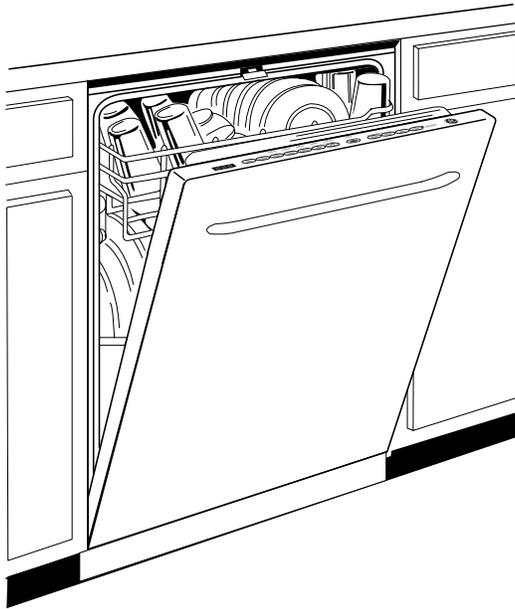




*GE Consumer & Industrial*

# TECHNICAL SERVICE GUIDE

## Top Control Profile Dishwashers



### MODEL SERIES:

**PDW9200**

**PDW9280**

**PDW9700**

**PDW9800**

**PDW9880**





### **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.

***GE Consumer & Industrial***

*Technical Service Guide*

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## Table of Contents

Active Vent.....	21
Circulation Pump and Motor .....	13
Component Locator Views.....	9
Components .....	11
Control Features .....	5
Control Module .....	19
Control Module Board.....	19
Demo Mode .....	14
Detergent/Rinse Module .....	20
Door Interlock Switch .....	20
Door Panel .....	18
Drain System .....	16
Factory Test Mode .....	23
Fan.....	21
Fill Funnel .....	12
Heating Element .....	14
Lower Spray Wash Arm, Fine Filter, and Inlet Cover .....	12
Main Conduit .....	12
Membrane Keypad .....	18
Middle Spray Arm .....	11
Nomenclature .....	4
Schematic.....	26
Service Mode.....	22
Strip Circuits .....	25
Transorb .....	17
Troubleshooting .....	24
Turbidity Sensor.....	15
Upper Spray Arm .....	12
Using the Dishwasher with the Upper Rack Removed .....	11
Wash Cycles.....	13
Warranty .....	27
Water Valve and Flood Switch .....	16
Water Valve Test .....	17

# Nomenclature

## Model Number

**P D W 9 2 0 0 J 0 0 W W**

**Brand**

P = Profile

**Product Type**

DW = Dishwasher

**Model Designator**

Designates features – the higher the number, the more features.

**Exterior Color**

- BB = Black
- CC = Bisque
- SS = Stainless Steel
- WW = White
- II = Integrated\*

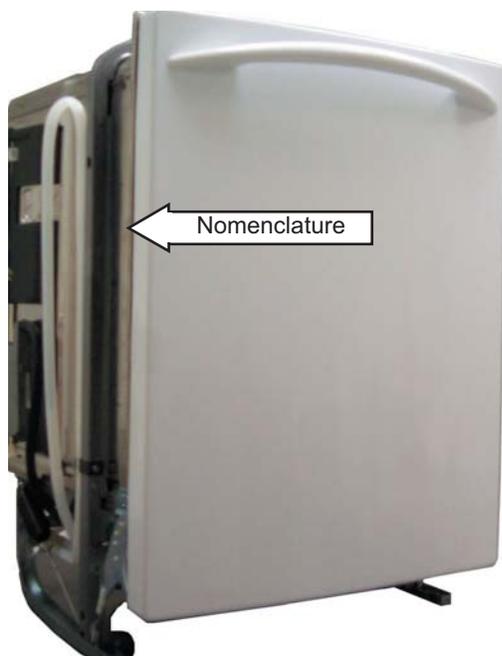
**Engineering Model Suffix**

**Model Year Designator**

**\*Note:** The exterior color, II = Integrated, requires a panel kit.

## Serial Number

The model number and serial number are located inside the door jam. The mini-manual is located behind the toe-plate.



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

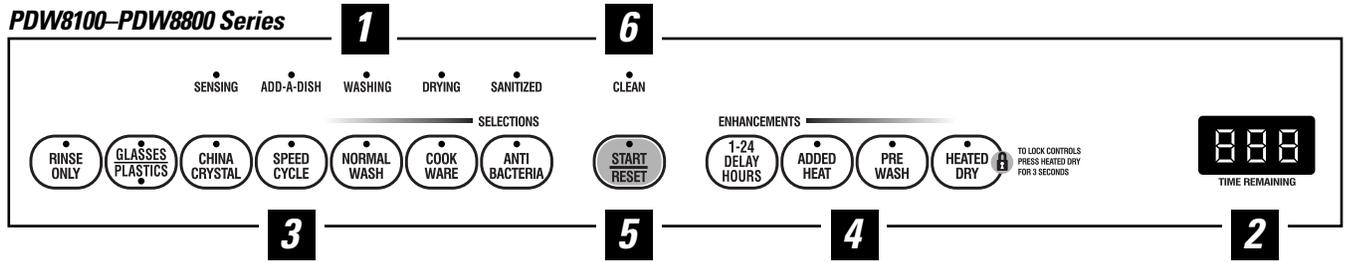
Example: **AG**123456S = January, 2004

<b>A</b> - JAN	2005 - H	The letter designating the year repeats every 12 years.
<b>D</b> - FEB	2004 - G	
<b>F</b> - MAR	2003 - F	
<b>G</b> - APR	2002 - D	
<b>H</b> - MAY	2001 - A	Example:
<b>L</b> - JUN	2000 - Z	T - 1974
<b>M</b> - JUL	1999 - V	T - 1986
<b>R</b> - AUG	1998 - T	T - 1998
<b>S</b> - SEP	1997 - S	
<b>T</b> - OCT	1996 - R	
<b>V</b> - NOV	1995 - M	
<b>Z</b> - DEC	1994 - L	

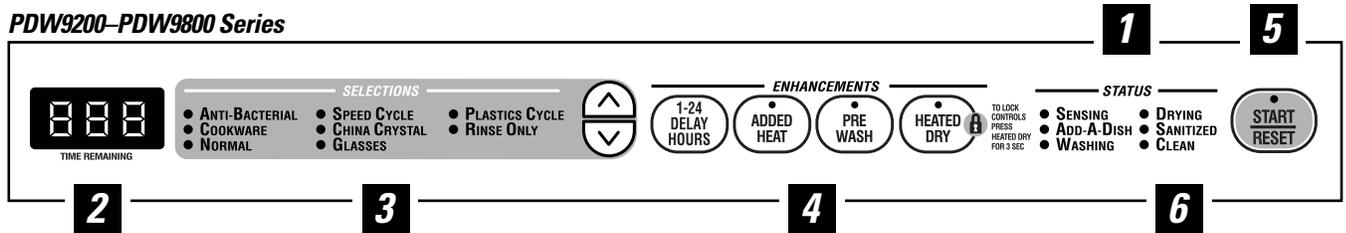
**Note:** The service information sheet is located under the control panel.

# Control Features

## PDW8100–PDW8800 Series



## PDW9200–PDW9800 Series



## Control Settings

### 1 Status Indicator Lights (Indicators vary by models)

The Status display tells you what is happening while the dishwasher is in operation and may flash, indicating a malfunction. The lights will come **ON** indicating the sequence of the dishwasher operation.

**SENSING** Displayed while the ExtraClean™ Sensor is measuring the amount of soil and temperature of water. The dishwasher will adjust the selected cycle to achieve optimal performance.

**ADD-A-DISH** Displayed during prewash indicating that dishes added now will still be cleaned.

**WASHING** Displayed during prewash, main wash and rinse periods.

**RINSING** Displayed during rinse periods.

**DRYING** Displayed during **HEATED DRY**.

**SANITIZED** Displayed when cycle has met sanitization conditions.

**CLEAN** Displayed when a wash cycle is complete and enhancements are complete.

### 2 Time Remaining Display (on some models)

During operation, the display shows the minutes remaining until the cycle is complete. The display may adjust the remaining time while the Sensing light is on. During a delay start, the display will show hours of time remaining until the cycle starts.

### 3 Selections

PDW8100–PDW8800 Series: Press the pad for the desired wash cycle.

PDW9200–PDW9800 Series: Use the Arrow Pads (▲▼) to scroll through the wash cycles.

The light above or next to the selected pad will be **ON** to indicate which **WASH CYCLE** has been selected.

**ANTI-BACTERIA Heavy** 10.0 gal., 93 min.  
(on some models) **Medium** 8.6 gal., 90 min.  
**Light** 7.2 gal., 90 min.

This cycle raises the water temperature in the final rinse to sanitize your dishware. The cycle length will vary depending on the temperature of your inlet water.

**NOTE:** The Anti-Bacteria cycle is monitored for sanitization requirements. If the cycle is interrupted during or after the main wash portion or if the incoming water temperature is so low that adequate water heating cannot be achieved, the sanitizing conditions may not be met. In these cases, the sanitized light will not illuminate at the end of the cycle.

**NOTE:** NSF-certified residential dishwashers are not intended for licensed food establishments.

### 3 Selections (continued)

---

**COOKWARE (POTS & PANS)** **Heavy** 11.4 gal., 95 min.  
**Medium** 10.0 gal., 71 min.  
**Light** 10.0 gal., 66 min.

This cycle is meant for heavily soiled dishes or cookware with dried-on or baked-on soils.  
This cycle may not remove burned-on foods. Everyday dishes are safe to be used in this cycle.

---

**NORMAL WASH** **Heavy** 9.9 gal., 74 min.  
**Medium** 7.0 gal., 61 min.  
**Light** 5.6 gal., 48 min.

This cycle is for medium/heavily soiled dishes and glassware.

---

**SPEED CYCLE** **Heavy** 9.3 gal., 36 min.  
(on some models) **Medium** 7.2 gal., 36 min.  
**Light** 5.7 gal., 33 min.

This cycle is for everyday dishes and glassware.

---

**CHINA CRYSTAL** **Heavy** 10.0 gal., 49 min.  
**Medium** 7.2 gal., 36 min.  
**Light** 7.2 gal., 36 min.

This cycle is for lightly soiled china and crystal.

---

**GLASSES** **Heavy** 10.0 gal., 45 min.  
(on some models) **Medium** 7.2 gal., 33 min.  
**Light** 7.2 gal., 32 min.

This cycle is specifically designed for glasses.

---

**PLASTICS CYCLE** **Heavy** 9.9 gal., 119 min.  
(on some models) **Medium** 7.0 gal., 106 min.  
**Light** 5.6 gal., 93 min.

This cycle is specifically designed to reduce the risk of melting plastic items and improve plastic drying. For removing red tomato-based stains, GE recommends the use of Cascade Plastic Booster™.

---

**RINSE ONLY** **Heavy** 2.9 gal., 7 min.  
**Light** 1.4 gal., 3 min.

For rinsing partial loads that will be washed later. Do not use detergent with this cycle.

**NOTE:** On the PDW8700 and PDW8800 Series models, the **GLASSES/PLASTICS** selector is a toggle pad; toggle the pad until the desired cycle is indicated.

**NOTE:** This dishwasher is equipped with an ExtraClean™ Sensor with automatic temperature control; therefore, cycle length and time may vary depending on soil and temperature conditions.

**NOTE:** Only the Anti-Bacteria cycle has been designed to meet the requirements of Section 6, NSF 184 for soil removal and sanitization efficacy.

## 4 Enhancements

The light above the selected pad will be **ON** to indicate which **ENHANCEMENT** has been selected.

---

**DELAY HOURS** You can delay the start of a wash cycle for up to 24 hours (depending on model). Press the **DELAY START** pad to choose the number of hours you want to delay the start of the cycle; then press **START/RESET**.

**PDW8100–PDW8800 Series:** The machine will count down and start automatically at the correct time.

**PDW9200–PDW9800 Series:** After closing the door, the machine will count down and automatically start at the correct time.

**NOTE:** To cancel the **DELAY START** selection before the cycle begins, press the **DELAY START** pad until the display is blank.

---

**ADDED HEAT (EXTRA HOT WASH)** When selected, the cycle will run longer with heating elements on to improve both wash and dry performance.

**NOTE:** Cannot be selected with **RINSE ONLY** cycle.

---

**PRE WASH** (on some models) For use with heavily soiled and/or dried-on, baked-on soils. This option **MUST** be selected **PRIOR** to starting the cycle. This option adds 16 minutes to the cycle time.

**NOTE:** Cannot be selected with **RINSE ONLY** cycle.

---

**HEATED DRY** Light Off Shuts off the drying heat option. Dishes will air dry naturally (PDW8100–PDW8800 Series) or fan dry (PDW9200–PDW9800 Series) to save energy.

---

**HEATED DRY** Light On **PDW8200–PDW8600 Series:** Turns the heater on for fast drying. This will extend the total cycle time by 8 minutes for the **SPEED CYCLE** and 30 minutes for all other cycles.

**PDW8100, PDW8700, PDW8800 and PDW9200–PDW9800 Series:** Turns the heater on with the fan for fast drying. This will extend the total cycle time by 30 minutes for the **ANTI-BACTERIAL** cycle, 38 minutes for the **NORMAL** cycle, 8 minutes for the **SPEED** cycle, 15 minutes for the **PLASTICS** cycle and 30 minutes for all other cycles.

**NOTE:** Cannot be selected with **RINSE ONLY** cycle.

---

**LOCK**  You can lock the controls to prevent any selections from being made. Or you can lock the controls after you have started a cycle.

**Children cannot accidentally start dishwasher by touching pads with this option selected.**

To unlock the dishwasher controls, press and hold the **HEATED DRY** pad for 3 seconds. To lock the dishwasher, press and hold the **HEATED DRY** pad for 3 seconds. The light above the **LOCK** pad will turn off.

---

**RESET** To change a cycle after washing starts...

**PDW8100–PDW8800 Series:** Touch the **START/RESET** pad to cancel the cycle. The **START/RESET** light will flash while the water is pumped out if needed. This takes approximately 90 seconds.

**PDW9200–PDW9800 Series:** Open the door slowly to prevent splash-out. Touch the **START/RESET** pad to cancel the cycle. If the **START/RESET** light is flashing, close the door until the water pumps out (this takes approximately 90 seconds) and the light stops flashing.

When the light stops flashing, the dishwasher can be reprogrammed and restarted.

## **5** *Start*

---

### **PDW8100–PDW8800 Series**

Close the dishwasher door and select the cycle and desired enhancements. Touch the **START/RESET** pad to begin the cycle. Water fill begins immediately, and approximately 60 seconds later the wash action begins.

When the dishwasher door is fully closed, the control panel lights will display the last settings you selected. If you don't want to change any of the settings, simply touch the **START/RESET** pad to begin the cycle.

If the door is closed, the indicator lights will turn off if the **START/RESET** pad is not selected within 2 minutes. To activate the display, open and close the door or press any pad.

---

### **PDW9200–PDW9800 Series**

After selecting the cycle and desired enhancements, touch the **START/RESET** pad to ready the dishwasher to begin the cycle. Close the door to start the cycle or begin the **DELAY START** 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 touch the **START/RESET** pad to ready the dishwasher and close the door to begin the cycle.

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

---

## **6** *Clean*

---

### **PDW8100–PDW8800 Series**

The **CLEAN** light is illuminated when the selected cycle and enhancements are complete. The light will stay **ON** until the door is opened.

---

### **PDW9200–PDW9800 Series**

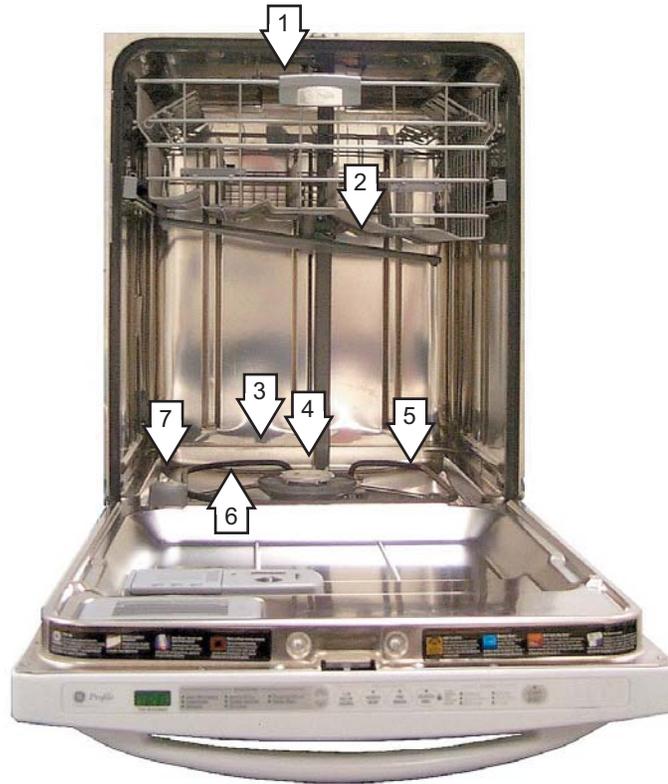
The **CLEAN** light is illuminated and a double beep will sound when the selected cycle and enhancements are complete. You may remove the dishes at any time. Note the high-efficiency fan will run quietly for 30 minutes to 4 hours (depending on selected cycle) after the **CLEAN** light is illuminated to continue drying the dishes. This can be interrupted by opening the door and pressing any keypad.

**NOTE:** To turn off the double beep indicator (or re-activate it if it was previously disengaged), press the **HEATED DRY** pad 5 times within 3 seconds. A triple beep will sound to indicate the end-of-cycle beep option has been toggled.

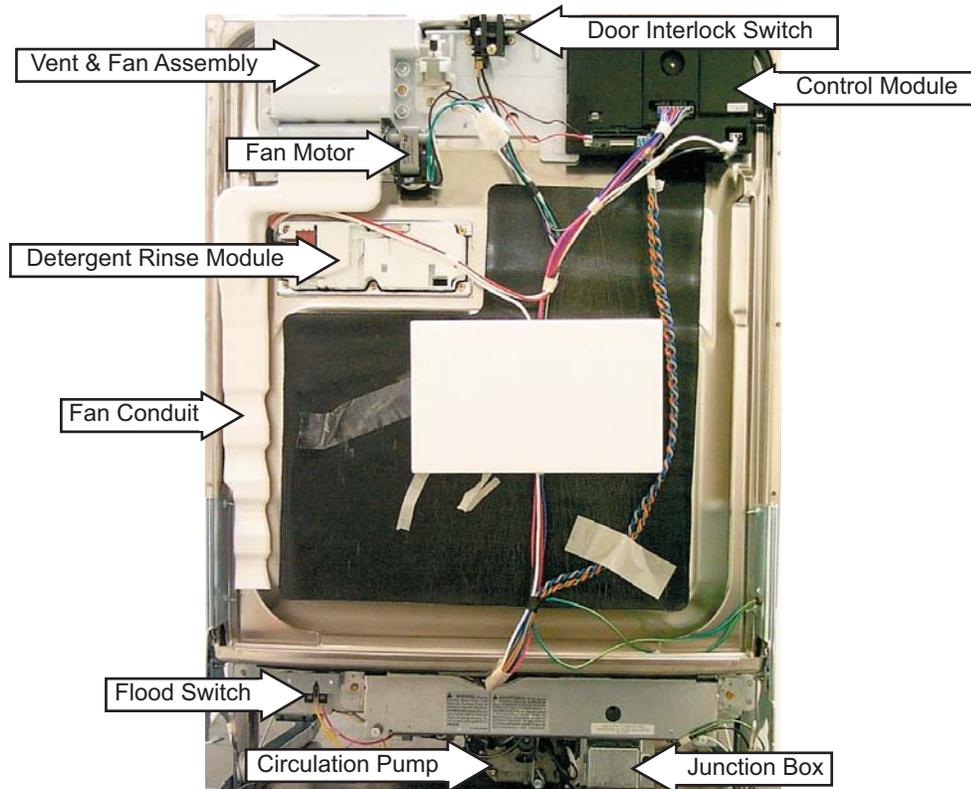
# Component Locator Views

## Inside Cabinet View

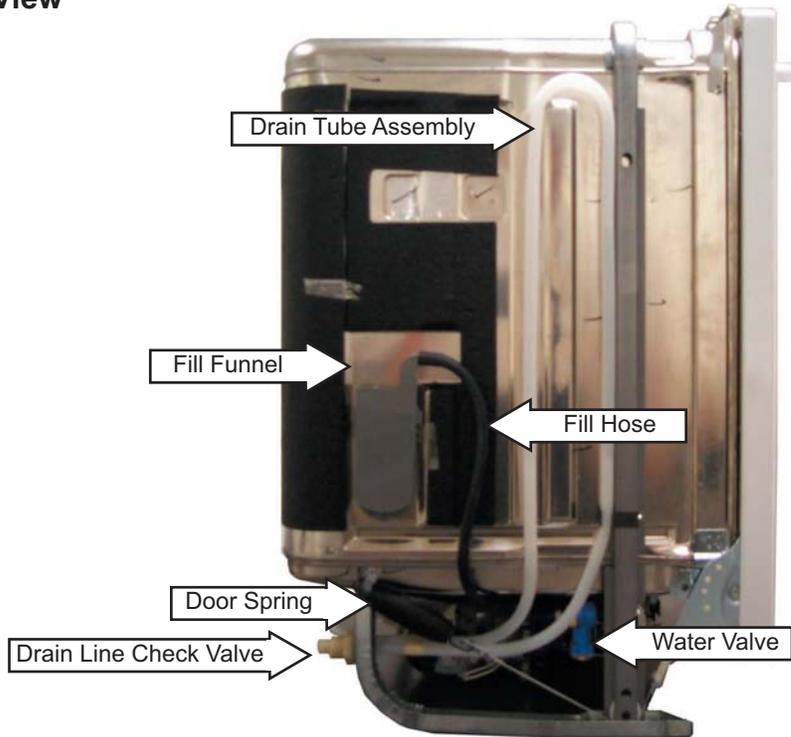
- 1 - Upper Spray Arm
- 2 - Middle Spray Arm
- 3 - Lower Spray Arm
- 4 - Hub
- 5 - Filter Screen
- 6 - Heating Element
- 7 - Float



## Door View (Panel Removed)

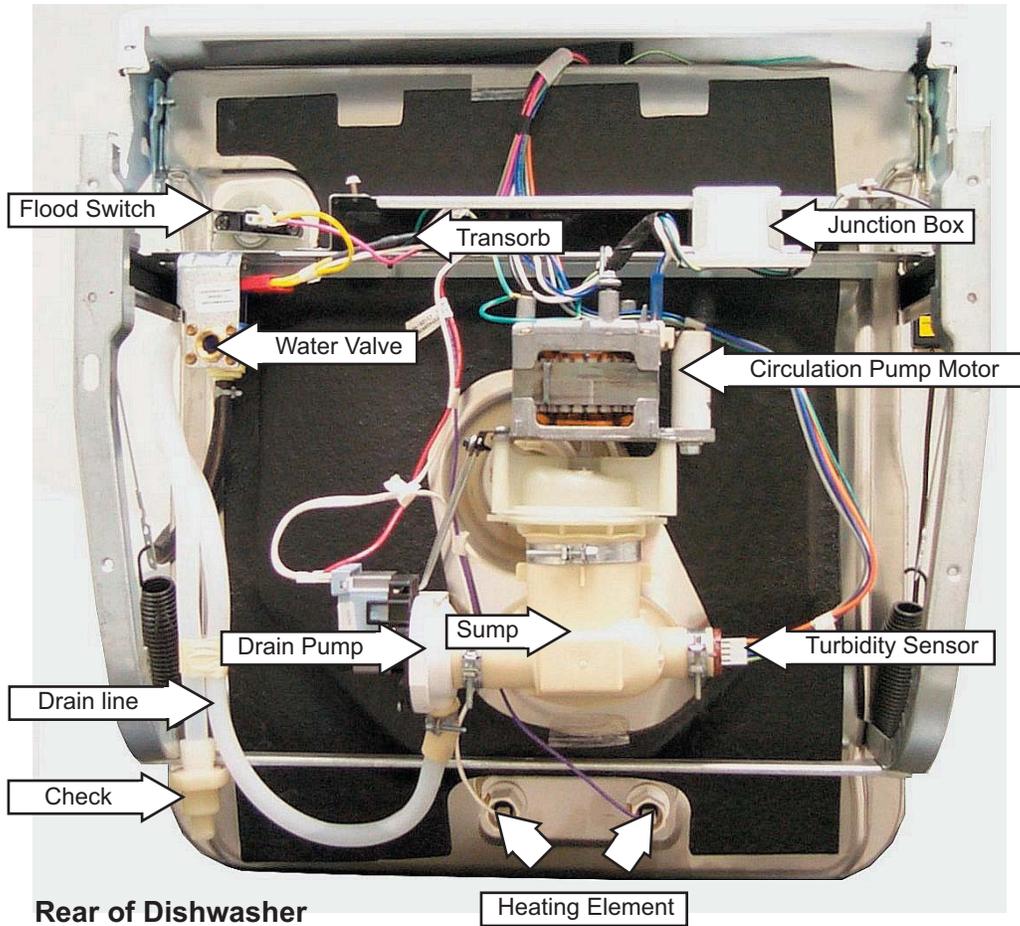


**Left Side View**



**Bottom View**

**Front of Dishwasher**

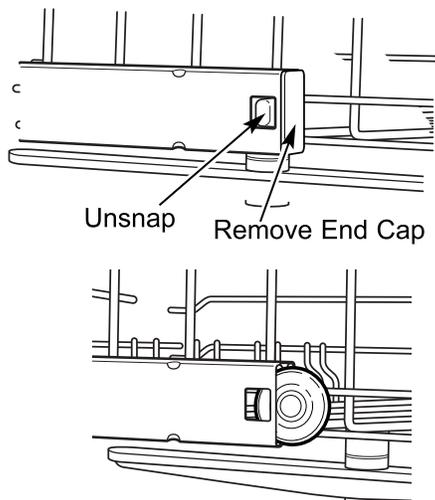


**Rear of Dishwasher**

# Components

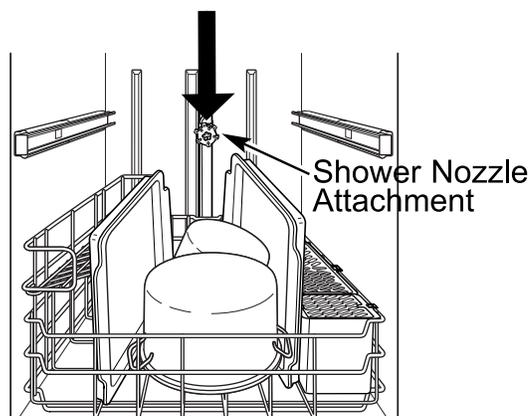
## Using the Dishwasher with the Upper Rack Removed

1. Unsnap and remove the end cap on each side of the rails.
2. Pull the rack straight out and off the rails.
3. Replace the end caps.
4. Push the rails all the way back into the dishwasher.



5. Slide the shower nozzle attachment over the spout.
6. The dishwasher is now ready for use.

**Note:** Always use the shower nozzle when the upper rack is removed.



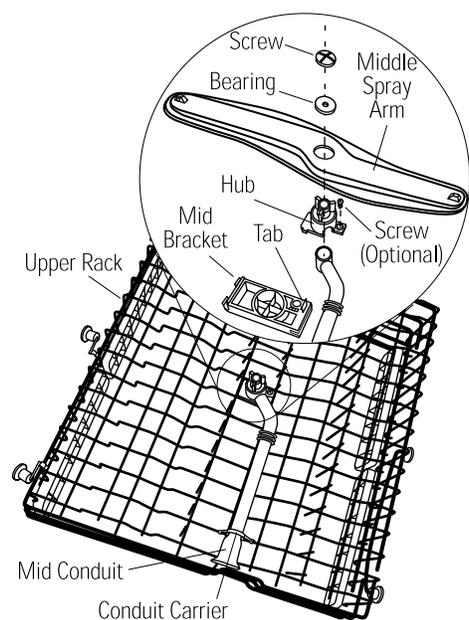
## Middle Spray Arm

1. Check holes in spray arm for bits of china, seeds, and other foreign matter.
2. Check spray arms for rotation.

## Removal and Replacement

1. Pull upper rack all the way out.
2. Remove plastic screw on bottom of middle spray arm. This will allow the middle spray arm and bearing to be removed.

**Note:** Install middle spray arm with spray jets facing the upper rack. Place bearing between spray arm screw and bottom of the middle arm.



**Note:** If the upper rack experiences poor cleaning problems, ensure the middle spray arm is turning freely. If not, disassemble the middle spray arm and clean the bearing surface, then reassemble.

## Lower Spray Arm, Fine Filter, and Inlet Cover

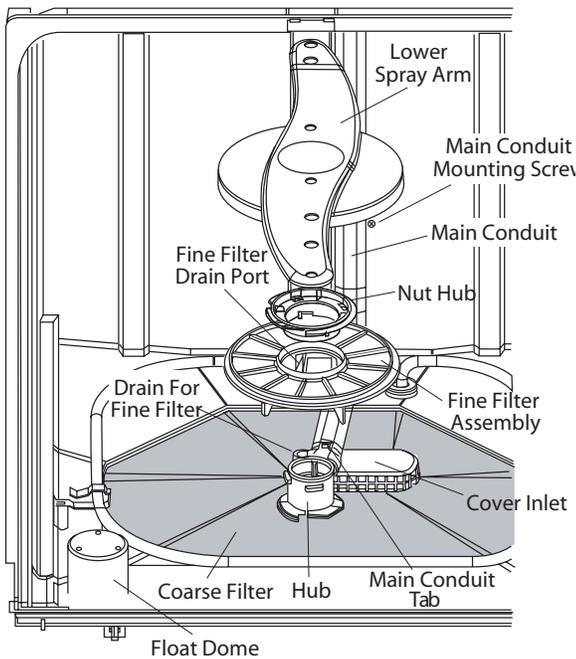
Check the holes in spray arm for bits of china, seeds, and other foreign matter. Also check the spray wash arms for rotation. If soil is present, clean fine filter screen.

The lower spray wash arm can be removed by gently lifting and rotating it counterclockwise.

The nut hub can be removed by rotating it counterclockwise.

**Caution:** Use care to avoid breaking the clip on the hub when removing the main conduit from hub.

**Note:** When installing the fine filter, make sure the drain port of the filter is engaged with the drain for the fine filter.



## Upper Spray Arm

Check the holes in spray wash arm for bits of china, seeds, and other foreign matter. Also check the spray wash arms for rotation.

To remove the upper spray wash arm, remove the upper rack (See **Middle Spray Arm**), then remove the screw and upper spray wash arm.

## Main Conduit

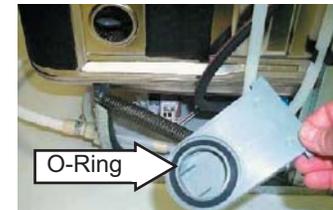
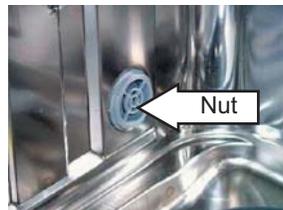
The main conduit supplies water to the middle and upper spray wash arms.

### Removal and Replacement

1. Pull upper rack all the way out.
2. Push the tab on the outer slide cap in and remove the slide cap.
3. Remove the upper rack.
4. Release the bottom conduit tab.
5. Release 2 center conduit tabs and remove the main conduit.

## Fill Funnel

The top section of the fill funnel separates from the main body. The fill funnel body is held in place by a nut (located on the inside of the dishwasher). Rotate the nut counterclockwise to remove the main body. There is an O-ring seal between the fill funnel and dishwasher tub. Make certain the O-ring is fully seated when reinstalling.



## Wash Cycles

CYCLE	MAX # OF PRE-WASH CYCLES	WASH CYCLE	MAX # RINSE CYCLES	WASH TIME <sup>1</sup>		WASH TEMPERATURE		HEATED DRY TIME	FAN ON TIME <sup>6</sup>	
				MIN	MAX	MIN	MAX		HEATED DRY	W/O HEATED DRY
Normal Wash	3	1	3	32	88	130 <sup>2</sup>	150 <sup>2</sup>	38	120	240
Speed Wash	3	1	2	19	26	125 <sup>3</sup>	150 <sup>3</sup>	8	120	240
Glasses	3	1	3	26	39	110 <sup>3</sup>	130 <sup>3</sup>	30	120	240
China Crystal	3	1	3	30	52	110 <sup>3</sup>	130 <sup>3</sup>	30	120	240
Pots & Pans	4	1	3	44	108	140 <sup>3</sup>	150 <sup>3</sup>	38	120	240
Sani Wash	3	1	3	21	100	130 <sup>3</sup>	158 <sup>3</sup>	8+15 <sup>4</sup>	120	240
Rinse Only	0	0	2	2	2	80	158	Not An Option	Not An Option	240
Plastics	3	1	3	39	88	130 <sup>2</sup>	140 <sup>2</sup>	45/60 <sup>5</sup>	120	240

Time is in minutes

Temperature is in degrees Fahrenheit

- 1.) Cycle times do not include water fill and drain
- 2.) Heater on in main wash and final rinse
- 3.) Heater on in all pre-washes, main wash and all rinses
- 4.) 8 minutes heated dry and 15 minutes cool down
- 5.) 45 minutes without heated dry, 60 minutes with heated dry
- 6.) Fan running time after cycle has completed

## Circulation Pump and Motor

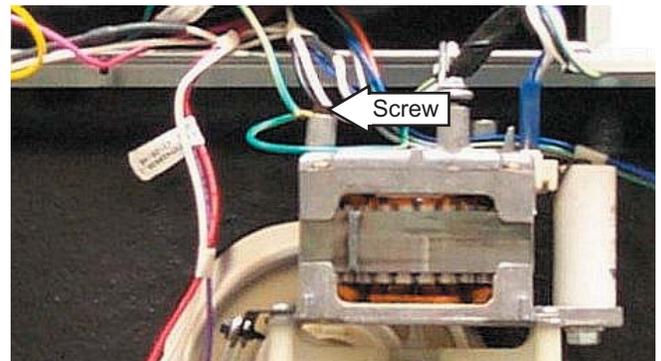
The dishwasher must be removed from its installation to gain access to the circulation pump and motor. The circulation pump can be activated using **Service Mode**. Refer to schematic or strip circuit for motor resistance value.

Before removing the circulation pump, remove the water from the sump with a syringe.

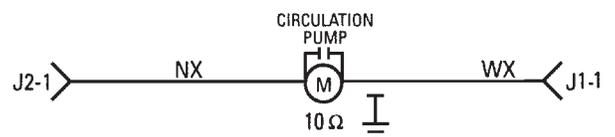
It is important to remember the motor does not start immediately when the dishwasher cycle has started. If the motor hums, but will not start, make certain the pump impeller is free from obstruction and the motor shaft can turn freely.

The terminals on the induction motor are labeled L1 and N. The motor is thermally protected (internally) through the L1 side. The wiring connector is blue to match the wire leading to the motor. It is designed to fit only one way on the terminals. Make certain the connector is fully seated when installing.

**Note:** It is extremely important that the self-tapping grounding screw is tightened securely when reinstalling the circulation pump.



Circulation Pump and Motor Strip Circuit



## Heating Element

The heating element can be activated using **Service Mode**.

The dual-wattage heating element produces 875 watts during wash, to help heat the water, and an effective wattage due to cycling of 700 watts during the dry cycle.

It is normal for the heating element to cycle during HEATED DRY. The control energizes the heating element continuously for the first 6 minutes, then cycles the heating element ON for 60 seconds, then OFF for 60 seconds for the remainder of the HEATED DRY cycle.

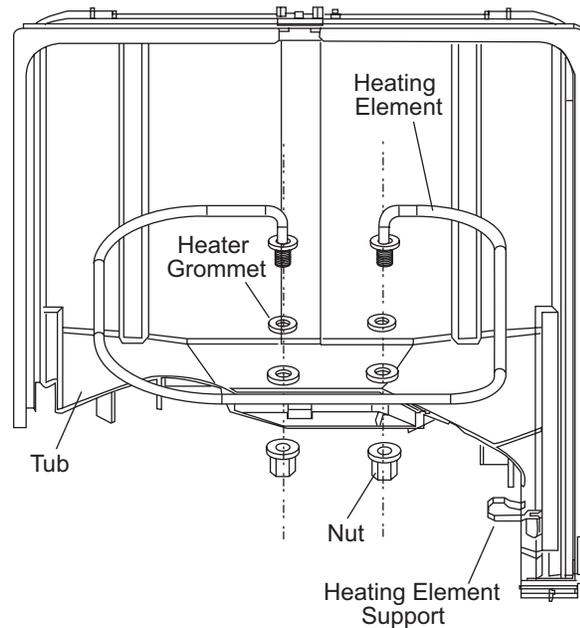
Selecting ADDED HEAT will energize the heater for the entire time during the last pre-wash cycle and the final rinse cycle. Circulation time during the final rinse is increased 2.8 times the normal with this option. If selected after the wash cycle has started, the feature will not take effect until the beginning of the next fill. This option is not available for the RINSE ONLY cycle.

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.

If the problem is that the dishes are not drying correctly, don't overlook the rinse agent. A rinse agent will improve the water sheeting action and drying performance.

It is normal for the stainless steel tub and inner door panel to retain water droplets even though the dishes are dry.

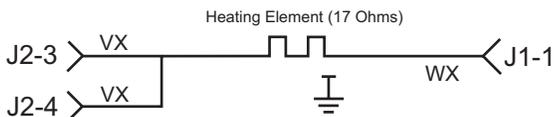
The heating element nuts are located on the underside of the washer, near the back. Ample force is required to remove the nuts. Removing the dishwasher from installation may be required.



## Demo Mode

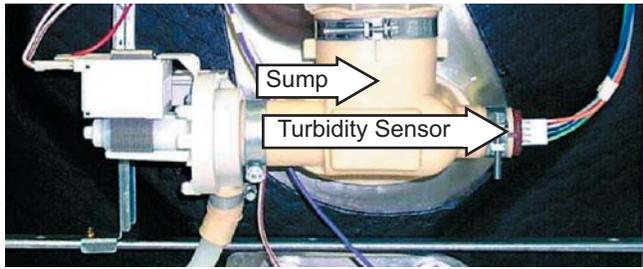
- Demo mode is entered by pressing the down arrow and ADDED HEAT pads simultaneously for 5 seconds.
- When entered, the NORMAL and ADDED HEAT LEDs blink for 3 seconds and the active vent will close.
- Pressing a pad will light the corresponding LED.
- Pressing the START/RESET pad will activate the main pump for 20 seconds and each cycle LED will be lit in sequence for 3 seconds (left to right).
- On 3-digit display models, the display will sequence 999, 888, 777, 666, 555, etc., before running the main pump.
- The cycle will end after the main pump stops. The drain cycle will not be energized.
- To exit the demo mode, the dishwasher must be disconnected from power.

### Heating Element Strip Circuit



## Turbidity Sensor

The turbidity sensor is located on the side of the sump.



The turbidity sensor measures the amount of suspended particles in the wash water in the sump. The control sends the turbidity sensor a pulse width modulated 5 volt signal for calibration and usage during operation.

The control then receives an analog signal of the sensed turbidity, which is processed by the microprocessor.

The base-line reading is taken during the first fill as the sump water level is between the  $\frac{1}{4}$ - to  $\frac{3}{8}$ -in. gap between the LED transmitter and the receptor. Successive turbidity measurements are supplied to the control module and used to determine whether any prewash or rinse cycles can be skipped. The sensing LED is on during all pre-wash cycles and during the final rinse.

Decisions are based on a comparison of clean water measurements at the beginning of the first fill, measurements taken at selected fills, and water temperature. By measuring the turbidity level, the control module can conserve energy on lightly soiled loads by skipping unnecessary cycles.

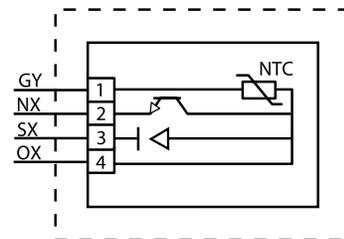
**Note:** If the turbidity sensor circuit fails to open or is shorted, the sensing LED on the control panel will **not** light, and the unit will operate for the maximum amount of time, using the maximum number of wash and rinse fills for the selected cycle.

The turbidity sensor also contains the thermistor for automatic temperature control.

The thermistor's resistance has a negative temperature coefficient. As the temperature increases, the resistance goes down. At 75°F, the resistance is approximately 9.9K  $\Omega$ . At 140°F, the resistance is approximately 2.8K  $\Omega$ .

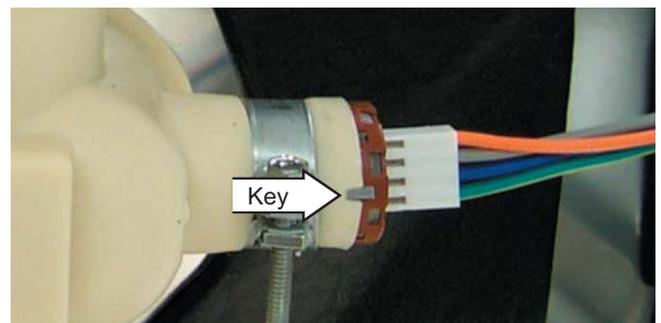
### Turbidity Sensor Test

The **Service Mode** is the most accurate way to test the turbidity sensor circuit. The turbidity sensor circuit contains the control module, wiring, and the turbidity sensor.



**Note:** When replacing the turbidity sensor, always run the **Factory Test Mode** to calibrate the turbidity sensor to the control board.

When installing the turbidity sensor, align the key on the sensor with the keyway on the sump.



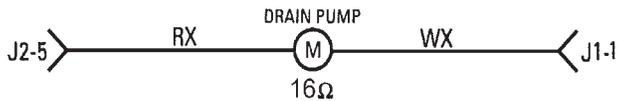
## Drain System

The drain system consists of the following components:

- Auxiliary drain pump (includes motor and one-way check valve)
- Drain tube
- Check valve (in line with drain tube)
- Drain hose

The inlet cover prevents large particles from entering the sump. Water entering the drain pump is not filtered by the fine filter (metal) or by the sump filter (plastic). The drain pump is mounted on the sump and contains a one-way check valve. The drain pump is controlled by the control module and can be activated using **Service Mode**.

**Auxiliary Drain Pump Strip Circuit**



The drain pump utilizes a 120V AC motor. The motor should read approximately 16  $\Omega$ .

## Water Valve and Flood Switch

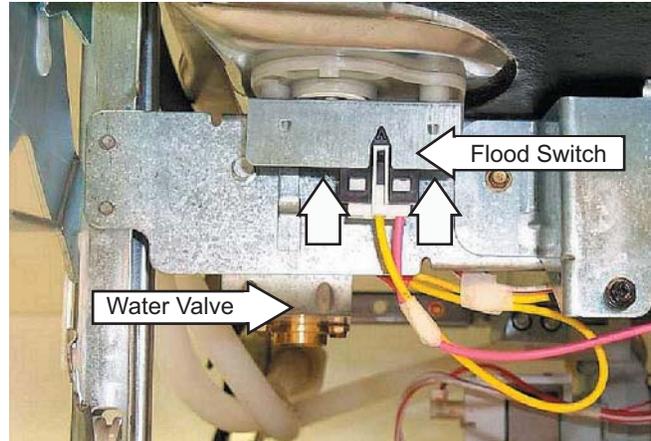
The water valve is a 120 VAC solenoid valve that is switched on/off by the control module. The flood switch acts as a safety switch **ONLY** and does not control normal operation of the water valve. The flood switch opens the L1 side of the water valve circuit.

The switch is normally open. The weight of the flood switch float holds the switch closed. The flood switch will not stop the flow of water if the valve sticks open from a mechanical failure.

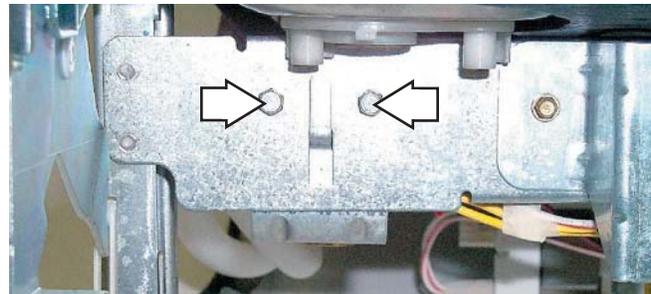
The water valve can be replaced with the dishwasher installed.

**WARNING:** Disconnect power to dishwasher before servicing water valve and flood switch.

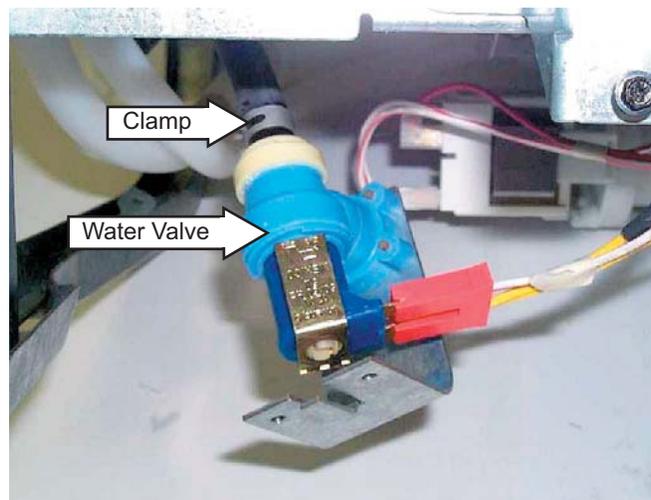
The flood switch is held in place by 2 Phillips head screws.



The water valve is secured to the frame by 2 hex head screws. (Photo is shown with flood switch removed.)



**Note:** To prevent leaks after installation, ensure that hose-to-valve connection is good and that clamp is in place.



## Water Valve Test

1. Attempt to activate water valve using **Service Mode**. Pump out water as necessary using **Service Mode**. If an intermittent failure is suspected, activate water valve 5 times using **Service Mode**. Water valve should stay on for 50 to 71 seconds per activation and should not turn on and off during the 50 to 71 second activation time.
2. If the water valve is not operating properly or water level is low, check the following:
  - Water valve, flood switch, flood switch float and stem, transorb, and then main control. The flood switch should open when the water level is approximately 1/4-in. above the base (bottom) of the float dome.
  - Resistance through the water valve solenoid coil - 750  $\Omega$  to 1200  $\Omega$ .
  - Clogged screen in water valve.

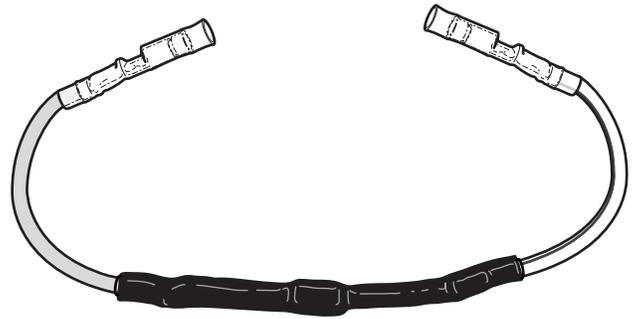


## Transorb

The dishwasher contains a transient absorber (“transorb”) in the water valve circuit. The transorb absorbs electrical transients created when the water valve is turned off. It is wired in the harness between the line and the neutral side of the water valve circuit. If the transorb fails, it may create a short circuit that would cause the circuit breaker to trip when the water valve is activated.

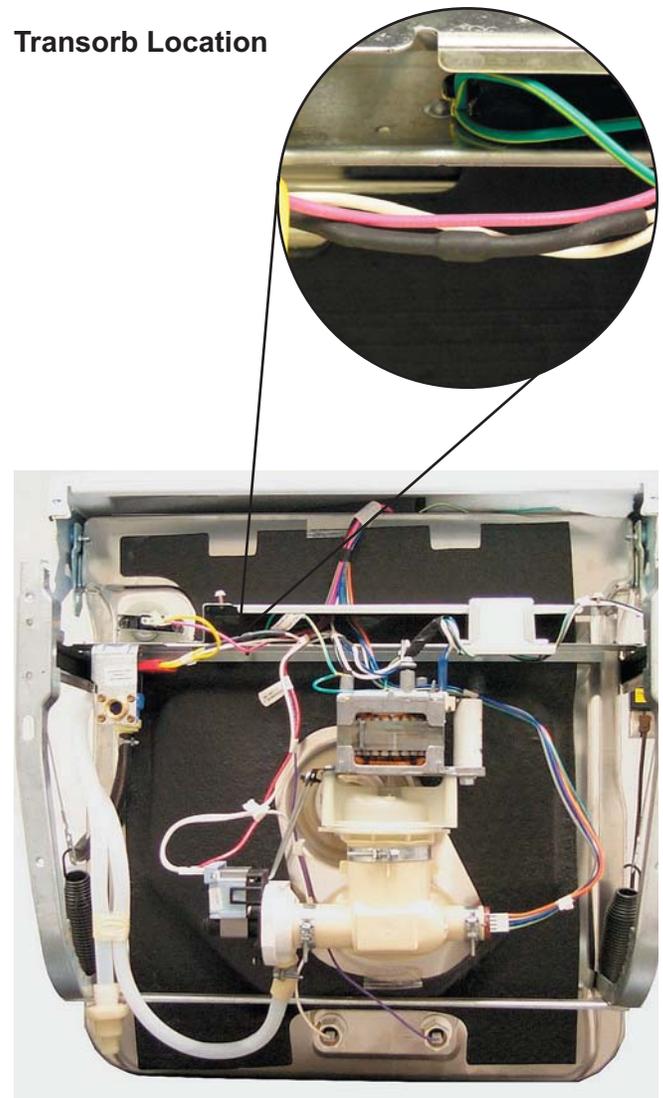
To check the transorb, disconnect power to the dishwasher and unplug the connector from the water valve. Measure the resistance between the two terminals in the connector. The transorb is good if the resistance measurement is 100K ohms or higher.

To replace the transorb, order the kit WD35X10025. It contains a transorb with two attached butt connectors and instructions. The kit allows you to splice a new transorb into the wire harness.



A shorted transorb can damage the water valve circuit in the electronic control. If the transorb has failed, replace the electronic control along with the transorb to prevent future related control problems.

## Transorb Location



## Door Panel

The door panel covers the main control board, detergent cup, vent fan, motor, louver, and door-interlock switch.

The outer door panel is held in place by 12 screws (5 Phillips head screws per side and two 1/4-in. hex head screws at the bottom).



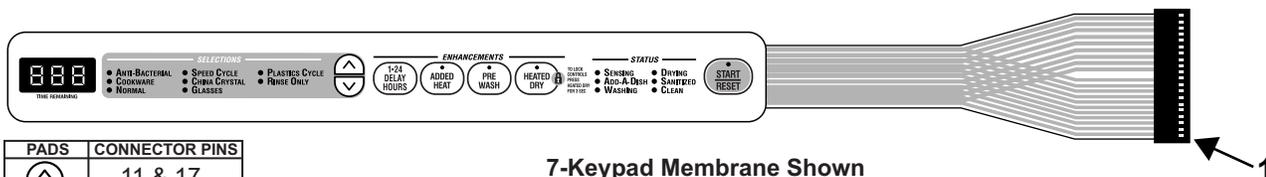
**Note:** Ribbon cable(s) connect the keypad membrane (3-digit display on some models) to the control circuit board. Due to the ribbon length, care must be taken when removing the door panel to ensure that the ribbon cable(s) are not damaged.

## Membrane Keypad

The door panel must be removed to access the membrane keypad (see *Door Panel*).

- When removing the membrane keypad, peel the keypad from right to left.
- When installing, make sure the membrane button areas and lights align with the keypad.
- On models with an LED display, the display is held in place by 2 Phillips head screws.

**Note:** When replacing the keypad membrane, always run the **Factory Test Mode** to calibrate the keypad membrane to the control board.



PADS	CONNECTOR PINS
	11 & 17
	11 & 16
	11 & 15
	12 & 15
	12 & 16
	12 & 17
	13 & 15

7-Keypad Membrane Shown

**Note:** When troubleshooting, always check resistance between pins 18 and 19:

- 7-keypad membrane should read approximately 22K  $\Omega$ .
- 6-keypad membrane should read approximately 75K  $\Omega$ .

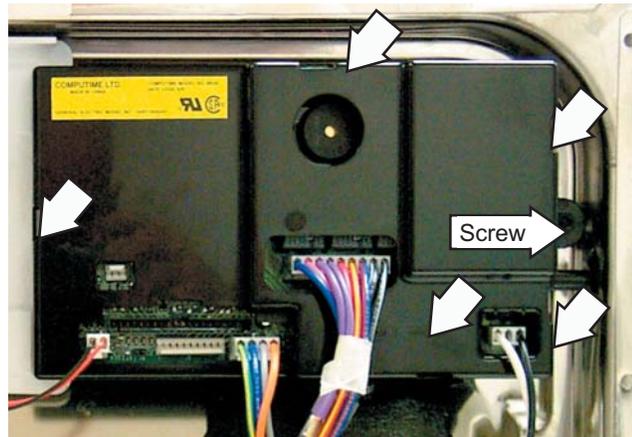
When a control pad is pressed, continuity is present on the corresponding pins (see chart). **Example:** If the HEATED DRY pad is pressed, you should have continuity between pins 12 and 17. To locate pin numbers, note location of pin 1 for reference point. (See graphic.)

## Control Module

The door panel must be removed to access the control module (see **Door Panel**). The main control is considered a “smart” control, capable of learning the water temperature and turbidity characteristics of the home.

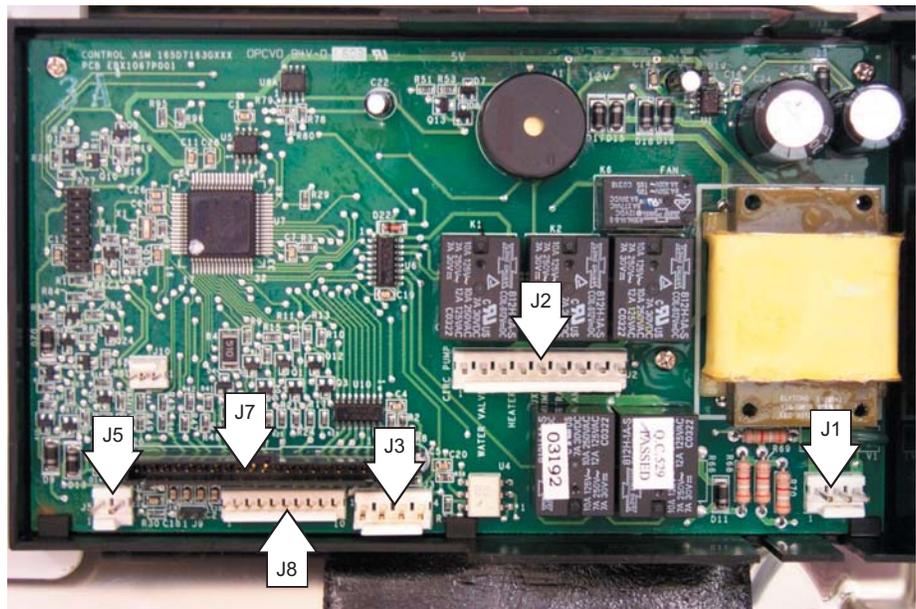
It is normal if the cycle times vary over a period of time from the factory default settings due to temperature and water quality.

The control module is held in place by a single screw that secures the module to the right side of the inner door panel. (The screw is located on the outside of the inner door panel.)



## Control Module Board

**Note:** When replacing the control module, always run the **Factory Test Mode** to calibrate the keypad membrane and turbidity sensor to the control board.



J1 - Door Interlock Switch

J2 - Heating Element, Circulation Pump, Drain Pump, Fan, Water Valve, Detergent Module

J3 - Turbidity Sensor

J5 - Vent Louver Motor

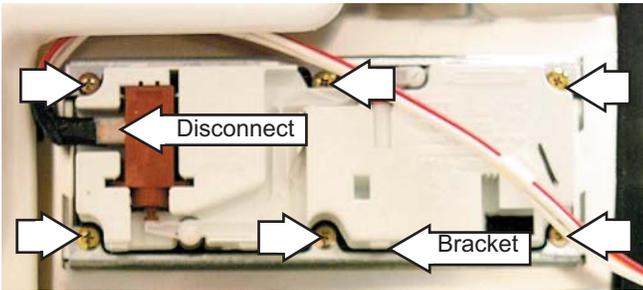
J7 - Membrane keypad ribbon cable connector

J8 - LED ribbon cable connector for 3-digit display (some models)

## Detergent/Rinse Module

The door panel must be removed to access the detergent/rinse module (see **Door Panel**).

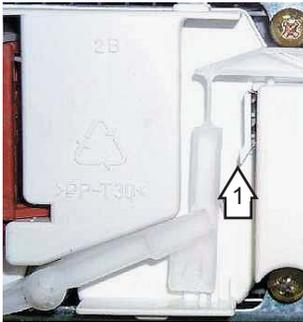
The detergent rinse module is held in place by 6 Phillips head screws and 2 brackets.



The detergent/rinse module automatically dispenses both the detergent and the rinse agent at the appropriate times. The module is activated 2 times during a wash cycle. Detergent is dispensed at the beginning of the main wash cycle and rinse agent at the beginning of the final rinse. The detergent/rinse module can be activated using **Service Mode**.

### The first time the module is activated:

The lever slides up the right-hand path of the connecting rod (1). This action releases the detergent cover.



When deactivated (2), the lever returns down the left-hand path and comes to rest under the notch in the center of the connecting rod.



At the second activation (3), the lever lifts the connecting rod by the notch. This action lifts the rinse dispenser plunger and releases the rinse agent. When deactivated, the lever returns to its original starting position.

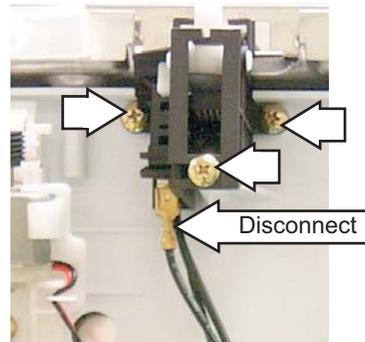


## Door Interlock Switch

The door interlock switch opens the L1 circuit when the door is open. Switch is replaced as an assembly.

### Removal and Replacement

1. Remove the outer door panel (see **Door Panel**).
2. Remove the 3 Phillips head screws that hold the door interlock switch in place.
3. Disconnect the 2 wire connectors from the door interlock switch assembly.



If the door is unlatched while running a wash cycle, the cycle countdown will pause and the vent will open. If unlatched for more than 15 seconds during a wash cycle, the control will beep once every 15 seconds until the door is re-latched.

## Active Vent

The active vent consists of the fan, motor, housing, and vent louver motor.

The active vent helps to reduce the noise level and heat loss when in the closed position. The control module supplies +/- 12 VDC to the vent louver motor. The control module reverses polarity to drive the motor in a clockwise or counterclockwise (open or closed) direction.

The vent closes 8 seconds after the main pump is switched on during the first fill cycle and opens during the drying cycle (heated and non-heated). The vent is open during cooldown periods or when the unit is not in use.

If the vent is closed and the door is opened during the wash cycle, the vent will open. When the door is closed again, the vent will remain open for 8 seconds, then close again to finish the cycle.

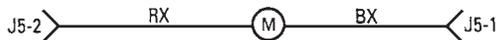
It is normal for water vapor to come through the active vent during the dry cycle. The active vent can be opened and closed using the **Service Mode**.

The vent louver is held in place by a single screw. Remove the motor from the mount by rotating the motor 90° in the mount and sliding it out between the tabs.

**Note:** The gear in the mount is held in place with the motor.



Vent Motor Strip Circuit



## Fan

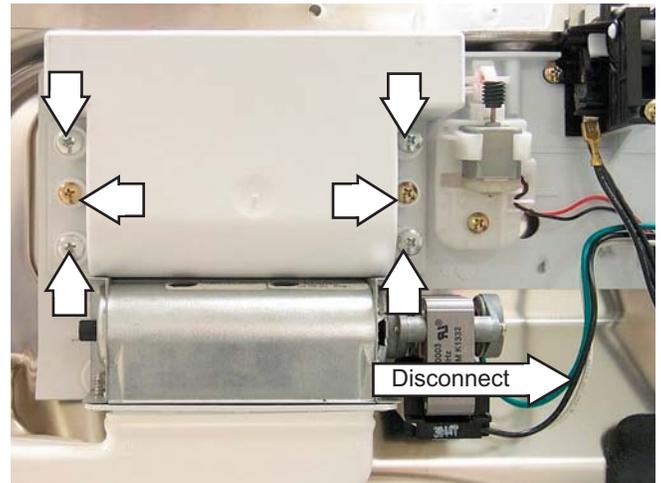
During natural dry, the fan runs for approximately 4 hours after the last drain cycle is completed (clean light on). During heated dry, the fan runs for approximately 2 hours after the last drain cycle is completed. If the door is opened, the fan stops and the control stops counting down. When the door is relatched, the fan will start again and the control will continue to count down. Touching any gear will turn off the fan.

**Note:** This also applies to the RINSE ONLY cycle. Since heated dry is not an option with RINSE ONLY, the fan will run for approximately 4 hours before turning off.

To access the vent fan and motor, remove the door panel (see **Door Panel**).

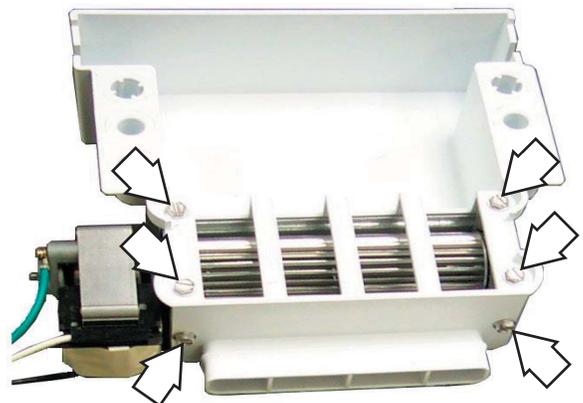
The vent fan and motor housing are held in place by:

- 4 long, silver Phillips head screws.
- 2 short, brass Phillips head screws (see photo).



**Note:** Foam with double-sided tape holds the conduit in place. The foam tears easily if pulled during removal of the housing.

Six Phillips head screws hold the fan and motor to the vent housing.



# Service Mode

To enter service mode, press and hold the down arrow and heated dry keypads simultaneously for 3 seconds. All LEDs light for 3 seconds when service mode is entered. To exit service mode press the START/RESET at any time.

## 6 PAD CONTROL



PAD	Description	Notes
1L	Activates/Deactivates Heater and Fan	Test times out after 6 minutes.
2L	Activates/Deactivates Water Valve	Operates until flood switch opens.
3L	Activates/Deactivates Detergent Cup	Clean LED <b>ON</b> . Can take up to 40 seconds for detergent cup to open.
4L	Activates/Deactivates Auxiliary Pump	Cookware LED <b>ON</b> .
5L	Activates/Deactivates Main Pump	Normal LED <b>ON</b> .
START/RESET	Use to exit Service Mode	

## 7 PAD CONTROL



PAD	Description	Notes
1L	Activates/Deactivates Heater and Fan	Test times out after 6 minutes.
2L	Not Used	
3L	Activates/Deactivates Water Valve	Operates until flood switch opens.
4L	Activates/Deactivates Detergent Cup	Clean LED <b>ON</b> . Can take up to 40 seconds for detergent cup to open.
5L	Activates/Deactivates Auxiliary Pump	Cookware LED <b>ON</b> .
6L	Activates/Deactivates Main Pump	Normal LED <b>ON</b> .
START/RESET	Use to exit Service Mode	

**\*Note:** Service mode may be used for 30 minutes maximum. After 30 minutes, the service mode will automatically turn off.

# Factory Test Mode

**Always run the factory test mode to calibrate when replacing the turbidity sensor, control module board, and membrane keypad.**

The Factory test mode is the most accurate way to test the turbidity sensor circuit which contains the control module, wiring, and turbidity sensor. Factory test mode will test the thermistor (used for automatic temperature control) that is contained in the turbidity sensor and will test the transmitter that is contained in the turbidity sensor.

## Entering Factory Test Mode

**Note:** This mode can only be entered within the first 2 minutes after power-up. After 2 minutes, factory test mode is unavailable.

Disconnect power from dishwasher. Wait 10 seconds and connect power to dishwasher. Press the UP and DOWN keypads simultaneously for 3 seconds (This step must be performed within 2 minutes of power-up). The control will step through the test cycle for the preset amount of time. Press DELAY/START or (DELAY/HOURS on some models) to advance to the next step.

## TEST CYCLE

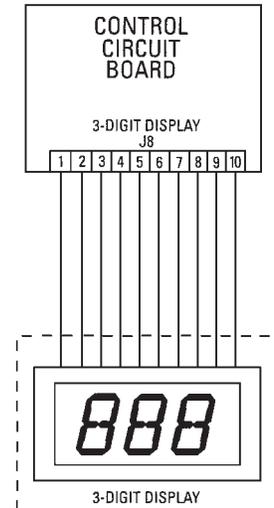
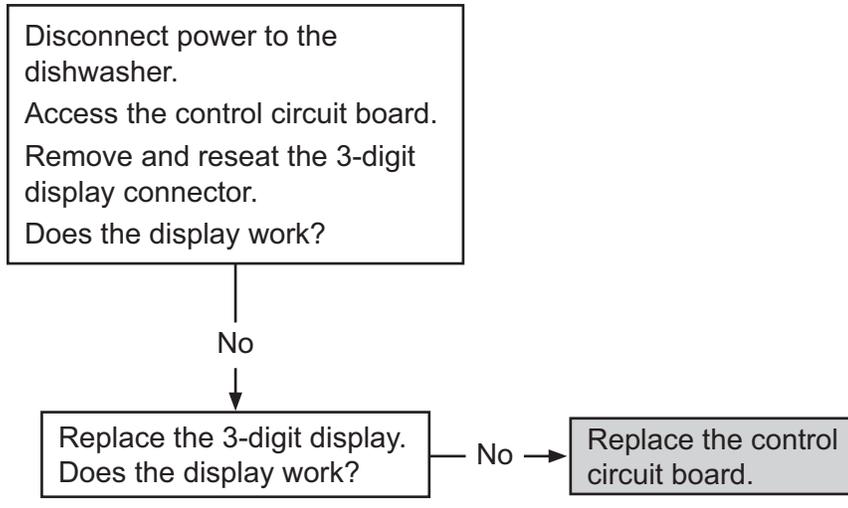
1. All LEDs illuminate for 10 seconds.
2. Vent fan energizes for 5 seconds, then the active vent closes.
3. Detergent module is activated. Water valve energizes for 60 seconds.
4. Main pump is energized. Water valve continues filling for an additional 10 seconds.
5. Heater is energized and main pump continues to run for an additional 60 seconds.
6. Dishwasher pauses for 40 seconds. During this time the turbidity sensor, control module board, and membrane keypad are being calibrated.
  - a. The control module will beep continuously and the lock icon LED will light if:
    - 1) The temperature sensor check does not fall between the limits (42°F to 199°F).
    - 2) The control receives an analog signal outside the expected range for the turbidity sensor.
    - 3) The EEPROM was not read correctly.
7. Drain pump energizes for 75 seconds.
8. The detergent module is energized for 60 seconds and the water valve is energized for 70 seconds.
9. The heater and main pump are energized for 60 minutes. (Press DELAY/START DELAY/HOURS on some models) to advance to the next step before control times out.
10. Active vent opens, drain pump is energized for 75 seconds, then active vent closes.

**Note:** If the calibration test fails, check the following:

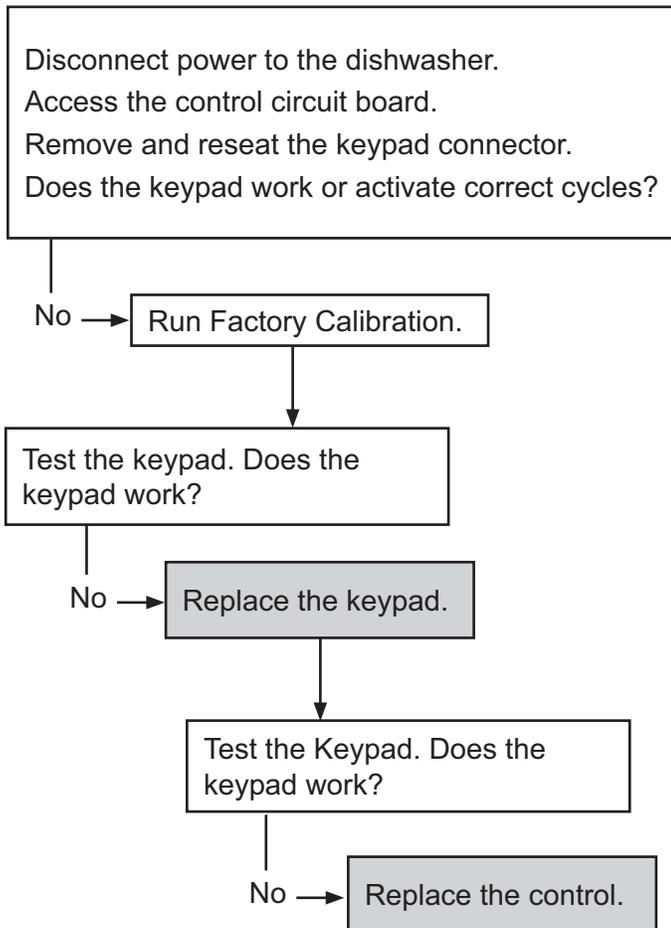
- Make certain the dishwasher is not located on a non-insulated outer wall where the temperature at the turbidity sensor may be below 42°F.
- The turbidity sensor may be dirty. Run a rinse only cycle with 1 cup vinegar or use citric acid crystals (WD35X151) to clean the sensor.

# Troubleshooting

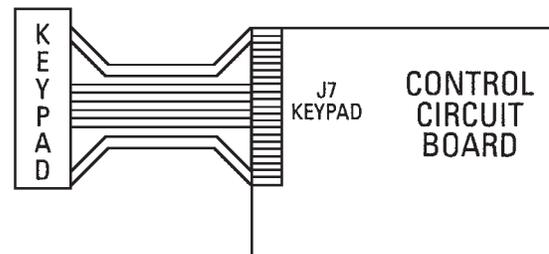
## 3-Digit Display Does Not Work



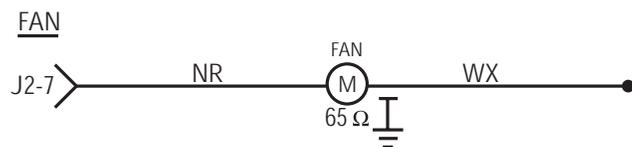
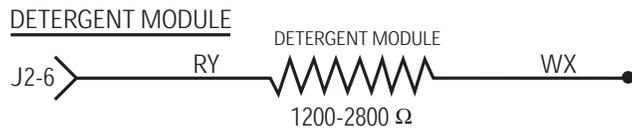
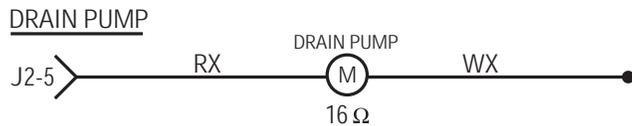
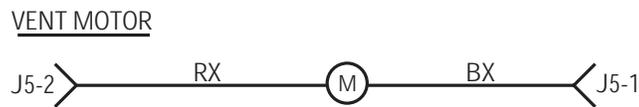
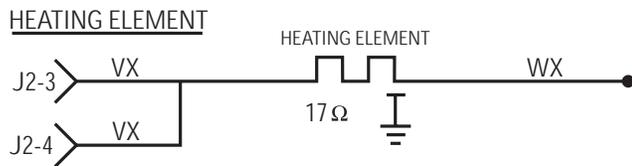
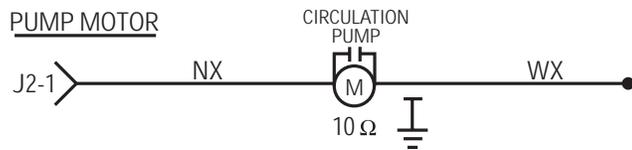
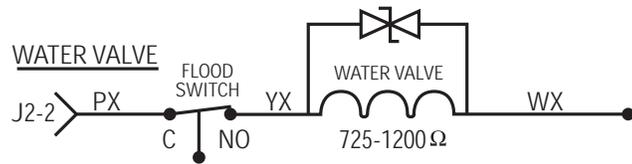
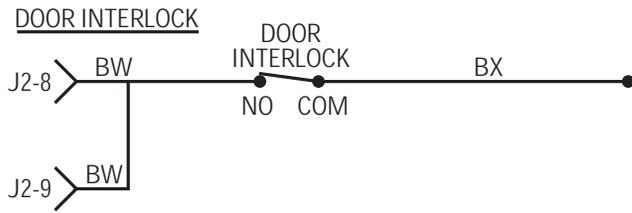
## Keypad Does Not Work



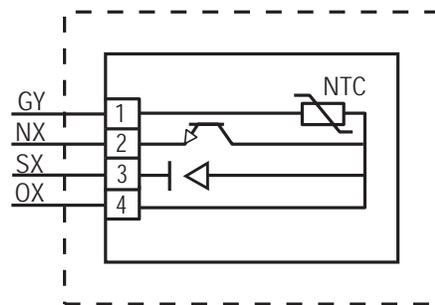
**Note:** Carefully remove the keypad label. When replacing the keypad label, make sure the lights and pads align properly with the membrane.



# Strip Circuits



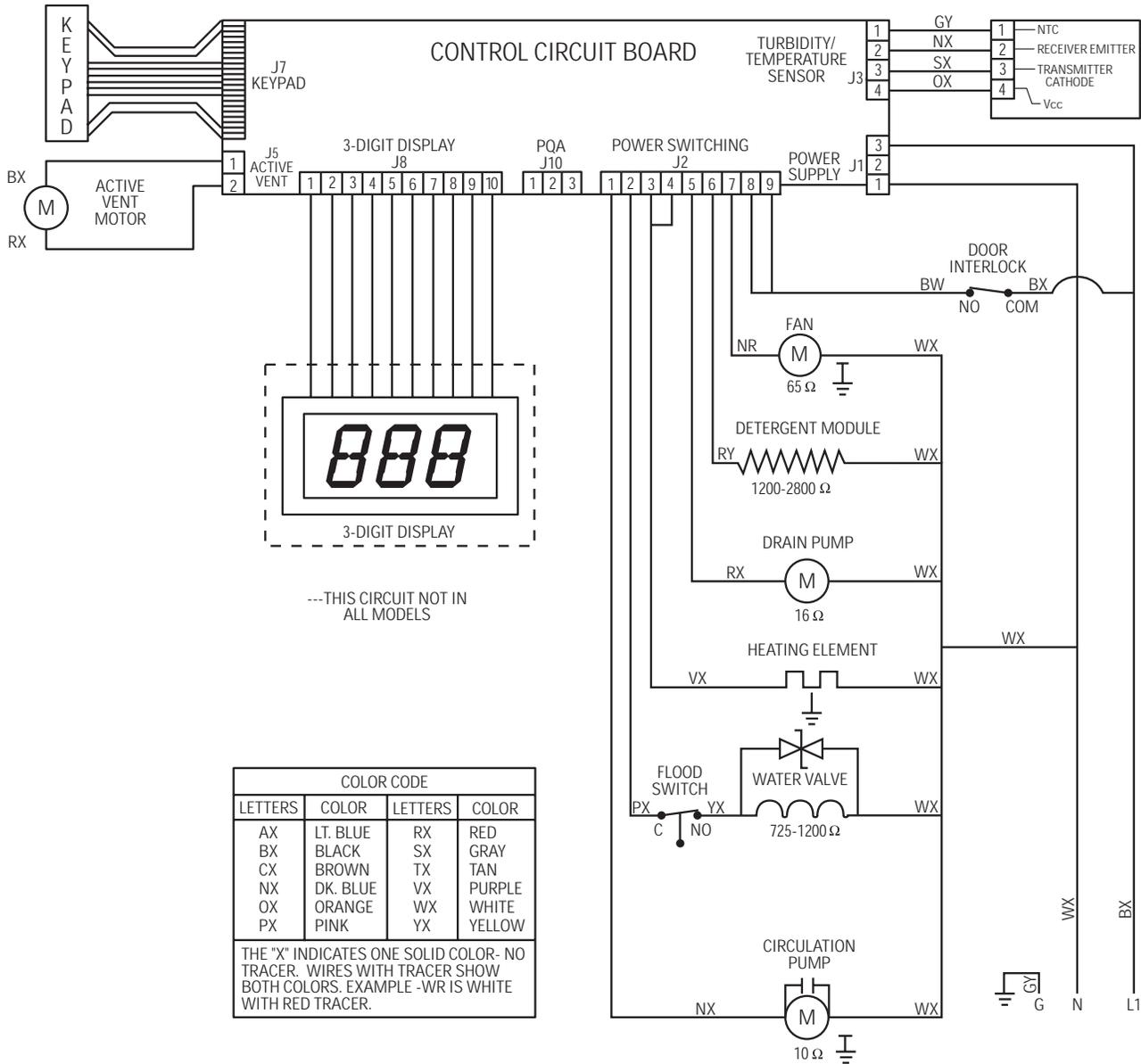
TURBIDITY SENSOR



# Schematic

**WARNING:** Disconnect electrical power before servicing.

**Caution:** Label all wires prior to disconnection. Wiring errors can cause improper and dangerous operation. Verify operation after servicing.



# Warranty

## GE Dishwasher Warranty.



All warranty service provided by our Factory Service Centers, or an authorized Customer Care® technician. To schedule service, on-line, 24 hours a day, visit us at [www.GEAppliances.com](http://www.GEAppliances.com), or call 800.GE.CARES (800.432.2737) in the United States. In Canada, call 1.800.361.3400.

<b>For The Period Of:</b>	<b>GE Will Replace:</b>
<b>One Year</b> From the date of the original purchase	<b>Any part</b> of the dishwasher which fails due to a defect in materials or workmanship. During this <b>full one-year warranty</b> , GE will also provide, <b>free of charge</b> , all labor and in-home service to replace the defective part.
<b>Second Year</b> From the date of the original purchase	<b>Any part</b> of the dishwasher which fails due to a defect in materials or workmanship. During this <b>second-year limited warranty</b> , you will be responsible for any labor or in-home service costs.
<b>Five Years</b> From the date of the original purchase	<b>The dishwasher racks or the electronic control module</b> if they should fail due to a defect in materials or workmanship. During this <b>five-year limited warranty</b> , you will be responsible for any labor or in-home service costs.
<b>Lifetime of Product</b>	<b>The Stainless tub or door liner</b> , if it fails to contain water due to a defect in materials or workmanship. During this <b>full warranty</b> , GE will also provide, <b>free of charge</b> , all labor and in-home service to replace the defective part.

### What GE Will Not Cover (for customers in the United States):

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Replacement of house fuses or resetting of circuit breakers.
- 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.

This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. Proof of original purchase date is needed to obtain service under the warranty. In Alaska, the warranty excludes the cost of shipping or service calls to your home.

Some states do not allow the exclusion or limitation of incidental or consequential damages. 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, consult your local or state consumer affairs office or your state's Attorney General.

**Warrantor: General Electric Company, Louisville, KY 40225**