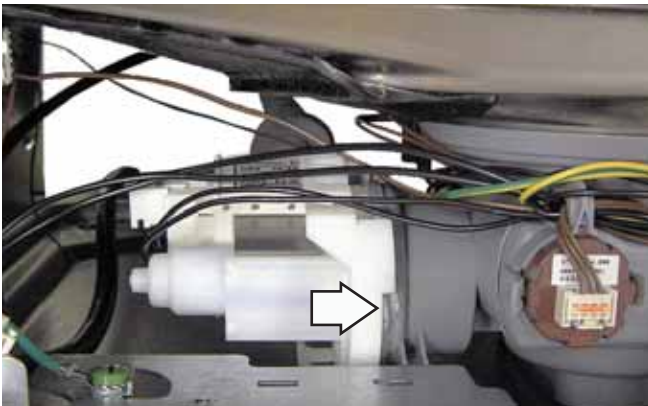
The drain pump has a synchronous motor (30 W, 120 V, 26  $\Omega$ ). The direction of rotation is random making the pump partially self-cleaning, but may be accessed from inside the tub to clean.

**Note:** The drain pump runs for 6-25 seconds at the beginning of every cycle. The time depends on whether a cycle ended on its own or was stopped by the customer.

The drain pump must be removed from the front of the machine.

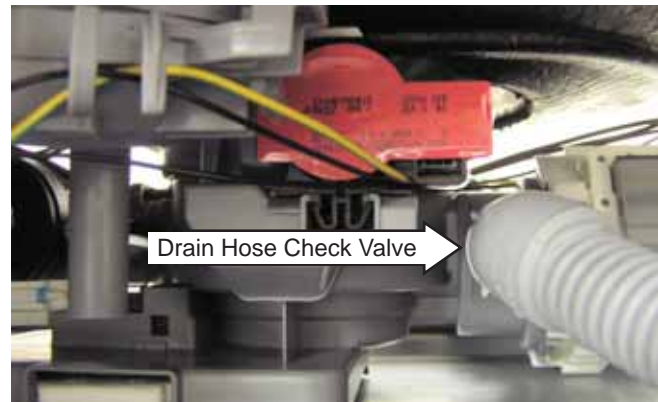
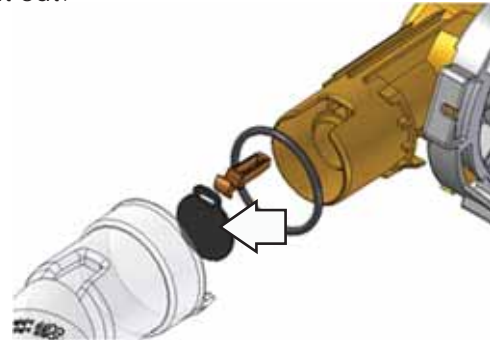
### To remove the drain pump:

1. Remove the EMI filter (See *EMI Filter*.)
2. Press the locking tab out and turn the pump clockwise approximately 1/4 turn to remove.



## Drain Pump Check Valve

The drain pump check valve is located inside the sump well at the drain hose outlet. It is accessed by disconnecting the drain hose and pulling the valve straight out.



## Light Switch

**Note:** The dishwasher must be pulled forward from installation to access light switch screw. (To remove the light, see **Light** in *Inside Tub Components*.)

The light switch is activated by the left hinge when the door is opened at least 5 degrees.

To remove the light switch, remove one T-20 screw from the lower left outside edge of the dishwasher.



# Troubleshooting

## Service Mode

To enter service mode:

1. Turn off main power **ON/OFF** switch.
2. Wait at least 5 seconds.
3. Press and hold both **CYCLE** and **START/RESET** buttons.
4. Turn on main power **ON/OFF** switch.
5. Release the **CYCLE** and **START/RESET** buttons.
6. **START** and **CLEAN** flash.
7. Most recent **FAULT** indicated by graphic pad indicators (see chart).

## Component Testing in Service Mode

**Note:** Press the **CYCLE** button to proceed to each next step of the component test.

Step 1. Inlet valve (**AUTO** LED on).

Step 2. Inlet valve again (other models have 2nd valve) (**HEAVY** LED on).

Step 3. Nothing happens (not applicable for this model) (**NORMAL** LED on).

Step 4. Rinse aid dispenser solenoid (**LIGHT** LED on).

Step 5. Circulation pump (**SPEED** LED on).

Step 6. Circulation pump and heating element (**RINSE** LED on).

Step 7. Fan and wax motor (**AUTO** and **HEAVY** LEDs on).

Step 8. Drain pump (**AUTO**, **HEAVY** and **NORMAL** LEDs on).

**Note:** Components remain active until you proceed to next step. Technician should proceed through test as needed, and then exit the component test mode.

## Water Level

Check the water level using the spray arm hub. The normal fill will come to approximately the top of the flat, raised area as indicated. An overflow condition will be recognized closer to the locking lip indicated.

Normal Fill = 0.85 gallon

(Total cycle = 5.3 gallons)

Overflow = 1.25 gallons

## To Adjust Water Fill

While in the service mode, press and hold the **CYCLE** pad for 3 seconds.

- Normal water fill has NO wash cycle LEDs lit. Normal water intake volume.

Display LED lit

- **AUTO** ----Water intake volume increases by 5%
- **HEAVY** ----Water intake volume increases by 10%
- **NORMAL** -Time-controlled water intake (45 seconds)
- **LIGHT** ----Time-controlled 5% increase (47 seconds)
- **SPEED** ----Time-controlled 10% increase (50 seconds)
- **RINSE**-----Time-controlled 15% increase (52 seconds)



## Fault Codes

Indicator	Indicating	Why	Check
AUTO flashes	Temperature Fault Service Mode	Temperature increase less than 10F degrees in 10 minutes. <i>Program continues</i>	Heater, thermistor, water level, circulation pump, main control & wiring
HEAVY flashes	Overfilling Use & Care	Too much water in the machine, pressure sensor or float switch activated. If the water has not been drained within 60 seconds, the program stops. <i>(drain pump activated)</i>	Drain pump, blocked drain hose, flow meter, inlet valve leaks, and wiring.
NORM flashes	Thermistor fault Service Mode	Stopped or > 175F <i>Program continues</i>	Thermistor and main Control
LIGHT flashes	Water intake fault Use & Care	< 80 pulses within 60 seconds, or correct number of pulses not achieved within 255 seconds. <i>Program stopped</i>	Water inlet, flow meter, inlet water valve, & wiring
SPEED flashes	Leaking Valve Use & Care	Water inlet detected with inlet valve turned off. Any current program stopped. <i>(drain pump activated)</i>	Leak through the inlet valve and flow meter, check why inlet valve is not closing.
RINSE flashes	Pressure sensor fault Service Mode	Output signal > 4.8 VDC <i>Program continues</i>	Pressure sensor, main control, & wiring
AUTO & HEAVY flash	Drain fault Use & Care	Water not drained after 120 seconds. <i>Program stopped</i>	Drain pump, blocked drain hose, main control, & wiring. Filter needs cleaning?
AUTO & SPEED flash	Turbidity sensor fault Service Mode	The process assumes high turbidity in case of "uncertainty" in the Auto program	Water quality, filters, turbidity sensor, drain system & wiring

**Note:** To clear the fault indications labeled **Service Mode** (see second column of table) from the display: 1. Turn off the main power switch; 2. Wait at least 5 seconds; 3. Press and hold the CYCLE pad; 4. Turn main power switch back on; 5. Then release the CYCLE pad. To clear the fault indications labeled **Use & Care** from the display, 1. Turn off the main power switch, 2. Then turn it back on.

## Main Control Programs

Default from factory

Water 49°C / 120°F											
Program	Options		Temperature, °F		Time, min		Consumption		Number of Pre Washes	Number of Main Washes	Number of Rinses
	Main Wash	Drying	Main Wash, °F	Last Rinse, °F	Drying Cycle	Complete Cycle	Water, US Gal.	Energy, kWh			
Auto	-	Heat dry	130-150	160	48	105-155	3,4-6,3	0,7-1,0	2-4	1	2-3
Auto	-	Eco	130-150	140	48	95-150	3,4-6,3	0,5-0,8	2-4	1	2-3
Heavy	Temp boost	Heat dry	160	160	48	210	5,3	1,19	2	1	3
Heavy	Temp boost	Eco	160	140	48	205	5,3	0,99	2	1	3
Heavy	Eco	Heat dry	130	160	48	200	5,3	0,98	2	1	3
Heavy	Eco	Eco	130	140	48	190	5,3	0,78	2	1	3
Normal	Temp boost	Heat dry	150	160	48	140	5,8	0,95	2	1	3
Normal	Temp boost	Eco	150	150	30	120	5,8	0,75	2	1	3
Normal	Eco	Heat dry	130	160	48	145	4,0	0,87	1	1	3
Normal	Eco	Eco	130	120	30	105	4,0	0,48	1	1	3
Light	Temp boost	Heat dry	120	140	30	127	2,9	0,69	-	1	2
Light	Temp boost	Eco	120	120	20	107	2,9	0,51	-	1	2
Light	Eco	Heat dry	105	140	30	123	2,9	0,6	-	1	2
Light	Eco	Eco	105	120	20	100	2,9	0,35	-	1	2
Speed	Temp boost	Heat dry	140	140	10	64	2,6	0,69	-	1	2
Speed	Temp boost	Eco	140	-	-	42	2,6	0,52	-	1	2
Speed	Eco	Heat dry	85	140	10	46	2,6	0,39	-	1	2
Speed	Eco	Eco	85	-	-	20	2,6	0,02	-	1	2
Rinse & dry	-	Heat dry	-	120	-	22	0,8	0,18	-	-	1
Rinse	-	Eco	-	-	-	4	0,8	0,004	-	-	1

## Troubleshooting Checklist

The troubleshooting checklist is common for all dishwasher models. They use different parts to accomplish the same thing and diagnosis will remain similar.

When a problem arises, and a possible cause is listed, follow the test and remove or replace procedures as outlined in this Technical Service Manual.

The wiring diagram, schematic, and service mode test are a necessity when making electrical checks. In most cases, an ohmmeter will handle all the tests necessary.

To verify the setup of any particular cycle of operation, refer to *Control Panel Features*.

Symptom	Check for the Following	Remedy
Dishwasher will not operate when turned ON.	1. A blown fuse or tripped circuit breaker.	1. Replace the fuse or reset the breaker.
	2. Damaged or defective wiring.	2. Repair the wiring.
	3. Improper motor resistances.	3. Replace the motor.
	4. Defective door switch contacts.	4. Replace the door switch.
	5. Defective door latch.	5. Replace the door latch.
Dishwasher runs but will not heat.	1. Heater element is open.	1. Replace the heater element.
	2. Damaged or defective wiring.	2. Repair the wiring.
Dishwasher runs but will not stop.	1. Electronic control inoperative.	1. Replace the electronic control.
	2. Damaged or defective wiring.	2. Repair the wiring.
Dishwasher runs with door open.	1. Defective door safety switch.	1. Replace the door safety switch.
Motor hums but will not start or run.	1. Defective motor bearings.	1. Replace the motor.
	2. Defective motor capacitor.	2. Replace the motor capacitor.
Motor trips out on internal thermal overload protector.	1. Improper motor voltage.	1. Replace the motor.
	2. Motor shaft binding.	2. Replace the motor.
	3. Motor windings shorted.	3. Replace the motor.
Etching on glassware.	1. Soft water condition (Natural or artificial).	1. Have a sample of the water analyzed by the local water department.
Dishwasher continues to fill even though there is no voltage to the fill valve (flooding condition).	1. Defective water fill valve.	1. Replace the water fill valve.
	2. Debris buildup under the diaphragm in the water fill valve.	2. Clean out the debris or replace the water fill valve.

Symptom	Check for the Following	Remedy
No heat during the dry cycle.	1. Defective heater element.	1. Replace the heater element.
	2. Damaged or defective wiring.	2. Repair the wiring.
Dishwasher will not fill with water or will not fill properly.	1. The water supply is turned off.	1. Turn the water supply on.
	2. Low water pressure.	2. Minimum water pressure of 20 PSI.
	3. Defective water fill valve.	3. Replace the water fill valve.
	4. Obstructed water fill valve or hose.	4. Disassemble and clean the water fill valve and hose.
	5. Damaged or defective wiring.	5. Repair the wiring.
	6. Defective pressure switch.	6. Replace the pressure switch.
	7. Heavy water usage elsewhere in home.	7. Use dishwasher when water usage is at a minimum.
Dishwasher will not pump out.	1. Defective drain pump.	1. Replace the drain pump.
	2. Defective impeller.	2. Replace the impeller.
	3. Defective electronic control.	3. Replace the electronic control.
Water siphons out.	1. Drain hose loop too low.	1. Move the drain hose to the proper height.
	2. Drain line connected to a floor drain not properly vented.	2. Install a vent air gap at counter top.
Too much water fill.	1. Defective water fill valve.	1. Replace the water fill valve.
Water leaks from dishwasher.	1. Too much water fill.	1. See previous symptom.
	2. Defective tub seal.	2. Replace the tub seal.
	3. Defective vent plate.	3. Replace the vent plate.
	4. Dishwasher door not level.	4. Adjust the dishwasher door.
	5. Dishwasher not level.	5. Level the dishwasher.
	6. Soap suds leak from dishwasher.	6. Refer to use and care manual.
	7. Loose hose clamps.	7. Tighten or replace hose clamps.
	8. Loose heater element.	8. Tighten heater element mounting nuts.
	9. Defective water seals.	9. Replace the water seals.
	10. Motor and pump assembly not seated properly in tub liner bottom.	10. Remount the motor and pump assembly in the tub liner bottom.

Symptom	Check for the Following	Remedy
Poor washability.	1. Improper loading of dishes, pots, pans, and nesting of silverware.	1. Instruct the customer on proper loading of the dishwasher. Refer to the Owner's Manual.
	2. Defective spray arm.	2. Check spray arm for proper rotation.
	3. Water level should cover heating element.	3. See "Dishwasher will not fill with water or will not fill properly" symptom.
	4. Defective detergent/rinse module.	4. Replace the detergent/rinse module.
	5. Old, improper amount, or wrong type of detergent used (detergents lose effectiveness in a damp area).	5. Instruct the customer on proper use of dishwasher detergent. Refer to the Owner's Manual.
	6. Low incoming water temperature.	6. Incoming water temperature of 120°F is required to properly dissolve dishwashing detergents.
	7. Clogged filter assembly.	7. Clean the filter assembly and microfilter.
Poor drying of dishes.	1. Improper loading of dishes, pots, pans, and nesting of silverware.	1. Instruct the customer on proper loading of the dishwasher. Refer to the Owner's Manual.
	2. Low incoming water temperature.	2. Incoming water temperature of 120°F is required to properly dissolve dishwashing detergents.
	3. Water remaining in tub after drain cycle is completed.	3. See "Dishwasher will not pump out" symptom.
	4. Defective heating element.	4. Replace the heating element.
	5. Damaged or defective wiring.	5. Repair the wiring.
Door will not latch.	1. Defective door latch.	1. Replace the door latch.
Noisy pump assembly.	1. Defective motor bearings.	1. Replace the pump motor.
	2. A sucking sound is heard at the end of the cycle.	2. This is a normal condition.
Detergent left in the dispenser.	1. Detergent allowed to stand too long in the dispenser.	1. Instruct the customer on proper use of dishwasher detergent. Refer to the Owner's Manual.
	2. Dispenser was wet when detergent was added.	2. Instruct the customer on proper use of dishwasher detergent. Refer to the Owner's Manual.
	3. Detergent is binding on detergent/rinse module cover.	3. Replace the heating element.
	4. Detergent cup held closed or blocked by large dishes.	4. Instruct the customer on proper loading of dishwasher. Refer to the Owner's Manual.

Symptom	Check for the Following	Remedy
Noisy pump assembly.	1. Debris in bottom of tub sump area.	1. Clean out the sump area.
	2. Pump parts were not properly installed.	2. Inspect the pump and correct any installation errors.
	3. Impellers are not properly shimmed or are rubbing.	3. Use the shim gage furnished in the impeller seal kit. When the seal is properly shimmed the impellers will be in the correct operating position.
	4. Defective motor bearings.	4. Replace the motor.
	5. A sucking sound is heard at the end of the cycle.	5. This is a normal condition.
Spotting or filming on glasses (reposition of food soil).	1. Detergent allowed to stand too long in the dispenser or excessive amounts of detergent are being used.	1. Instruct the customer on proper use of dishwasher detergent. Refer to the Owner's Manual.
	2. Low incoming water temperature.	2. Incoming water temperature of 120°F is required to properly dissolve dishwashing detergents.
	3. Improper loading of dishes, pots, pans, and nesting of silverware.	3. Instruct the customer on proper loading of the dishwasher. Refer to the Owner's Manual.
	4. Water high in mineral content.	4. Have water analyzed. Use of commercially available rinse agents (such as Jet Dry) helps to reduce the spotting by lowering the surface tension of the water (the water then "sheets" off the dishes).
	5. High incoming water temperature.	5. Incoming water temperature of 160°F or higher will cause high protein food particles to bake onto the dishes before detergent can remove them. Set water heater tank to deliver 120°F water.
	6. Improper installation of the dishwasher to a food waste disposal.	6. Install properly. Refer to Installation Manual.



# Washability Complaints

**Hot Water** – Ample supply of water at a temperature of 120°F is necessary for best results. Do **not** use dishwasher soon after using clothes washer or filling bathtub.

**Loading** - Consult Owner's Manual on loading procedures.

**Amount of Water** – Make sure dishwasher is level. Check water level, allowing dishwasher to fill normally for first fill. **The water level should be to the heating coil.** If water level is low, check for clogged screen and check pressure switch. (See *Water Valve*.)

**Detergent/Rinse Module Leakage** – Some moisture in cup is normal. Detergent must not be soaking wet, oozing out, and down the inner door panel. If a leak is detected, check the detergent/rinse module door lid, latch operation, and gasket seal. (See *Detergent/Rinse Module*.)

**Proper Amount of Detergent** – Use full detergent cup of fresh detergent in hard water. Use only enough detergent to get good wash performance in soft water.

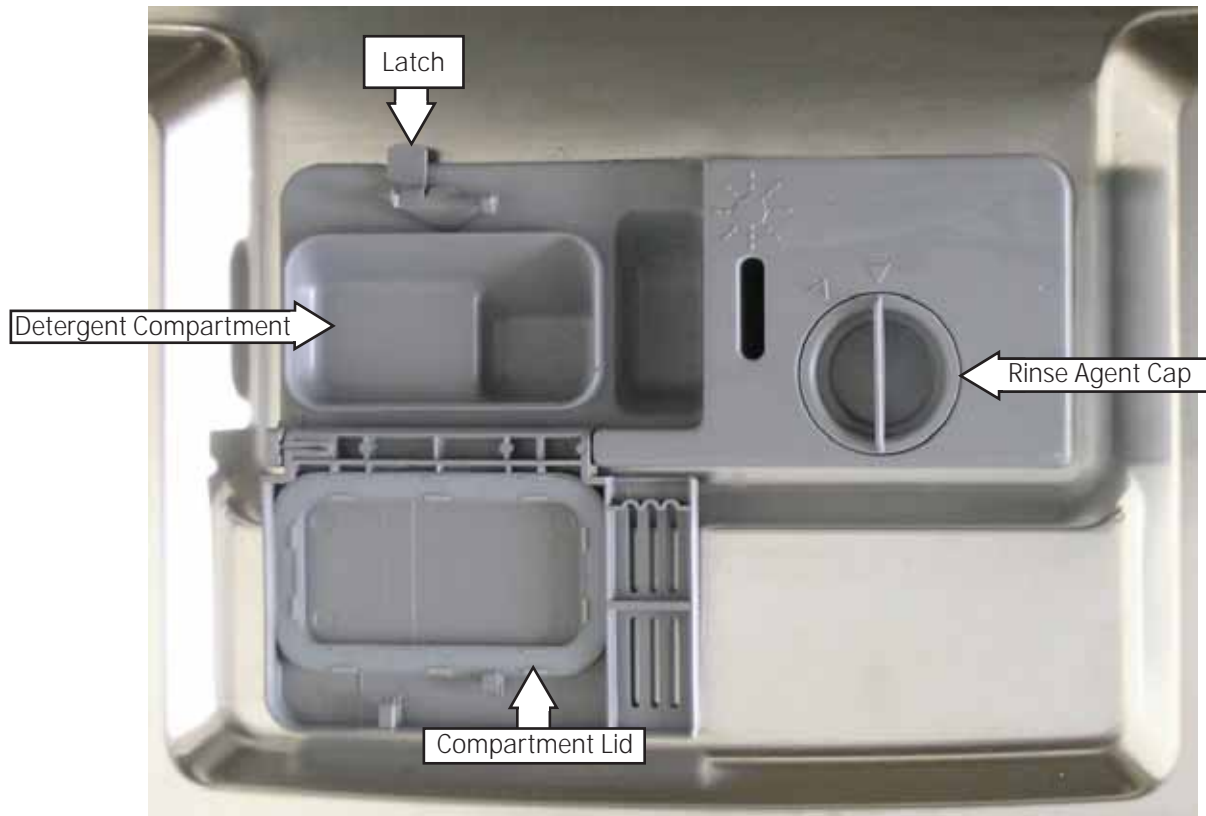
**Rinse Agent** – Use rinse agent if spotting or drying is a problem. A rinse agent will improve the water sheeting action and drying performance.

**Water Valve** – (See *Water Valve*.)

**Upper Basket** – If a wash problem is reported for the upper basket, check for a leaking flapper on the two ports built into the upper shower support. (See *Upper Basket*.)

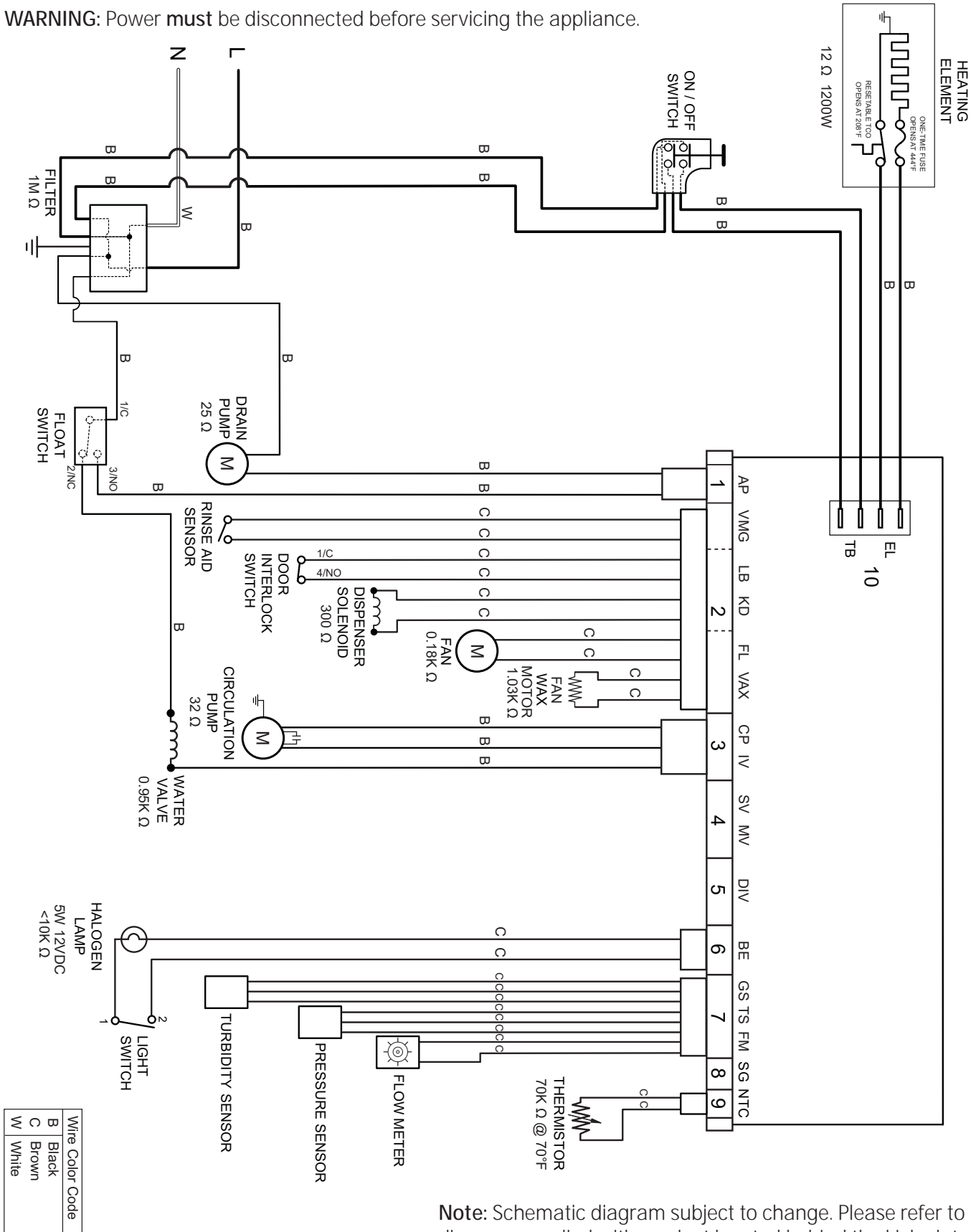
**Spray Arm** – Check to be sure the spray arms spin freely and jets are not clogged. Check to be sure the middle spray arm water conduit is connecting properly to the main conduit.

**Drying** – Water inlet temperature must be at least 120°F for proper drying. Low water inlet temperature will prevent proper convection air movement and increase drying time substantially.



# Schematic

**WARNING:** Power must be disconnected before servicing the appliance.



**Note:** Schematic diagram subject to change. Please refer to diagram supplied with product located behind the kick plate.

# Warranty

## YOUR MONOGRAM DISHWASHER WARRANTY

Staple sales slip or cancelled check here. Proof of original purchase date is needed to obtain service under warranty.

### WHAT IS COVERED From the Date of the Original Purchase

#### ONE-YEAR

Any part of the dishwasher which fails due to a defect in materials or workmanship. During this limited one-year warranty, GE will also provide, free of charge, all labor and in-home service to replace the defective part.

#### Five Years

The dishwasher rack and/or the electronic control module, if these should fail due to a defect in materials or workmanship. During this five-year limited warranty, you will be responsible for any labor or in-home service costs.

#### Lifetime

The stainless steel tub or door liner, if it fails to contain water due to a defect in materials or workmanship. During this limited lifetime warranty, GE will also provide, free of charge, all labor and in-home service to replace the defective part.



This warranty is extended to the original purchaser and any succeeding owner for the products purchased for ordinary home use in the 48 mainland states, Hawaii or Washington, D.C. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location for service. In Alaska the warranty is the same except that it is LIMITED because you must pay to ship the product to the service shop or for the service technician's travel cost to your home.

All warranty service will be provided by our Factory Service Centers or by our authorized Customer Care® servicers during normal working hours.

Should your appliance need service, during warranty period or beyond, call 800.444.1845. Please have serial number and model number available when calling for service.

### WHAT IS NOT COVERED

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Replacement of house fuses or resetting of circuit breakers.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.
- Cleaning or servicing of the air gap device in the drain line.
- Damage caused after delivery, including damage from items dropped on the door.
- Product not accessible to provide required service.

**EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are in your state, consult your local or state consumer affairs office or your state's Attorney General.

Warrantor: General Electric Company,  
Louisville, KY 40225