



**CONSUMER CARE TECHNICAL  
EDUCATION GROUP PRESENTS**

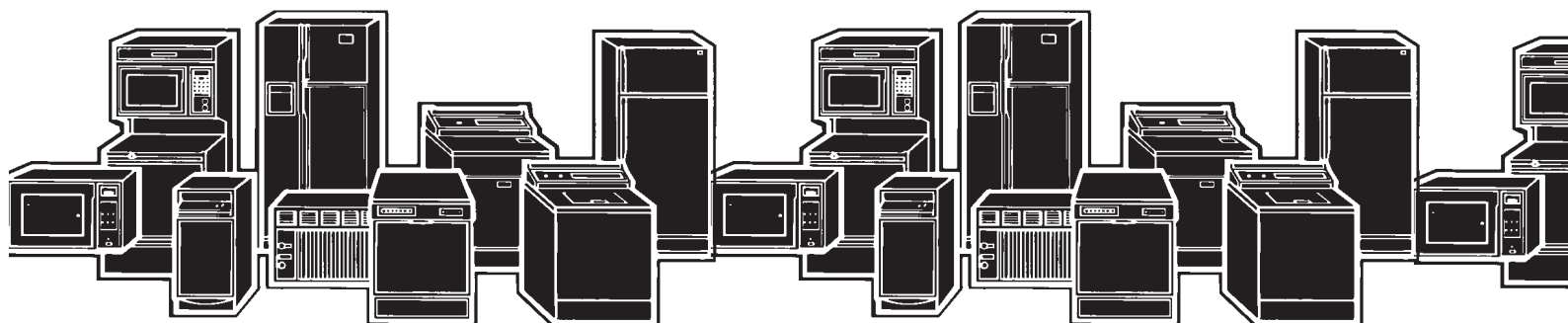
**KD-13**

## **2008 UNDERCOUNTER DISHWASHER**



**Models: GU2800XTV  
GU3600XTV**

**JOB AID  
Part No. 8178741**



## **FORWARD**

This Whirlpool Job Aid, “2008 Undercounter Dishwasher” (Part No. 8178741), provides the In-Home Service Professional with information on the installation, operation, and service of the 2008 Undercounter Dishwasher. For specific information on the model being serviced, refer to the “Use and Care Guide,” or “Tech Sheet” provided with the washer.

The Wiring Diagram used in this Job Aid is typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product when servicing the unit.

## **GOALS AND OBJECTIVES**

The goal of this Job Aid is to provide information that will enable the In-Home Service Professional to properly diagnose malfunctions and repair the 2008 Undercounter Dishwasher. The objectives of this Job Aid are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the dishwasher to its proper operational status.

WHIRLPOOL CORPORATION assumes no responsibility for any repairs made on our products by anyone other than In-Home Service Professionals.
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# **-NOTES-**



# GENERAL

## DISHWASHER SAFETY

**Your safety and the safety of others are very important.**

We have provided many important safety messages in this manual and on the appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word “DANGER” or “WARNING.” These words mean:

**! DANGER**

**You can be killed or seriously injured if you don’t immediately follow instructions.**

**! WARNING**

**You can be killed or seriously injured if you don’t follow instructions.**

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

# MODEL & SERIAL NUMBER LABEL AND TECH SHEET LOCATIONS

The Model/Serial Number label and Tech Sheet locations are shown below.

**Tech Sheet Location  
(Behind Toe Grill)**



**Model & Serial Number  
Label Location**



# WHIRLPOOL MODEL & SERIAL NUMBER DESIGNATIONS

<b>MODEL NUMBER</b>	<b>G</b>	<b>U</b>	<b>2500</b>	<b>XT</b>	<b>P</b>	<b>B</b>
<b>INTERNATIONAL SALES IND. OR MARKETING CHANNEL IF PRESENT</b>						
<b>PRODUCT GROUP</b> D = DISHWASHER G = "GOLD" DISHWASHER						
<b>PRODUCT IDENTIFICATION</b> UD = UNDERCOUNTER DISHWASHER P = PORTABLE						
<b>SERIES CODE</b> 400 = BASE PLATFORM 600 = DERIVATIVE MODELS 800 = BASE PLATFORM 900 = POWER CLEAN PLATFORM 1000 = TALL TUB PLATFORM - PLASTIC 2000 = TALL TUB PLATFORM - GOLD PLASTIC 3000 = TALL TUB PLATFORM - STAINLESS L000 = DERIVATIVE MODELS C000 = DERIVATIVE MODELS						
<b>FEATURE CODE</b> P = PREMIUM WASH SYSTEM (FOR "L" SERIES) PW = PREMIUM WASH SYSTEM SW = STANDARD WASH SYSTEM XT = TALL TUB WASH SYSTEM DW = 18" WASH SYSTEM						
<b>YEAR OF INTRODUCTION</b> V = 2008						
<b>COLOR CODE</b> B = BLACK MONOCHROMATIC M = BLACK CONSOLE W/BLACK BISCUIT PANEL Q = WHITE MONOCHROMATIC S = BLACK W/STAINLESS PANEL T = BISCUIT MONOCHROMATIC W/FRAMELESS PANEL U = BLACK CONSOLE W/BLACK/ALMOND PANEL AND BISCUIT/WHITE PANEL X = BLACK CONSOLE W/BLACK/WHITE PANEL Y = STAINLESS MONOCHROMATIC W = BLACK W/WHITE DOOR PANEL						

<b>SERIAL NUMBER</b>			
<b>SERIAL NUMBER</b>	<b>N</b>	<b>U</b>	<b>41 01002</b>
<b>DIVISION RESPONSIBILITY</b> F = Findlay, OH			
<b>YEAR OF PRODUCTION</b> U = 2007 W = 2008			
<b>WEEK OF PRODUCTION</b> 41 = 41ST WEEK			
<b>PRODUCT SEQUENCE NUMBER</b>			

# SPECIFICATIONS

Model		GU2800XTV	GU3600XTV
		Gold	Gold
Colors		B,Q,T,S,Y	B,Q,Y
Platform		Plastic Tall Tub	Stainless Steel
			Plastic Tall Tub
Wash System			
	Feed System	Direct	Direct
	Wash Levels	5 Wash Levels	5 Wash Levels
	Top Spray	Plastic w/nozzles	Plastic w/nozzles
	E-Star	E-Star	E-Star
	Lower Wash Arm	Plastic Blue Dusk	Plastic Blue Dusk
		Thermistor	Thermistor
Sensors		Auto Soil Sensor - (OWI)	Auto Soil Sensor - (OWI)
	Temperature Sensor	Thermistor	Thermistor
	Soil Sensor		Auto Soil Sensor - (OWI)
	APF		APF
Control			
	Type of Control	Electronic Full A/O w Graphic icons	Electronic Full A/O w Graphic icons
	Knob Type	Blue LED's	Blue LED's
	LED	Start / Cancel	Start / Cancel
		Options	Options
		Cycles	Cycles
		4 Cycle Status	4 Cycle Status
		No Count Down Display	No Count Down Display
Dispensers			
	Bulk Dispensing w/ Removable Reservoir	6 Cycles	6 Cycles

		Adaptive Wash	Adaptive Wash
Cycles		Pots & Pans	Pots & Pans
	Adaptive Wash (Smart Wash)		
	Pots/ Pans	Pots/ Pans	Pots/ Pans
	Heavy Plus		
	Heavy		
	Normal	Normal	Normal
	China	China	China
	Glass Xpress / Fast Wash	Fast Wash	Fast Wash
	Short Wash		
	Rinse Only	Rinse Only	Rinse Only
	Plate Warm		
		High Temp Wash	High Temp Wash
Options		6 Options	6 Options
	High Temp Boost / Wash / Scour	Power Scour	Power Scour
	Soak and Scour	Sani Rinse (NSF)	Sani Rinse (NSF)
	Power Scour	Heated Dry	Heated Dry
	Sani Rinse (NSF)		
	Dry Option	Control Lock	Control Lock
	Delay Wash	2-4-6 Hour Delay	2-4-6 Hour Delay
	Control Lock	Control Lock	Control Lock
	Vent	Nylon	Nylon
	Upper Rack	Side Clip - Utensil Holder	Side Clip - Utensil Holder
		Side Clip - Light Items Holder	Side Clip - Light Items Holder
		EZ-2-Lift Adjusters	EZ-2-Lift Adjusters
		2 - light item Clips	2 - light item Clips
		2 - Fold Down Tines	2 - Fold Down Tines
		Yes (S&Y-Black)	Yes (S-Black)
Panels		Match Color	Match Color
	Color coordinated Toe panel		

	Access Panels		
Product Dimensions	Height	33 7/8" - 34 1/2"	33 7/8" - 34 1/2"
	Width	23 7/8	23 7/8
	Depth	24 1/2	24 1/2

# INSTALLATION INFORMATION

## INSTALLATION REQUIREMENTS FOR DISHWASHER

### IMPORTANT SAFETY INSTRUCTIONS

**WARNING:** When using the dishwasher, follow basic precautions, including the following:

- Read all instructions before using the dishwasher.
- Use the dishwasher only for its intended function.
- Use only detergents or rinse agents recommended for use in a dishwasher, and keep them out of the reach of children.
- When loading items to be washed:
  - 1) Locate sharp items so that they are not likely to damage the door seal; and
  - 2) Load sharp knives with the handles up to reduce the risk of cut-type injuries.
- Do not wash plastic items unless they are marked “dishwasher safe” or the equivalent. For plastic items not so marked, check the manufacturer's recommendations.
- Do not touch the heating element during or immediately after use.
- Do not operate the dishwasher unless all enclosure panels are properly in place.
- Do not tamper with controls.
- Do not abuse, sit on, or stand on the door, lid, or dish racks of the dishwasher.
- To reduce the risk of injury, do not allow children to play in or on the dishwasher.
- Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. **HYDROGEN GAS IS EXPLOSIVE.** If the hot water system has not been used for such a period, before using the dishwasher turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. As the gas is flammable, do not smoke or use an open flame during this time.
- Remove the door or lid to the washing compartment when removing an old dishwasher from service or discarding it.

### **WARNING**



#### **Tip Over Hazard**

**Do not use dishwasher until completely installed.**

**Do not push down on open door.**

**Doing so can result in serious injury or cuts.**

#### **You need to:**

- Slowly open dishwasher drawer while someone grasps the rear of the dishwasher. Remove shipping materials. Close dishwasher door. Latch the dishwasher door shut.
- Observe all governing codes and ordinances.
- Install this dishwasher as specified in these instructions.
- Have everything you need to properly install dishwasher.
- Installation should be performed by a qualified service technician. The dishwasher must be installed to meet all electrical and plumbing national and local codes and ordinances.


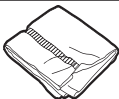
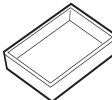
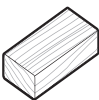
Gather the required tools and parts before starting installation. Read and follow the instructions provided with any tools listed here.

TOOLS NEEDED






- Pliers
- Phillips screwdriver
- Flat-blade screwdriver
- 5/16" and 1/4" nut drivers or hex sockets
- Measuring tape or ruler
- UL listed or CSA approved twist-on wire connectors \*
- 10" adjustable wrench that opens to 1-1.8" (2.9 cm)
- Utility knife
- Small Level
- 5/8" open-end wrench

\*Must be the proper size to connect your household wiring to 16-gauge wiring in dishwasher.

Other useful items you may need:



Flashlight		Bath towel	
Shallow pan		Wood block	

PARTS SUPPLIED



2 - Drain hose clamps (1 large and 1 small)  Silver  Green	Drain hose 	2 - #10 x 1/2" Phillips-head screws  
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Make sure all these parts are included in the literature package.

PARTS NEEDED

90° Elbow fitting with 3/8" N.P.T. external threads (the other end must fit your water supply line) 	Teflon® tape or pipe joint compound 
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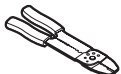
Other parts you may also need:

1-1/2"-2" (38.1- 5.0 cm) Screw-type clamps (3 max) 	Side mounting kit for solid surface countertops (Part No. 8212560)	Masking or duct tape 
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**NOTE:** Parts available for purchase in plumbing supply stores. Check local codes. Check existing electrical supply. See “Electrical Requirements” section. It is recommended that electrical connections be made by a licensed electrical installer.

In addition, for first time installations

Tools needed:

Electric drill with 1/2", 3/4" and 1-1/2" hole saw bits 	Small tubing cutter 	Wire stripper 
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Parts needed:

Copper tubing (3/8" O.D. suggested) or flexible braided water supply line 	See “Electrical Requirements” section	For Direct Wire: use UL listed or CSA approved conduit connector to fit 7/8" (2.2 cm) hole	For Power Supply Cord: use UL listed power supply cord kit marked for use with dishwasher
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## LOCATION REQUIREMENTS

Grounded electrical supply required.

Do not run drain lines, water lines or electrical wiring where they can interfere with or contact dishwasher motor or legs.

The location where the dishwasher will be installed must provide clearance between motor and flooring. Motor should not touch the floor.

Do not install dishwasher over carpeted flooring.

Protect dishwasher and water lines leading to dishwasher against freezing. Damage from freezing is not covered by the warranty.

A side panel kit is available from your dealer for installing your dishwasher at the end of your cabinetry.

A moisture barrier accessory (Part No. 4396277) is available from your dealer for installing underneath the countertop, but is not required.

Check location where dishwasher will be installed. The location must provide:

- easy access to water, electricity and drain.
- convenient access for loading and unloading dishes. Corner locations require a 2" (5.1 cm) minimum clearance between the side of the dishwasher door and the wall or cabinet.
- square opening for proper operation and appearance.
- cabinet front perpendicular to floor.
- level floor. (If floor at front of opening is not level with floor at rear of opening, shims may be needed to level dishwasher.)

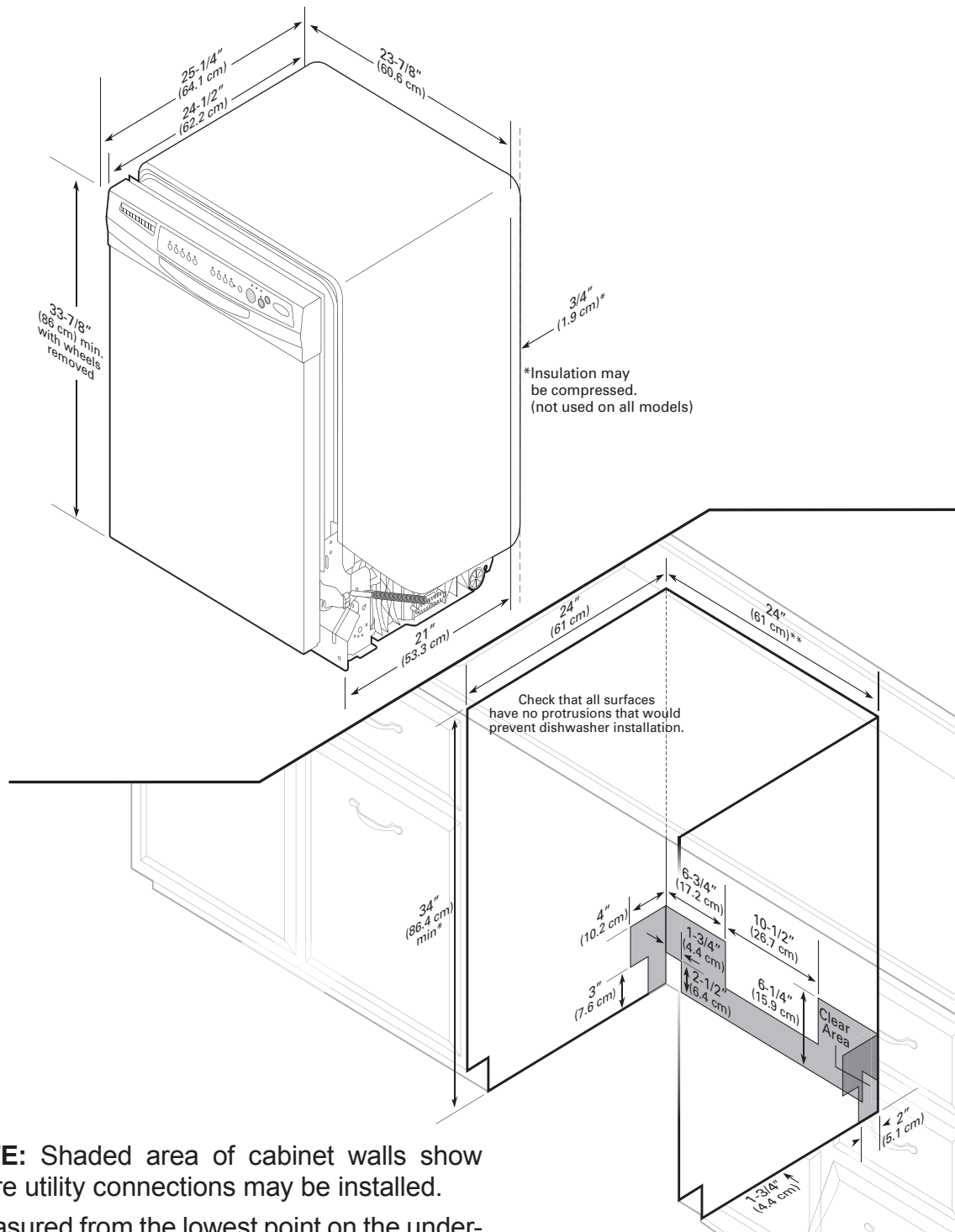
**Helpful Tip:** Be sure to accurately measure dimensions and ensure dishwasher is level if the floor in the dishwasher opening is uneven (example: flooring extends only partway into opening).

**NOTE:** To prevent shifting during dishwasher operation, shims must be securely attached to the floor.

If dishwasher will be left unused for a period of time or in a location where it may be subject to freezing, have it winterized by authorized service personnel.

Make sure pipes, wires and drain hose are within the shaded area shown in the "Product and Cabinet Opening Dimensions" see page 2-4.

## Product and Cabinet Opening Dimensions



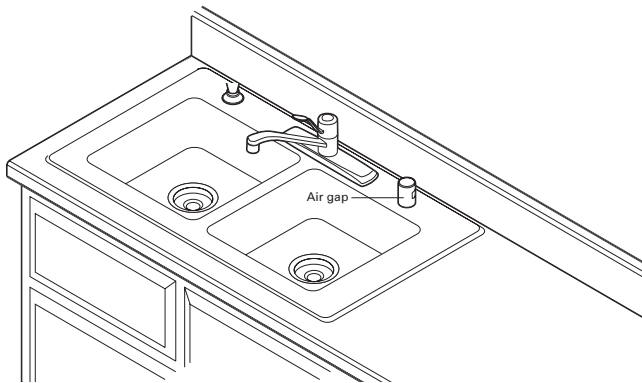
**NOTE:** Shaded area of cabinet walls show where utility connections may be installed.

\*Measured from the lowest point on the underside of countertop. May be reduced to 33-7/8" (86 cm) by removing wheels from dishwasher.

## DRAIN REQUIREMENTS

- A new drain hose is supplied with your dishwasher. If this is not long enough, use a new drain hose with a maximum length of 12' (3.7 m) (Part No. 3385556) that meets all current AHAM/IAPMO test standards, is resistant to heat and detergent, and fits the 1" (2.5 cm) drain connector of the dishwasher.
- Make sure to connect drain hose to waste tee or disposer inlet above drain trap in house plumbing and 20" (50.8 cm) minimum above the floor. It is recommended that the drain hose either be looped up and securely fastened to the underside of the counter, or be connected to an air gap.

### Use of air gap



- Make sure to use an air gap if the drain hose is connected to house plumbing lower than 20" (50.8 cm) above subfloor or floor.
- Use 1/2" minimum I.D. drain line fittings.
- If required the air gap should be installed in accordance with the air gap installation instructions, when connecting the air gap a rubber hose (not provided) will be needed to connect to the waste tee or disposer inlet.

## WATER SUPPLY REQUIREMENTS

- A hot water line with 20-120 psi (138-862 kPa) water pressure can be verified by a licensed plumber.
- 120°F (49°C) water at dishwasher.
- 3/8" O.D. copper tubing with compression fitting or flexible braided water supply line (Part No. 4396897RP) NOTE: 1/2" minimum plastic tubing is not recommended.
- A 90° elbow with 3/8" N.P.T. external pipe threads on one end.
- Do not solder within 6" (15.2 cm) from water inlet valve.

## ELECTRICAL REQUIREMENTS

### **WARNING**



#### **Electrical Shock Hazard**

**Disconnect electrical power at the fuse box or circuit breaker box before installing dishwasher.**

**Failure to do so can result in death or electrical shock.**

Be sure that the electrical connection and wire size are adequate and in conformance with the National Electrical Code, ANSI/NFPA 70 - latest edition and all local codes and ordinances.

A copy of the above code standards can be obtained from: National Fire Protection Association One Batterymarch Park Quincy, MA 02269

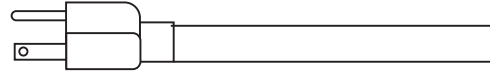
You must have:

- 120-volt, 60 Hz, AC-only, 15 or 20 amp., fused electrical supply.
- copper wire only.

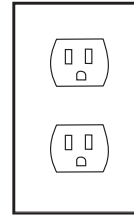
We recommend:

- a time-delay fuse or circuit breaker.
- a separate circuit.

**If connecting dishwasher with a power supply cord:**



- Use UL listed power supply cord kit (Part No. 4317824) marked for use with dishwasher.
- Power supply cord must plug into a grounded 3 prong outlet, located in the cabinet next to the dishwasher opening. Outlet must meet all local codes and ordinances.



**If connecting dishwasher with direct wiring:**

- Use flexible, armored or non-metallic sheathed, copper wire with grounding wire that meets the wiring requirements for your home and local codes and ordinances.
- Use a U.L. listed or CSA approved conduit connector.



# INSTALLATION INSTRUCTIONS

## **! WARNING**



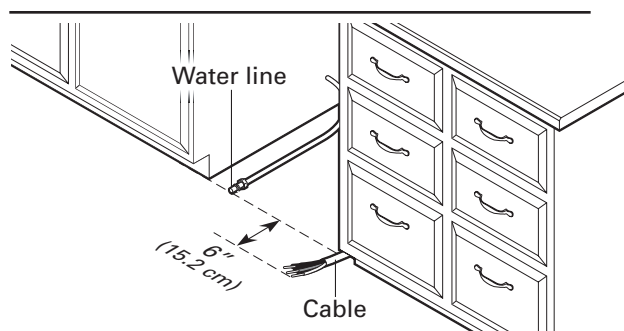
### **Electrical Shock Hazard**

**Disconnect electrical power at the fuse box or circuit breaker box before installing dishwasher.**

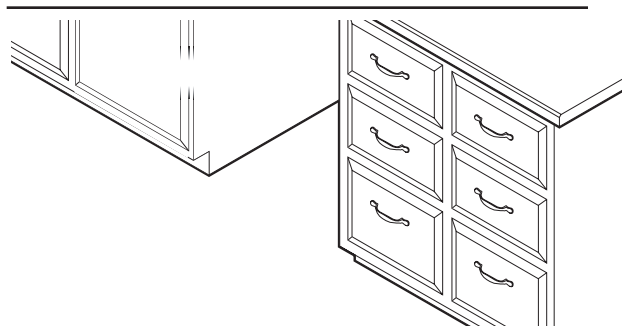
**Failure to do so can result in death or electrical shock.**

1. Disconnect electrical power at the fuse box or circuit breaker box before installing dishwasher.
2. Shut off the water supply to the dishwasher.
3. Do you already have utility hookups?  
Yes —Follow instructions in the “Prepare Cabinet Opening—Existing Utilities” see page 7.  
No —Follow instructions in the “Prepare Cabinet Opening—New Utilities” see page 8.

### **Existing utility hookups**

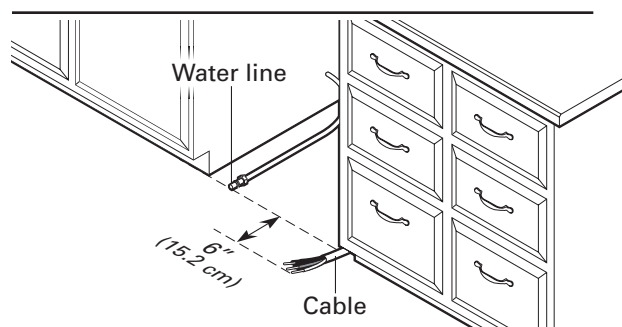


### **No existing utility hookups**



### **Prepare Cabinet Opening—Existing Utilities**

#### **Check water and electrical placement**



If the water line and the cable extend to the locations shown, proceed to the “Install Drain Hose” section. If they do not reach far enough, follow the instructions in the “Prepare Cabinet Opening—New Utilities” see page 8.

## Prepare Cabinet Opening—New Utilities

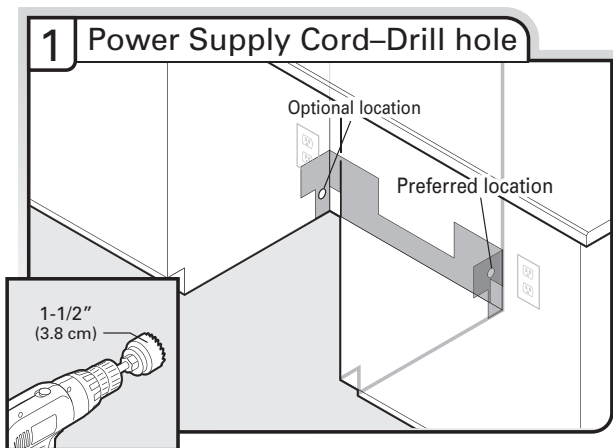
### Prepare and route the electrical supply

What type of electrical connection will you use?

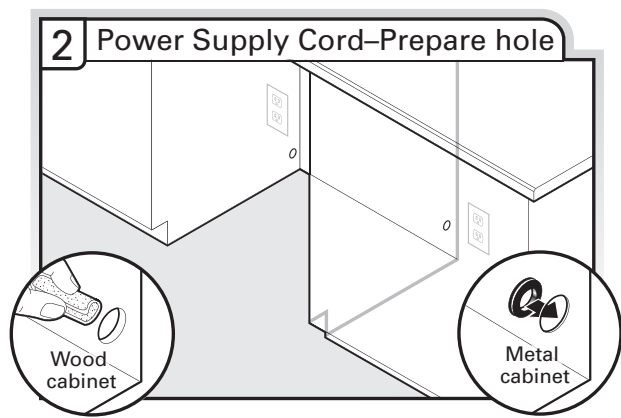


#### Option A, Power Supply Cord:

**NOTE:** A grounded 3 prong outlet is required inside a cabinet next to the dishwasher cabinet opening.



Drill a 1-1/2" (3.8 cm) hole in cabinet side or rear. See product and cabinet opening dimensions.

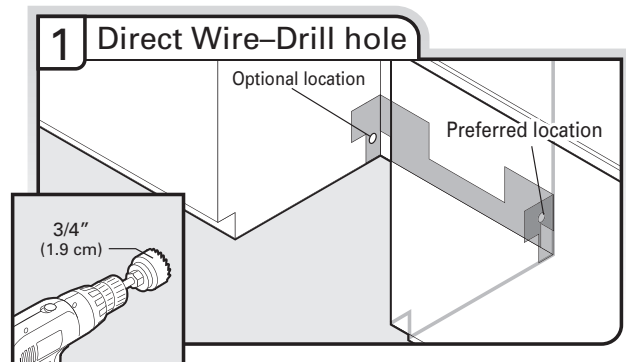


Wood cabinet: Sand hole until smooth.

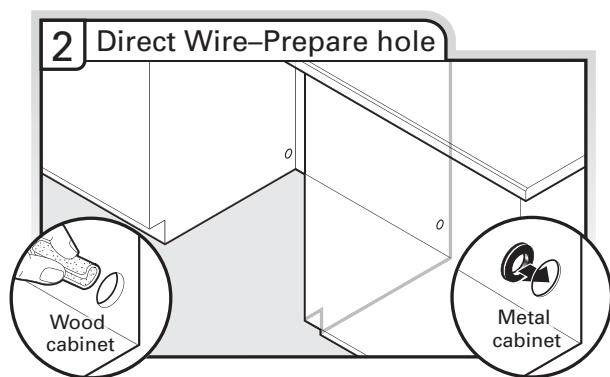
Metal cabinet: Cover hole with grommet included with power supply cord kit.

#### Option B, Direct Wire:

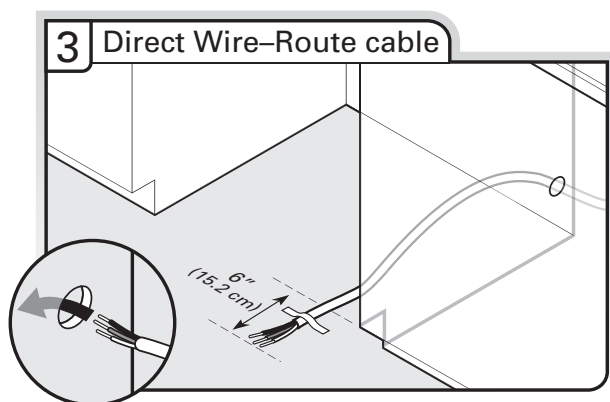
**Helpful Tip:** Wiring the dishwasher will be easier if you route the cable into the cabinet opening from the right side.



Drill a 3/4" (1.9 cm) hole in right-hand cabinet side or rear. See product and cabinet opening dimensions.



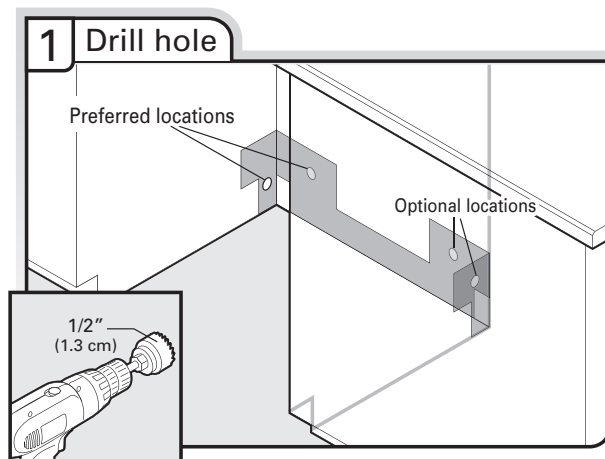
Wood cabinet: Sand hole until smooth.  
Metal cabinet: Cover hole with grommet (not provided).



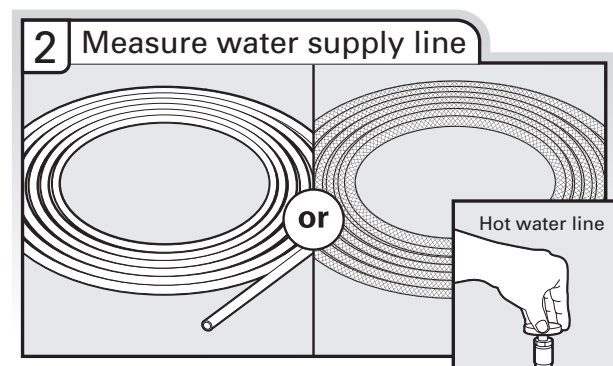
Route cable from power supply through cabinet hole (cable must extend to the right front side of cabinet opening). Tape cable to the floor in area shown. This will prevent cable from moving when dishwasher is moved into cabinet opening.

## Prepare and Route Water Line

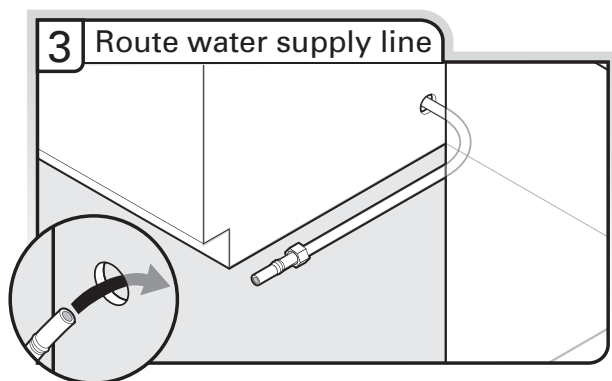
**Helpful Tip:** Routing the water line through the left side of cabinet opening will make water connection easier.



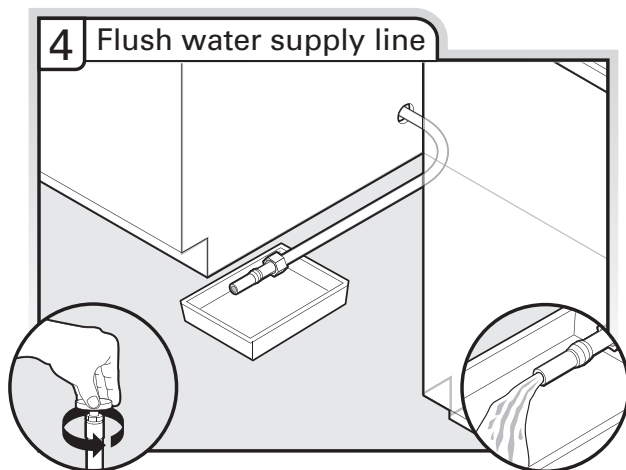
Drill a 1/2" (1.3 cm) hole in the cabinet side or rear.



Measure overall length of copper tubing or flexible braided water supply line. Attach to the hot water line using a connection configuration that is in compliance with local codes and ordinances. The water line to the dishwasher should have a manual shutoff valve.



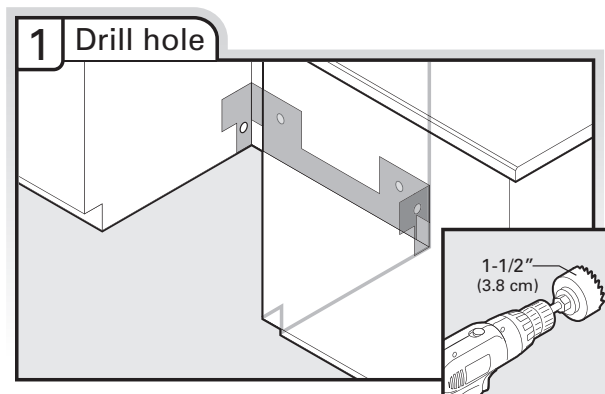
Slowly route water supply line through hole in cabinet. (If using copper tubing, it will bend and kink easily, so be gentle.) It should be far enough into the cabinet opening to connect it to the dishwasher inlet on the front left side of the dishwasher.



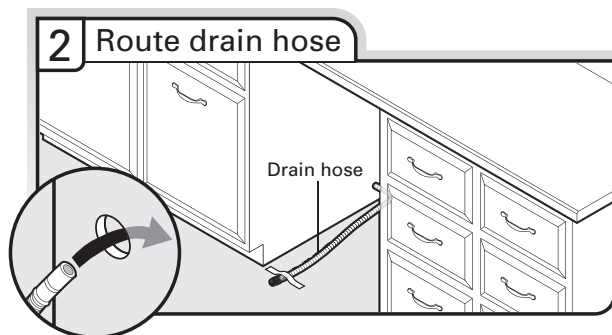
Slowly turn water shutoff valve to “ON” position. Flush water into a shallow pan until clear to get rid of particles that could clog the inlet valve. Turn shutoff valve to “OFF” position.

## Install Drain Hose

**IMPORTANT:** Always use a new drain hose. Check local codes to determine if an air gap is required.



If needed, drill a 1-1/2” (3.8 cm) diameter hole in cabinet wall or side of the opening closest to the sink.



Route drain hose as shown through hole in cabinet to the front center of opening where drain connection will be made. Tape drain hose to the floor in area shown. This will prevent it from moving when dishwasher is moved into cabinet opening.



### 3 Connect drain hose

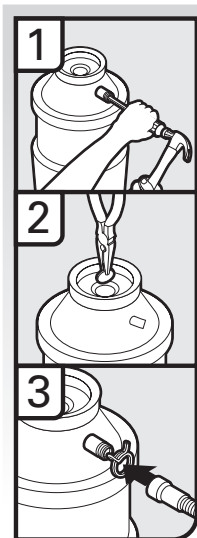
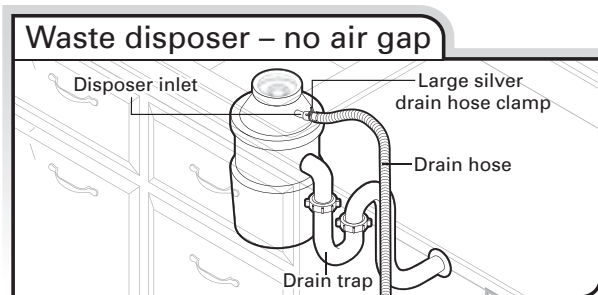
Connect drain hose to waste tee or waste disposer using one of the following options:

- Option A, Waste disposer – no air gap
- Option B, No waste disposer – no air gap
- Option C, Waste disposer – with air gap
- Option D, No waste disposer – with air gap

**IMPORTANT:** The drain hose connection of the disposer or a waste tee must be made before the drain trap and at least 20" (50.8 cm) above the floor where the dishwasher will be installed.

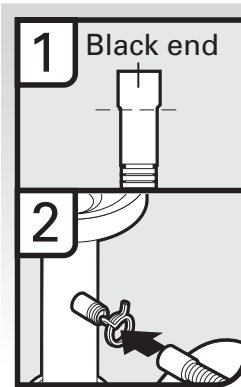
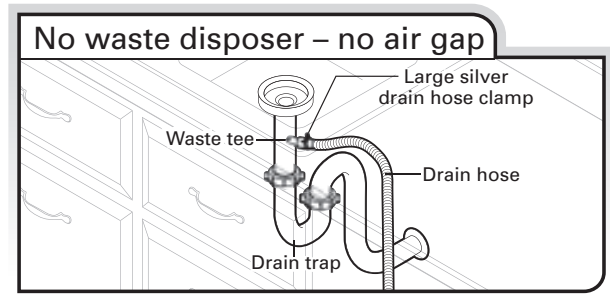
**Helpful Tip:** To reduce vibration of the hose, keep the hose away from the floor.

#### Option A, Waste disposer – no air gap



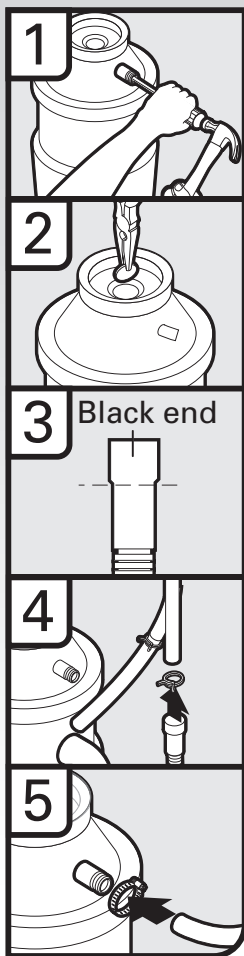
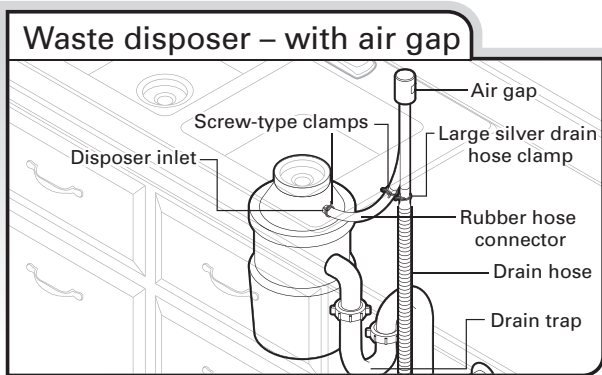
1. Using a hammer and screwdriver, knock plug into disposer.
2. Use needle nose pliers to remove plug.
3. Attach drain hose to disposer inlet with large silver drain hose clamp (provided). Use pliers to squeeze clamp open and move into position.

#### Option B, No waste disposer – no air gap



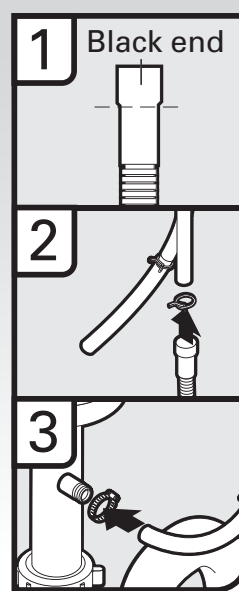
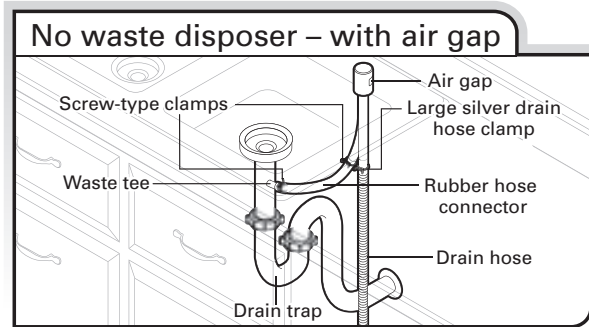
1. Connect black end of drain hose to waste tee and cut if needed. (Do not cut ribbed section.)
2. Attach black end of drain hose to waste tee with a large silver drain hose clamp (provided). Use pliers to squeeze clamp open and move into position. If the drain hose was cut use a 1-1/2" to 2" (3.8 to 5 cm) screw-type clamp (not provided).

## Option C, Waste disposer – with air gap



1. Using a hammer and screwdriver, knock plug into disposer.
2. Use needle nose pliers to remove plug.
3. Connect black end of drain hose to air gap and cut if needed. (Do not cut ribbed section.)
4. Attach drain hose to air gap with large silver drain hose clamp (provided). Use pliers to squeeze clamp open and move into position. If the drain hose was cut, use a 1-1/2" to 2" (3.8 to 5 cm) screw-type clamp (not provided).
5. Use a rubber hose (not provided) with screw-type clamps (not provided) to connect from air gap to disposer inlet.

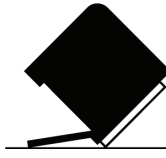
## Option D, No waste disposer – with air gap



1. Connect black end of drain hose to air gap and cut if needed. (Do not cut ribbed section.)
2. Attach drain hose to air gap with large silver drain hose clamp (provided). Use pliers to squeeze clamp open and move into position. If the drain hose was cut, use a 1-1/2" to 2" (3.8 to 5 cm) screw-type clamp (not provided).
3. Use a rubber hose (not provided) with screw-type clamps (not provided) to connect from waste tee to air gap.

## Prepare Dishwasher

### **! WARNING**



#### **Tip Over Hazard**

**Do not use dishwasher until completely installed.**

**Do not push down on open door.**

**Doing so can result in serious injury or cuts.**

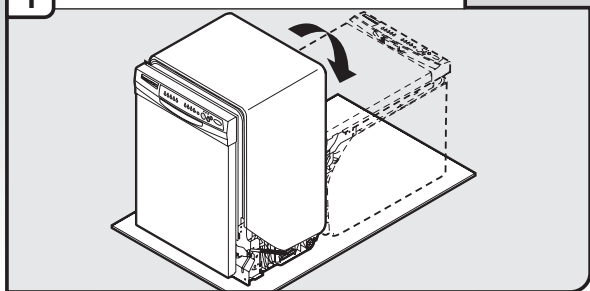
### **! WARNING**

#### **Excessive Weight Hazard**

**Use two or more people to move and install dishwasher.**

**Failure to do so can result in back or other injury.**

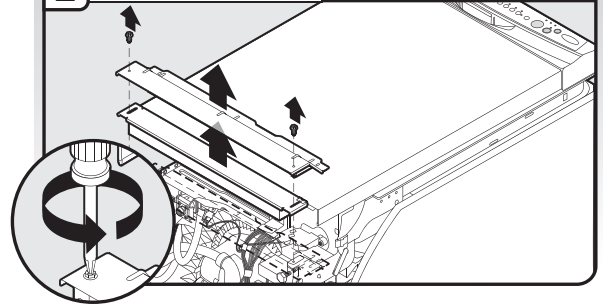
#### **1** Put dishwasher on its back



**Helpful Tip:** Place cardboard under dishwasher until installed in cabinet opening to avoid damaging floor covering. Do not use door panel as a work table without first covering with a towel to prevent scratching the door panel.

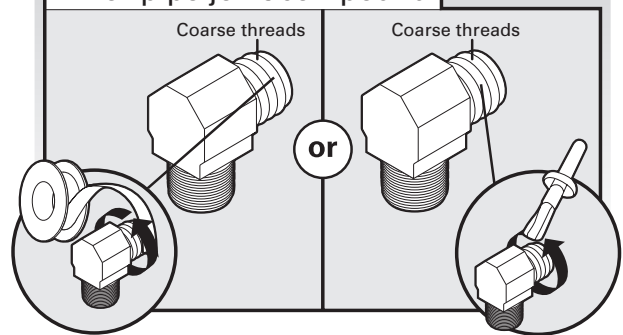
Using two or more people, grasp sides of dishwasher door frame and place dishwasher on its back.

#### **2** Remove panels



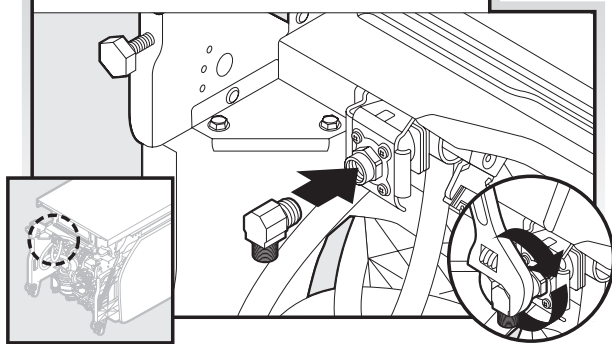
Using a 1/4" hex head socket, nut driver or Phillips screwdriver, remove two screws attaching access panel and lower panel to dishwasher. Do not remove tech sheet from access panel.

#### **3** Apply Teflon® tape or pipe joint compound



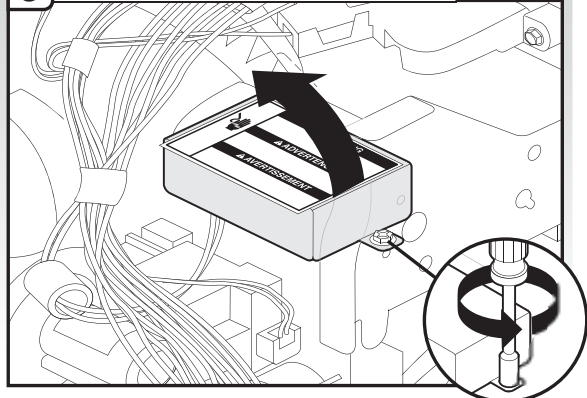
Apply Teflon® tape or pipe joint compound to 90° elbow fitting (not provided). Wrap tape around coarse threads two to four times to prevent leaks.

**4** Connect 90° elbow fitting to water inlet valve



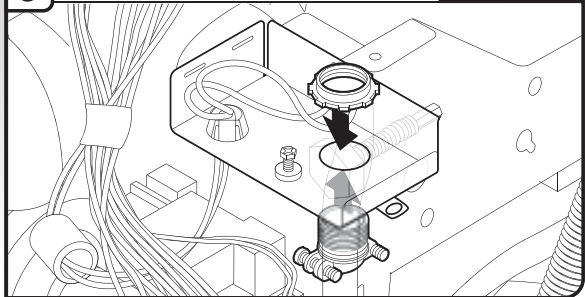
Connect 90° elbow fitting to water inlet valve. Using a wrench, tighten elbow until snug, and be sure that it faces to the rear.

**5** Remove terminal box cover



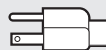
Using a 1/4" hex head socket, nut driver or Phillips screwdriver, remove terminal box cover. Retain for later use.

**6** Install conduit connector



Install a U.L. listed or CSA approved conduit connector. Make sure screwheads are facing to the left when tightening conduit nut. Conduit connector may be provided with the power supply cord kit.

**What type of electrical connection will you use?**



Power Supply Cord:  
Follow Option A instructions

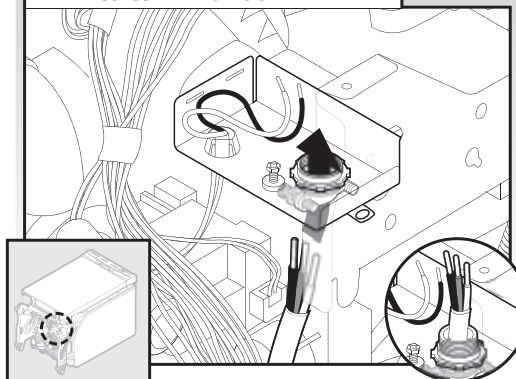


Direct Wire:  
Follow Option B instructions

## Make Power Supply Cord Connection

### Option A, Power Supply Cord:

**1** Power Cord—Route cord into terminal box



Route cord so that it does not touch dishwasher motor to lower part of dishwasher tub. Pull cord through conduit connector in terminal box.

Select UL listed or CSA approved twist-on wire connectors (not included) rated to connect your household wiring to 16-gauge dishwasher wiring.

## ⚠ WARNING



### Electrical Shock Hazard

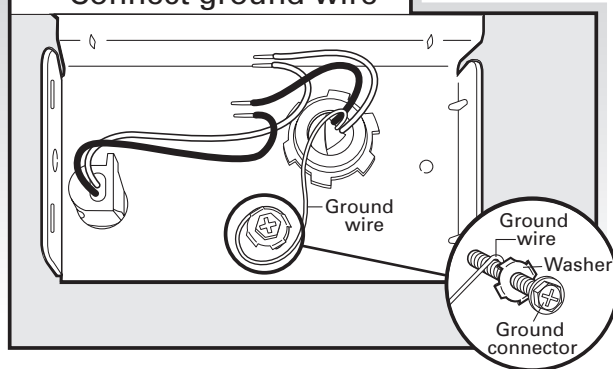
Electrically ground dishwasher.

Connect ground wire to green ground connector in terminal box.

Do not use an extension cord.

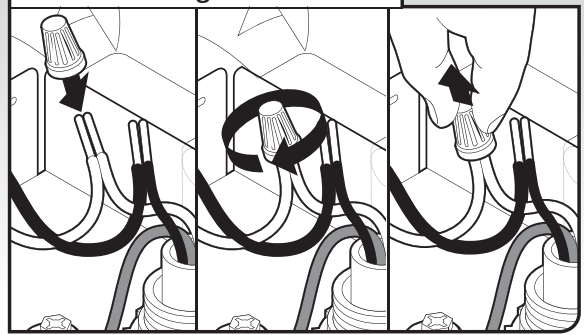
Failure to follow these instructions can result in death, fire, or electrical shock.

### 2 Power Supply Cord— Connect ground wire



Remove the green grounding screw and place through the ring terminal of the green ground wire. Reattach and tighten the green screw.

### 3 Power Cord—Connect remaining wires



**NOTE:** Do not pre-twist stranded wire. Twist on wire connector. Gently tug on wires to be sure both are secured.

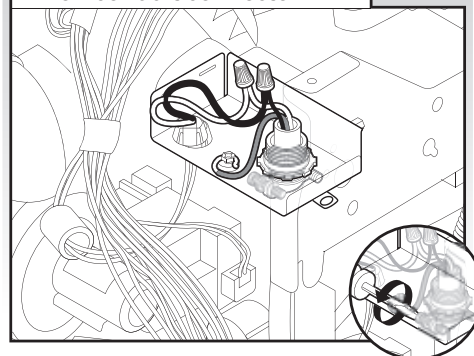
Connect wires black to black and white to white, using UL listed or CSA approved twist-on wire connectors (not included).

### Wiring configuration

Power supply wire:		Terminal box wire:
white	↔	white
black	↔	black
ground wire	↔	ground connector

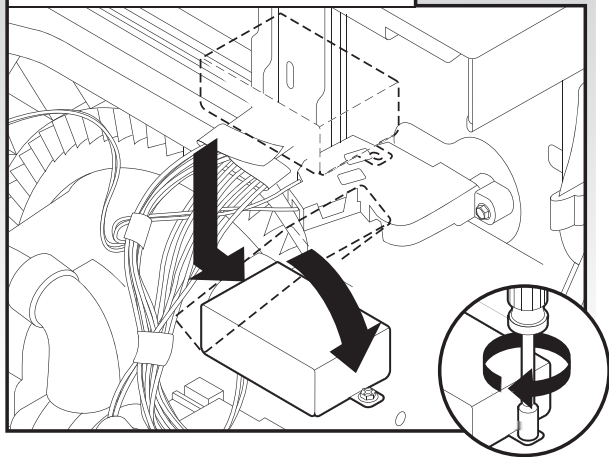
If needed, see website for animated representation of this step. Visit [www.whirlpool.com](http://www.whirlpool.com) under FAQ tab.

### 4 Power Cord—Secure cord on conduit connector



Tighten conduit connector screws to secure cord.

## 5 Power Cord—Reinstall terminal box cover

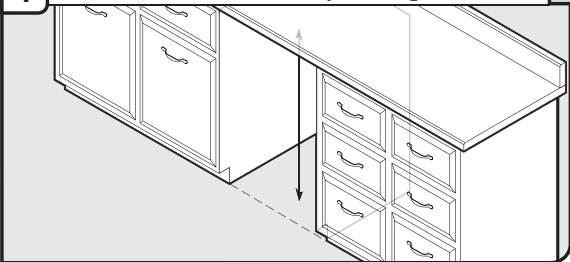


Place wires inside terminal box. Insert tabs on left side of cover. Make sure wires are tucked inside box. Close cover ensuring wires are not pinched. Use 1/4" nut driver and previously removed screw to secure cover.

**NOTE:** Do not plug into outlet until instructed.

## Determine Cabinet Opening

### 1 Measure cabinet opening



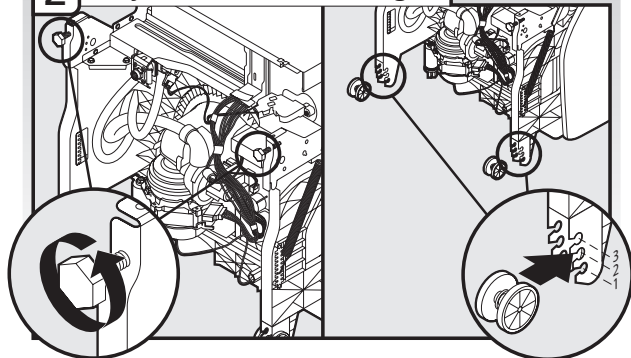
Measure height of cabinet opening from underside of countertop to floor where dishwasher will be installed (you will need to measure the lowest point on the underside of the countertop and the highest point on the floor). Refer to "Dishwasher Height Adjustment Chart" for wheel position and the number of turns needed.

## Dishwasher Height Adjustment Chart

Cabinet opening height	Wheel position	Number of turns on front leg
33-7/8" (86.0 cm)	Removed	All the way up
34" (86.4 cm)	1	10
34-1/4" (87 cm)	2	5
34-1/2" (87.6 cm)	3	0

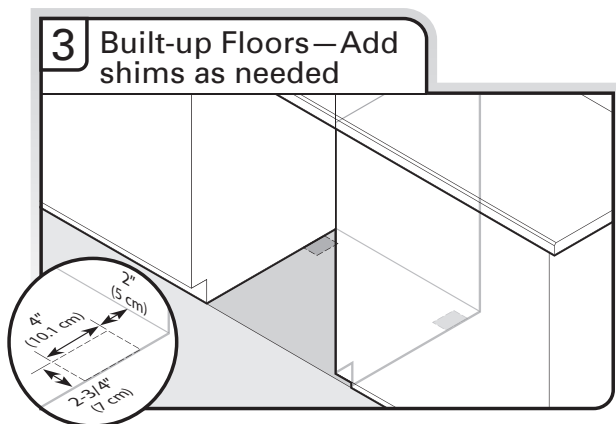
**NOTE:** If the minimum cabinet opening height is less than 34"(86.4 cm), the rear wheels can be removed for additional clearance. This will allow the dishwasher to fit into a 33-7/8" (86 cm) high cabinet opening, but the dishwasher will be more difficult to move. (Measurements are approximate. Wheels and legs are preset at the factory for 34-1/2" (87.6" cm).)

### 2 Adjust wheels and legs



Turn both leveler legs to the same height. Put wheels in the required position determined from "Dishwasher Height Adjustment Chart". (To change wheel position, use a flat bladed screwdriver to pop out the wheel, then snap into the new position.)

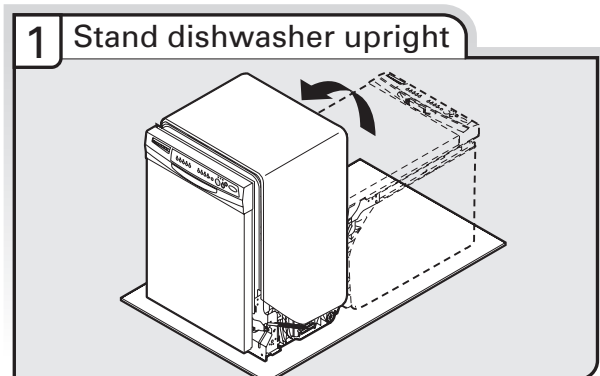




Built-up floors (Kitchen floor height is higher than cabinet opening.) Example: Kitchen floor tile does not extend into cabinet opening. Add shims as needed in the area shown to bring the dishwasher up to 34" (86.4 cm) below the countertop.

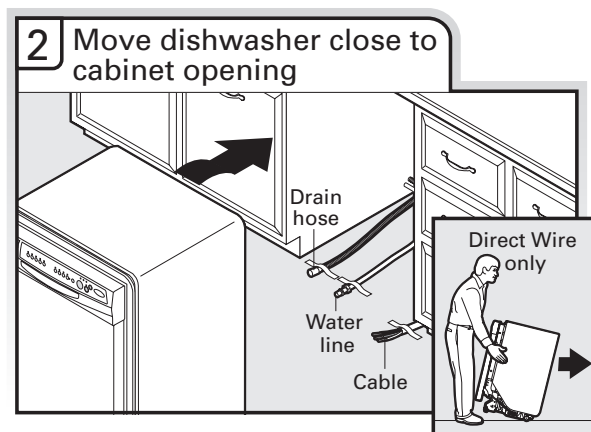
**NOTE:** Shims must be securely attached to floor to prevent movement when the dishwasher is in use.

## Move Dishwasher into Cabinet Opening



Using two or more people, stand dishwasher upright.

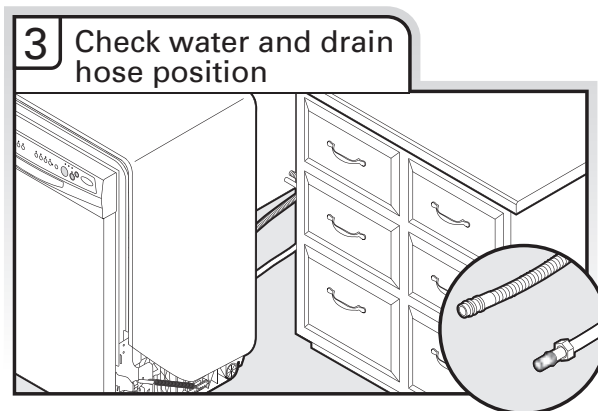
**NOTE:** Do not install kickplate until instructed.



**IMPORTANT:** Double check correct placement of utilities. Grasp the sides of the dishwasher at the edges of the door panel. Tilt dishwasher backwards on wheels and move dishwasher close to cabinet opening.

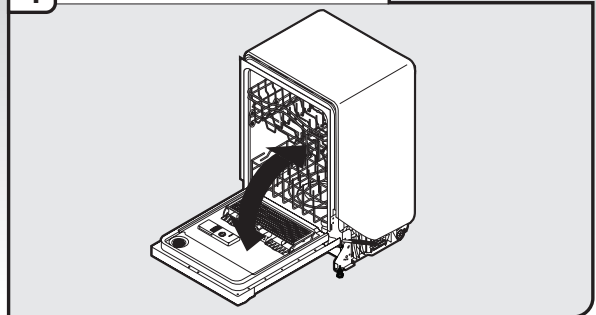
**NOTE:** Do not push on the front of the panel or on the console—they may dent.

**Helpful Tip:** Temporarily tape utilities to the floor in the locations shown to prevent them from moving when dishwasher is moved into the cabinet opening.



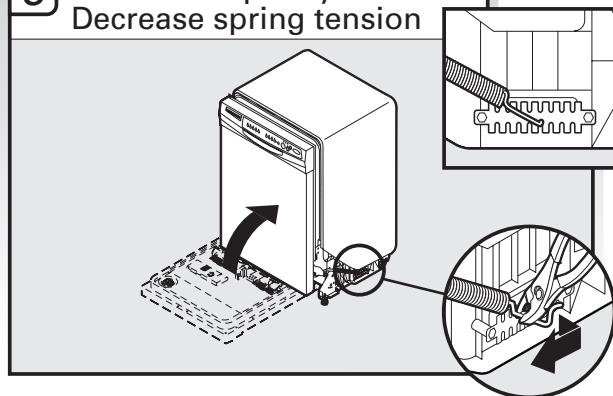
Check that water line is on the left side of opening and drain hose is near the center of the cabinet opening.

#### 4 Open and close door



With another person holding the dishwasher to prevent it from tipping, open and close the door a few times. If the door closes or falls open under its own weight, the door tension will need to be adjusted.

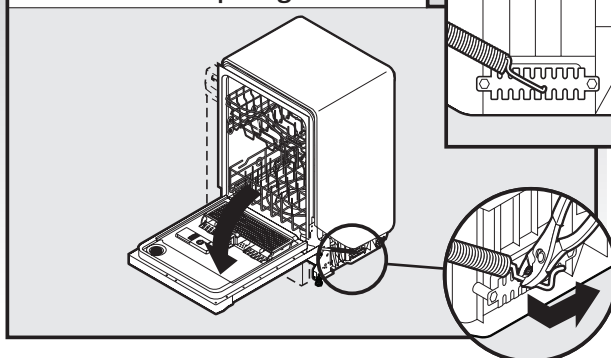
#### 5 Closes too quickly — Decrease spring tension



If the door closes too quickly, decrease the spring tension by moving the spring end toward the front of the dishwasher.

**NOTE:** Springs should be in the same notches on left and right sides.

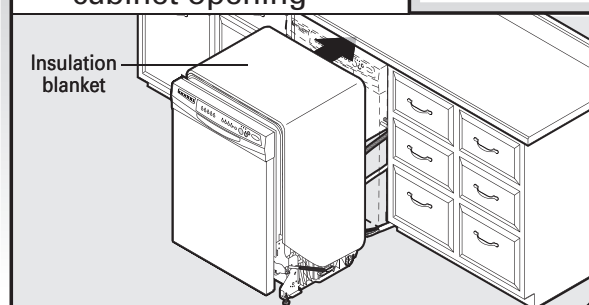
#### 6 Door falls open — Increase spring tension



If the door falls open, increase the spring tension by moving the spring end toward the back of the dishwasher.

**NOTE:** Springs should be in the same notches on left and right sides.

#### 7 Move dishwasher into cabinet opening



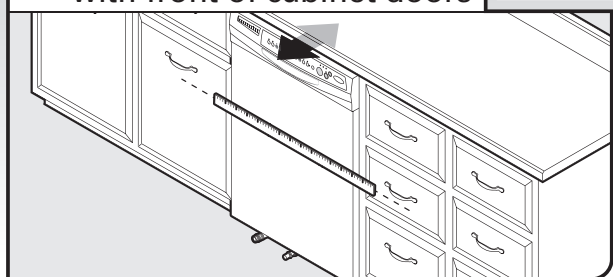
**IMPORTANT:** If wheels were removed, protect the floor when moving the dishwasher. Slowly move dishwasher completely into cabinet opening. Do not kink or pinch water line, drain hose, power supply cord or direct wire between dishwasher and cabinet. Remove cardboard from under dishwasher.

**NOTE:** It is all right if dishwasher fits tightly into cabinet opening. Do not remove insulation blanket — the blanket reduces the sound level.

**NOTE:** If using power cord, make sure to route end through hole in cutout before sliding into cabinet opening.

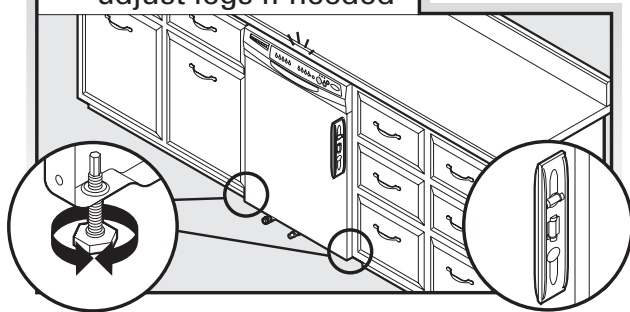


**8** Align front of dishwasher with front of cabinet doors



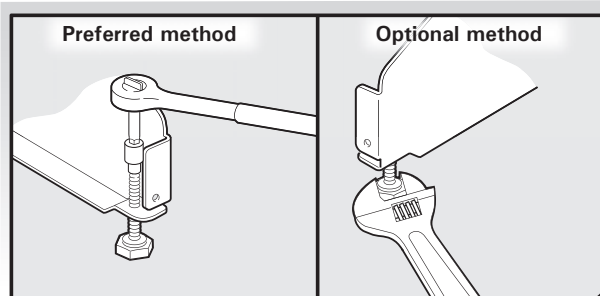
Align front of dishwasher door panel with front of cabinet doors. You may need to adjust alignment to be even with your cabinets.

**9** Check for plumb and adjust legs if needed

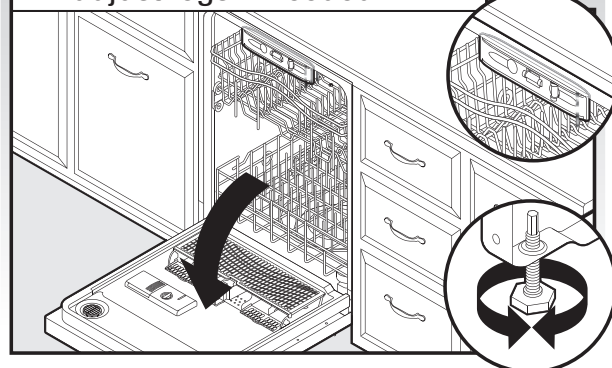


Check that leveling legs are firmly against the floor. Close and latch the door, and place level against the front panel. Check that dishwasher is centered from front to back in the opening. If needed, adjust leveling leg until dishwasher is plumb. Repeat for other side of dishwasher.

**Helpful Tip:** Push up on front of dishwasher to raise dishwasher off the ground to adjust front legs. With some installations, it may be easier to adjust the front legs using the 3/16" hex head socket or adjustable wrench.

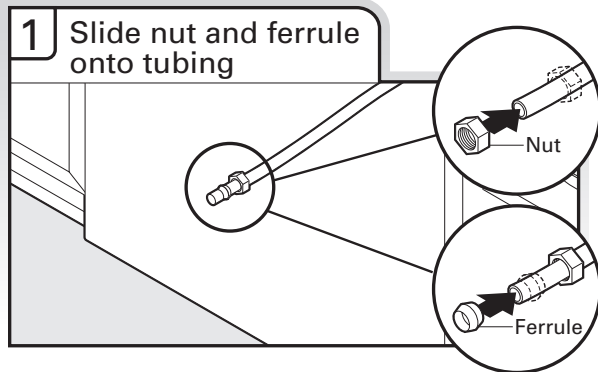


**10** Check level side to side and adjust legs if needed



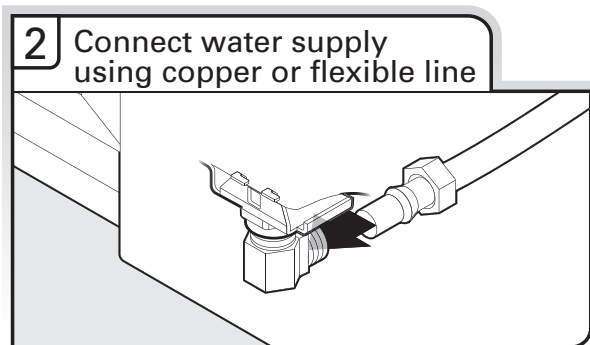
Place level against top front opening of tub. Check that dishwasher is level from side to side. If dishwasher is not level, adjust front legs up or down until dishwasher is level.

## Connect to Water Supply



Copper tubing only: Slide nut then ferrule onto copper tubing about 1" (2.5 cm).

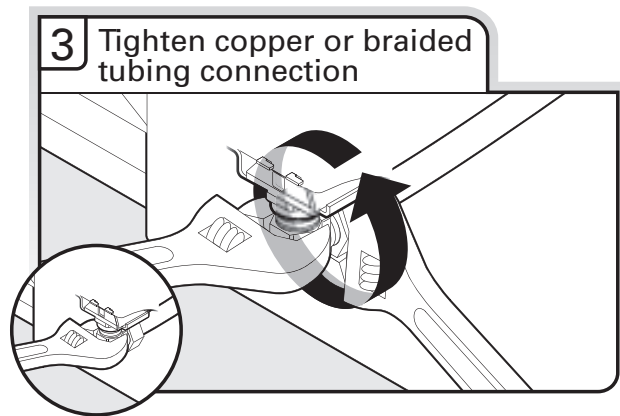
**NOTE:** To prevent vibration during operation, route the water supply line so that it does not touch the dishwasher base, frame or motor.



Copper tubing only: Put the tubing into the 90° elbow fitting as far as it will go (the copper tubing bends and kinks easily). Slide the nut and ferrule forward and start the nut onto the elbow threads.

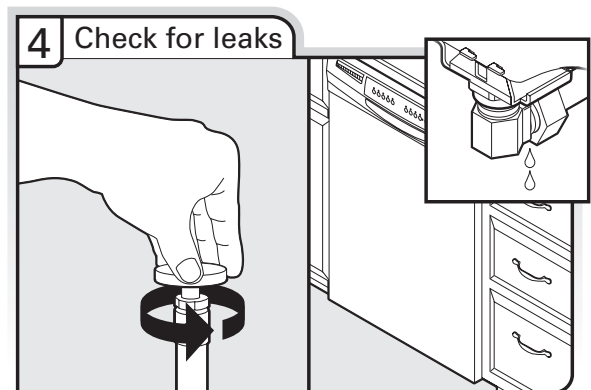
Flexible braided connection: Secure nut to elbow using 5/8" open ended wrench or adjustable wrench.

**NOTE:** Do not use Teflon® tape with compression fittings.



Hold the 90° elbow fitting still with one adjustable wrench and tighten the nut with second adjustable wrench.

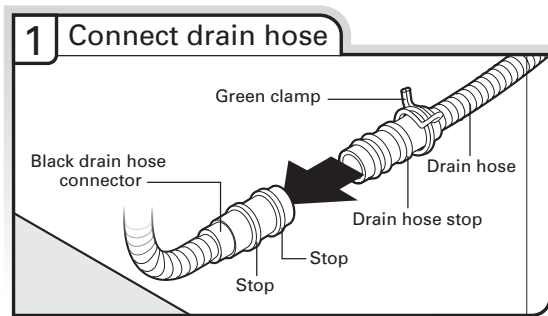
**Helpful Tip:** Use a 5/8" open ended wrench for easier access to tighten connection.



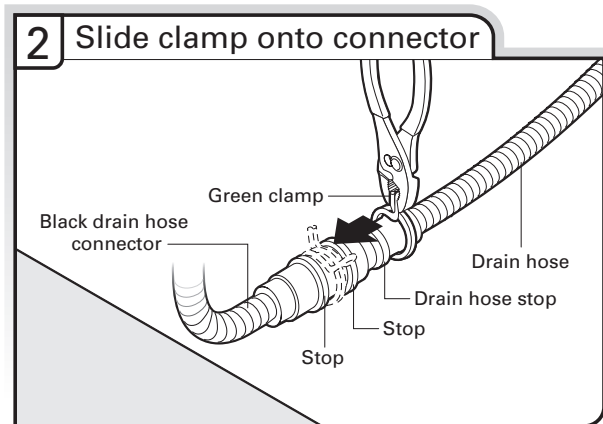
Place paper towel under 90° elbow fitting. Turn on water supply and check for leaks. If leak occurs, repeat previous step.

If needed, see website for animated representation of this step. Visit [www.whirlpool.com/watersupply](http://www.whirlpool.com/watersupply) under FAQ tab.

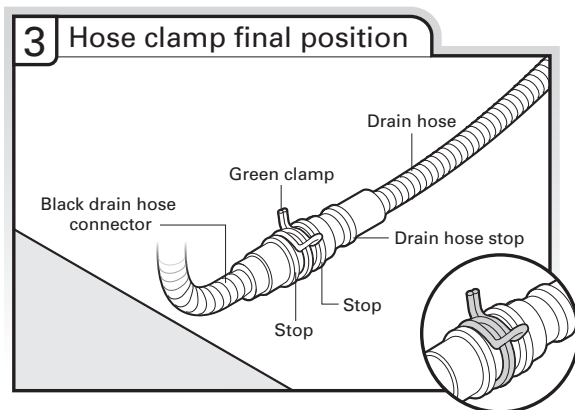
## Connect to Drain



Place towel under drain hose to catch any water in drain hose. Place the small green drain hose clamp onto the small end of the drain hose. Push the new drain hose into the black drain hose connector up to the drain hose stop.



Using pliers, squeeze open the small green drain hose clamp and slide onto connector between stops.



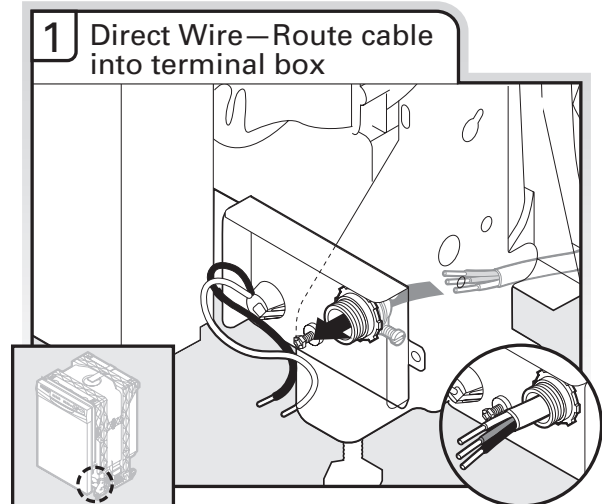
If needed, see website for animated representation of this step.

Visit [www.whirlpool.com/drain](http://www.whirlpool.com/drain) under FAQ tab.

## Make Direct Wire Electrical Connection

**NOTE:** If the power supply cord was connected earlier proceed to Secure Dishwasher in Cabinet Opening section.

### Option B, Direct Wire:



Route cable so that it does not touch dishwasher motor or lower part of dishwasher tub. Pull cable through cable clamp in terminal box.

Select UL listed or CSA approved twist-on wire connectors (not included) rated to connect your household wiring to 16-gauge dishwasher wiring.

## ⚠ WARNING

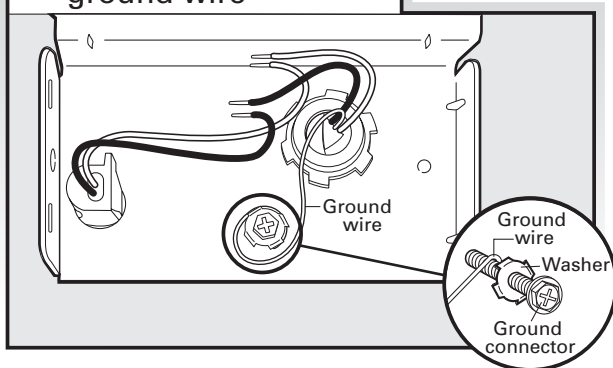


### Electrical Shock Hazard

Disconnect electrical power at the fuse box or circuit breaker box before installing dishwasher.

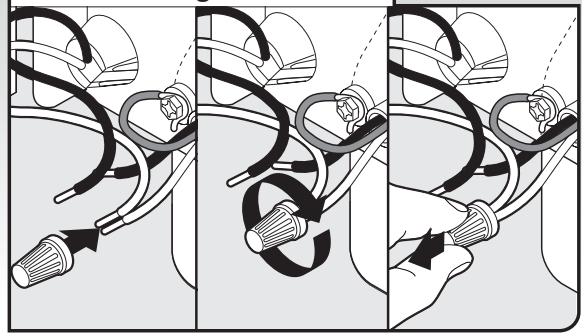
Failure to do so can result in death or electrical shock.

### 2 Direct Wire—Connect ground wire



Form bare ground wire into a U-shaped hook. Wrap ground wire hook clockwise around ground connector screw and under the washer. Securely tighten ground connector

### 3 Direct Wire—Connect remaining wires



**NOTE:** Twist on UL listed or CSA approved wire connector. Gently tug on wires to be sure both are secured.

Connect wires black to black and white to white, using UL listed or CSA approved twist-on wire connectors (not included).

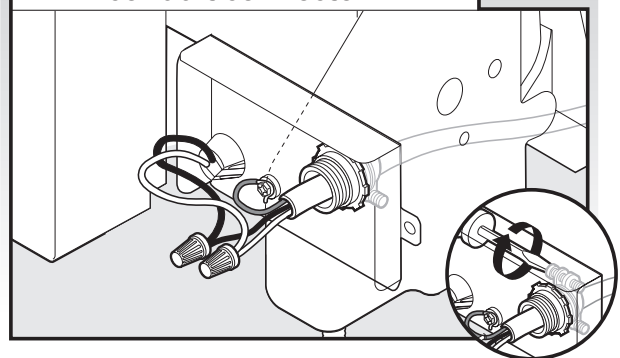
### Wiring configuration

Power supply wire:		Terminal box wire:
white	↔	white
black	↔	black
ground wire	↔	ground connector

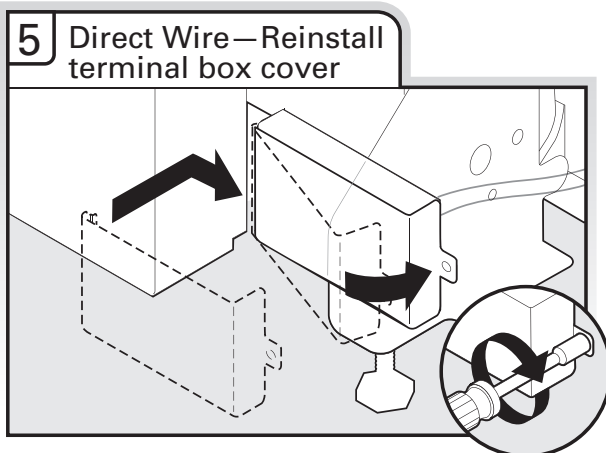
If needed, see website for animated representation of this step.

Visit [www.whirlpool.com/electrical](http://www.whirlpool.com/electrical) under FAQ tab.

### 4 Direct Wire—Secure cable in conduit connector

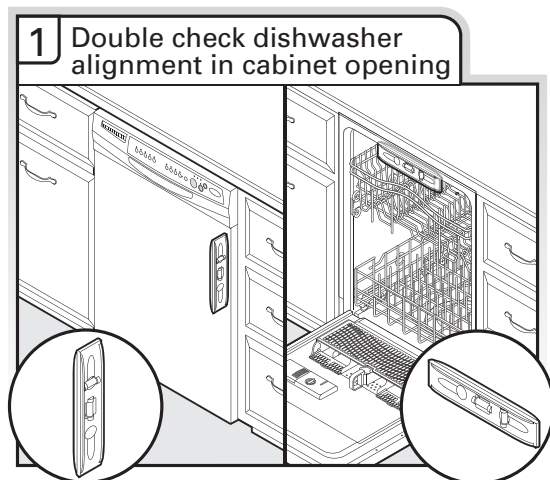


Tighten conduit connector screws to secure cable.



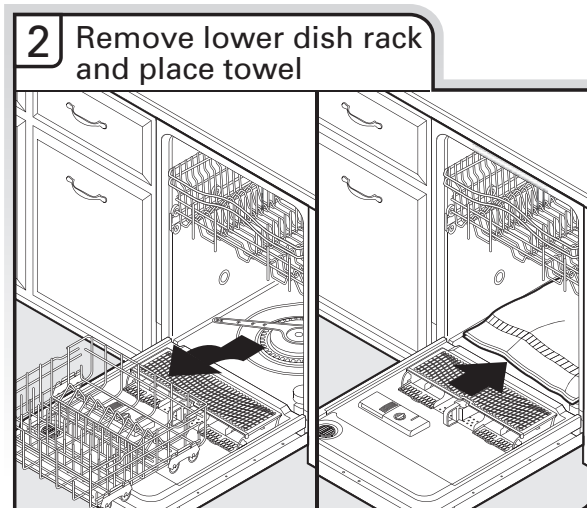
Place wires inside terminal box. Insert tabs on left side of cover. Make sure wires are tucked inside box. Close cover ensuring wires are not pinched. Use 1/4" nut driver and previously removed screw to secure cover.

## Secure Dishwasher in Cabinet Opening

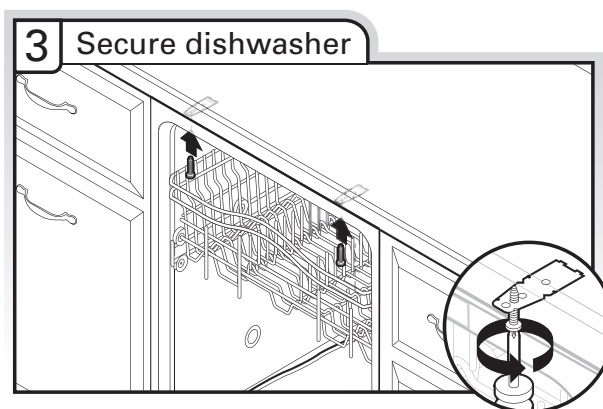


Check that dishwasher is still level front to back and side to side in cabinet opening.

**IMPORTANT:** If you have solid countertops such as corrian, granite, etc., you must use side mounting kit (Part No. 8212560). Follow kit instructions. (Brackets included with kit.)

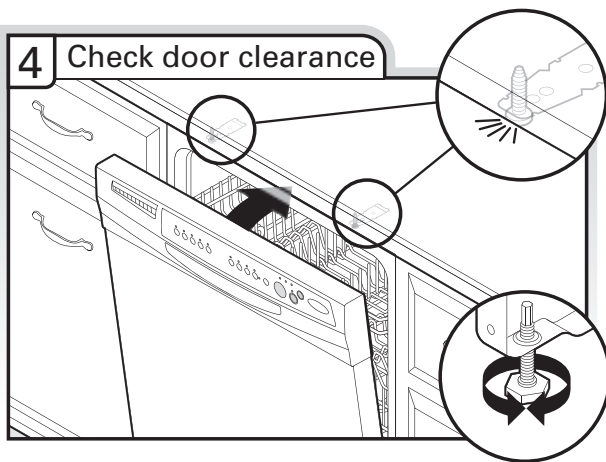


Open dishwasher door, remove lower dish rack, and place towel over pump assembly and lower spray arm of dishwasher. This will prevent screws from falling into pump area when securing dishwasher to countertop.

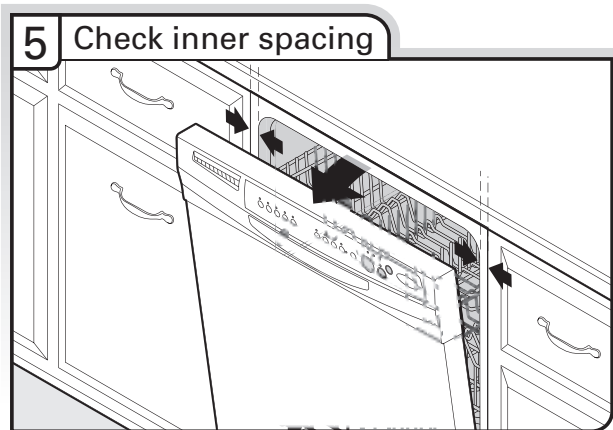


**NOTE:** Do not drop screws into bottom of dishwasher.

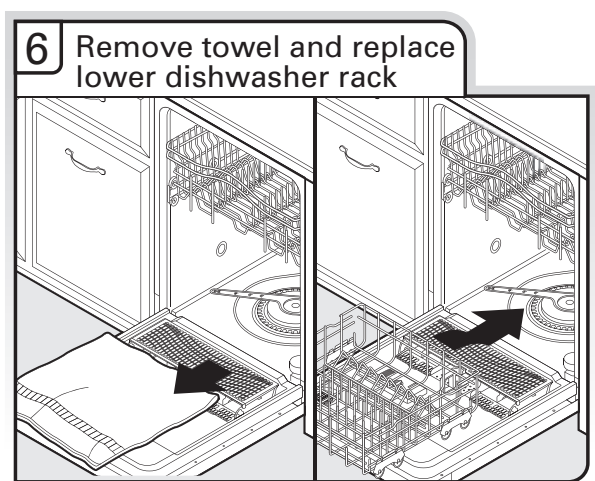
Locate brackets on top of dishwasher and secure dishwasher to countertop with two, #10 x 1/2" philipshead screws (included). The dishwasher must be secured to keep it from shifting when door is opened.



Check that top of door does not contact screws, brackets, or countertop. If it does, adjust leveling legs.

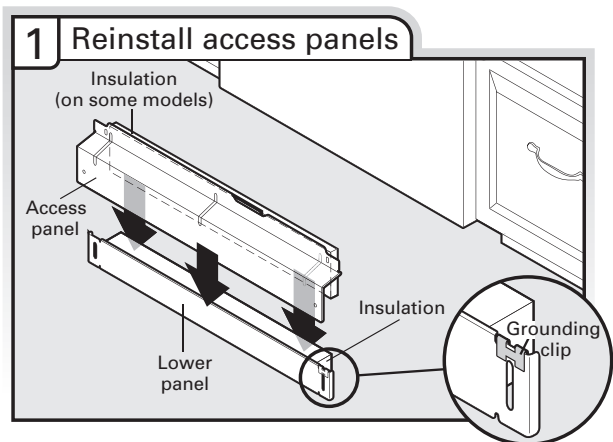


Open door and check that space between dishwasher cabinet opening and tub is equal on both sides. If spacing is not equal, loosen bracket screws secured and shift tub. Tighten bracket screws.



If needed, see website for animated representation of this step. Visit [www.whirlpool.com/anchoring](http://www.whirlpool.com/anchoring) under FAQ tab.

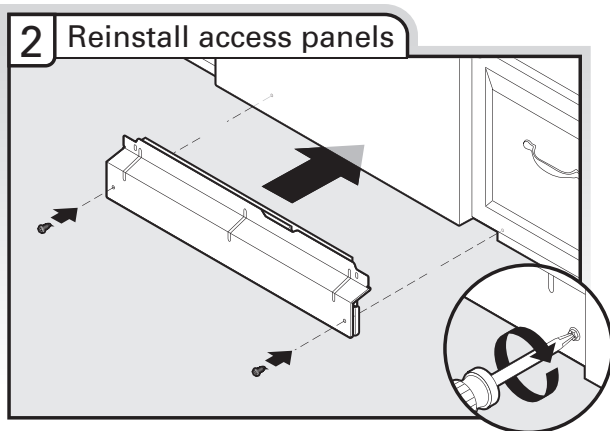
## Complete Installation



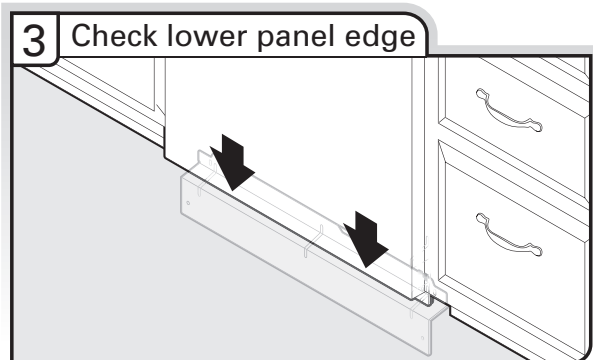
Check that grounding clip is attached to the lower panel.

Position the lower panel behind the access panel. On some models there is insulation on the access panel which must fall behind the insulation on the lower panel.

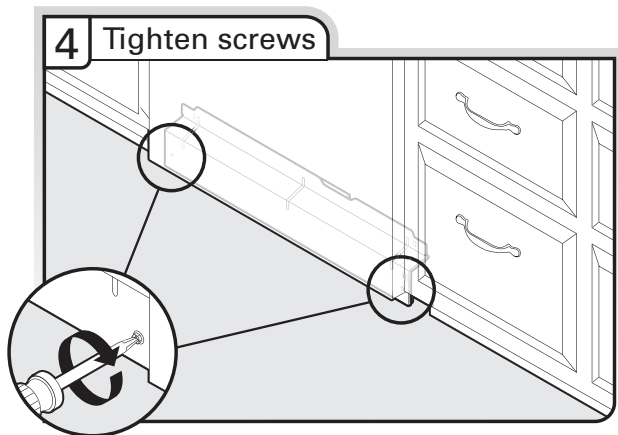




Hold the two panels together and place them against dishwasher leg. Using a philips or 1/4" screwdriver, reinstall the screws through the holes in the access panel and the slots in the lower panel.



Check that the lower edge of the lower panel contacts the floor. Adjust if necessary.



Tighten access panel screws.

TEFLON is a registered trademark of E.I. Du Pont De Nemours and Company.

## ⚠ WARNING



### Electrical Shock Hazard

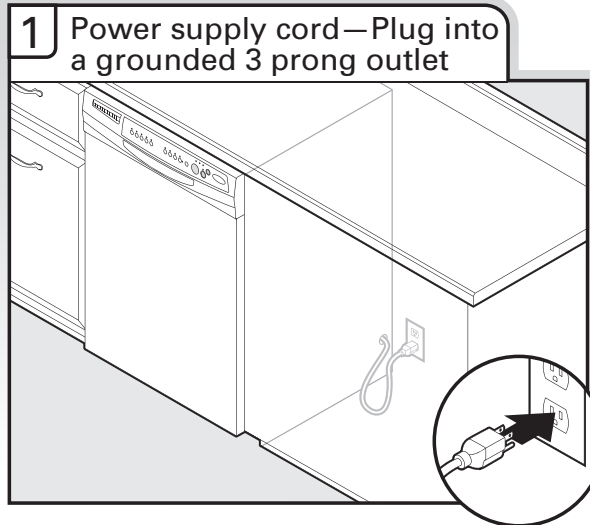
**Plug into a grounded 3 prong outlet.**

**Do not remove ground prong.**

**Do not use an adapter.**

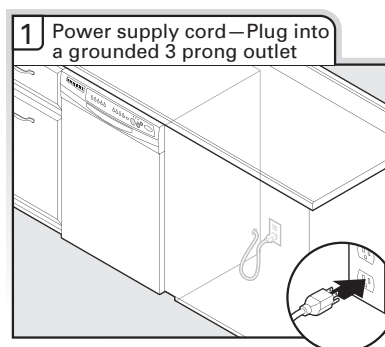
**Do not use an extension cord.**

**Failure to follow these instructions can result in death, fire, or electrical shock.**



Plug into a grounded 3 prong outlet. Check that power supply cord does not touch dishwasher motor or lower part of dishwasher tub.

### Reconnect Power



## Check Operation

- Read the Dishwasher User Instructions that came with your dishwasher.
- Check that all parts have been installed and no steps were skipped. Check that you have all tools used.
- Start dishwasher and allow it to complete the shortest wash cycle. After the first 2 minutes unlatch door, wait 5 seconds, then open door. Check to see that there is water in the bottom of the dishwasher tub. Check that dishwasher is working properly.

If not, disconnect power or unplug dishwasher and see “If Dishwasher Does Not Operate” section.

## If Dishwasher Does Not Operate

First try the solutions suggested here to possibly avoid the cost of a service call.

- Has the circuit breaker tripped or the house fuse blown?
- Is the door closed tightly and latched?
- Has the cycle been set correctly to start the dishwasher?
- Is the water turned on?

If none of these work, call 1-800-253-1301, or in Canada, call 1-800-807-6777.

For Roper models, call 1-800-447-6737, or in Canada call 1-800-807-6777.

## Additional Tips

Expect longer wash times. Your new dishwasher will average 2-3 hours per load, but use nearly 40% less energy than older models. Designed with a low wattage, low energy consumption motor, your dishwasher washes longer to ensure exceptional cleaning. Certain models are equipped with an optical water sensor so the first cycle will run longer to calibrate to optical sensor. Selecting certain options could increase cycle time past 3.5 hours.

Rinse Aid is necessary for good drying results:

This dishwasher is designed to be used with rinse aid for good drying performance and controlling hard water deposit build-up. Energy efficient dishwashers use less water and energy so they depend on the water sheeting action of rinse aid for good drying performance.

Start/Resume light may flash:

When pressing Start/Resume, you must make sure the door is closed within 3 seconds. If you do not, the Start/Resume light will flash until you press it again. (You must also do this when adding a dish during the middle of a cycle.)



# THEORY OF OPERATION

## GENERAL

### 2008 Undercounter Diswasher

Your dishwasher has the latest technology in dishwasher filtration. This triple filtration system minimizes sound and optimizes water and energy consumption while providing superior cleaning performance. Throughout the life of your dishwasher, the filter will require maintenance to sustain peak cleaning performance.

The triple filter system consists of 2 parts which filter one hundred percent of the water. The majority of water is filtered thru the upper filter, and the remaining water is filtered thru the fine mesh filter of the lower filter cup.

- The upper filter assembly keeps oversized items and foreign objects along with very fine food particles out of the pump.
- The lower filter keeps food from being recirculated onto your dishware with the fine mesh screen.
- Inside the lower filter is a baffle that stands in front of the wash motor inlet. This baffle optimizes the performance of the lower filter and keeps large items from entering the wash pump. The lower spray arm has a spray nozzle pointing down to clean the screen and direct the food soils to the filter cup.

The filters may need to be cleaned when:

- Visible objects or soils are on the Upper Filter Assembly.
- There is degradation in cleaning performance (that is, soils still present on dishes).
- Dishes feel gritty to the touch.

In drain, the water flows through the center of the filter cup, down and out the drain opening.

## DIVERTER VALVE

During wash, water travels from the wash motor up through the diverter valve which only allows the water to flow through one of three wash zone configurations.

1. Middle wash arm and upper spinner
2. Lower wash arm and upper spinner
3. TurboZone only

Cycle times are longer in this dishwasher, typically 20 minutes per cycle, due to lower water consumption and alternating wash zones. Some cycles can last up to four hours. The short one hour cycle does not include a dry cycle.

## VERY HARD WATER

If the customer has hard water (above 15 grains), the filter should be cleaned at least once per month. Building up of white residue on the dishwasher indicates hard water.

# CYCLE OPERATION

NOTE: Cycles shown depict typical low soil version. Cycles will vary based on sensor inputs and options selected.

POTS & PANS						
DRAIN 0 MIN 0:40 MAX	FILL 1:13	WASH 4:00	DRAIN SEQUENCE 1:43 MAX			
	FILL 1:11	DETERGENT DISPENSE	WASH 2:15	THERMAL HOLD *1 120° 55:00	WASH 50:00	DRAIN SEQUENCE 1:12 MAX
	FILL 1:06	WASH 6:00	DRAIN SEQUENCE 1:12 MAX			
	FILL 1:06	HEATED WASH 15:00	THERMAL HOLD *1 140° 45:00	RINSE AID DISPENSE	WASH 8:00	DRAIN SEQUENCE 1:08 MAX
	PAUSE 6:00	DRY *2,3 26:00				

NORMAL						
DRAIN 0 MIN 0:40 MAX	FILL 1:13	WASH 4:00	DRAIN SEQUENCE 1:43 MAX			
	FILL 1:09	DETERGENT DISPENSE	WASH 2:15	THERMAL HOLD *1 105° 35:00	WASH 25:00	DRAIN SEQUENCE 1:12 MAX
	FILL 0:18	WASH 4:42	DRAIN SEQUENCE 0:35 MAX			
	FILL 0:18	WASH 4:42	DRAIN SEQUENCE 0:35 MAX.			
	FILL 1:04	HEATED WASH 15:00	THERMAL HOLD 140° 45:00	RINSE AID DISPENSE	WASH 8:00	DRAIN SEQUENCE 1:08 MAX.
	PAUSE 06:00	DRY *2,3 26:00				

\*1: Thermal hold = heated wash until temperature reached or maximum time.

\*2: Heater not on for entire dry period.

\*3: if Selected.

SMART WASH / ADAPTIVE WASH						
DRAIN 0 MIN 0:40 MAX	FILL 1:13	WASH 4:00	DRAIN SEQUENCE 1:43 MAX			
	FILL 1:09	DETERGENT DISPENSE	WASH 3:45	THERMAL HOLD *1 105° 35:00	WASH 25:00	DRAIN SEQUENCE 1:12 MAX
	FILL 0:18	WASH 4:42	DRAIN SEQUENCE 0:35 MAX			
	FILL 0:18	WASH 4:42	DRAIN SEQUENCE 0:35 MAX			
	FILL 1:04	HEATED WASH 15:00	THERMAL HOLD *1 140° 45:00	RINSE AID DISPENSE	WASH 8:00	DRAIN SEQUENCE 1:08 MAX
	PAUSE 6:00	DRY *2,3 26:00				

CHINA						
DRAIN 0 MIN 0:40 MAX	FILL 1:13	WASH 4:00	DRAIN SEQUENCE 1:43 MAX			
	FILL 1:09	DETERGENT DISPENSE	WASH 2:15	THERMAL HOLD *1 105° 35:00	WASH 25:00	DRAIN SEQUENCE 1:12
	FILL 0:18	WASH 4:42	DRAIN SEQUENCE 0:35 MAX			
	FILL 0:18	WASH 4:42	DRAIN SEQUENCE 0:35 MAX			
	FILL 1:04	HEATED WASH 15:00	THERMAL HOLD *1 135° 45:00	RINSE AID DISPENSE	WASH 8:00	DRAIN SEQUENCE 1:08 MAX
	PAUSE 6:00	DRY *2,3 26:00				

\*1: Thermal hold = heated wash until temperature reached or maximum time.

\*2: Heater not on for entire dry period.

\*3: If selected.

Continued on the next page.

ONE HOUR WASH						
DRAIN 0 MIN 0:40 MAX	FILL 1:13	WASH 3:00	DRAIN SEQUENCE 1:43 MAX			
	FILL 1:04	WASH 3:00	DRAIN SEQUENCE 1:08			
	FILL 1:11	DETERGENT DISPENSE	WASH 14:45	DRAIN SEQUENCE 1:12 MAX		
	FILL 1:06	WASH 3:00	DRAIN SEQUENCE 1:12 MAX			
	FILL 1:06	HEATED WASH 15:00	RINSE AID DISPENSE	WASH 5:30	DRAIN SEQUENCE 1:08 MAX	
	PAUSE 6:00	DRY *2,3 29:00				

\*1: Thermal hold = heated wash until temperature reached or maximum time.

\*2: Heater not on for entire dry period.

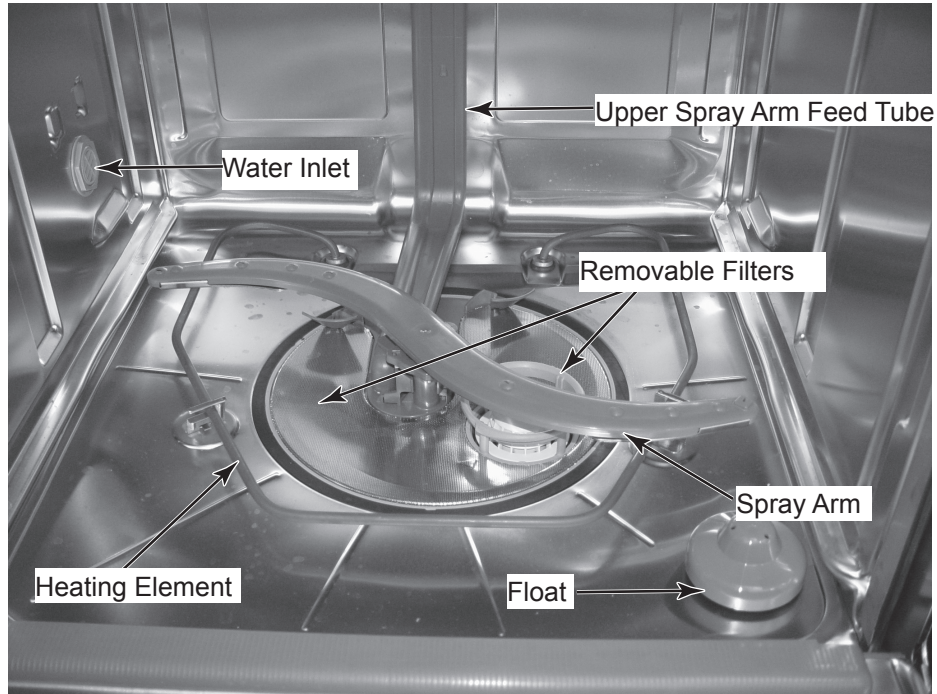
\*3: If selected.

# COMPONENT ACCESS

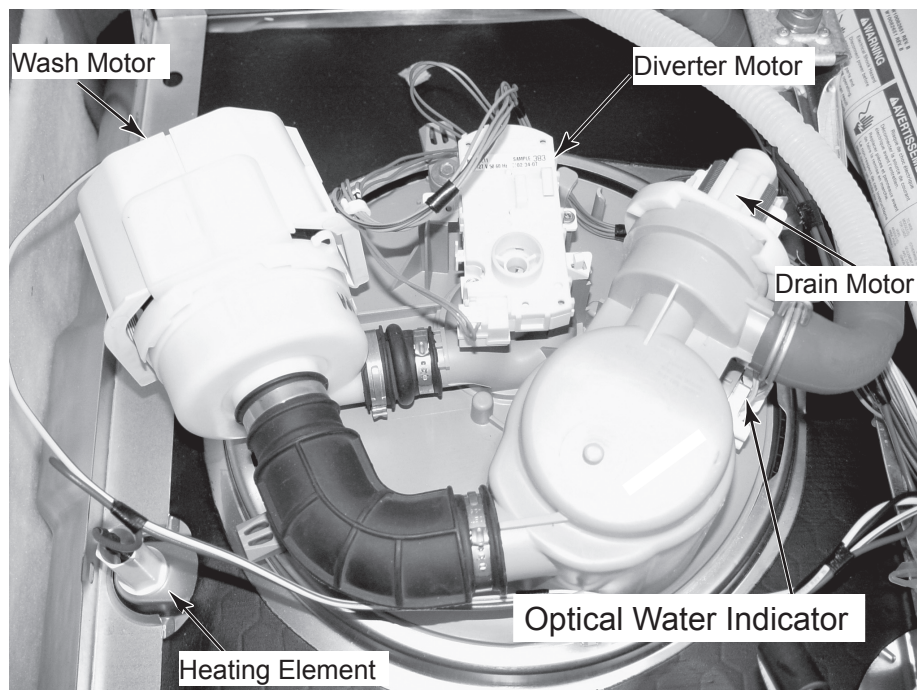
This section instructs you on how to service each component inside the Dishwasher.  
The components and their locations are shown below.

## COMPONENT LOCATIONS

### IN-TUB COMPONENTS



### TUB BOTTOM COMPONENTS



## REMOVING THE SPRAY ARM

### **WARNING**



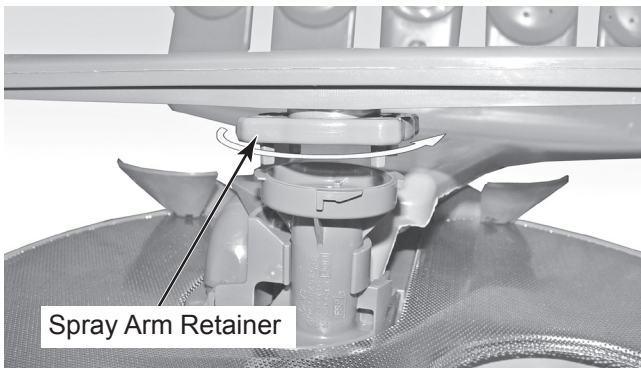
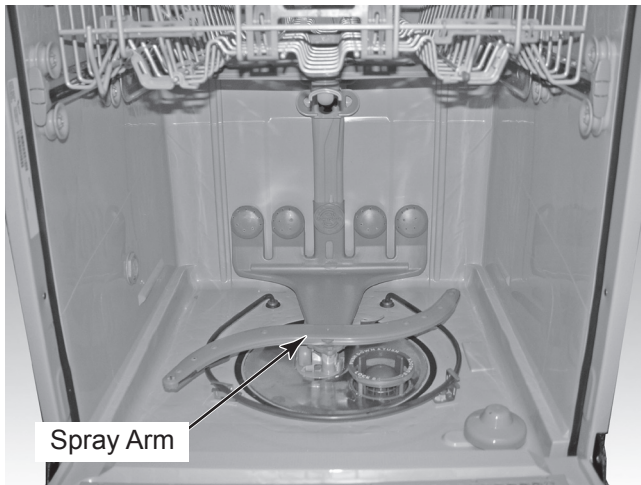
#### **Electrical Shock Hazard**

**Disconnect power before servicing.**

**Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

1. Unplug dishwasher or disconnect power.
2. Open the dishwasher door.
3. Remove lower rack out of the dishwasher.



4. Rotate spray arm retainer counterclockwise to release spray arm.



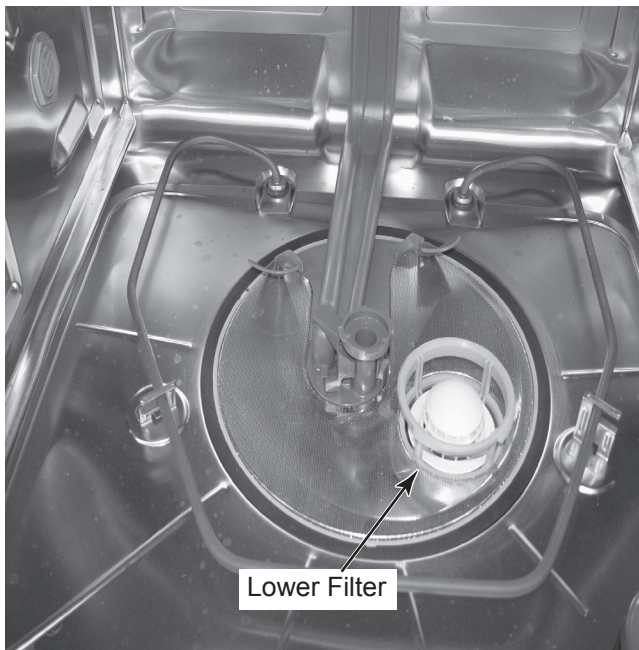
## REMOVING THE WASH FILTERS

### **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

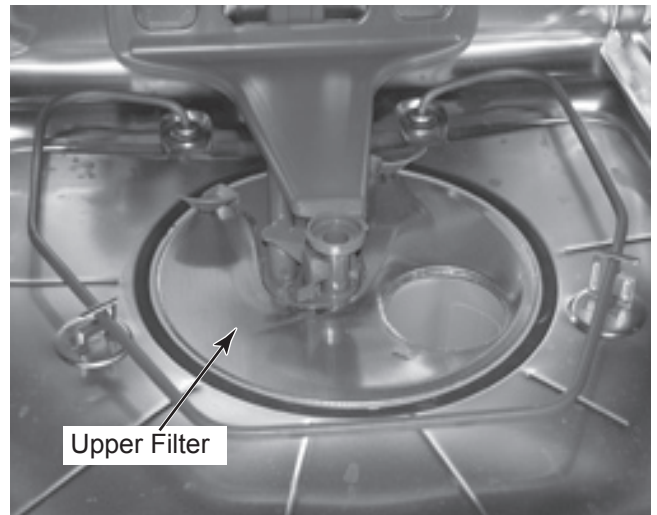
1. Unplug dishwasher or disconnect power.
2. Open the dishwasher door.
3. Remove lower rack out of the dishwasher.



4. Push down to rotate the lower wash filter counterclockwise to unlock it and lift wash filter out of dishwasher.



5. Lift and remove the lower filter from the dishwasher.



6. The upper filter may now be lifted out from the dishwasher.

## REMOVING THE WATER FEED TUBE / TURBOZONE™

### **⚠ WARNING**



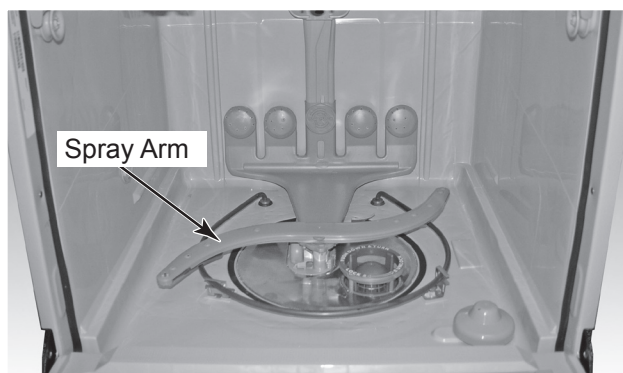
#### **Electrical Shock Hazard**

**Disconnect power before servicing.**

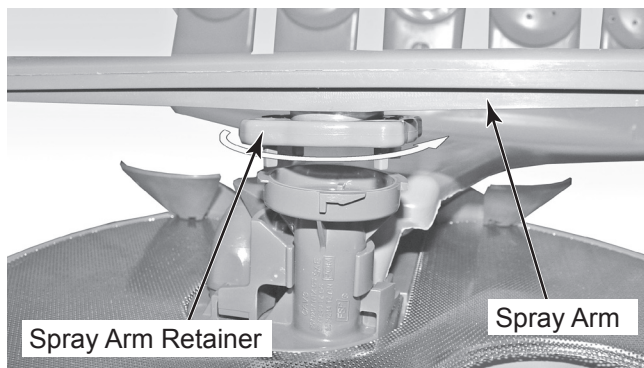
**Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

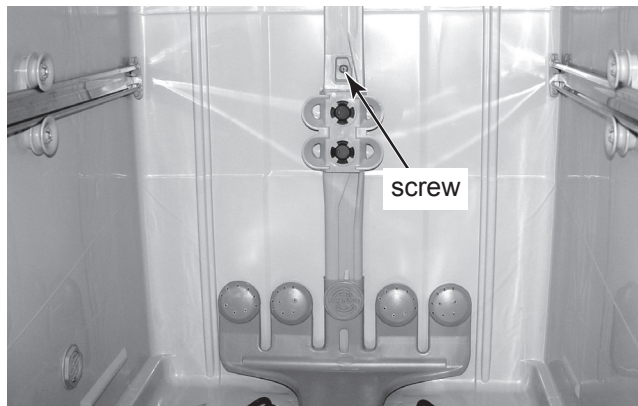
1. Unplug dishwasher or disconnect power.
2. Open the dishwasher door.
3. Remove upper and lower rack out of the dishwasher.



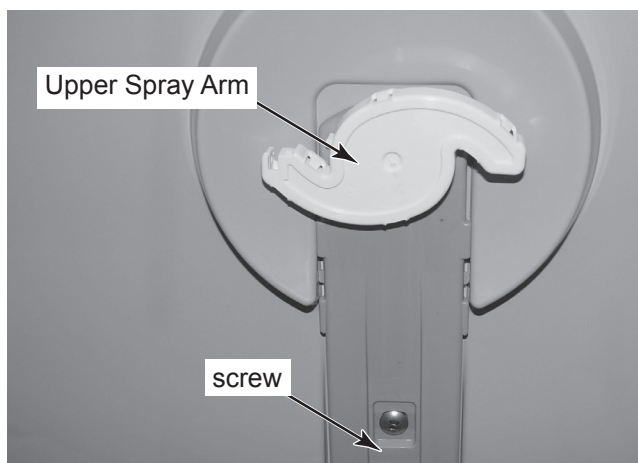
4. Rotate spray arm retainer counterclockwise to release spray arm.



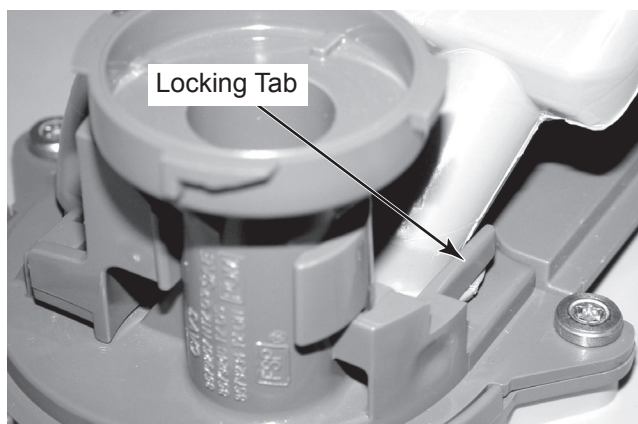
5. Remove water feed tube:
  - a) Remove screw located at the center back of the tub.



- b) Remove one screw located at the top of the tub near the upper spray arm.



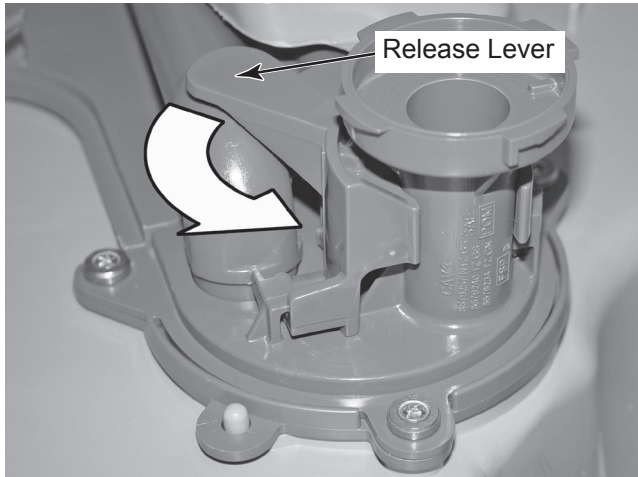
6. Remove the manifold tubing by rocking the manifold side to side and front to back.  
If necessary, slight outward pressure on the locking tab will release the manifold.





## REMOVING THE WATER FEED TUBE (continued from 4-4)

- Swing the release lever CCW to remove the feed tube from the pump assembly.



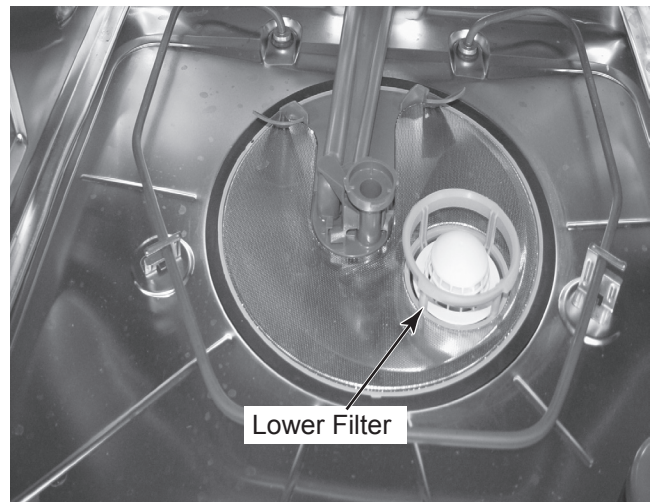
## ⚠ WARNING



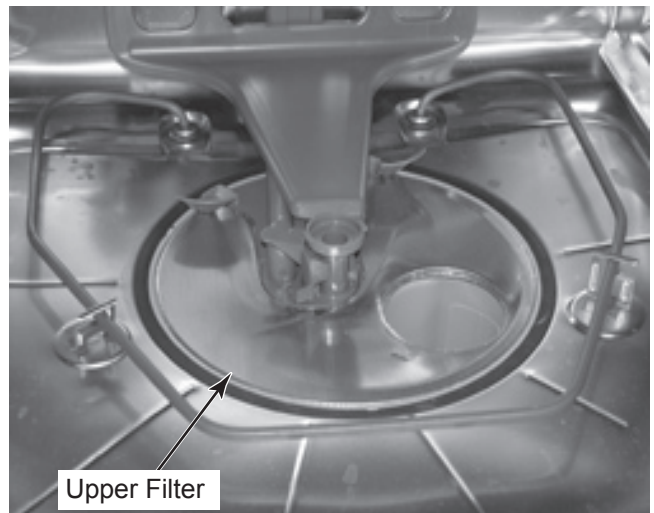
**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

## REMOVING THE COVER SIEVE AND DIVERTER DISC

- Push down to rotate the lower wash filter counterclockwise to unlock it and lift wash filter out of dishwasher.



- Lift and remove the upper filter from the dishwasher.



- Upper filter removed to expose filter sump.



**Removing the Cover Sieve and Diverter Disc**  
(continued from page 4-5)

# **! WARNING**



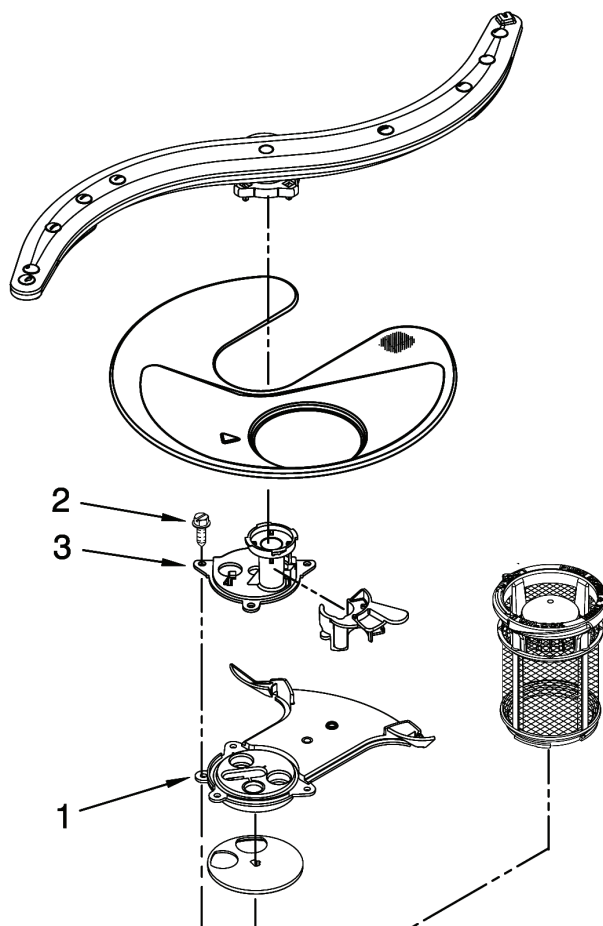
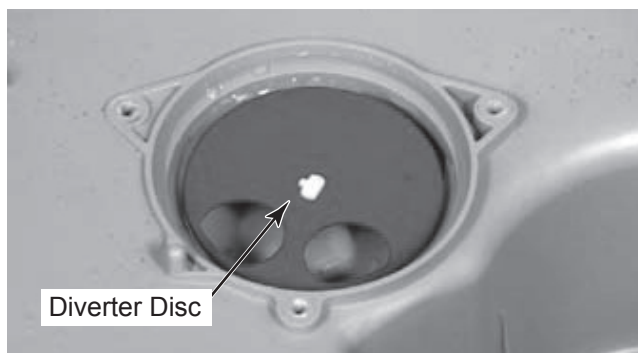
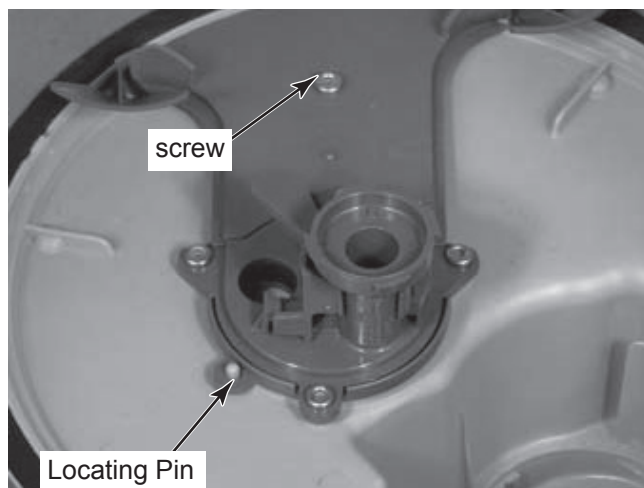
## **Electrical Shock Hazard**

**Disconnect power before servicing.**

**Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

4. Remove Outlet Cover.
5. Remove one screw that secures the cover sleeve to the sump.
6. Take note of the locating pin that protrudes through a hole in a tab on the cover sieve to assist in correct re-assembly



7. Remove Diverter Disc by lifting it up off the center post and out of the sump.

See the attached parts blow-up for part names and their assembly order.

- |    |         |               |
|----|---------|---------------|
| 1. | 8579241 | Cover, Sieve  |
| 2. | 3400069 | Screw         |
| 3. | 8579240 | Cover, Outlet |

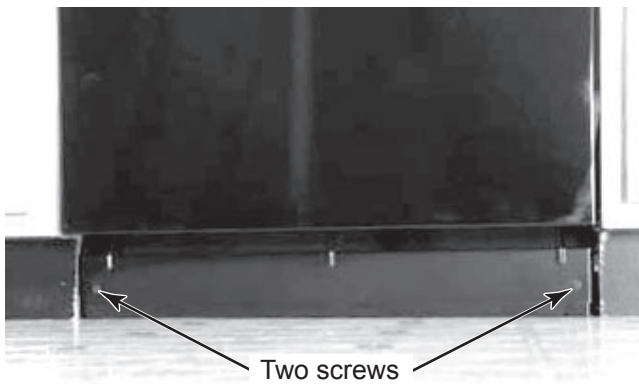
## REMOVING THE ACCESS PANEL AND TOE PANEL

### **WARNING**

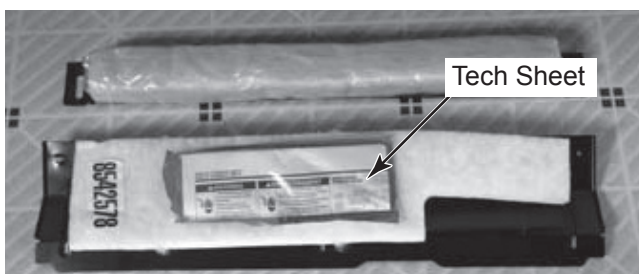


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug dishwasher or disconnect power.
2. Remove two screws that secure the access panel and toe panel to the base of the dishwasher.
3. Pull both panels away from the dishwasher.

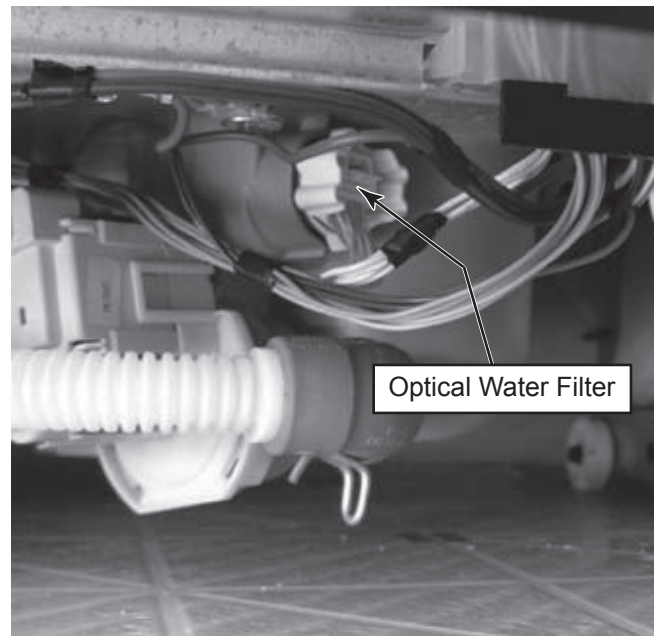


4. Note the location of the tech sheet on the back of the access panel.



## REMOVING THE OPTICAL WATER INDICATOR

1. Unplug dishwasher or disconnect power.
2. Remove the access panel and toe panel.
3. Disconnect the wire connector to the optical water indicator, or OWI, by lifting the locking tab and removing the wire connector.
4. Turn the OWI 90 degrees counter clockwise and pull it out of the sump.



5. Be sure to clean up any water that comes out of the drain pump or drain hose.

## REMOVING THE DRAIN HOSE

### **WARNING**



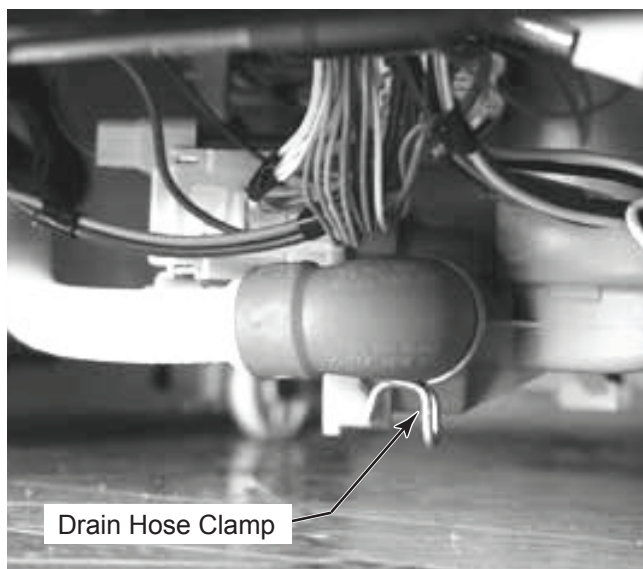
#### **Electrical Shock Hazard**

**Disconnect power before servicing.**

**Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

1. Unplug dishwasher or disconnect power.
2. Remove the access panel and toe panel
3. Use a pair of channel lock pliers to squeeze the clamp that secures the drain hose to the drain outlet.
4. Pull the clamp and hose off the drain outlet.
5. Be sure to clean up any water that comes out of the drain pump or drain hose.





## REMOVING THE DRAIN PUMP

### **WARNING**



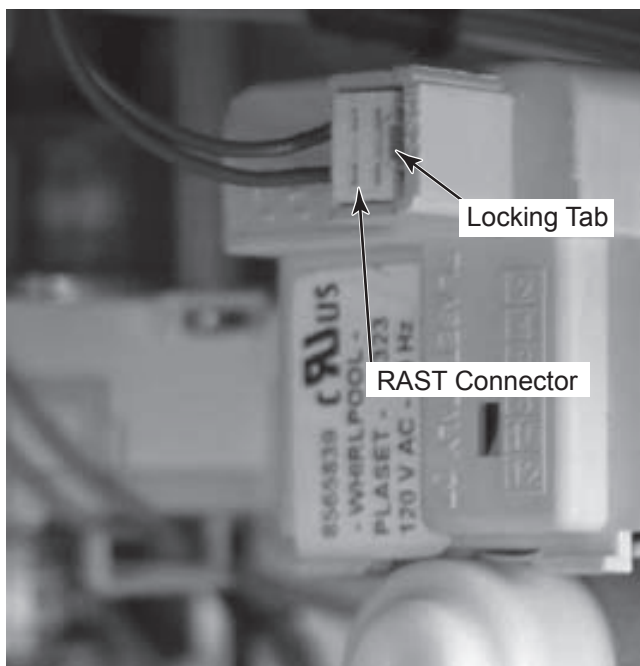
#### **Electrical Shock Hazard**

**Disconnect power before servicing.**

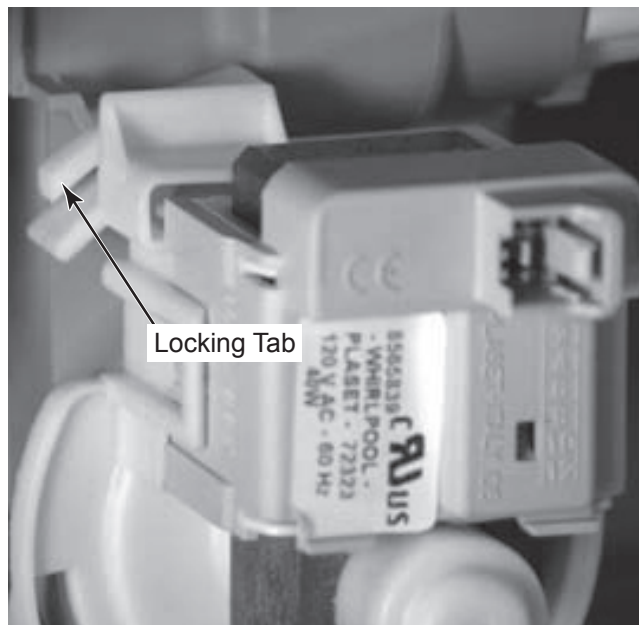
**Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

1. Unplug dishwasher or disconnect power.
2. Remove the access panel and toe panel
3. Remove the drain hose.
4. Disconnect the connector that secures the wire leads to the drain pump by lifting the locking tab and pulling the connector out.



5. Press the locking tab located behind the drain pump.



6. Rotate the drain pump 90 degrees counter clockwise to remove it from the dishwasher.



7. Be sure to clean up any water that comes out of the drain pump or drain hose.

## REMOVING THE SUMP

### **⚠ WARNING**

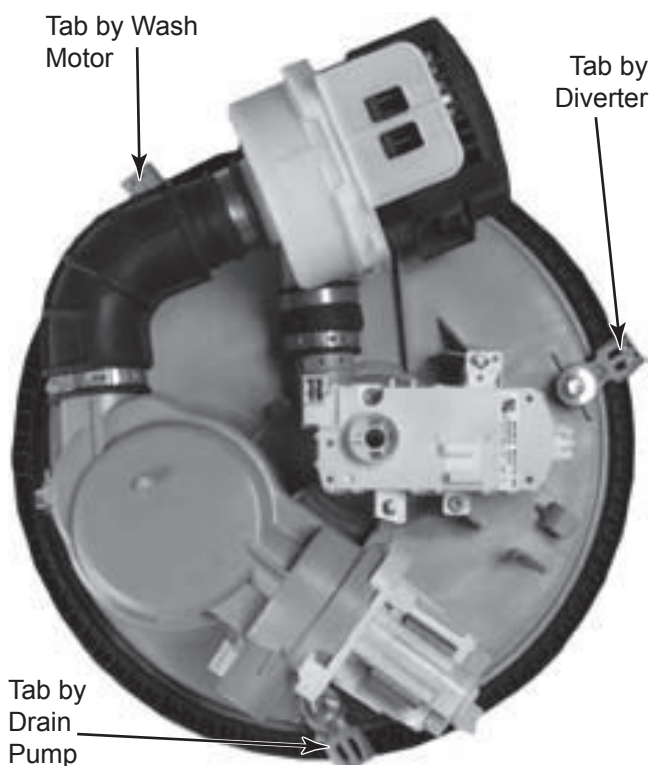


#### **Electrical Shock Hazard**

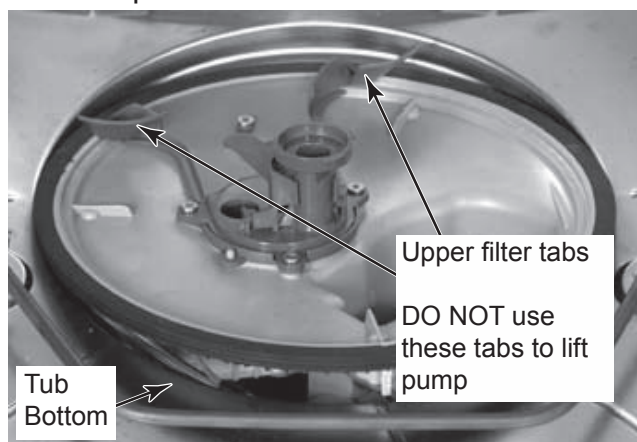
**Disconnect power before servicing.  
Replace all parts and panels before  
operating.**

**Failure to do so can result in death or  
electrical shock.**

1. Unplug dishwasher or disconnect power.
2. Remove the access panel and toe panel.
3. Remove the drain hose.
4. Remove the drain pump.
5. Reach under the dishwasher and rotate each of the 3 sump tabs 1/4 turn clockwise to unlock the sump from the tub.

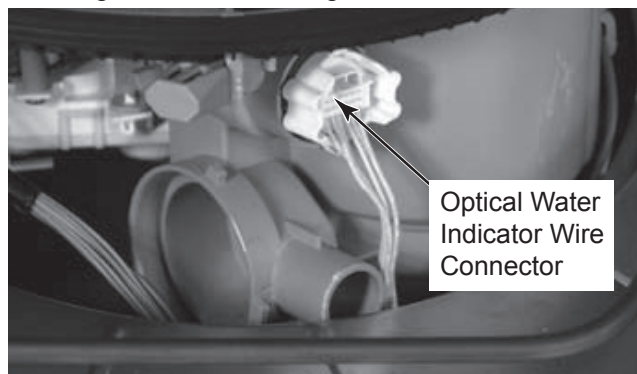


6. Open the dishwasher door.
7. Remove both dishracks.
8. Remove the upper and lower filters.  
(see page 4-3 for procedure)
9. Remove the lower Spray Arm assembly.  
(see page 4-2 for procedure)
10. Remove the Turbo wash manifold.  
(see page 4-6 for procedure)
11. Remove the feed tube assembly.  
(see page 4-6 for procedure)
12. Reach under the dishwasher and push up on the sump to separate the seal of the sump from the tub bottom.

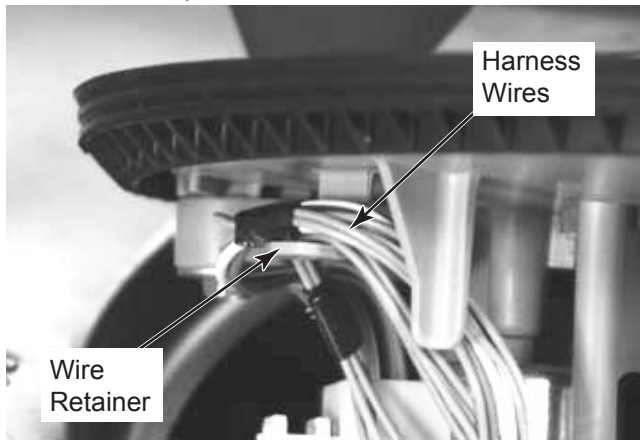


**Note: Do not use the upper filter tabs to lift the pump.**

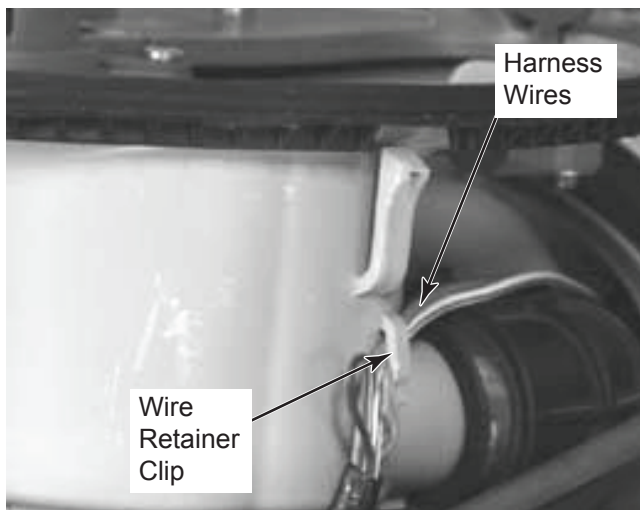
13. Lift the sump from inside the dishwasher tub and prop the front edge up so the connections to the OWI, optical water indicator, are accessible.
14. Disconnect the OWI wiring by lifting the locking tab and removing the wire connector.



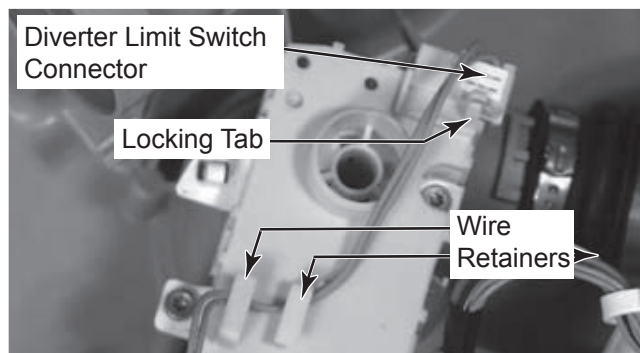
15. Pull the harness wires on the left side of the sump off of the wire retainer.



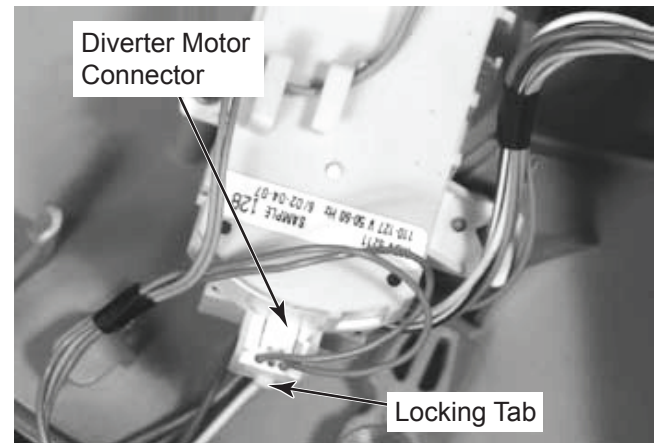
16. While lifting the sump, be sure that the harness wires on the right side of the sump release from the wire retainer clip.



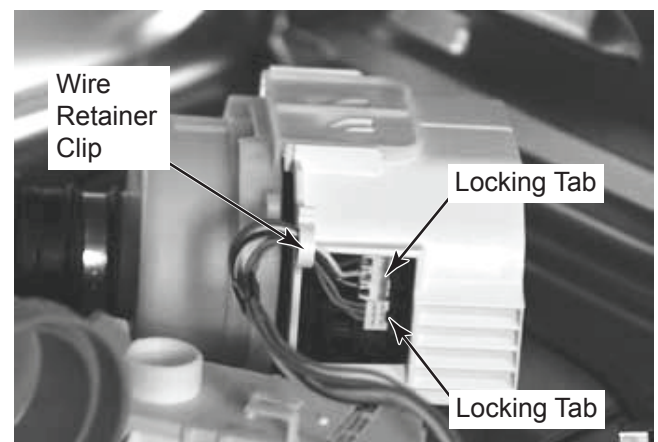
17. Turn the sump over and set it down in the sump hole upsidedown.
18. Remove the wires from the wire retainers on the diverter
19. Disconnect the wire connector to the diverter limit switch by lifting the locking tab and removing the wire connector



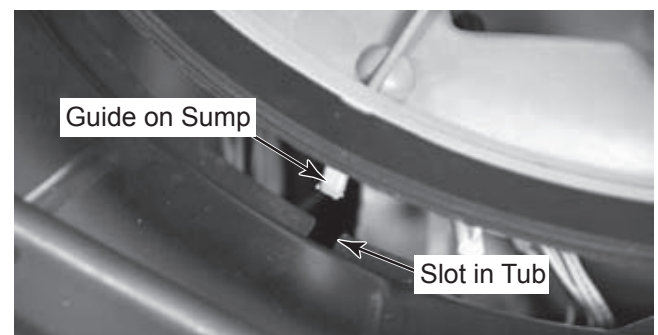
20. Disconnect the wire connector to the diverter motor by lifting the locking tab and removing the wire connector.



21. Remove the wires from the wire retainer clips on the wash motor.
22. Disconnect the two wire connectors to the wash motor by lifting the locking tabs and removing the wire connectors.



23. The sump can now be removed from dishwasher.
24. When reinstalling the sump into the tub use the alignment tab in the front of the sump and match it to the slot in the tub.



## REMOVING THE DIVERTER VALVE MOTOR

### **⚠ WARNING**



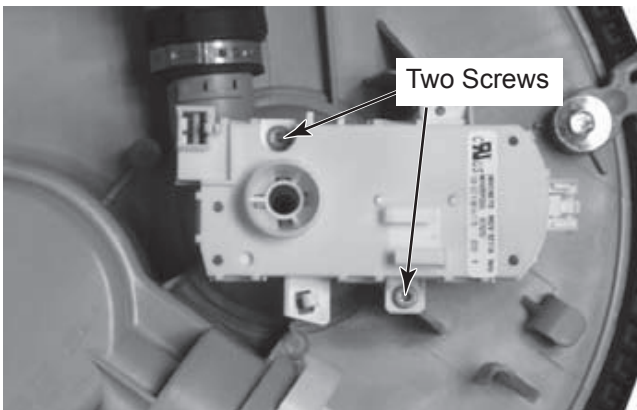
#### **Electrical Shock Hazard**

**Disconnect power before servicing.**

**Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

1. Unplug dishwasher or disconnect power.
2. Remove the sump. (see page 4-12 for procedure)
3. Remove the two screws that secure the diverter valve motor to the sump and remove the diverter valve motor from the dishwasher.





## REMOVING THE OUTER DOOR PANEL

### **WARNING**



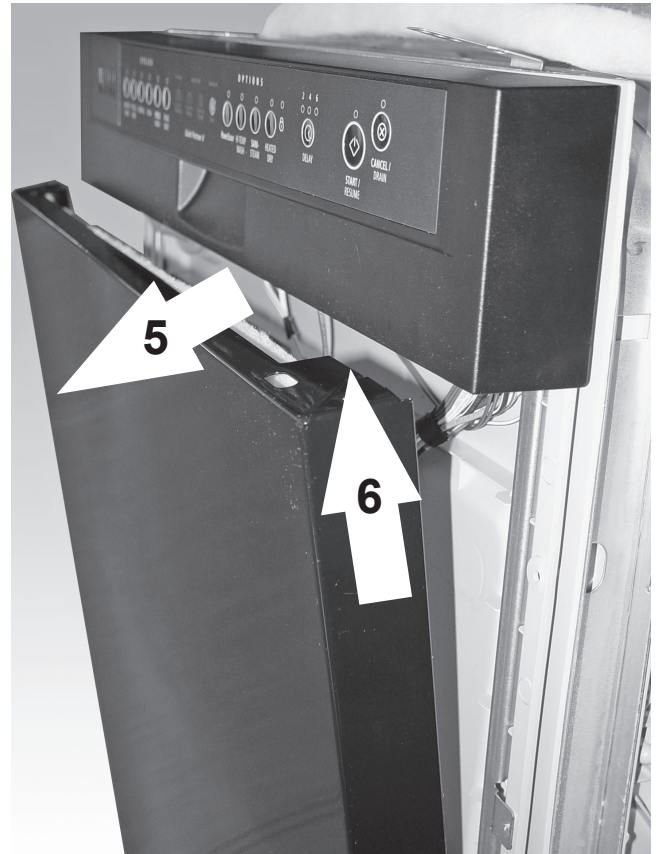
**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before  
operating.  
Failure to do so can result in death or  
electrical shock.

1. Unplug dishwasher or disconnect power.
2. Open the dishwasher door.
3. Remove 8 screws from the sides of the door panel.



4. Hold the front panel to the door panel and close the door.

5. Lean the front panel away from the dishwasher.



6. Lift the door panel up and off the front of the dishwasher.



## REMOVING THE CONTROL PANEL

### **WARNING**



#### **Electrical Shock Hazard**

**Disconnect power before servicing.  
Replace all parts and panels before  
operating.**

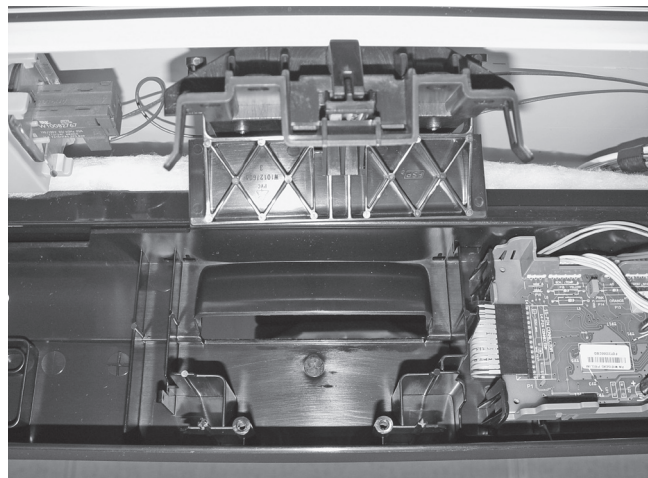
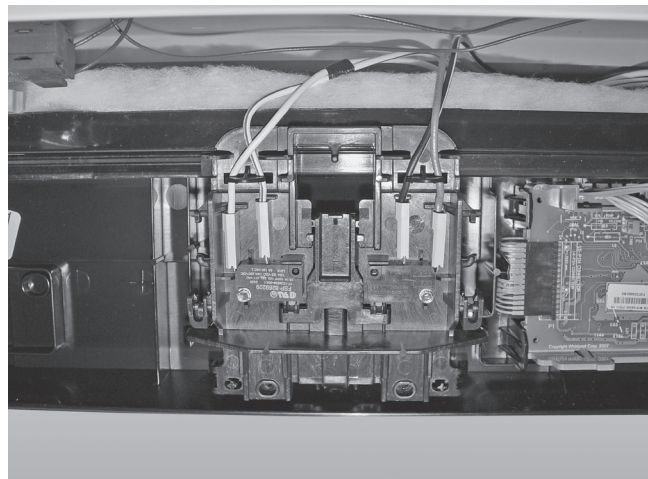
**Failure to do so can result in death or  
electrical shock.**

1. Unplug dishwasher or disconnect power.
2. Open the dishwasher door.
3. While supporting the control panel, remove six screws from the upper sides and center of the inner door panel.



4. While continuing to support the control panel, close the door.

5. Gently pull outward to disengage the control panel.
6. The control panel will be connected with wires that may need to be disconnected to set the control panel down.



## **- NOTES-**

# COMPONENT TESTING

## TESTING DISHWASHER COMPONENTS FROM THE CONTROL

**Before testing any of the components, perform the following checks:**

- The most common cause for mis-dianosed control failure is poor connections. Therefore, disconnecting, inspecting and reconnecting wires will be necessary throughout test procedures.
- All tests/checks should be made with a VOM or DVM having a sensitivity of 20,000 ohms-per-volt DC, or greater.
- Check all connections before replacing components, looking for broken or loose wires, failed terminals, or wires not pressed into connectors far enough.
- Voltage checks must be made with all connectors attached to the boards.
- Resistance checks must be made with power cord unplugged from outlet, and with wiring harness or connectors disconnected from the control.



### ⚠ WARNING

#### Electrical Shock Hazard

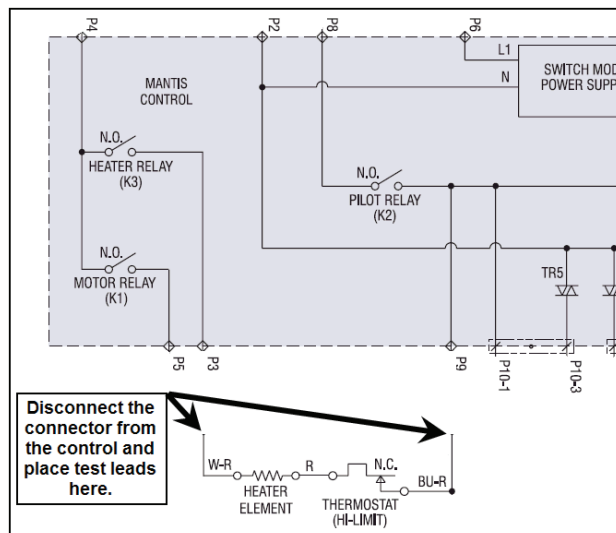
**Disconnect power before servicing.**

**Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

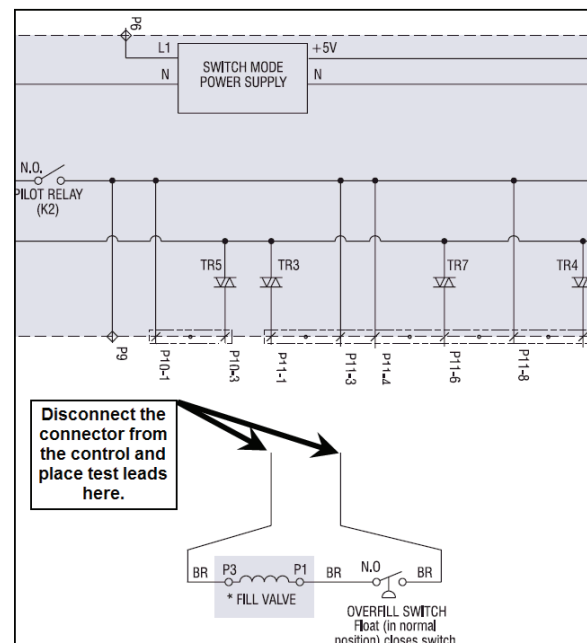
### HEATER CIRCUIT

1. Place one probe on the P9 position and the other on P3 position.
2. Should be between 10  $\Omega$  to 30  $\Omega$ .



### WATER VALVE CIRCUIT

1. Place one probe on the P10 Pin 1 position and the other on P11 Pin 3 position.
2. Should be between 890  $\Omega$  to 1090  $\Omega$ .







## ⚠ WARNING

### Electrical Shock Hazard

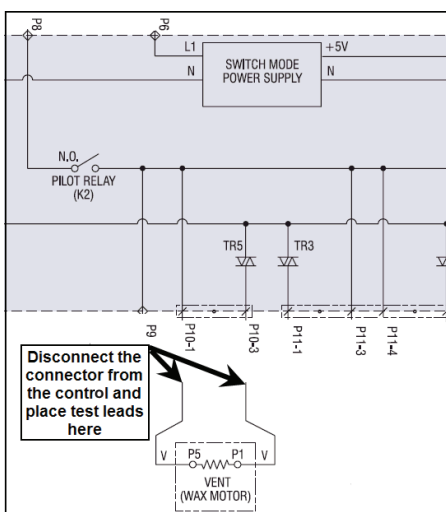
Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

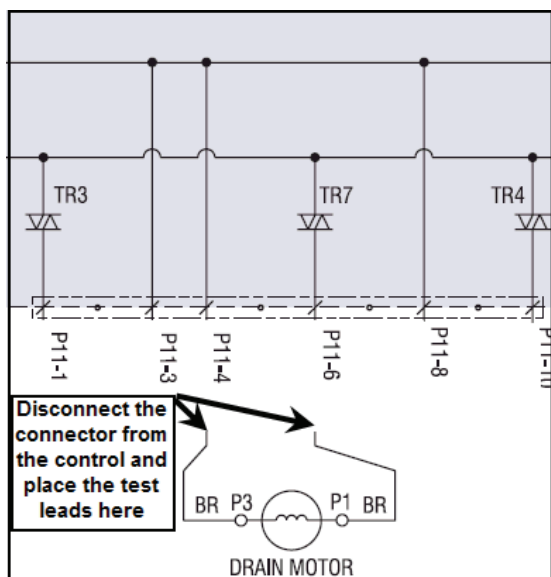
### VENT CIRCUIT

1. Place one probe on the P10 Pin 1 position and the other on P10 Pin 3 position.
2. Should be between 600  $\Omega$  to 1800  $\Omega$ .



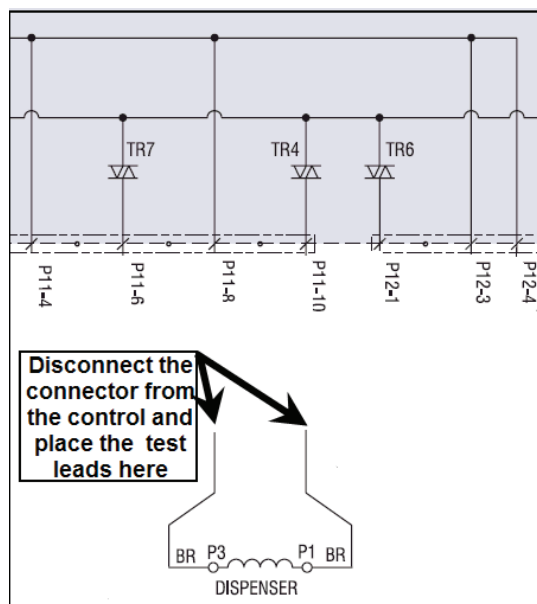
### DRAIN MOTOR CIRCUIT

1. Place one probe on the P10 Pin 1 position and the other on P10 Pin 6 position.
2. Should be between 15  $\Omega$  to 19  $\Omega$ .



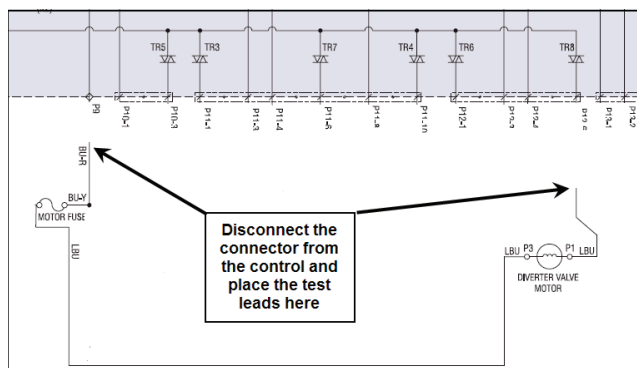
### DETERGENT AND RINSE AID CIRCUIT

1. Place one probe on the P10 Pin 1 position and the other on P11 Pin 10 position.
2. Should be between 280  $\Omega$  to 340  $\Omega$ .



### DIVERTER VALVE CIRCUIT

1. Place one probe on the P10 Pin 1 position and the other on P12 Pin 6 position.
2. Should be between 1300  $\Omega$  to 1600  $\Omega$ .



# DIAGNOSTICS & TROUBLESHOOTING

## TROUBLESHOOTING GUIDE

### **WARNING**



#### **Electrical Shock Hazard**

Electrically ground dishwasher.

Connect ground wire to green ground connector in terminal box.

Do not use an extension cord.

Failure to follow these instructions can result in death, fire, or electrical shock.

### **TROUBLESHOOTING GUIDE NOTES:**

- For resistance checks, refer to “Dishwasher Strip Circuits” section.
- For checking operation with diagnostics, refer to “Service Diagnostics Cycle” section.
- For information on normal cycle and options, see “Cycle Operation” section.

<b>CUSTOMER DESCRIPTION</b>	<b>POTENTIAL CAUSES</b>	<b>CHECK</b>	<b>RELATED ERROR CODE(S)</b>
<b>Clean LED Flashes</b>	Control programmed with self diagnostics.	Read error code from the dishwasher and refer to Service Error Codes table.	
<b>Won't Run or Power Up (“Dead” Keypad/Console)</b> <ul style="list-style-type: none"><li>■ No operation</li><li>■ No keypad response</li><li>■ No LEDs or display</li></ul>	No power to unit or bad connection.	Check fuses, circuit breakers, and junction box connections.	
	Loose connections in dishwasher power up circuit or between keypad(s) and control.	1. Unplug dishwasher or disconnect power. 2. Check continuity of all components in power up circuit. Check connections between keypad(s) and control.	
	Door switch not making contact: <ul style="list-style-type: none"><li>■ Faulty door latch assembly.</li><li>■ Faulty door switch.</li></ul>	1. Unplug dishwasher or disconnect power. 2. Measure resistance of door switch contacts while checking mechanical operation of latch assembly. Confirm switches not loose from assembly.	

CUSTOMER DESCRIPTION	POTENTIAL CAUSES	CHECK	RELATED ERROR CODE(S)
Clean LED Flashes	Control programmed with self diagnostics.	Read error code from the dishwasher and refer to Service Error Codes table.	
Won't Run or Power Up ("Dead" Keypad/Console) <ul style="list-style-type: none"> <li>■ No operation</li> <li>■ No keypad response</li> <li>■ No LEDs or display</li> </ul>	No power to unit or bad connection.	Check fuses, circuit breakers, and junction box connections.	
	Loose connections in dishwasher power up circuit or between keypad(s) and control.	1. Unplug dishwasher or disconnect power. 2. Check continuity of all components in power up circuit. Check connections between keypad(s) and control.	
	Door switch not making contact: <ul style="list-style-type: none"> <li>■ Faulty door latch assembly.</li> <li>■ Faulty door switch.</li> </ul>	1. Unplug dishwasher or disconnect power. 2. Measure resistance of door switch contacts while checking mechanical operation of latch assembly. Confirm switches not loose from assembly.	
	Opened bi-metal attached to control.	1. Unplug dishwasher or disconnect power. 2. Measure resistance. If open, replace. If replaced more than once, replace harness as well. NOTE: Replace any component with evidence of overheating.	
	Multiple open or shorted circuits in keypad.	See "Checking Keypad Operation."	
	Faulty control.	1. Unplug dishwasher or disconnect power. 2. Check/replace control.	
Won't Run <u>and</u> LED for Start/Resume Key is Blinking Slowly	By design, if the door is opened or power is interrupted during a cycle, the user must press the Start/Resume key to resume operation.	Instruct customer. Refer to Use & Care manual.	
	Start/Resume key not responding.	See "One or More Keys Won't Respond."	
	Control detected door switch problem.	Refer to "Service Error Codes" table.	5-1
Won't Run <u>and</u> LED Above Key(s) is Flashing Rapidly	Stuck key or short circuit(s) in keypad, or in control's input lines that read the keys.	Don't replace both: See first section of "Checking Keypad Operation" for test to determine whether shorts are in the keypad or the control.	2-1
Won't Start <u>and</u> Start/Resume key LED Flashes 3 Times When Start/Resume Key is Pressed	Control is programmed to not start if it suspects door switch is stuck closed. Control looks for switch to open between cycles. <ul style="list-style-type: none"> <li>■ Customer didn't open door between cycles.</li> <li>■ Door switch contacts stuck closed.</li> </ul>	1. Open and close door and then press Start/Resume key. Instruct customer. 2. Unplug dishwasher or disconnect power. 3. Measure resistance of door switch contacts while checking mechanical operation of latch assembly.	5-2
Won't Start <u>and</u> Start/Resume Key LED Flashes 3 Times When Start/Resume Key is Pressed <u>and</u> Clean LED or Completed is Blinking	Control detected motor and/or heater problems.	Refer to "Service Error Codes" table.	6-1 7-1 7-2
Won't Accept Key Presses and Control Lock LED On	Control Lockout feature accidentally turned on by customer.	Instruct customer. Press and hold the Heated Dry key for 5 seconds to turn off (or on) the Control Lock feature.	
	Control detected keypad problem.	Refer to "Service Error Codes" table.	2-1



CUSTOMER DESCRIPTION	POTENTIAL CAUSES	CHECK	RELATED ERROR CODE(S)
Some Keys Work but One or More Keys Won't Respond	Open key or LED circuit(s) on the keypad, or open circuits on the control to the key(s) and LEDs.	See "Checking Keypad Operation."	
Unusual LED or Display Readouts	Open ID diodes and/or LED circuit(s) in keypad, or open circuits on the control that drive	See "Checking Keypad Operation."	
Washes for <45 Seconds Without Filling and then Shuts Off	Unit is in Sales Demo mode .	Press the following key sequence in less than 3 seconds to turn Demo mode off (or on): High Temp □ Heated Dry □ Heated Dry □ High Temp □ Heated Dry □ Heated Dry NOTE: Service Diagnostics will also clear Demo mode.	
Long Cycles and/or Stuck in Certain Part of Cycle	As part of normal operation, the dishwasher pauses 2 or 3 times during the cycle for thermal holds and advances once temperature is met.	Instruct customer. Explain thermal holds and how the cycle pauses when they occur.	
	OWI soil sensor picking high soil cycle too often.	1. Run Service Diagnostics cycle to check if OWI is showing high soil with no soil added. 2. Check lens surface. Clean if needed. 3. Replace OWI. NOTE: If OWI soil sensor is replaced, run Diagnostics after installing new OWI to force calibration on next regular wash cycle.	
	Heater takes a long time to heat water with low voltage.	Check for at least 100 VAC at power source.	
	A water heating problem could cause long cycles but will typically cause a "water heating fault".	Refer to "Service Error Codes" table.	7-1
	Diverter problem prevented water from heating.	Refer to "Service Error Codes" table.	4-1 4-4
	Incoming water too cold .	Refer to "Service Error Codes" table.	8-2 8-3
	Sensor problem.	Refer to "Service Error Codes" table.	3-1 3-3
Can Start a Cycle, but Cycle Does Not Complete (and Clean LED or Completed May Blink)	Control canceled cycle due to error detected with wash motor, low water, or suds.	Refer to "Service Error Codes" table.	6-1 6-2 8-1
Will Not Drain, or Excess Water Left in Unit	Drain loop check valve not sealing.	1. Disconnect drain hose at plumbing connection. 2. Elevate hose above dishwasher and fill with water. If water flows into dishwasher, replace entire drain loop (install as high as possible and attach to underside of countertop if possible).	
	Customer misunderstands water level after drain.	Instruct customer. Sump will normally have about 2.4 cm (1 inch) of water remaining after cycle.	
	Draining problem.	Refer to "Service Error Codes" table. NOTE: Refer to table even if error code not recorded by control.	9-1

CUSTOMER DESCRIPTION	POTENTIAL CAUSES	CHECK	RELATED ERROR CODE(S)
Detergent Not Dispensing or Detergent Left in Dispenser	Item in lower rack blocked lid or blocked spray of water to dispenser.	Instruct customer on proper dish loading.	
	Mechanical binding of dispenser lid.	1. Unplug dishwasher or disconnect power. 2. Check/replace dispenser.	
	Lid latch binding due to excess detergent in mechanism.	Instruct customer on proper dispenser filling.	
	Open coil on dispenser solenoid or loose/open connection in dispenser circuit.	1. Unplug dishwasher or disconnect power. 2. Check resistance of dispenser coil and all connections in dispenser circuit.	
	Open coil on dispenser solenoid or loose/open connection in dispenser circuit.	1. Unplug dishwasher or disconnect power. 2. Check resistance of dispenser coil and all connections in dispenser circuit.	
	Control cancelled cycle before dispensing due to error detected with wash motor, low water, or suds.	Refer to "Service Error Codes" table.	6-1 6-2 8-1
	Faulty dispenser drive circuit on control.	Check operation of dispenser during Diagnostics.	
Poor Wash	Cycle selection of customer not appropriate for dish load.	Instruct customer on cycle selection. Recommend "High Temp" option for wash performance boost.	
	Plugged or damaged screens.	Inspect following 3 screens. <ul style="list-style-type: none"> <li>■ Filter cup coarse screen</li> <li>■ Filter cup fine screen</li> <li>■ Sump fine screen</li> </ul>	
	Spray arms not rotating.	Check for free and proper arm rotation by operating dishwasher and opening door to see whether arms remain in the same position. If arms are blocked by dish item, instruct customer. May also have restricted movement due to misalignment of the upper spray arm water delivery system. Check nozzles. If plugged, clean nozzles and confirm filters installed properly.	
	Mechanical items covered previously.	See "Will Not Drain or Excess Water Left in Unit", or "Detergent Not Dispensing or Detergent Left in Dispenser," or details on temperature sensing in "Long Cycles and/or Stuck in Certain Part Of Cycle."	
	Soil sensor problem.	Refer to "Service Error Codes" table. NOTE: Refer to table even if error code not recorded by control.	3-2 3-3
	Diverter problem.	Refer to "Service Error Codes" table. NOTE: Refer to table even if error code not recorded by control.	4-1 4-4
	Control canceled cycle due to error detected with wash motor, low water, or suds.	Refer to "Service Error Codes" table.	6-1 6-2 8-1
Film on Glasses and/or Dishes	Hard water leaving film on dishes.	Check water hardness. If hard, instruct customer to use maximum detergent or try pouring ¼ cup of Glass Magic into bottom of dishwasher. Also recommend the High Temp option. To clean the dishwasher, recommend running with 1 cup of white vinegar sitting upright in upper rack.	

CUSTOMER DESCRIPTION	POTENTIAL CAUSES	CHECK	RELATED ERROR CODE(S)
Film on Glasses and/or Dishes (continued)	Detergent carryover.	Check water hardness. If below 10 grains, then instruct customer to use less detergent and recommend the High Temp option.	
	Drain loop check valve not sealing.	1. Disconnect drain hose at plumbing connection. 2. Elevate hose above dishwasher and fill with water. If water flows into dishwasher, replace entire drain loop (install as high as possible and attach to underside of countertop if possible).	
Poor Dry	Customer not using rinse aid and/or Heated Dry.	Recommend use of rinse aid and Heated Dry. Instruct customer how to fill and monitor rinse aid.	
	Line voltage too low to heat fast enough.	Check power source. Confirm at least 100 VAC.	
	Rinse Aid dispenser not dispensing.	See last three items under "Detergent Not Dispensing or Detergent Left in Dispenser."	
	A heating problem could cause poor drying but will typically cause a water heating fault.	Refer to "Service Error Codes" table.	7-1
	Diverter problem prevented water from heating.	Refer to "Service Error Codes" table. NOTE: Refer to table even if error code not recorded by control.	4-1 4-4
	Control canceled cycle due to error detected with wash motor, low water, or suds.	Refer to "Service Error Codes" table.	6-1 6-2 8-1
Sanitized LED Blinks at the End of a Cycle (Control Could Not Confirm Sanitization Achieved)	Door opened during final rinse or dry.	Instruct customer.	
	Incoming water too cold.	Refer to "Service Error Codes" table.	8-2 8-3
	Line voltage too low to heat fast enough.	Check power source. Confirm at least 100 VAC.	
	Diverter problem prevented water from heating in final rinse.	Refer to "Service Error Codes" table.	4-1 4-4
	A heating problem could cause the temperature not to reach but will typically cause a water heating fault.	Refer to "Service Error Codes" table.	7-1
	Thermistor/OWI problem.	Refer to "Service Error Codes" table.	3-1 3-2
Melted or Etched Dishware (Long and/or Hot Cycles)	Customer uses non-dishwasher safe dishes or loads directly over heater.	Instruct customer.	
	Temperature sensing problem.	Refer to "Service Error Codes" table.	3-1
	Water heating problem.	Refer to "Service Error Codes" table.	7-2
	Etching can be a result of using too much detergent.	Instruct customer.	
Noisy Operation	Spray arm stalled or blocked and spraying on the door.	<ul style="list-style-type: none"> <li>■ Instruct customer if blocked.</li> <li>■ Check spray arm rotation and inspect for plugged nozzles. If plugged, clean nozzles and confirm filters installed properly.</li> </ul>	
	Diverter problem.	Refer to "Service Error Codes" table.	4-1 4-4
	No or low water.	Refer to "Service Error Codes" table.	8-1
	Drains too long because of sensor problem.	Refer to "Service Error Codes" table.	3-1 3-3 9-1

## SERVICE ERROR CODES TABLE Example 1-8 means "Inlet Water" function, "Low Water / Air in Pump" problem.

FUNCTION CODE	PROBLEM CODE	CAUSES	WHAT TO CHECK
1- CONTROL	1 Pilot Stuck On	Control detected K2 relay stuck closed.	1. Unplug dishwasher or disconnect power. 2. Check all loads for shorts. 3. Replace control and all faulty components.
2- USER INTERFACE	1 Stuck Key	Control detected stuck key(s) in keypad or keypad connection.	See "Checking Keypad Operation."
	2 No Response	User Interface cannot communicate with main control.	1. Unplug dishwasher or disconnect power. 2. Check all wiring connections between display module and P16 on the main control.
3- THERMISTOR/ OWI	1 Open	<ul style="list-style-type: none"> <li>Open connector or component in Temperature Sensing Circuit.</li> <li>Open or faulty temperature sensor.</li> <li>Faulty temperature sensor input on control.</li> </ul>	1. Check operation of temperature sensor in Service Diagnostic Cycle. 2. Unplug dishwasher or disconnect power. 3. Check all components and connections in the Temperature Sensing Circuit.
	2 Shorted	<ul style="list-style-type: none"> <li>Incoming water temperature above 71°C (160°F).</li> <li>Shorted connection or component in Temperature Sensing Circuit.</li> <li>Shorted or faulty temperature sensor.</li> <li>Faulty temperature sensor input on control.</li> </ul>	1. Check Incoming water temperature. 2. Check operation of temperature sensor in Service Diagnostic cycle. 3. Unplug dishwasher or disconnect power. 4. Check all components and connections in the Temperature Sensing Circuit.
	3 Failed Calibration	OWI failure.	1. Check all connections in soil sensing circuit. 2. Check OWI lens surface. Clean if needed. 3. Run Service Diagnostics to check OWI operation. OWI should see low soil with just water. Replace OWI or control if needed. NOTE: Run Diagnostics after installing new OWI to force calibration on next regular wash cycle.
4- DIVERTER	1 Can't Find Position	Control cannot determine diverter position.	1. Check all connections in diverter motor and diverter sensor circuits. 2. Verify diverter is working during Service Diagnostic cycle. Replace diverter and/or control.
	2	Reserved for future use.	
	3	Reserved for future use.	
	4 Stuck On	Diverter motor is stuck ON.	1. Check all connections in diverter motor and diverter sensor circuits. 2. Verify diverter is working during Service Diagnostic cycle. Replace diverter, harness or control.
	5 Disk Missing	Control detected diverter disk in sump is missing.	1. Unplug dishwasher or disconnect power. 2. Remove lower spray arm, turbo zone assembly, rear feed tube and outlet cover; and verify the round diverter disk is installed.
5- DOOR SWITCH(ES)	1 Door Open	Door was not latched within 3 seconds of pressing the Start/Resume key.	Instruct customer. Refer to Use and Care Manual.
		Door switch not making contact: <ul style="list-style-type: none"> <li>Faulty or sloppy door latch assembly (which can be aggravated by high door closure force, keeping strike plate from fully seating).</li> <li>Faulty door switch (high resistance).</li> </ul>	1. Unplug dishwasher or disconnect power. 2. Measure resistance of door switch contacts while checking mechanical operation of latch assembly. Confirm switches not loose from assembly. Check strike plate and door closure force.

FUNCTION CODE	PROBLEM CODE	CAUSES	WHAT TO CHECK
5- DOOR SWITCH(ES) (continued)	2 Not Opening	Control programmed to not start if it suspects the door switch is stuck closed. Control looks for the door switch to open between cycles. <ul style="list-style-type: none"> <li>Customer didn't open the door between cycles.</li> <li>Door switch contacts stuck closed.</li> </ul>	<ol style="list-style-type: none"> <li>1. Open and close door and then press Start/Resume key. Instruct customer.</li> <li>2. Unplug dishwasher or disconnect power.</li> <li>3. Measure resistance of door switch contacts while checking mechanical operation of latch assembly.</li> </ol>
6- WASH MOTOR	1 No Commu- nication	Loose connections between control and motor.	<ol style="list-style-type: none"> <li>1. Unplug dishwasher or disconnect power.</li> <li>2. Check all connections in Wash/Rinse Circuit and Motor Communications Circuit.</li> </ol>
		Motor fuse open. Faulty wash motor or diverter motor.	<ol style="list-style-type: none"> <li>1. Unplug dishwasher or disconnect power.</li> <li>2. Use inspection mirror to inspect for water leakage and/or overheating on the diverter and wash motor.</li> <li>3. Measure resistance of diverter from load side of fuse (long wire side) to test pad at P12-6 on control (normal resistance 1300-1600 <math>\Omega</math>).</li> <li>4. Check error code history for both components.</li> <li>5. If resistance of diverter is normal and there is no history of diverter errors, then replace wash motor and fuse.</li> </ol>
		Neutral door switch not making contact consistently: <ul style="list-style-type: none"> <li>Faulty or sloppy door latch assembly (which can be aggravated by high door closure force, keeping strike plate from fully seating).</li> <li>Faulty door switch (high resistance).</li> </ul> NOTE: Neutral switch on plastic tub models is only in series with motor and heater. Other loads are not affected.	<ol style="list-style-type: none"> <li>1. Unplug dishwasher or disconnect power.</li> <li>2. Measure resistance of door switch contacts while checking mechanical operation of latch assembly. Confirm switches not loose from assembly. Check strike plate and door closure force.</li> </ol>
		Faulty control on wash motor or dishwasher.	<ol style="list-style-type: none"> <li>1. Run Service Diagnostics and confirm if other loads operate. If so go to step 2.</li> <li>2. Unplug dishwasher or disconnect power.</li> <li>3. Replace wash motor.</li> <li>4. Plug in dishwasher or reconnect power.</li> <li>5. If no other loads turn on go to step 6.</li> <li>6. Unplug dishwasher or disconnect power.</li> <li>7. Replace control.</li> </ol>
	2 Motor Error	Communication error between control and motor.	<ol style="list-style-type: none"> <li>1. Visually check all connections to motor and control.</li> <li>2. Check for proper operation during Service Diagnostics.</li> </ol>

Continued on the next page

FUNCTION CODE	PROBLEM CODE	CAUSES	WHAT TO CHECK
7- HEATING	1 No Heat	Control programmed to stop running and not allow further cycles if it detects a water heating problem (no temperature increase detected during heated wash on three consecutive cycles). Control disables the Start/Resume key until cleared.	Running Diagnostics clears the control and allows a cycle to run again. The water heating problem must be fixed or the control will stop running again. See potential causes below.
		Heater Circuit problem: <ul style="list-style-type: none"> <li>Open in heater.</li> <li>Open connection or component in Heater Circuit.</li> <li>Faulty Heater Drive Circuit on control.</li> </ul>	1. Check operation of heater in Service Diagnostics Cycle. 2. Unplug dishwasher or disconnect power. 3. Measure resistance of heater and all components and connections in Water Heating Circuit/Heat Dry Circuit.
		Neutral door switch not making contact consistently: <ul style="list-style-type: none"> <li>Faulty or sloppy door latch assembly (which can be aggravated by high door closure force, keeping strike plate from fully seating).</li> <li>Faulty door switch (high resistance).</li> </ul> NOTE: Neutral switch on plastic tub models is only in series with motor and heater. Other loads are not affected.	1. Unplug dishwasher or disconnect power. 2. Measure resistance of door switch contacts while checking mechanical operation of latch assembly. Confirm switches not loose from assembly. Check strike plate and door closure force.
	2 Stuck On	Heating element stuck ON.	1. Unplug dishwasher or disconnect power. 2. Check resistance of all components in Water Heating Circuit/Heat Dry Circuit. Replace faulty components. 3. Check for continuity between P8 and P9 on control. If shorted, replace control.
8- INLET WATER	1 Low Water/ Air in Pump	No water to dishwasher.	Verify water supply is turned on and supply line adequate. Correct installation if necessary.
		Bowls or pots loaded or flipped upside down and captured wash water.	Instruct customer on loading. Refer to Use and Care Manual.
		Loose connection to dishwasher fill valve, or in the valve circuit, or in fill valve solenoid.	1. Unplug dishwasher or disconnect power. 2. Check resistances of fill valve solenoid and all connections in the Fill Circuit.
		Overfill switch stuck in "Overfill" position and/or dishwasher not level.	Remove any items stuck under float. Verify that the float moves freely and you hear the "click" of the switch contacts. Check/adjust levelness of dishwasher.
		Drain loop detached from tub and/or improper drain connection.	Check for water siphoning out of unit: 1. Allow dishwasher to complete normal fill. 2. Drain for 5-10 seconds by pressing Cancel/Drain. 3. Open door and confirm water does not siphon out of unit. If it does, confirm drain loop is attached to side of dishwasher and drain hose is connected to a drain at least 50.8 cm (20 inches) off the floor.
		Inlet screen or fill valve plugged.	1. Turn off water supply to dishwasher 2. Disconnect water line to fill valve and inspect inlet for obstruction.
		Dishwasher creating too many suds during washing.	1. Allow unit to fill and wash for 1 minute. Open door and check for excessive sudsing. 2. Confirm using proper dishwasher detergent, not hand detergent. 3. Check for excessive rinse aid leakage.

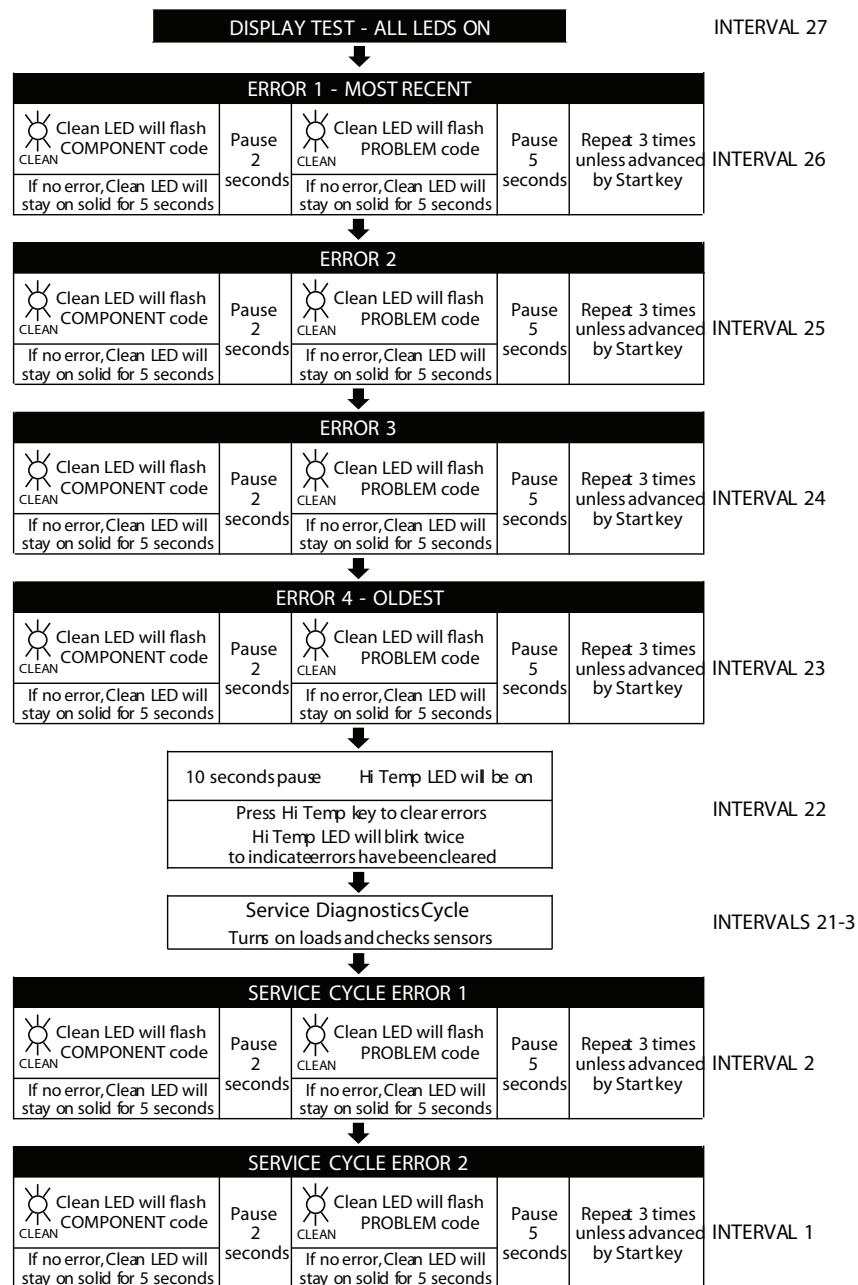
FUNCTION CODE	PROBLEM CODE	CAUSES	WHAT TO CHECK
8- INLET WATER (continued)		Inlet screen or fill valve plugged.	1. Turn off water supply to dishwasher 2. Disconnect water line to fill valve and inspect inlet for obstruction.
		Dishwasher creating too many suds during washing.	1. Allow unit to fill and wash for 1 minute. Open door and check for excessive sudsing. 2. Confirm using proper dishwasher detergent, not hand detergent. 3. Check for excessive rinse aid leakage.
		Faulty fill valve drive circuit on the control.	Check operation of fill valve during Diagnostics.
		Water leaking from dishwasher .	Check for leaks under dishwasher.
		Diverter disk in sump is missing .	1. Unplug dishwasher or disconnect power 2. Remove lower spray arm, turbo zone assembly, rear feedtube and outlet covert and verify whether the round diverter disk is installed.
	2 Cool Water	Incoming water under 32°C (90°F).	1. Be sure dishwasher is connected to the hot water supply. 2. Confirm temperature at sink (recommend 49°C/120°F). Instruct customer to run water at sink before running dishwasher.
	3 Cold Water	Incoming water under 18°C (65°F).	1. Be sure dishwasher is connected to the hot water supply. 2. Unplug dishwasher or disconnect power. 3. Check all connections and measure resistance in "Temperature Sensing Circuit." Replace OWI if needed. 4. Confirm temperature at sink (recommend 49°C/120°F). Instruct customer to run water at sink before running dishwasher.
9- DRAINING	1 Slow Drain	Obstructed drain hose or path .	1. Unplug dishwasher or disconnect power 2. Check for blockages from sump check valve to customer's plumbing. Potential items: <ul style="list-style-type: none"> <li>■ Plugged garbage disposal or plug not knocked out.</li> <li>■ Blocked/stuck sump or drain loop check valve.</li> <li>■ Plugged hoses.</li> </ul>
		Open winding on drain pump motor or loose/open connection in Drain Motor Circuit.	1. Unplug dishwasher or disconnect power. 2. Check resistances of drain motor windings and all connections in Drain Circuit.
		Drain pump impeller fractured.	1. Unplug dishwasher or disconnect power 2. Remove drain pump and check impeller by pulling and rotating. If the impeller pulls off easily or turns freely (normally there is some uneven resistance), it is stripped. Replace drain pump.
		Faulty drain motor drive circuit on control.	Check operation of drain motor during Diagnostics.



# SERVICE DIAGNOSTICS WITH ERROR CODES TABLE

## ENTRY SEQUENCE

HEATED DRY ⇒ NORMAL ⇒ HEATED DRY ⇒ NORMAL ⇒ HEATED DRY ⇒ NORMAL



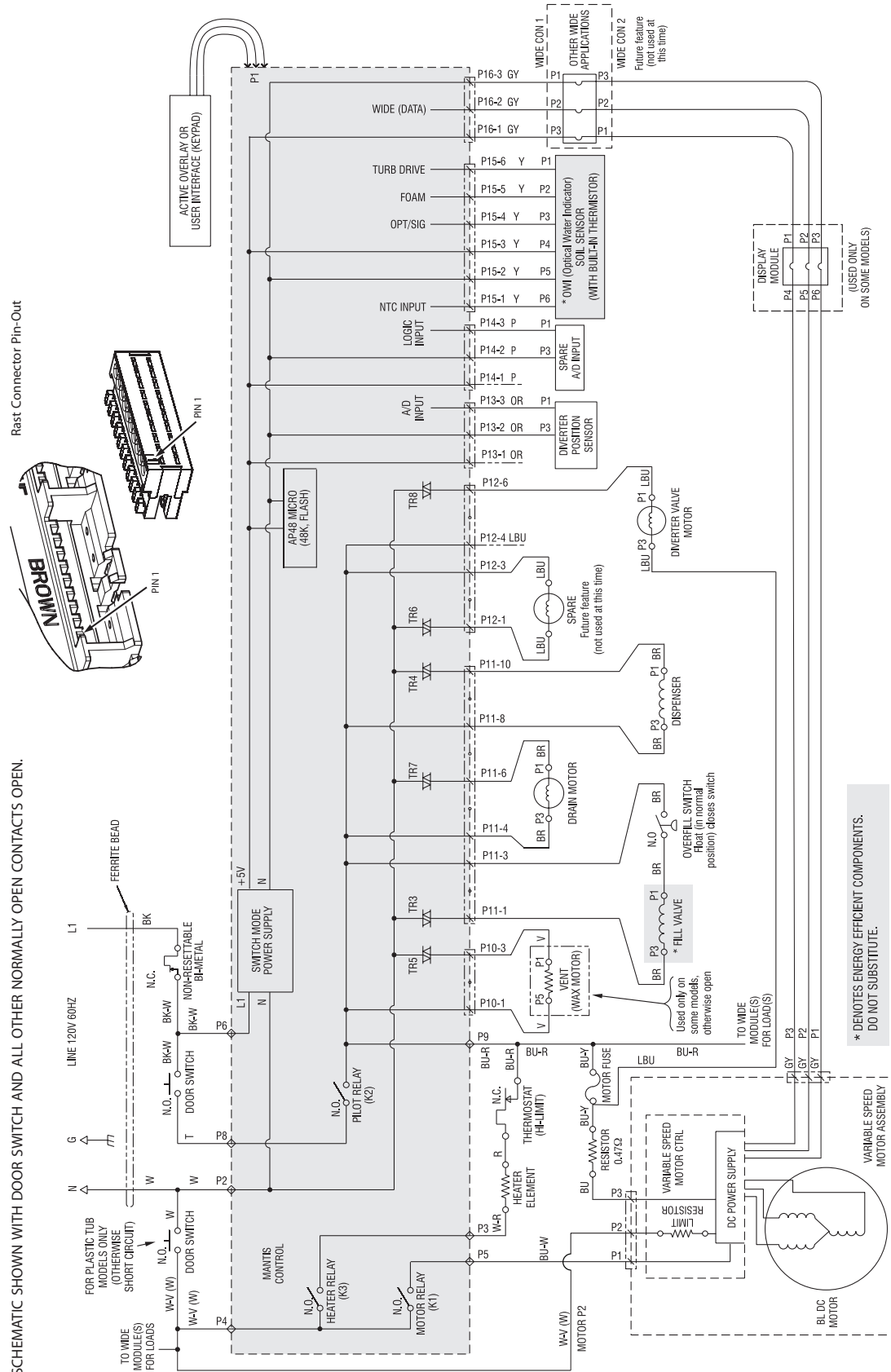
## SERVICE DIAGNOSTIC CYCLE CHART

INTERVAL	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CYCLE, OPTION & STATUS LEDS																											
NORMAL																											
1 HR WASH																											
HI TEMP																											
START/RESUME																											
CIRC																											
RUNNING																											
DRYING																											
SANITIZED																											
CLEAN																											
ALL OTHER CYCLE, OPTION, & STATUS LEDS																											
NOTE <input type="checkbox"/> 5																											
NOTES 4,5,6																											
TOTAL TIME (MAX): 24:11																											
INTERVAL TIME (min:sec)																											
0:06	1:21	1:21	1:21	1:21	1:21	1:21	0:10	0:45	0:05	0:42	0:05	0:45	0:05	0:05	1:30	0:26	0:05	1:00	0:30	4:00	0:01	0:01	0:01	0:01	0:01	0:01	1:21
SOIL SENSING INTERVALS & SENSOR CHECKS																											
0:06	1:21	1:21	1:21	1:21	1:21	1:21	0:10	0:45	0:05	0:42	0:05	0:45	0:05	0:05	1:30	0:26	0:05	1:00	0:30	4:00	0:01	0:01	0:01	0:01	0:01	0:01	1:21
THERMISTOR (temperature sensor) CHECK INTERVAL																											
0:06	1:21	1:21	1:21	1:21	1:21	1:21	0:10	0:45	0:05	0:42	0:05	0:45	0:05	0:05	1:30	0:26	0:05	1:00	0:30	4:00	0:01	0:01	0:01	0:01	0:01	0:01	1:21
OWI (soil sensor) CHECK INTERVALS																											
0:06	1:21	1:21	1:21	1:21	1:21	1:21	0:10	0:45	0:05	0:42	0:05	0:45	0:05	0:05	1:30	0:26	0:05	1:00	0:30	4:00	0:01	0:01	0:01	0:01	0:01	0:01	1:21
NOTE: OWI has thermistor built in; see check <i>book</i>																											
DIVERTER POSITION SENSOR CHECK																											
0:06	1:21	1:21	1:21	1:21	1:21	1:21	0:10	0:45	0:05	0:42	0:05	0:45	0:05	0:05	1:30	0:26	0:05	1:00	0:30	4:00	0:01	0:01	0:01	0:01	0:01	0:01	1:21
LOADS																											
0:06	1:21	1:21	1:21	1:21	1:21	1:21	0:10	0:45	0:05	0:42	0:05	0:45	0:05	0:05	1:30	0:26	0:05	1:00	0:30	4:00	0:01	0:01	0:01	0:01	0:01	0:01	1:21
PILOT RELAY																											
0:06	1:21	1:21	1:21	1:																							

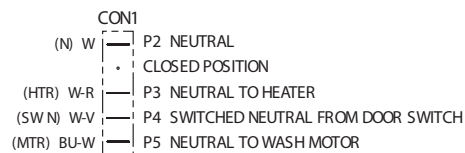
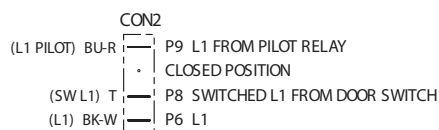
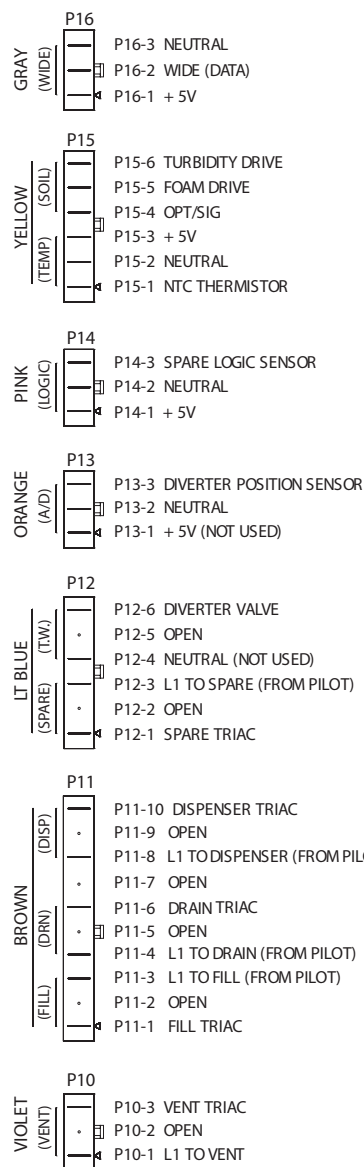
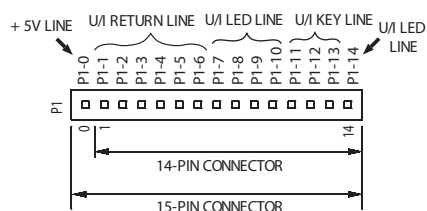
## **- NOTES -**

# WIRING DIAGRAMS

## DISHWASHER



# ELECTRONIC CONTROL PIN LOCATION



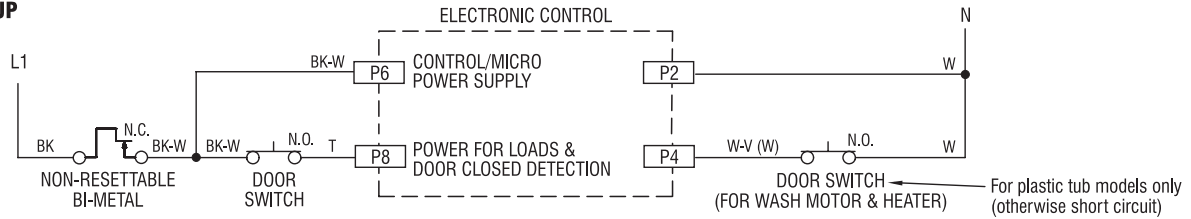
# STRIP CIRCUITS

The following individual circuits are for use in diagnoses. Do not continue with the diagnosis of the appliance if a fuse is blown, a circuit breaker is tripped, or if there is less than a 120 volt power supply at the wall outlet.

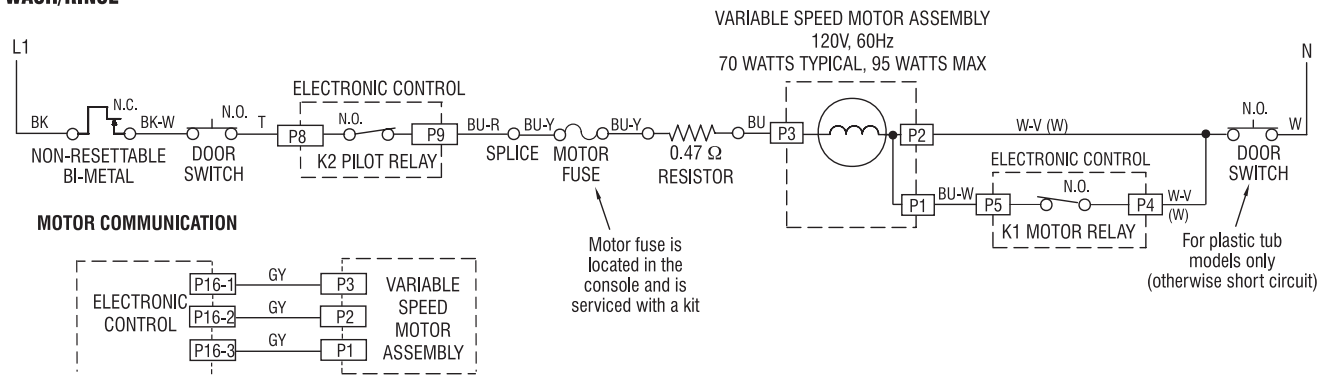
Unplug dishwasher or disconnect power.

Perform resistance checks. To check resistance of a component, disconnect harness leads first.

## POWER UP

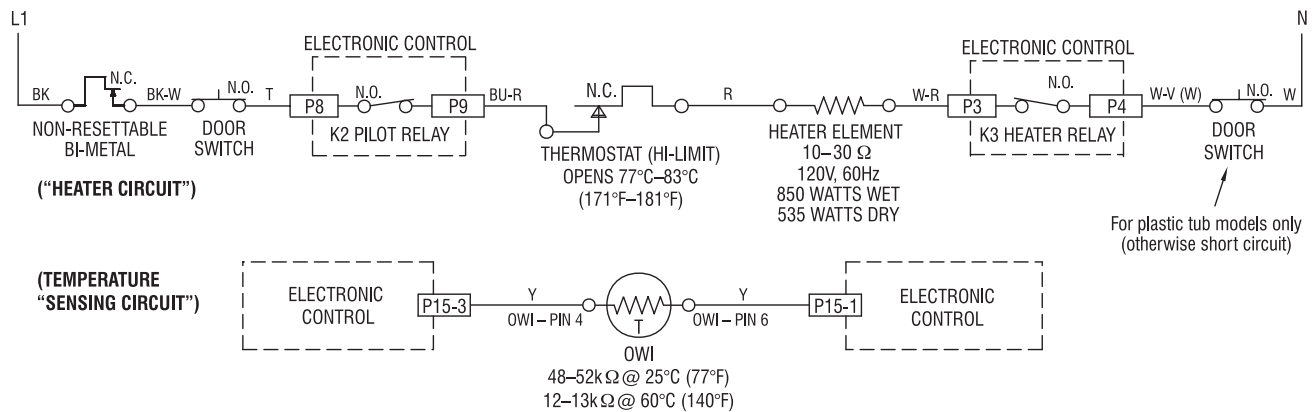


## WASH/RINSE



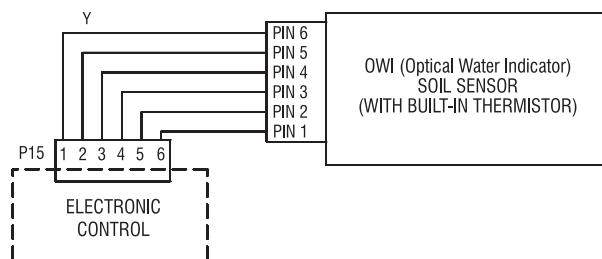
## WATER HEATING/HEAT DRY

Pump is washing and control monitors temperature during water heating periods. (See WASH/RINSE & TEMPERATURE "SENSING CIRCUIT".)



## SOIL SENSING

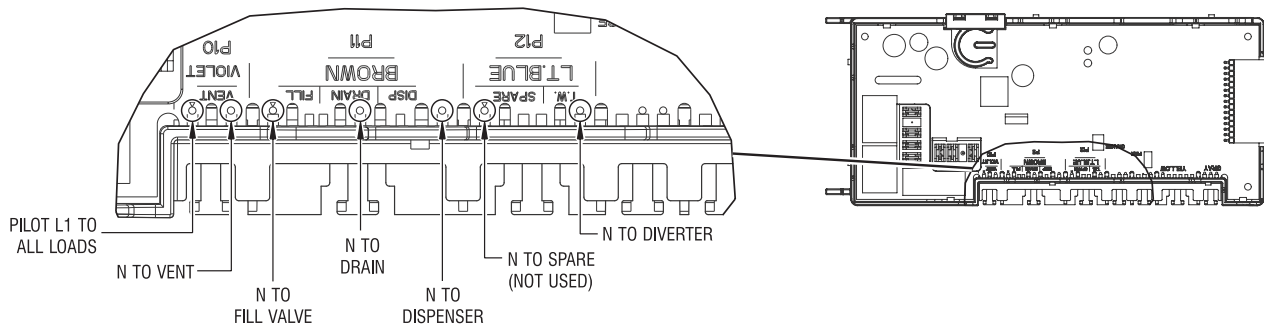
Use service diagnostics to test OWI.



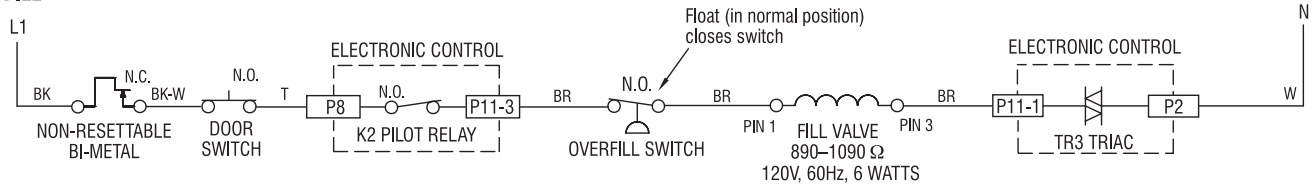


## METERING OF TRIAC LOADS

Load must be connected for triac to operate correctly. Meter checks best made at the control. (See illustration below.)

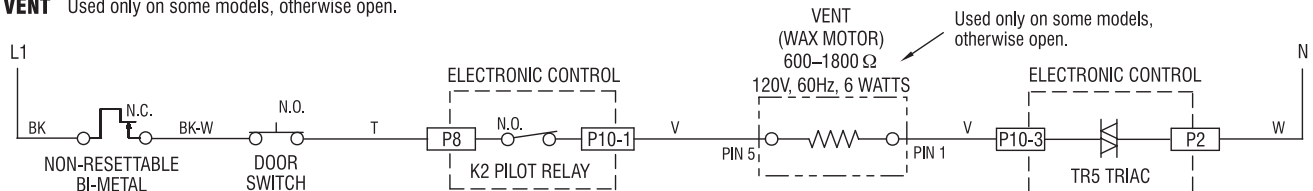


## FILL

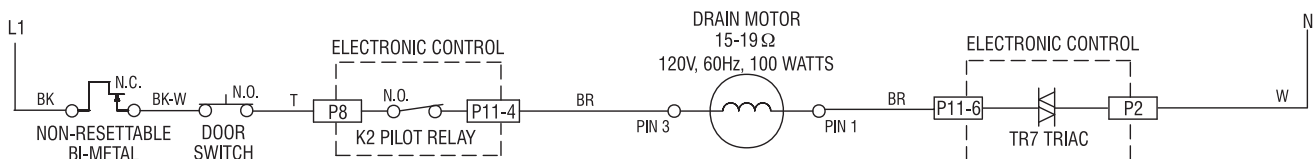


## VENT

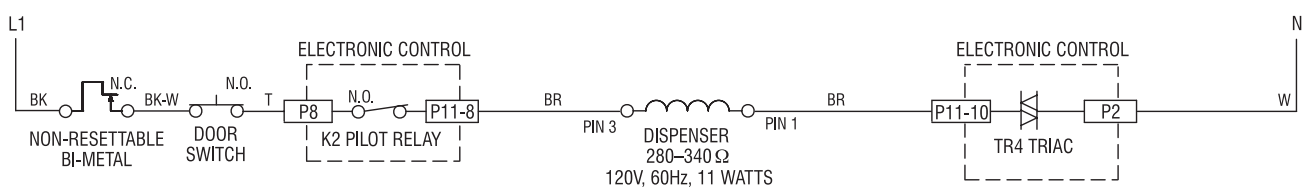
Used only on some models, otherwise open.



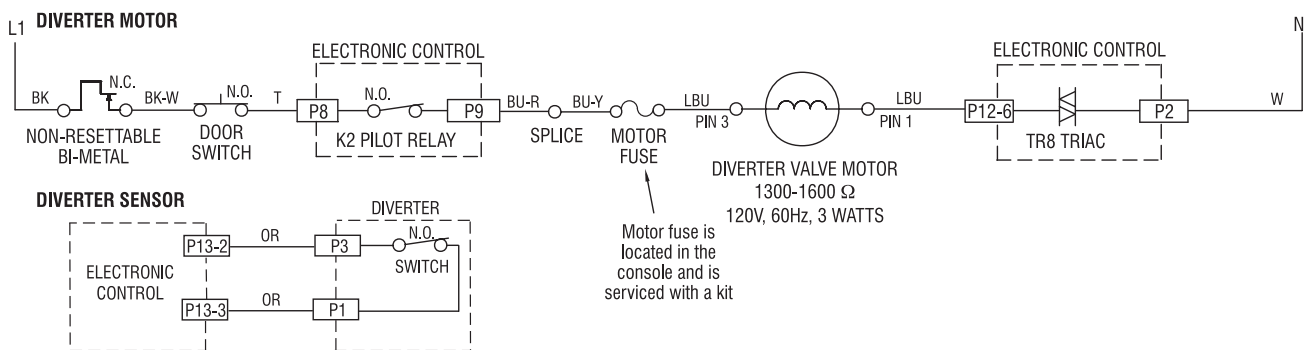
## DRAIN



## DISPENSER (DETERGENT & RINSE AID)



## DIVERTER VALVE



# **PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION SOURCES**

## ***IN THE UNITED STATES:***

### **FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:**

FOR WHIRLPOOL PRODUCTS: 1-800-253-1301

FOR KITCHENAID PRODUCTS: 1-800-422-1230

FOR ROPER PRODUCTS: 1-800-447-6737

### **FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:**

THE TECHNICAL ASSISTANCE LINE: 1-800-832-7174

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN  
AUTHORIZED IN-HOME SERVICE PROFESSIONAL**

### **FOR LITERATURE ORDERS:**

PHONE: 1-800-851-4605

### **FOR TECHNICAL INFORMATION AND SERVICE POINTERS:**

[www.servicematters.com](http://www.servicematters.com)

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## ***IN CANADA:***

### **FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:**

1-800-461-5681

### **FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:**

THE TECHNICAL ASSISTANCE LINE: 1-800-488-4791

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN  
AUTHORIZED IN-HOME SERVICE PROFESSIONAL**

