Whirlpool CORPORATION

# TECHNICAL EDUCATION

## Global Wash System

2011 Undercounter Dishwashers

2 ½" Console Models:

WDF530PAY*
WDF530PLY*
WDF730PAY*
WDF750SAY*

Fully Integrated Door Models:

WDT710PAY*
WDT770PAY*
WDT790SAY*
WDT790SLY*
WDT910SAY*

*All Colors

JOB AID W10450109

# FORWARD

This Whirlpool Job Aid, "Global Wash System (GWS), 2011 Undercounter Dishwasher" (Part No. WXXXXXXXX), provides the In-Home Service Professional with information on the installation, operation, and service of the "Global Wash System". For specific information on the model being serviced, refer to the “Use and Care Guide,” or “Tech Sheet” provided with the dishwasher.

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

# 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 "Global Wash System" 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 washer to its proper operational status.

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

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# 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 your 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.

## 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.

## SAVE THESE INSTRUCTIONS

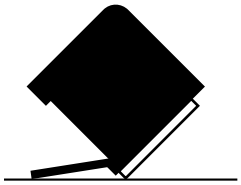
State of California Proposition 65 Warnings:

WARNING: This product contains one or more chemicals known to the State of California to cause cancer.

WARNING: This product contains one or more chemicals known to the State of California to cause birth defects or other reproductive harm.

# GENERAL
## Before Using Your 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**

**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.**

- Install where dishwasher is sheltered from the elements. Avoid possible rupture of fill valve from freezing. Such ruptures are not covered by the warranty. See "Storing" section for winter storage information.
- Install and level dishwasher on a floor that will hold the weight, and in an area suitable for its size and use.
- Remove all shipping plugs from hoses and connectors (such as the cap on the drain outlet) before installing. See Installation Instructions or complete information.

### GROUNDING INSTRUCTIONS

- **For a grounded, cord-connected dishwasher:** The dishwasher must be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for electric current. The dishwasher is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is installed and grounded in accordance with all local codes and ordinances.

  **WARNING:** Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service representative if you are in doubt whether the dishwasher is properly grounded. Do not modify the plug provided with the dishwasher; if it will not fit the outlet, have a proper outlet installed by a qualified electrician.
- **For a permanently connected dishwasher:** The dishwasher must be connected to a grounded metal, permanent wiring system, or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the dishwasher.

### SAVE THESE INSTRUCTIONS

# 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**

# GENERAL

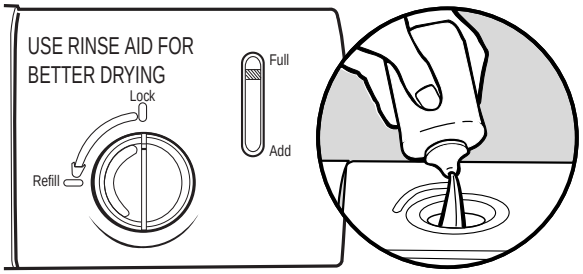
## Energy

Congratulations on purchasing your water and energy efficient dishwasher! This dishwasher cleans by spraying the dishes with water and pauses to allow the detergent to soak into and release the soils on the dishes. The cycles are longer due to the soak and pauses for exceptional cleaning. Several models contain an optical water sensor. The optical water sensor is used to determine the optimum water and energy consumption for great cleaning performance. The first cycle using the sensor will run longer to calibrate the optical sensor.

## Performance

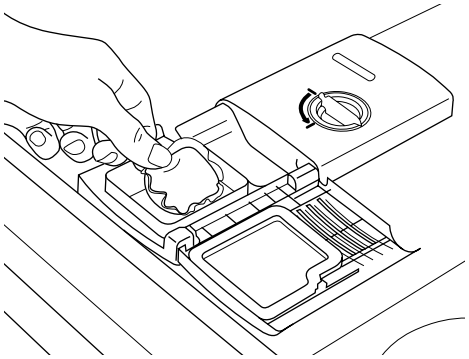
### Rinse Aid

Using rinse aid will optimize your drying and wash performance. This dishwasher is specifically designed to be used with rinse aid for improved drying performance and controlling buildup of hard water deposits. Energy efficient dishwashers use less water and energy, so they depend on the water "sheeting" action of rinse aid for total optimal performance.



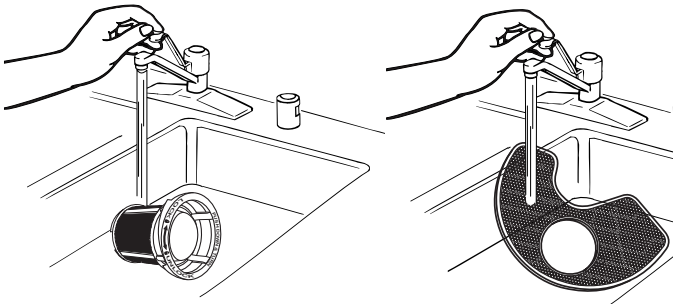

### Detergent

The United States has passed a restriction limiting the amount of phosphorus (phosphates) in the household dishwasher detergents to no more than 0.5%, where previous detergents contained 8.7%. Major manufacturers have reformulated their dishwasher detergent for this change in detergents as another step in eco-conscious awareness. With these recent changes it is recommended to use tablets and packs for convenience and improved performance.

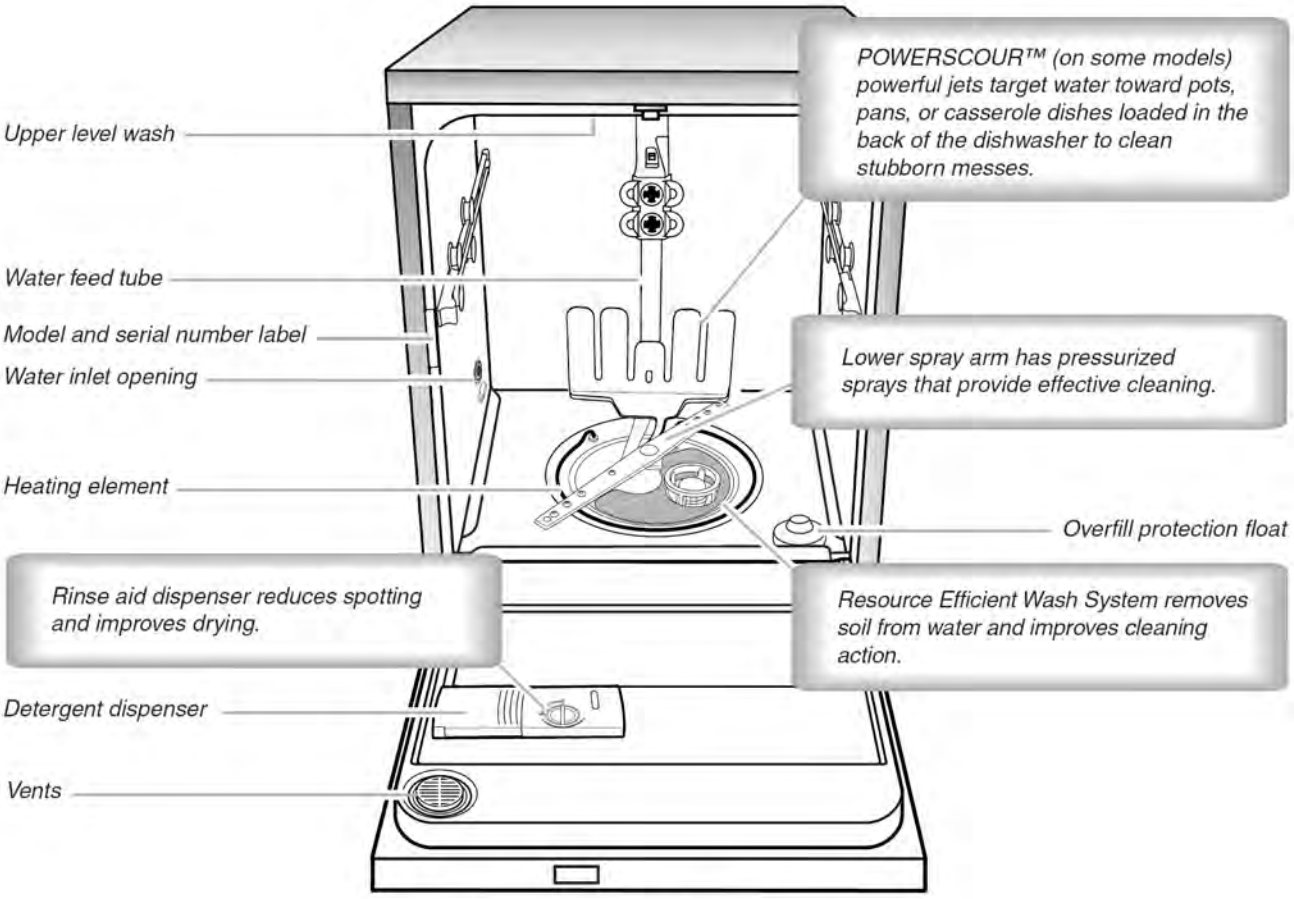


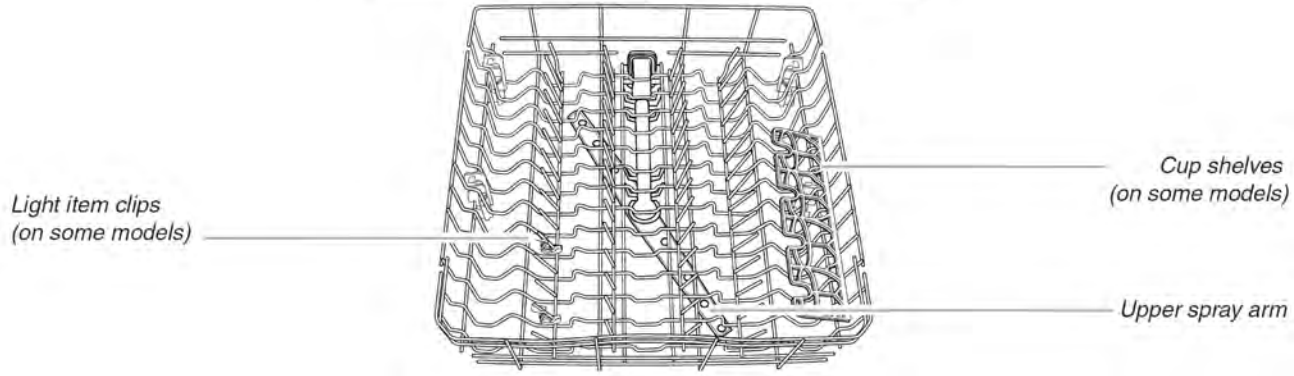
### Filtration System

Your dishwasher has the latest technology in dishwasher filtration. This triple filtration system minimizes sound and optimizes water and energy conservation while providing optimal cleaning performance. Maintenance of your filters regularly will sustain peak cleaning performance. We suggest you clean both your upper and lower filter and rinse under running water at least once a month.

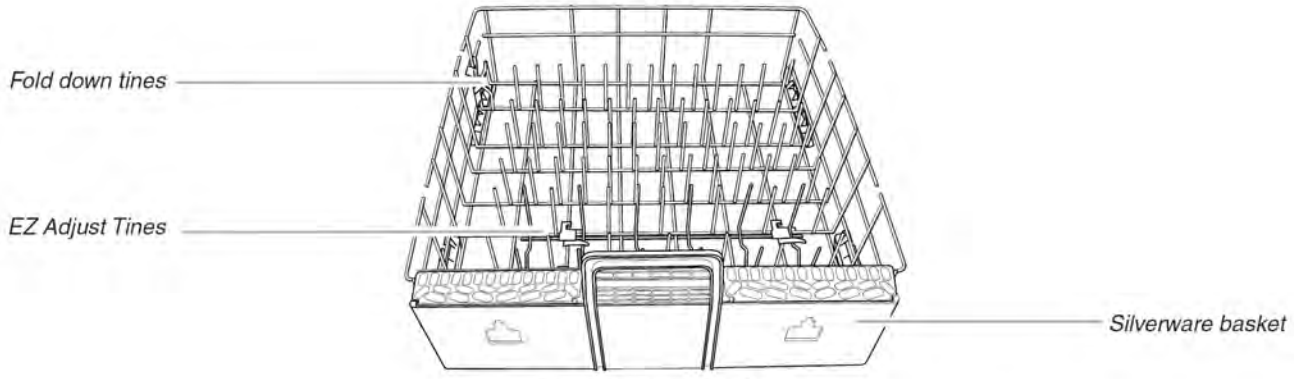


# PARTS AND FEATURES




**TOP RACK**



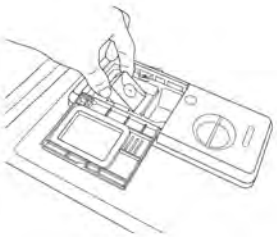

**BOTTOM RACK**

# QUICK STEPS

**1** **Prepare and load dishwasher.**

**Spin the spray arms. They should turn freely.**

**2** **Add detergent and rinse aid.**



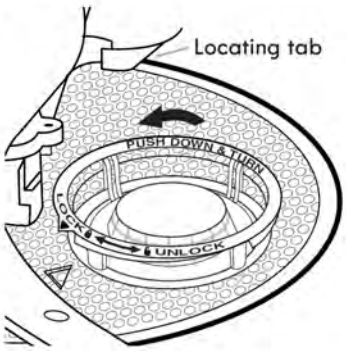
**3** **Select a cycle and option (cycles and options vary by model).**

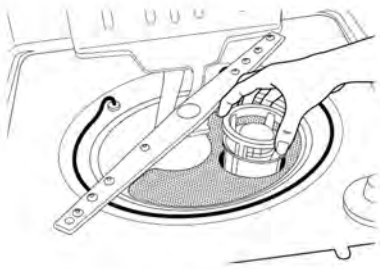


**4** **Start dishwasher.**

**For models with controls on top of the door, select wash cycle, option and press START/RESUME before closing the door. Push door firmly closed. The door latches automatically. Select the wash cycle, options and press START/RESUME or press START/RESUME twice to repeat the same cycle and options as in the previous wash cycle.**


**5** **Unload and clean the filter. See "Recommended Time Interval to Clean Your Filter," in the "Filtration System" section for the recommended cleaning schedule.**



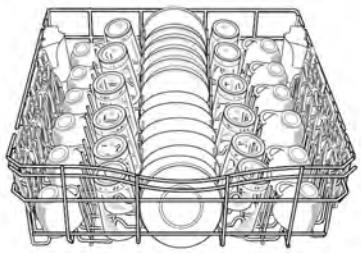



# DISHWASHER USE

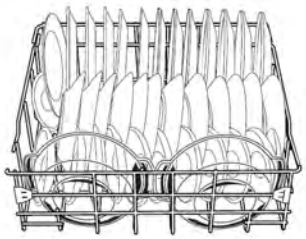
## STEP 1

### Prepare and Load the Dishwasher

**IMPORTANT:** Remove leftover food, bones, toothpicks and other hard items from the dishes. Remove labels from containers before washing.



*Upper rack*



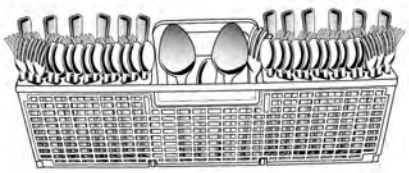
*Lower rack*

- Make sure nothing keeps spray arm(s) from spinning freely. It is important for the water spray to reach all soiled surfaces.

- Make sure that when the dishwasher door is closed no items are blocking the detergent dispenser.
- Items should be loaded with soiled surfaces facing down and inward to the spray as shown in the graphics above. This will improve cleaning and drying results.
- Avoid overlapping items like bowls or plates that may trap food.
- Place plastics, small plates and glasses in the upper rack.
- Wash only items marked “dishwasher safe.”
- To avoid thumping/clattering noises during operation: Load dishes so they do not touch one another. Make sure lightweight load items are secured in the racks.

- When loading silverware, always place sharp items pointing down and avoid “nesting” as shown. If your silverware does not fit into the designated slots, flip the covers up and mix silverware types to keep them separated.

- Use suggested loading patterns, as shown, to better clean your silverware.



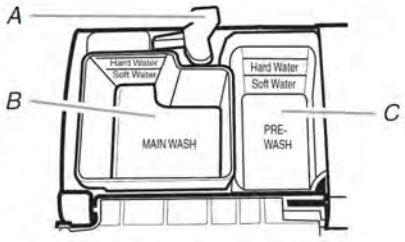
- Use the slots in the covers to keep your silverware separated for optimum wash. (See illustration, right.)

## STEP 2

### Add Detergent

**NOTE:** If you do not plan to run a wash cycle soon, run a rinse cycle. Do not use detergent.

- Use automatic dishwasher detergent only. Add powder, liquid or tablet detergent just before starting a cycle.
- Fresh automatic dishwasher detergent results in better cleaning. Store tightly closed detergent container in a cool, dry place.
- For optimum performance, tablet detergent is recommended.




*A. Cover latch*
*B. Main wash section*
*C. Pre-wash section*

- The amount of detergent to use depends on:

  How much soil remains on the items - Heavily soiled loads require more detergent.

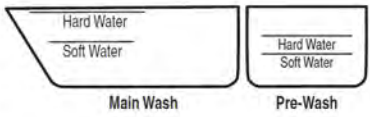
  The hardness of the water - If you use too little detergent in hard water, dishes won't be clean. If you use too much in soft water, glassware will etch.

  Soft to Medium Water (0-6 grains per U.S. gallon) [typical water softener water and some city water]

  Medium to Hard Water (7-12 grains per U.S. gallon) [well water and some city water]

- Depending on your water hardness, fill the Main Wash section of the dispenser as shown. Fill the Pre-Wash section to the level shown, for heavily soiled items.

**NOTE:** Fill amounts shown are for standard powdered detergent. Follow instructions on the package when using other dishwasher detergent.

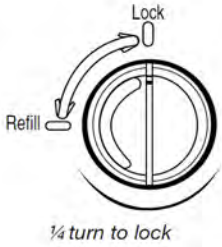



### Add Rinse Aid

- Your dishwasher is designed to use rinse aid for good drying performance. Without rinse aid your dishes and dishwasher interior will have excessive moisture. The heat dry option will not perform as well without rinse aid.
- Rinse aid keeps water from forming droplets that can dry as spots or streaks. They also improve drying by allowing water to drain off of the dishes after the final rinse.
- Check the rinse aid indicator. Add rinse aid when indicator drops to “Add” level.

# DISHWASHER USE

- To add rinse aid, turn the dispenser cap to "Refill" and lift off. Pour rinse aid into the opening until the indicator level is at "Full." Replace the dispenser cap and turn to "Lock." Make sure cap is fully locked.



*¼ turn to lock*

**NOTE:** For most water conditions, the factory setting will give good results.

- Check the water hardness level to ensure no rings or spots on your dishware before adding rinse aid or adjusting the factory setting.
- If you have hard water or notice rings or spots, try a higher setting.

Turn the arrow adjuster inside the dispenser by either using your fingers or inserting a flat-blade screwdriver into the center of the arrow and turning.

## STEP 3

### Select a Cycle (cycles vary by model)

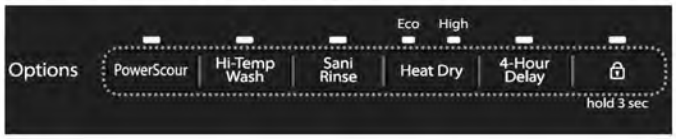
See "Cycle and Option Descriptions" charts in the following section.

Heavier cycles and options affect cycle length.


### Select Options (options vary by model)

See "Cycle and Option Descriptions" charts in the following section.

You can customize your cycles by pressing the options desired.




## STEP 4

### Start or Resume a Cycle

- Run hot water at the sink nearest your dishwasher until the water is hot. Turn off water. For best dishwashing results, water should be 120°F (49°C) as it enters the dishwasher.
- For models with controls on top of the door, select wash cycle, option and press START/RESUME before closing the door. Push door firmly closed. The door latches automatically. Select the wash cycle, options and press STAR/RESUME or press START/RESUME to repeat the same cycle and options as in the previous wash cycle.


- You can add an item anytime at the beginning of the cycle. Open the door slowly and add the item. Close the door firmly. Press START/RESUME.

# CYCLE AND OPTION DESCRIPTIONS


This information covers several different models. Your dishwasher may not have all the cycles and options described.

You can customize your cycle by selecting an option.
See option selections. If you change your mind, press the option again to turn off the option, or select a different option. You can change an option anytime before the selected option begins. At each stage of the wash cycle, you may hear noises that you are not used to hearing in your previous dishwasher. Each cycle will provide a series of pauses and water sprays throughout the wash cycle. This is normal and will provide optimal cleaning performance.

*Maximum wash times depend on water temperature, heavy soil condition, dish load size and options selected.

**CYCLE SELECTIONS**

| CYCLES | DISH LOAD TYPES | DESCRIPTIONS | ESTIMATED WASH TIME (HH:MM) | |
|---|---|---|---|---|
| | | | Cycle Minimum | *Maximum (with options selected) |
| Sensor | This is the most recommended cycle for all loads. Use for all day-to-day soil types when washing full to partial dish loads. | This cycle will sense the correct wash time and temperature for the soil levels and size, while sensing the right level for drying. Throughout the cycle, the wash will repeatedly pause adjusting for optimal wash action and sensing. | 1:45 | 4:40 |
| Heavy | Use for hard-to-clean, heavily soiled pots, pans, casseroles, and regular tableware. | This cycle combines tough wash action, longer wash time and higher wash temperatures to remove the tough soils. | 2:05 | 4:40 |
| Normal | Use for loads with normal amounts of food soil. | The energy-usage label is based on this cycle. During the wash, the wash action will repeatedly pause for several seconds. | 1:45 | 4:40 |
| Eco | Use for lightly soiled items, china and crystal. | The most water and energy efficient cycle, using less water and energy, while maintaining good wash performance. | 1:45 | 2:13 |
| 1-Hour Wash | Use for fast results. The 1 Hour Wash cycle will clean normal soils using slightly more water and energy. | For improved drying, select the Heated Dry option which adds ½ hour. | 0:58 | 1:21 |
| Over Night | Use for loads with normal amounts of food soil. It is a longer cycle and therefore is ideal to run overnight. | Longer cycle developed to run overnight to save energy. This cycle has a longer soak time before the main wash begins. | 6:20 | 7:00 |

**IMPORTANT:** The sensor in your dishwasher monitors the soil level. Cycle time and/or water usage can vary as the sensor adjusts the cycle for the best wash performance. If the incoming water is less than the recommended temperature or food soils are heavy, the cycle will automatically compensate by adding time, heat and water as needed.

# CYCLE AND OPTION DESCRIPTIONS (continued)


**OPTION SELECTIONS**

| OPTIONS | DISH LOAD TYPES | DESCRIPTIONS | USE WITH: |
|---|---|---|---|
| PowerScour | Pans, casseroles, etc., with tough food soil. | Activates the POWERSCOUR™ spray jets and provides intensified water spray to the back of the lower level rack. May add heat and time to the cycle. | Sensor, Heavy or Normal cycle |
| Hi-Temp Wash | Loads containing tough, baked-on food. | Increases the target water temperature during the wash portions of the cycle.<br>Adds heat, wash time and water to the cycle. | Sensor, Heavy or Normal cycle |
| Sani Rinse | To sanitize your dishes and glassware in accordance with NSF/ANSI Standard 184 for Residential Dishwashers. | Raises the water temperature in the final rinse to approximately 155°F (68°C). This high temperature rinse sanitizes your dishes and glassware in accordance with NSF/ANSI Standard 184 for Residential Dishwashers. Certified residential dishwashers are not intended for licensed food establishments.<br>The Sanitize or Sani Rinse option adds heat and time to the cycle. | Sensor, Heavy or Normal cycle. Only these sanitization cycles have been designed to meet the NSF/ANSI requirements. |
| Eco High Heat Dry | For best drying results, dry dishes with heat.<br>High Dry provides the optimum dry performance. Eco Dry provides energy savings and good dry performance. | Turn OFF (air dry) when loads contain plastic dinnerware that may be sensitive to high temperatures.<br>High Dry with the use of rinse aid will provide the best drying performance. | All cycles |
| 4-Hour Delay | To run your dish washer at a later time or during off-peak hours. | Delays the start of a cycle up to 8 hours (on models with 2-4-8 Hour Delay).<br>Select a wash cycle and options. Press Delay until reaching the desired hours for the delay to start. Press START/RESUME. Close the door firmly. | All cycles |
| Top Rack Wash | Smaller loads slightly soiled. | Uses less energy and time to clean small loads. | Sensor, Heavy or Normal cycle |

# CYCLE AND OPTION DESCRIPTIONS (continued)

## OPTION SELECTIONS

| OPTIONS | PURPOSE | DESCRIPTIONS | USE WITH: |
|---|---|---|---|
| **Control Lock**   | To avoid unintended use of your dishwasher, or cycle and option changes during a cycle. | To turn on Lock, press and hold Control Lock for at least 3 seconds.<br>To turn off Lock, press and hold Control Lock for at least 3 seconds.<br>When Control Lock is lit, all buttons are disabled. If you press any pad while your dishwasher is locked, the light flashes 3 times. The dishwasher door can be opened while the controls are locked. | Anytime |

## CONTROLS AND CYCLE STATUS

| CONTROL | PURPOSE | COMMENTS |
|---|---|---|
|   | Press to start or resume a wash cycle | If the door is opened during a cycle or the power is interrupted, the Start/Resume indicator flashes. The cycle will not resume until the door is closed and Start/Resume is pressed. |
|   | Press to cancel wash cycle | Close the door firmly. The dishwasher starts a 2-minute drain (if needed). Let the dishwasher drain completely. |
|   | To follow the progress of your dishwasher cycle | Clean indicator glows when a cycle is finished.<br>If you select the Sani Rinse option, when the Sani Rinse cycle is finished, the "Sanitized" indicator glows. If your dishwasher did not properly sanitize your dishes, the light flashes at the end of the cycle. This can happen if the cycle is interrupted, or the water could not be heated to the required temperature. The light goes off when you open or close the door or press CANCEL. |

# DISHWASHER FEATURES

**Your Whirlpool dishwasher may have some or all of these features.**

## POWERSCOUR™ Wash Area

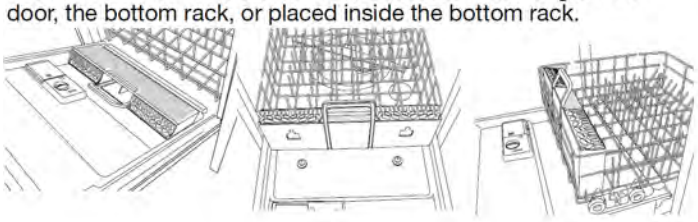
The POWERSCOUR™ wash area is located at the back of the lower level rack.

**NOTE:** You must select the POWERSCOUR™ wash option to use this feature. Make sure items do not interfere with the water feed tube, spray arms, or POWERSCOUR™ spray jets.

- Load pans, casserole dishes, etc. in the back of the lower dish rack with the soiled surfaces facing the POWERSCOUR™ spray jets.
- Only one row of items may face the POWERSCOUR™ spray jets. Stacking, overlapping or nesting items will keep the POWERSCOUR™ spray jets from contacting all of the surfaces.

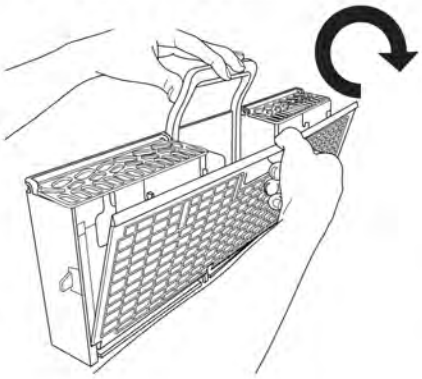
## ANYWARE™ PLUS silverware basket

The ANYWARE™ PLUS silverware basket can be hung on the door, the bottom rack, or placed inside the bottom rack.



**To open the ANYWARE™ PLUS silverware basket:**

To unlock, grasp the front panel, pull up and rotate 90° as shown. Make sure the front panel is up all the way before rotating.



**NOTE:** Be sure the front panel of the silverware basket is completely locked into place before pulling out the bottom rack and before closing the dishwasher door.

**To remove the basket from the door:**

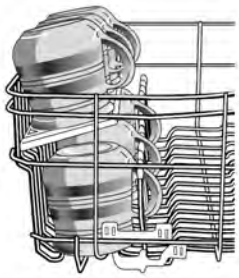
1. Grasp the silverware basket by the handle. Slide it toward the top of the door.
2. Lift the basket off the holding buttons.

**To replace the basket in the door:**

1. Set the silverware basket on the holding buttons.
2. Slide the basket toward the bottom of the door until itlocks into place.

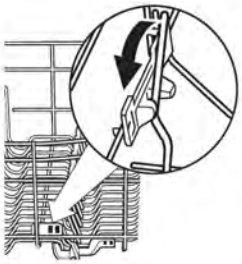
## Cup shelves

Fold down the extra shelf on the left-hand or right-hand side of the top rack to hold additional cups, stemware or long items such as utensils and spatulas.



## Fold-down Tines

The row of tines on the left-hand and right-hand sides of the upper or in the back of lower rack can be adjusted to make room for a variety of dishes.

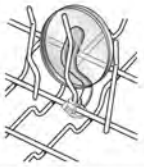


**To adjust the fold-down tines:**

1. Grasp the tip of the tine that is in the tine holder.
2. Gently push the tine out of the holder.
3. Lay the tines down, toward the center of the rack.

## Light Item Clips

The light item clips hold lightweight plastic items such as cups, lids, or bowls in place during washing.

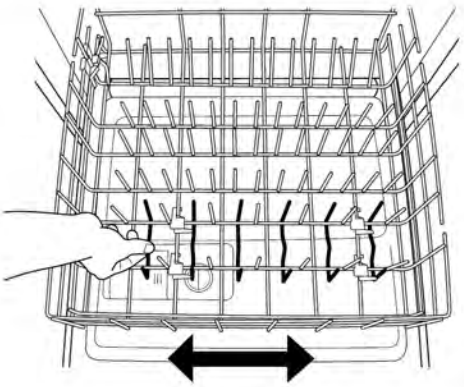


**To move a clip:**

1. Pull the clip up and off the tine.
2. Reposition the clip on another tine.

## EZ Adjust Tines

Sliding lower-rack tines that move left or right to fit your dishes. You can use this feature to fit larger items such as cereal bowls.



# DISHWASHER FEATURES (continued)

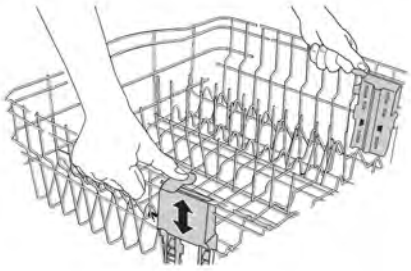
## EZ-2-Lift™ Top Rack

You can raise or lower the top rack to fit tall items in either the top or bottom rack. Adjusters are located on each side of the top rack. Raise the top rack to accommodate items up to 9" (22 cm) in the top rack and 13" (33 cm) in the bottom rack, or lower the top rack to accommodate items up to 11" (28 cm) in both the top and bottom racks.

To raise the rack, press both rack adjusters and lift the rack until it is in the Up position and level.

To lower the rack, press both rack adjusters and slide the rack back to its lower position.

**NOTE:** The top rack must be level.



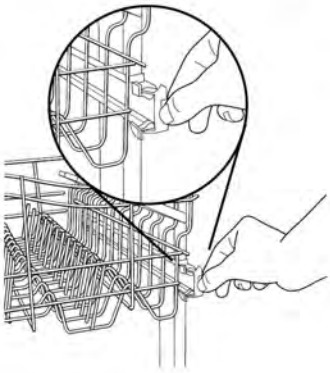
## Removable Top Rack

The removable top rack allows you to wash larger items such as pots, roasters, and cookie sheets in the bottom rack.

**IMPORTANT:** Remove dishes prior to removing the top rack from dishwasher.

To remove the rack

1. To gain access to the track stops, pull the upper rack forward about halfway out of the tub.
2. To open, flip the track stop toward the outside of the tub.
3. After opening both track stops, pull top rack out of the rails.
4. Close track stops and slide the tracks back into the dishwasher.

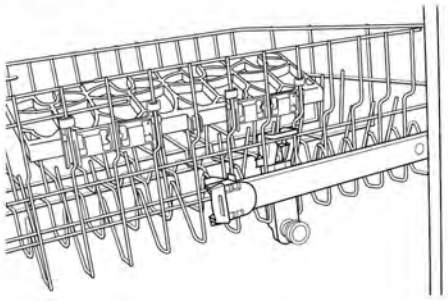


### To replace the rack

1. Gently pull tracks forward in dishwasher until they stop. Open track stops.
2. Place the back wheels on each side of the rack into the track slot and roll them back into the tracks, but do not push the rack all the way into the tub.
3. Insert front rack wheels on each side of the rack into the track slots.
4. Slide rack into the dishwasher. The stops will automatically close when rack enters dishwasher.

## Standard Rack Adjuster

You can raise or lower the top rack to fit tall items in either the top or bottom rack. Adjusters are located on each side of the top rack. Raise the top rack to accommodate items up to 9" (22 cm) in the top rack and 13" (33 cm) in the bottom rack, or lower the top rack to accommodate items up to 11" (28 cm) in both the top and bottom racks.



1. To raise, remove rack and slide lower wheels into the rails as directed in “Removable Top Rack” section.
2. To lower, remove rack and slide upper wheels into the rails as directed in “Removable Top Rack” section.

# FILTRATION SYSTEM

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

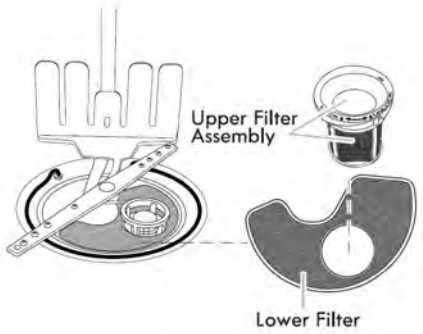
The triple filter system consists of 2 parts, an upper filter assembly and a lower filter.

- 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.

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.

It is very easy to remove and maintain the filters. The chart below shows the recommended cleaning frequency.




**RECOMMENDED TIME INTERVAL TO CLEAN YOUR FILTER**

| Number of Loads Per Week | If you only scrape before loading* | If you scrape and rinse before loading | If you wash before loading |
|---|---|---|---|
| 8-12 | Every two months | Every four months | Once per year |
| 4-7 | Every four months | Once per year | Once per year |
| 1-3 | Twice per year | Once per year | Once per year |

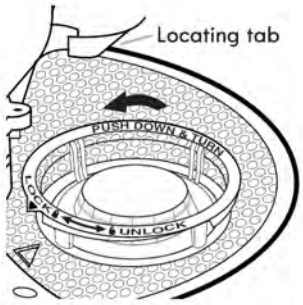
*Manufacturer's recommendation: This practice will conserve the water and energy that you would have used to prepare your dishes. This will also save you time and effort.

### Very Hard Water

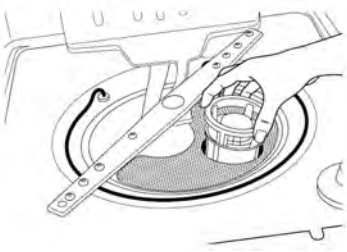
If you have hard water (above 15 grains), clean your filter at least once per month. Building up of white residue on your dishwasher indicates hard water. For tips on removing spots and stains, see "Troubleshooting" section.

### Filter Removal Instructions

1. Turn the Upper Filter Assembly ¼ turn counterclockwise and lift out.
2. Separate the upper filter assembly by gently pulling apart.
3. Clean the filters as shown.



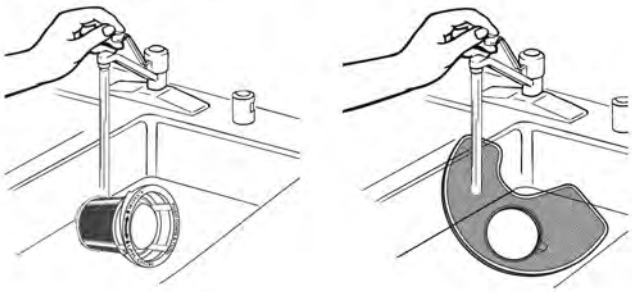

*To remove Upper Filter Assembly*



### Cleaning Instructions

**IMPORTANT:** Do not use wire brush, scouring pad, etc., as they may damage the filters.

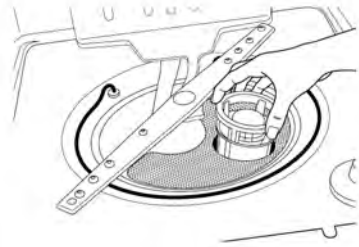
Rinse filter under running water until most soils are removed. If you have hard-to-remove soils or calcium deposits from hard water, a soft brush may be required.

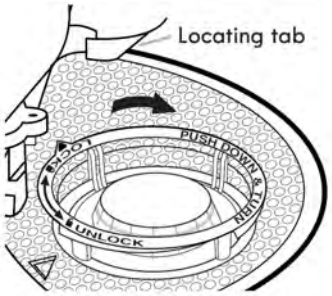


# FILTRATION SYSTEM (continued)

### Filter Reinstallation Instructions

1. Noting the previous illustrations, place the Lower Filter under the Locating Tabs in the bottom of the dishwasher so the round opening for the Upper Filter Assembly lines up with the round opening in the bottom of the tub.
2. Insert the Upper Filter Assembly into the circular opening in the Lower Filter.






*To replace Upper Filter Assembly*

3. Slowly rotate the filter clockwise until it drops into place. Continue to rotate until the filter is locked into place. If the filter is not fully seated (still turns freely), continue to turn the filter clockwise until it drops and locks into place.

   **NOTE:** The Upper Filter Assembly arrow does not have to align with the arrow in the Lower Filter as long as the filter is locked.

**IMPORTANT:** To avoid damage to dishwasher, do not operate your dishwasher without the filters properly installed. Be sure the Lower Filter is securely in place and the Upper Filter Assembly is locked into place. If the Upper Filter Assembly turns freely, it is not locked into place.

# DISHWASHER CARE

## CLEANING THE DISHWASHER

### Cleaning the exterior

Clean the exterior of the dishwasher with a soft, damp cloth and mild detergent. If your dishwasher has a stainless steel exterior, a stainless steel cleaner is recommended - Stainless Steel Cleaner and Polish Part Number 31464.

### Cleaning the interior

Clean the interior of the dishwasher, with a paste of powdered dishwasher detergent and water or use liquid dishwasher detergent on a damp sponge to clean the cooled-down interior.

A white vinegar rinse may remove white spots and film. Vinegar is an acid, and using it too often could damage your dishwasher.

Put 2 cups (500 mL) white vinegar in a glass or dishwasher-safe measuring cup on the bottom rack. Run the dishwasher through a complete washing cycle using an air-dry or an energy-saving dry option. Do not use detergent. Vinegar will mix with the wash water.

### Dishwasher Maintenance Procedure

To help avoid odor or odor-causing residue in your dishwasher, use affresh® dishwasher and disposer cleaner (recommended) once a month as part of routine maintenance. Affresh® dishwasher and disposer cleaner is effective in all dishwasher brands.

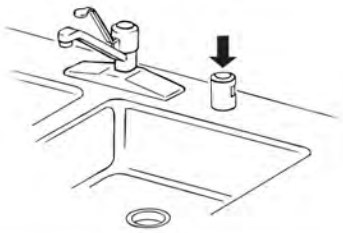
**IMPORTANT:**

- Read these instructions as well as the instructions found on the affresh® product package completely before beginning the cleaning process.
- Avoid handling the tablet without foil wrapper or gloves.

1. Remove all dishware from the dishwasher. Open the dishwasher and place 1 affresh® dishwasher and disposer tablet in the main detergent tray and close the tray. Place another tablet in the prewash tray or simply place 1 tablet in the bottom of the dishwasher. Close the dishwasher. Run the dishwasher on the most aggressive cycle - heavy duty scrub, heated water, etc.
2. Place 1 affresh® dishwasher and disposal tablet into the garbage disposal. Turn on hot water to slow flow. Run the disposal and water for 15 seconds. Turn off disposal and water. Do not flush disposal completely with water. Water from the dishwasher will clean out the disposal. If you have no garbage disposal, skip this step.

### Drain air gap

If you have a drain air gap, check and clean it if the dishwasher isn't draining well.



### Storing the Dishwasher

If you will not be using the dishwasher during the summer months, turn off the water and power supply to the dishwasher. In the winter, if the dishwasher could be exposed to near freezing temperatures or is left in a seasonal dwelling such as a second home or vacation home, avoid water damage by having your dishwasher winterized by authorized service personnel.

# — NOTES —

# INSTALLATION

## Installation Requirements

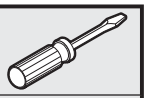
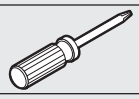
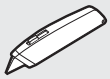
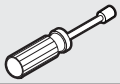
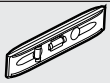
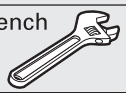
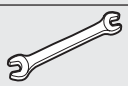
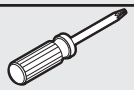
## INSTALLATION REQUIREMENTS

### Tools and Parts

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

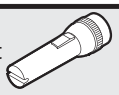
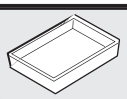
**All Installations**

**Tools needed:**

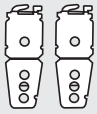
| | |
|---|---|
| Pliers  | Flat-blade screwdriver  |
| Phillips screwdriver  | Utility knife  |
| 5⁄16" and 1⁄4" nut drivers or hex sockets  | UL Listed/CSA Approved twist-on wire connectors*  |
| Measuring tape or ruler  | Small level  |
| 10" adjustable wrench that opens to 1⅛" (2.9 cm)  | 5⁄8" open-end wrench  |
| Torx®† T20 screwdriver  | |

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

**Other useful items you may need:**

| | | |
|---|---|---|
| Flashlight  | Shallow pan  | Bath towel  |

**Parts supplied:**

| | | | |
|---|---|---|---|
| Drain hose clamps (2) (1 large and 1 small)  Blue Green | Drain hose  | #10 x ½" Phillips-head screws (2)  | 2 – under-counter mounting brackets (top)  |

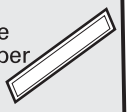
Make sure all these parts are included in the literature package.

**Parts needed:**

| |
|---|
| ⅜" Compr x ¾" hose fitting For part or kit, see local retailer or call Whirlpool Parts: 1-800-442-9991. Part Number W10273460  |

**Other parts you may also need:**

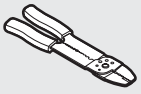
| | |
|---|---|
| 1½"–2" (3.81–5 cm) Screw-type clamps (3 maximum)  | Masking or duct tape  |

| | |
|---|---|
| For plastic tubs, side mounting kit for solid surface countertops (Part Number 8212560) | Moisture barrier tape (Part Number 4396277)  |

**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:**

| | | |
|---|---|---|
| Cordless drill with ½", ¾" and 1½" hole saw bits  | Small tubing cutter  | Wire stripper  |

**Parts needed:**

| | | |
|---|---|---|
| Copper tubing (⅜" O.D. suggested) or flexible braided water supply line  | See "Electrical Requirements" section. | |
| | For Direct Wire: use UL Listed/ CSA Approved strain relief to fit ⅞" (2.2 cm) hole | For Power Supply Cord: use UL Listed/CSA Approved power supply cord kit marked for use with dishwasher |

**Additional parts supplied with certain models only**

| |
|---|
| Bottom sound pad (located in lower rack) |

Make sure all these parts are included in the literature package.

# Installation Requirements (continued)

## 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.

Shelter 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 Number 4396277) is available from your dealer for installing underneath the countertop.

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).

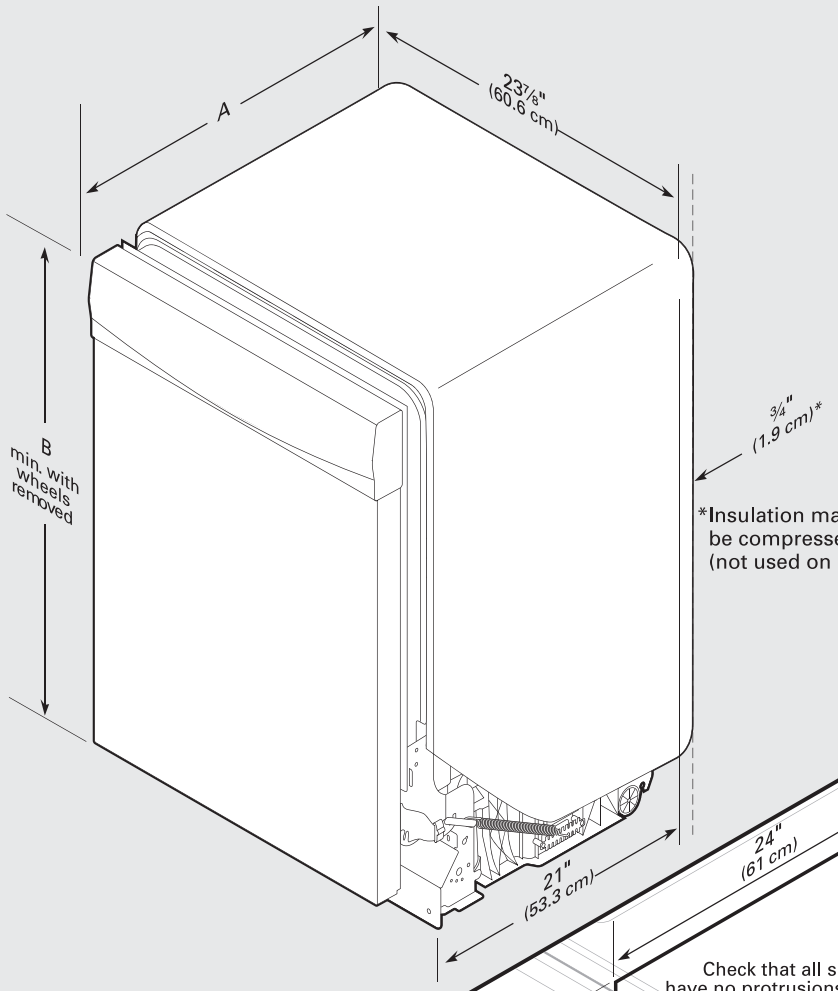
**NOTE:** To avoid shifting during dishwasher operation, shims must be securely attached to the floor.

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” section.

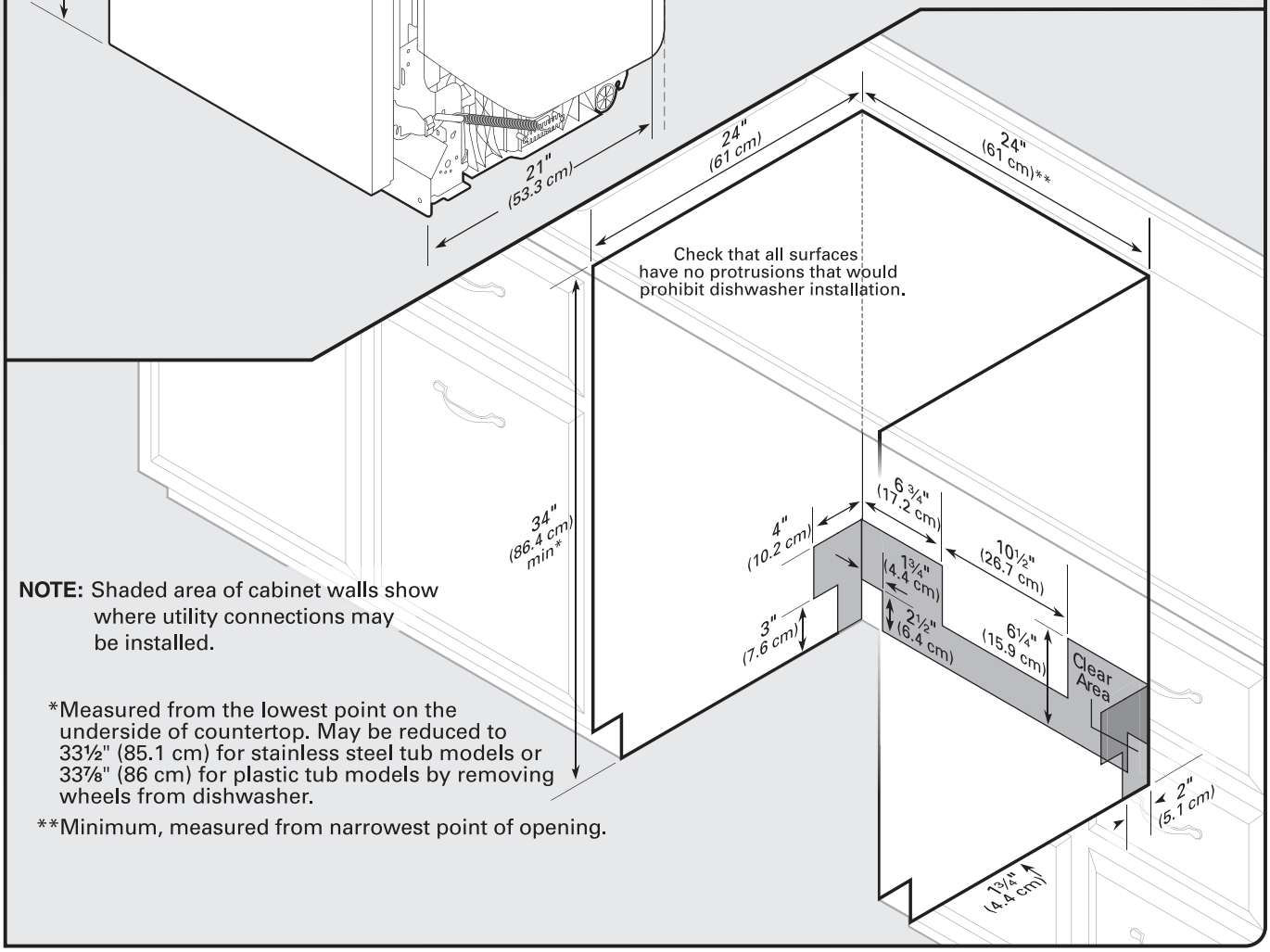
# Installation Requirements (continued)

## Product and Cabinet Opening Dimensions




| | A Depth | B Height |
|---|---|---|
| Stainless steel tub models | 24⅞" (63.2 cm) | 33½" (85.1 cm) |
| Plastic tub models | 25¼" (64.1 cm) | 33⅞" (86 cm) |

*Insulation may be compressed. (not used on all models)




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

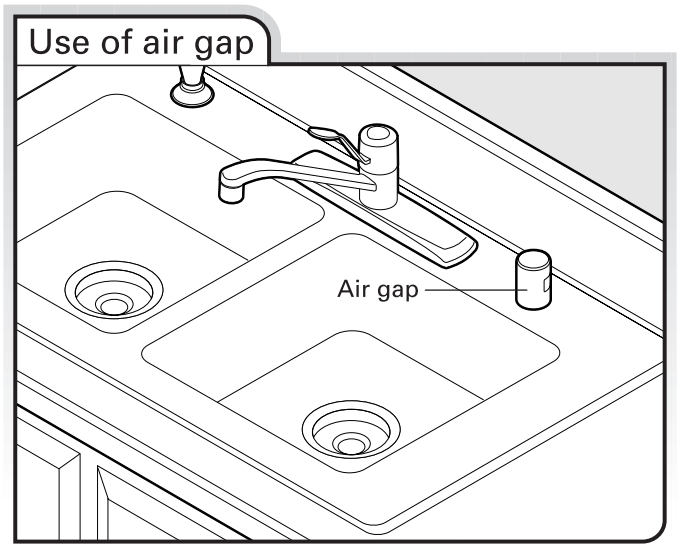
*Measured from the lowest point on the underside of countertop. May be reduced to 33½" (85.1 cm) for stainless steel tub models or 33⅞" (86 cm) for plastic tub models by removing wheels from dishwasher.

**Minimum, measured from narrowest point of opening.

# Installation Requirements (continued)

## Drain Requirements

- A new drain hose is supplied with your dishwasher. If drain hose is not long enough, use a new drain hose with a maximum length of 12 ft (3.7 m) (Part Number 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.




- 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 ½" minimum I.D. drain line fittings.
- If required, the air gap should be installed in accordance with the air gap installation instructions. When you are 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 to 120 psi (138 to 862 kPa) water pressure can be verified by a licensed plumber.
- 120°F (49°C) water at dishwasher.
- ⅜" O.D. copper tubing with compression fitting or flexible braided water supply line (Part Number 4396897RP). **NOTE:** ½" minimum plastic tubing is not recommended.
- A 90° elbow with ¾" hose connection with rubber washer. Order Part Number W10273460.
- Do not solder within 6" (15.2 cm) of the water inlet valve.

## Electrical Requirements

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
1 Batterymarch Park
Quincy, MA 02269

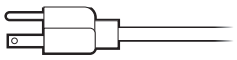
**You must have:**

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

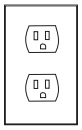
**We recommend:**

- 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 Number 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 nonmetallic sheathed, copper wire with grounding wire that meets the wiring requirements for your home and local codes and ordinances.
- Use a UL Listed/CSA Approved strain relief.

# 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 power

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

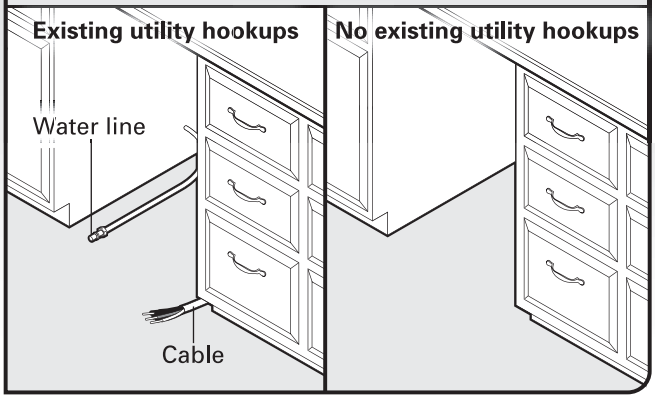
### 2 Shut off water supply

Shut off the water supply to the dishwasher.

### 3 Do you already have utility hookups?

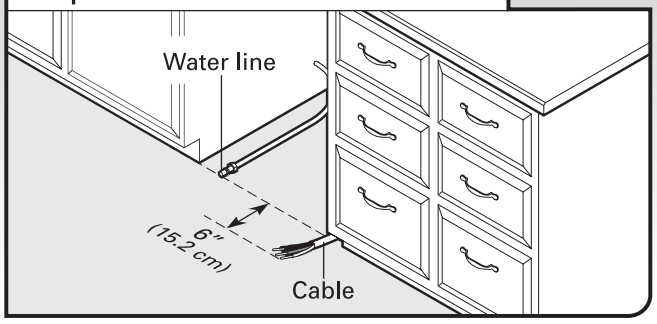
***Yes*** —Follow instructions in the "Prepare Cabinet Opening—Existing Utilities" section.

***No*** —Follow instructions in the "Prepare Cabinet Opening—New Utilities" section.




## Prepare Cabinet Opening—Existing Utilities

### 1 Check water and electrical placement

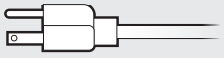



If the water line and the cable extend to the locations shown, proceed to the "Install Drain Hose" section. If they do not reach far enough, follow the instructions in the "Prepare Cabinet Opening—New Utilities" section.

## Prepare Cabinet Opening—New Utilities

**Prepare and route the electrical supply**

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



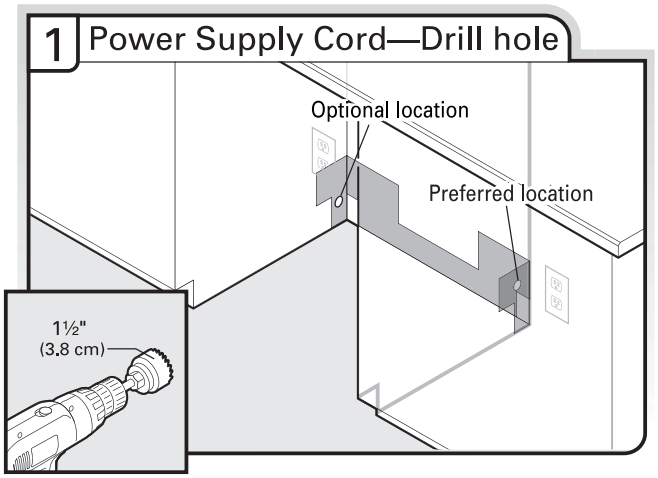
Power Supply Cord:
Follow Option A instructions

Direct Wire:
Follow Option B instructions

# Installation Requirements (continued)

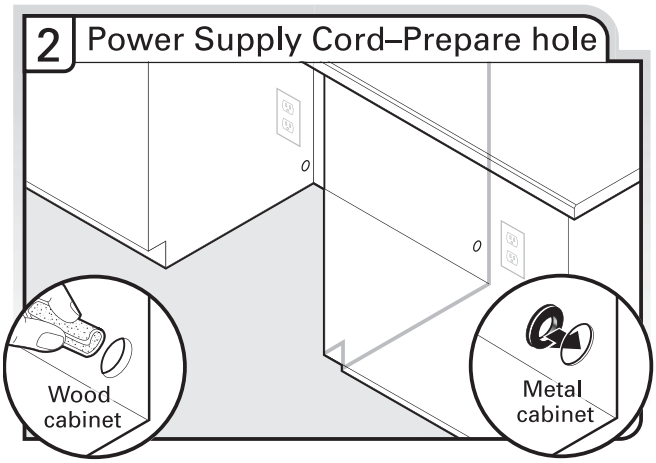
### Option A, Power Supply Cord:

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




Drill a 1½" (3.8 cm) hole in cabinet side or rear.

See "Product and Cabinet Opening Dimensions" section.

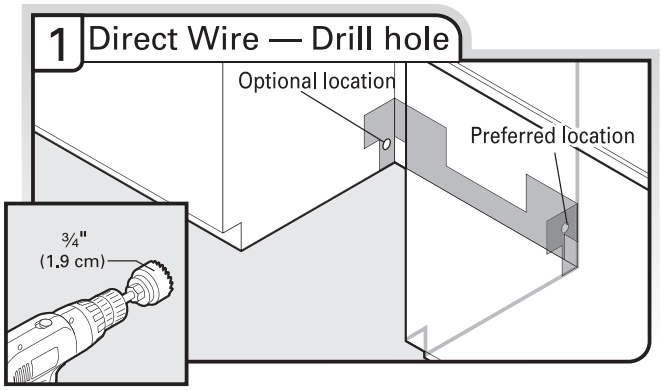



Wood cabinet: Sand the hole until smooth.

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

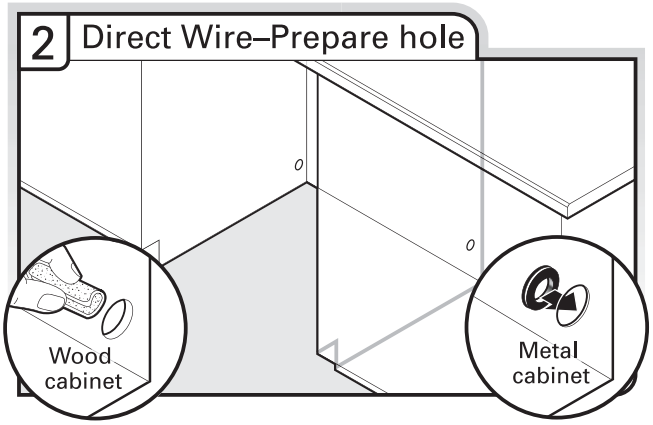
### Option B, Direct Wire:

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



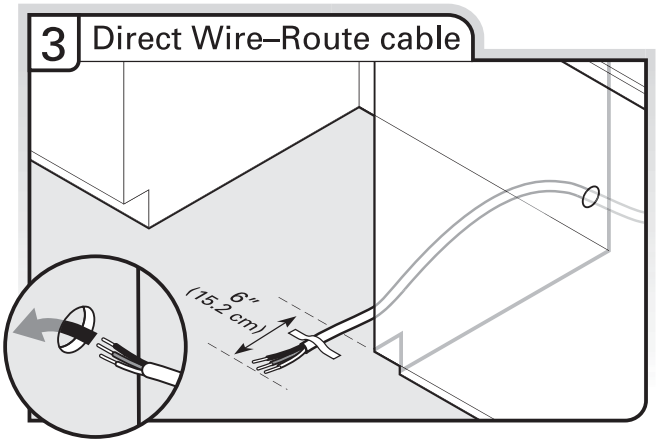

Drill a ¾" (1.9 cm) hole in right-hand cabinet side or rear.

See "Product and Cabinet Opening Dimensions" section.




Wood cabinet: Sand the hole until smooth.

Metal cabinet: Cover hole with grommet (Part Number 302797 - not provided).

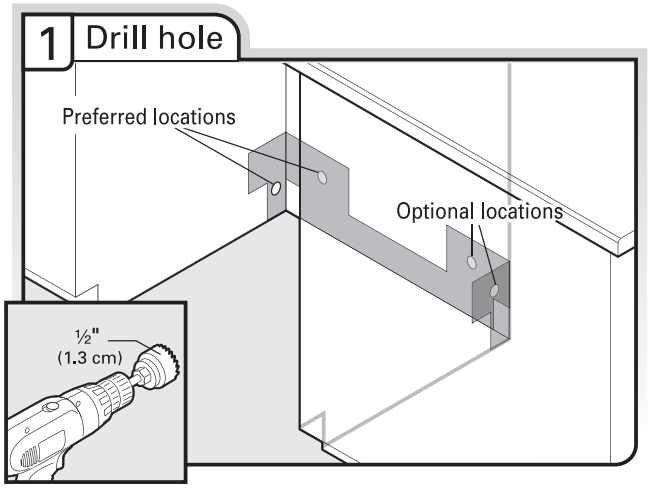



Route cable from power supply through cabinet hole (cable must extend to the right front side of cabinet opening). Tape cable to the floor in area shown. This will prohibit cable from moving when dishwasher is moved into cabinet opening.

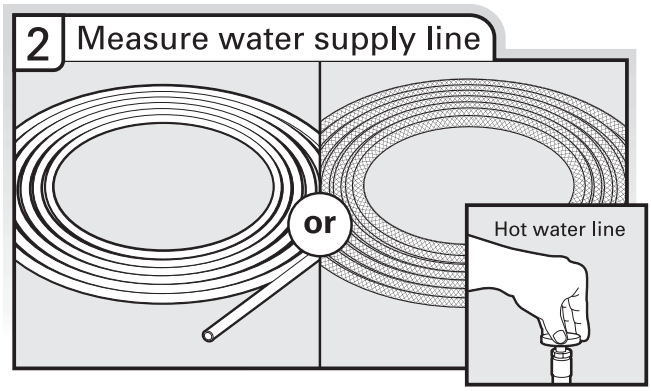
# Installation Requirements (continued)

## Prepare and Route Water Line

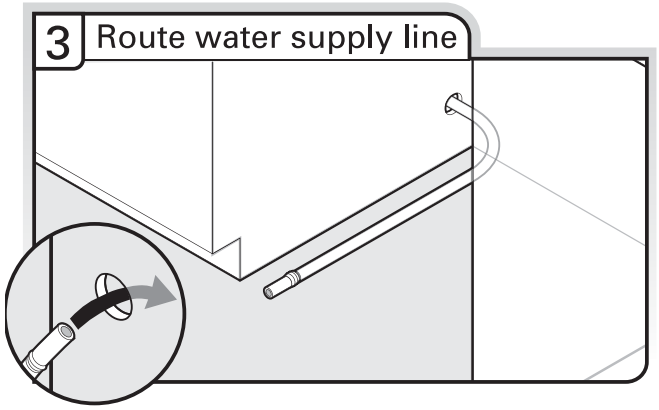
**Helpful Tip:** Routing the water line through the left side of cabinet opening will make water connection easier.



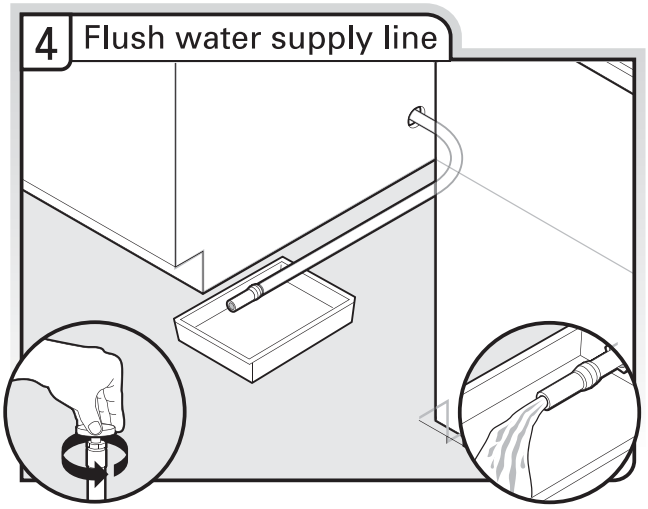

Drill a ½" (1.3 cm) hole in the cabinet side or rear.



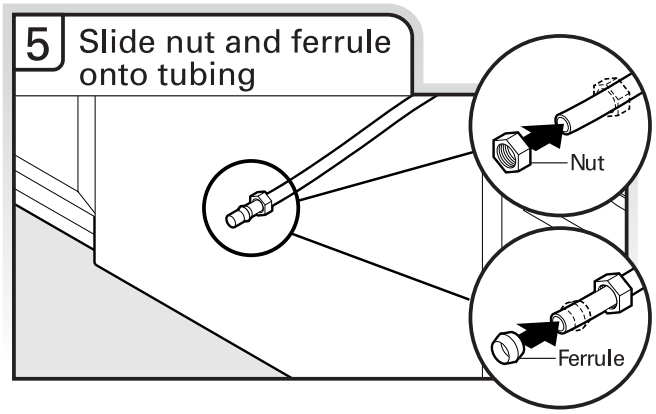

Measure overall length of copper tubing or flexible braided water supply line. Attach to the hot water line using a connection configuration that is in compliance with local codes and ordinances. The water line to the dishwasher should have a manual shutoff valve.




Slowly route water supply line through hole in cabinet. (If you are 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.



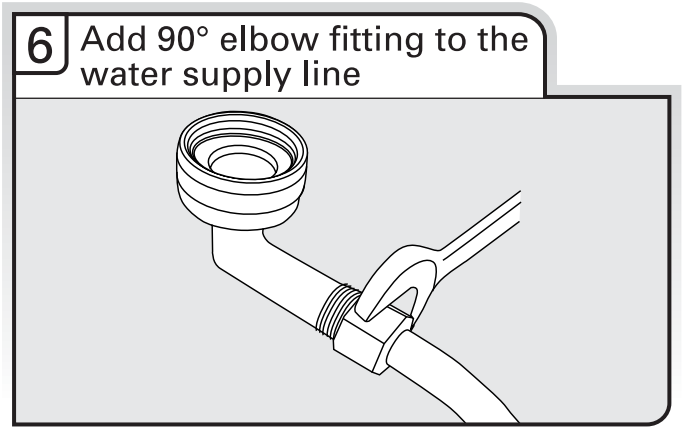

Slowly turn water shutoff valve to "ON" position. Flush water into a shallow pan until clear to get rid of particles that could clog the inlet valve. Turn shutoff valve to "OFF" position.




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

# Installation Requirements (continued)

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




Connect the ⅜" compression fitting to the water supply line prior to installing the unit into the cabinet opening. Attach such that the ¾" connection is facing upward as shown above.

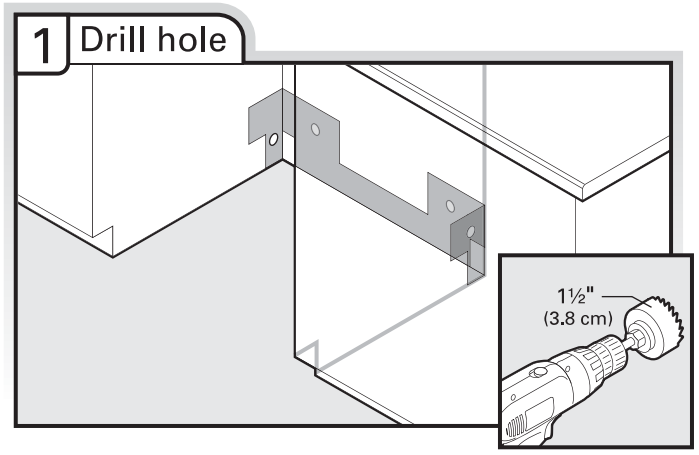
Copper tubing only: Put the tubing into the 90° elbow fitting as far as it will go (the copper tubing bends and kinks easily). Slide the nut and ferrule forward and start the nut onto the elbow threads.

Flexible braided connection: Secure nut to elbow using ⅝" open ended wrench or adjustable wrench.

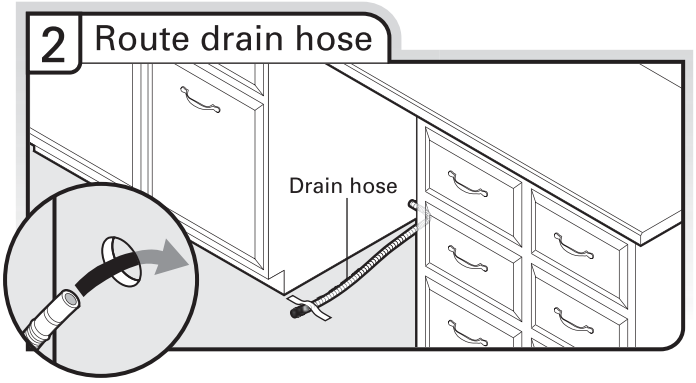
**NOTE:** Do not use Teflon®† tape with compression fittings.

## Install Drain Hose

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




If needed, drill a 1½" (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 prohibit 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

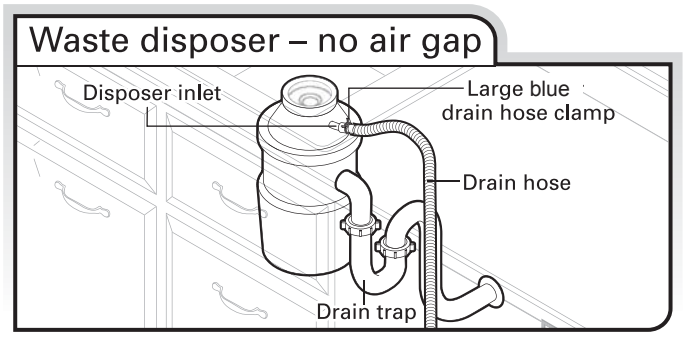
**IMPORTANT:** The drain hose connection of the disposer or a waste tee must be made before the drain trap and at least 20" (50.8 cm) above the floor where the dishwasher will be installed.

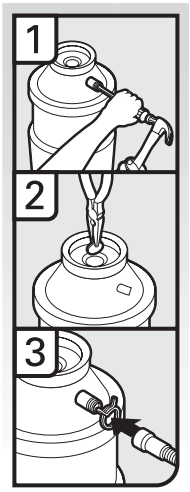
**Helpful Tip:** To reduce vibration of the hose, keep the hose away from the floor.

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

# Installation Requirements (continued)

## Option A, Waste disposer – no air gap



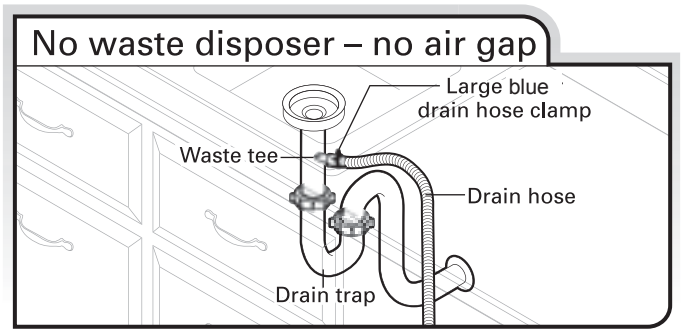



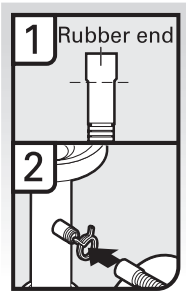

1. Using a hammer and screwdriver, knock plug into disposer.

2. Use needle-nose pliers to remove plug.

3. Attach drain hose to disposer inlet with large blue drain hose clamp (provided). Use pliers to squeeze clamp open and move into position.

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



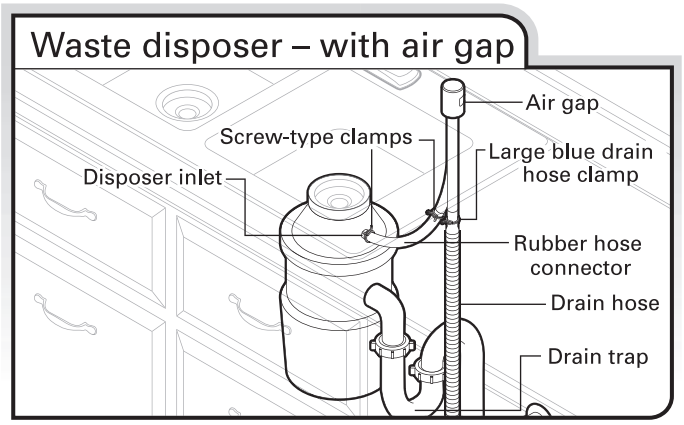



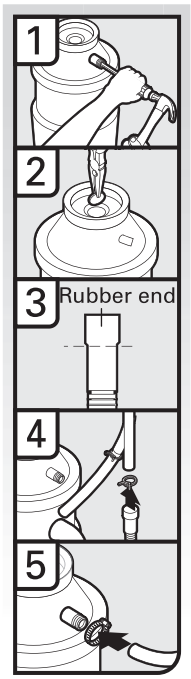

1. Fit rubber end of drain hose to waste tee and cut if needed.
**NOTE:** Do not cut ribbed section.

2. Attach rubber end of drain hose to waste tee with a large blue drain hose clamp (provided). Use pliers to squeeze clamp open and move into position. If the drain hose was cut, use a 1½" to 2" (3.8 to 5 cm) screw-type clamp (not provided).

# Installation Requirements (continued)

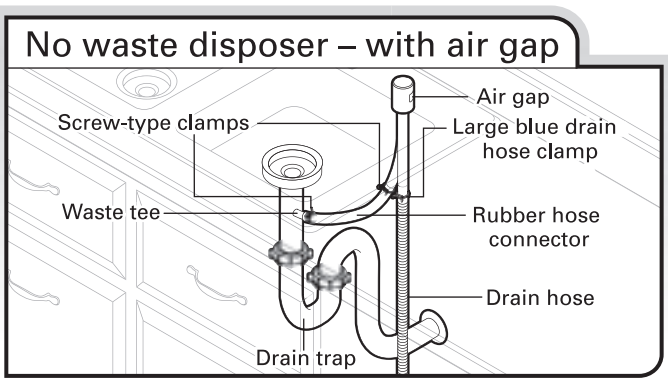
## Option C, Waste disposer – with air gap

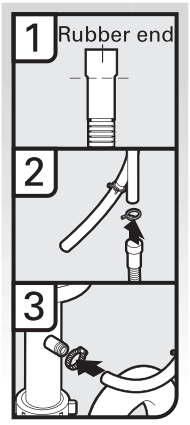



1. Using a hammer and screwdriver, knock plug into disposer.
2. Use needle-nose pliers to remove plug.
3. Connect rubber end of drain hose to air gap and cut if needed.
   **NOTE:** Do not cut ribbed section.
4. Attach drain hose to air gap with large blue drain hose clamp (provided). Use pliers to squeeze clamp open and move into position. If the drain hose was cut, use a 1½" 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

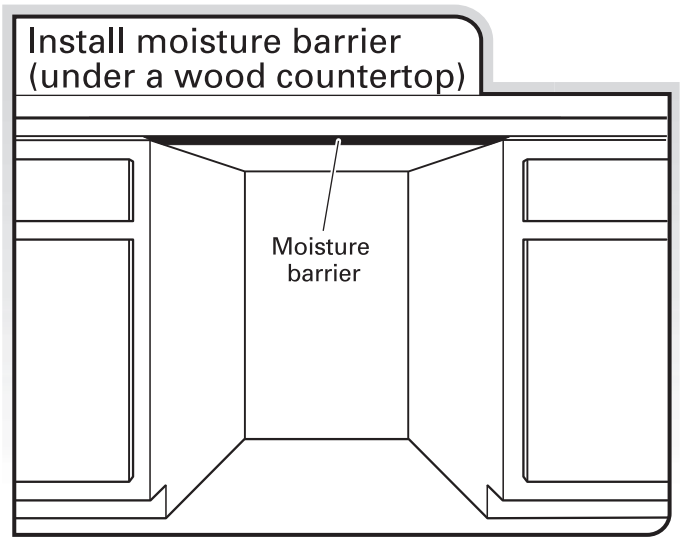



1. Connect rubber end of drain hose to air gap and cut if needed.
   **NOTE:** Do not cut ribbed section.
2. Attach drain hose to air gap with large blue drain hose clamp (provided). Use pliers to squeeze clamp open and move into position. If the drain hose was cut, use a 1½" to 2" (3.8 to 5.1 cm) screw-type clamp (not provided).
3. Use a rubber hose (not provided) with screw-type clamps (not provided) to connect from waste tee to air gap.

# Installation Requirements (continued)

## Install Moisture Barrier (under a wood countertop)




1. Make sure the area under the cabinet is clean and dry for installation of the moisture barrier.
2. Remove the backing of the moisture barrier and apply to underside of the countertop along the front edge of the counter.

## 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.**

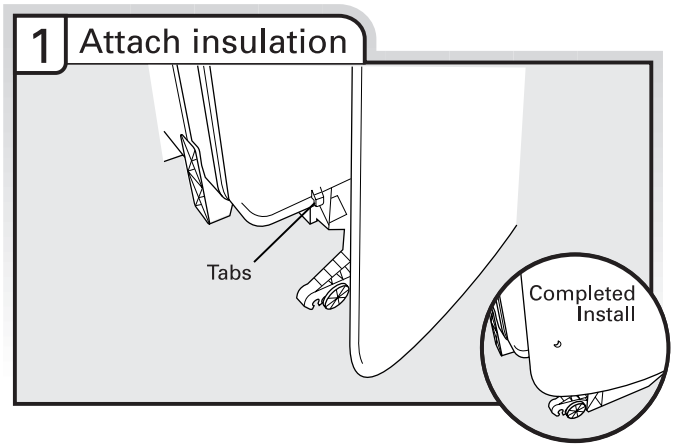
**⚠WARNING**

**Excessive Weight Hazard**

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

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

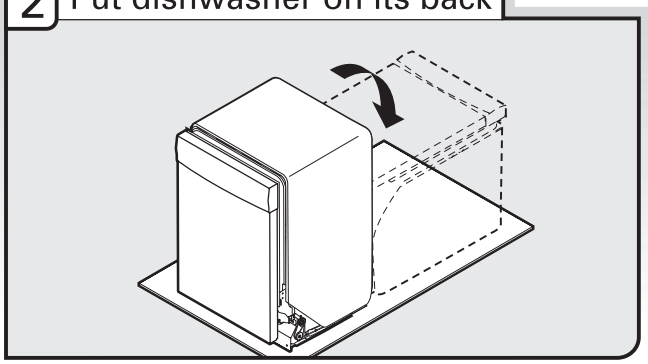
**NOTE:** Insulation is provided on some models. If your model does not have insulation, proceed to Step 2.




Using the precut slots in the insulation, fasten the insulation over the molded hooks on the tub. Be sure to fasten the insulation down on both sides of the tub.

# Installation Requirements (continued)

## 2 Put dishwasher on its back



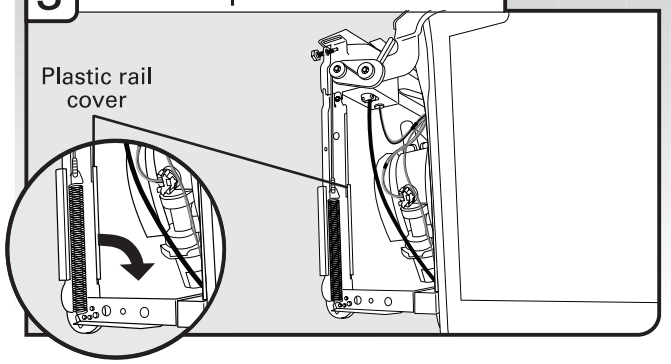
**Helpful Tip:** Place cardboard under dishwasher until installed in cabinet opening to avoid damaging floor covering. Do not use door panel as a worktable without first covering with a towel to avoid scratching the door panel.

Using 2 or more people, grasp sides of dishwasher door frame and place dishwasher on its back.

**NOTES:**

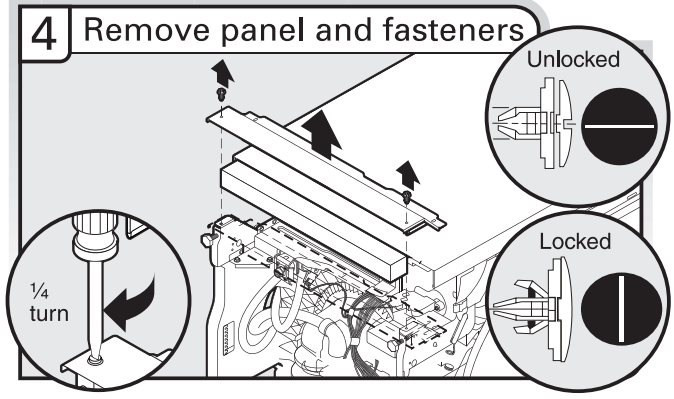
- Stainless steel tub models have a plastic rail cover installed on each side of the dishwasher frame.
- If you have a stainless steel tub model, complete Step 3.
- If you have a plastic tub model, proceed to Step 4.

## 3 Remove plastic rail cover



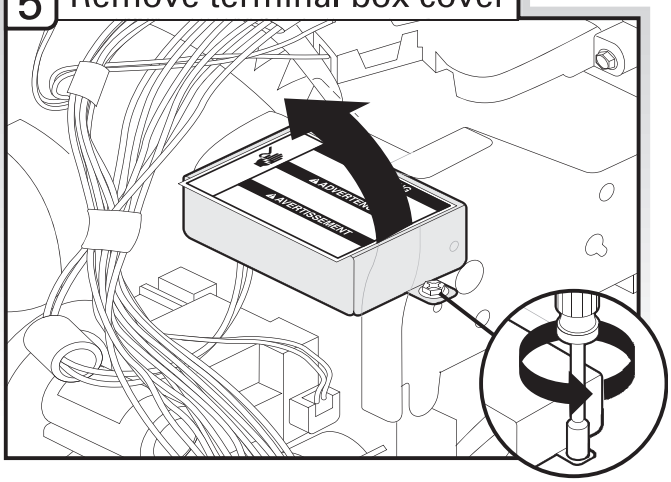

Remove and discard the plastic rail cover on each side of the dishwasher frame. To remove the plastic rail cover, push upward and back to unsnap it from the dishwasher frame.

## 4 Remove panel and fasteners



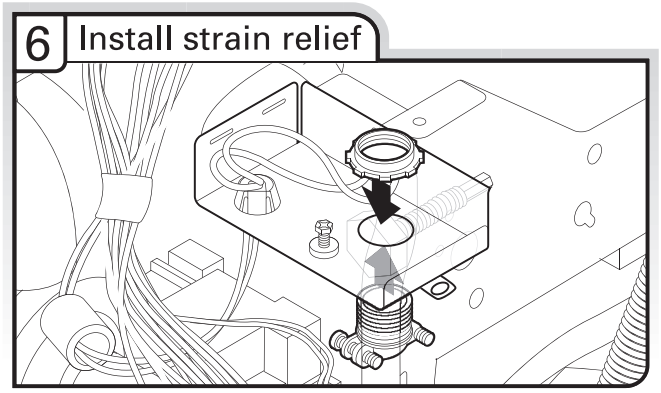

Using a flat-blade screwdriver, turn the plastic fasteners ¼ turn to unlock them. Remove panel. Do not remove tech sheet from access panel.

## 5 Remove terminal box cover



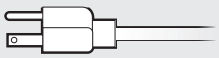
Using a ¼" hex head socket, nut driver or Torx T20 screwdriver, remove terminal box cover. Retain for later use.

## 6 Install strain relief



Install a UL Listed/CSA Approved strain relief. Make sure screw heads are facing to the left when tightening conduit nut. Strain relief is provided with the power supply cord kit.

## What type of electrical connection will you use?



Power Supply Cord:
Follow Option A instructions

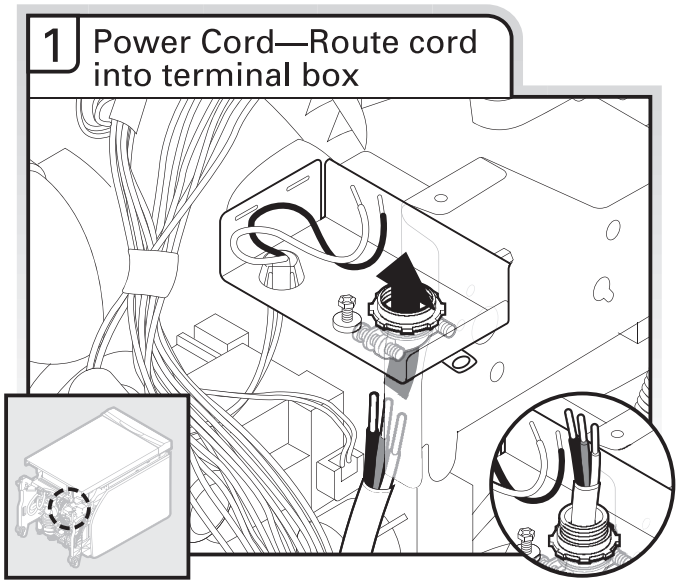
Direct Wire:
Follow Option B instructions

**NOTE:** If using Option B, proceed to "Determine Cabinet Opening," to continue with the installation of your dishwasher.

# Installation Requirements (continued)

## Make Power Supply Cord Connection

**Option A, Power Supply Cord:**




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

Select UL Listed/CSA Approved twist-on wire connectors rated to connect your power supply cord to 16-gauge dishwasher wiring.

**⚠WARNING**

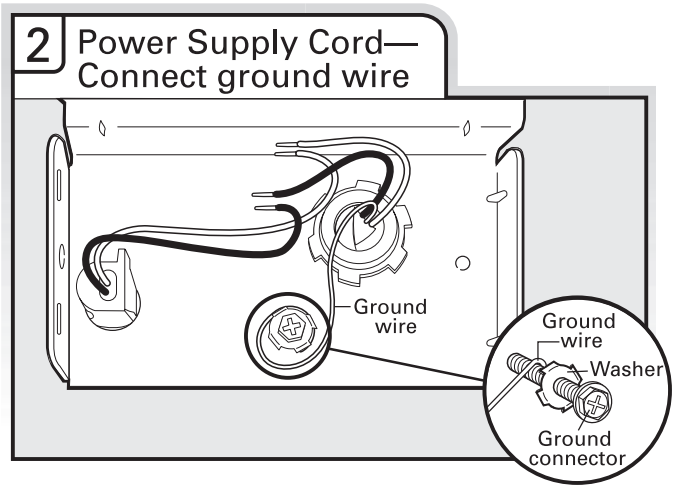
**Electrical Shock Hazard**

**Electrically ground dishwasher.**

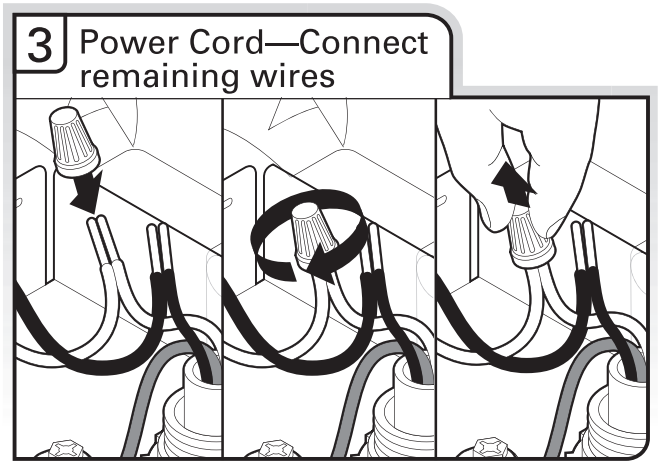
**Connect ground wire to green ground connector in terminal box.**

**Do not use an extension cord.**

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




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




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

# Installation Requirements (continued)

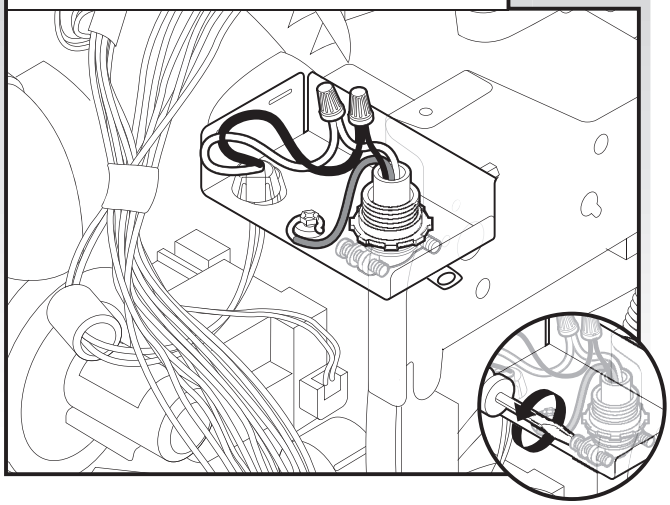
Connect wires black to black and white to white, using UL Listed/CSA Approved twist-on wire connectors.

### Wiring configuration

| Power supply wire: | | Terminal box wire: |
|---|---|---|
| white | ⟷ | white |
| black | ⟷ | black |
| ground wire | ⟷ | ground connector |

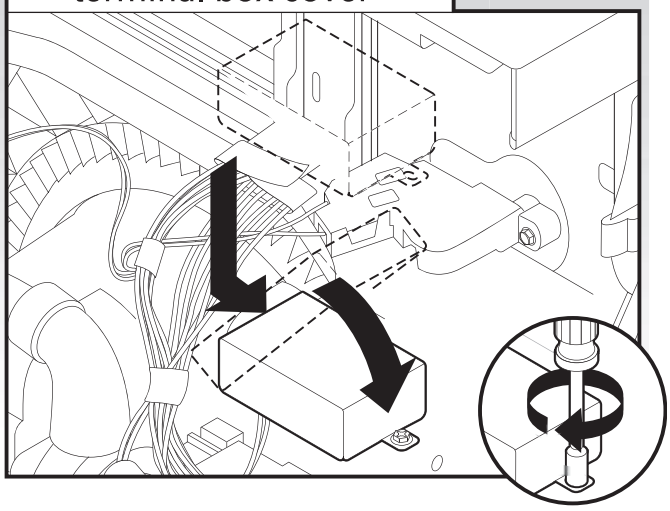
If needed, see website for animated representation of this step. Visit **www.whirlpool.com/electrical** under FAQ tab.

### 4 Power Cord–Secure cord on strain relief



Tighten strain relief screws to secure cord.

### 5 Power Cord—Reinstall terminal box cover

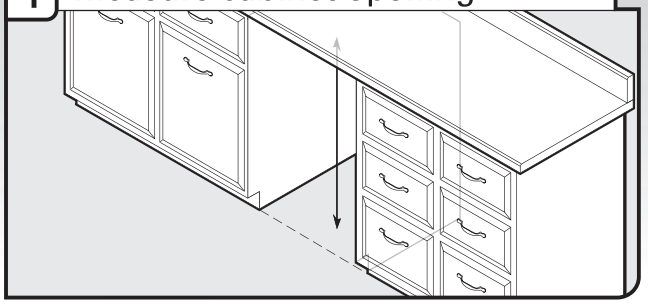


Place wires inside terminal box. Insert tabs on left side of cover. Make sure wires are tucked inside box. Close cover ensuring wires are not pinched. Use ¼" nut driver or Torx T20 screwdriver and previously removed screw to secure cover.

**NOTE:** Do not plug into outlet until instructed to do so.

## 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

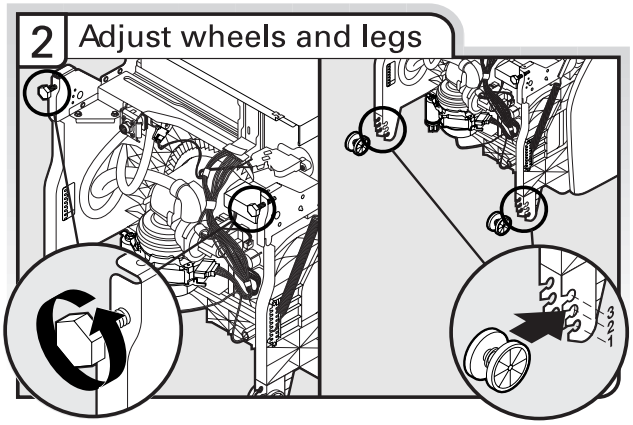
| Cabinet opening height | Wheel position | Number of turns on front leg |
|---|---|---|
| 33½" (85.1 cm) stainless steel tub models | Removed | All the way up |
| 33⅞" (86.0 cm) plastic tub models | Removed | All the way up |
| 34" (86.4 cm) | 1 | 10 |
| 34¼" (87.0 cm) | 2 | 5 |
| 34½" (87.6 cm) | 3 | 0 |

**NOTES:**

- 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 stainless steel tub dishwashers to fit into a 33½" (85.1 cm) high cabinet opening and plastic tub dishwashers to fit into a 33⅞" (86 cm) high cabinet opening. If the rear wheels are removed, the dishwasher will be more difficult to move. (Measurements are approximate. Wheels and legs are preset at the factory for 34½" [87.6 cm].)
- Depending upon the type of tub you have, the rear wheels are repositioned differently. Refer to the section that applies to your tub type.

# Installation Requirements (continued)

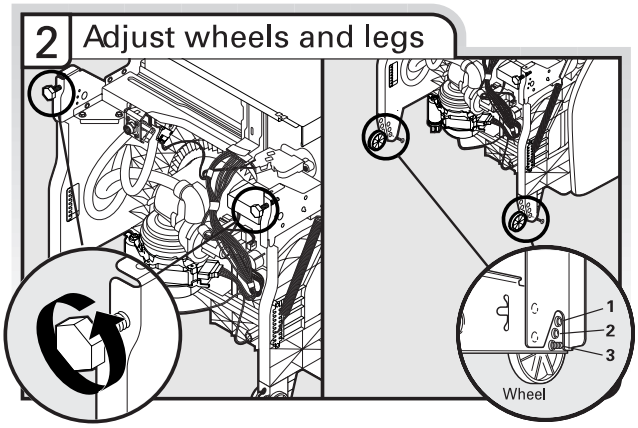
**Plastic Tub Models**



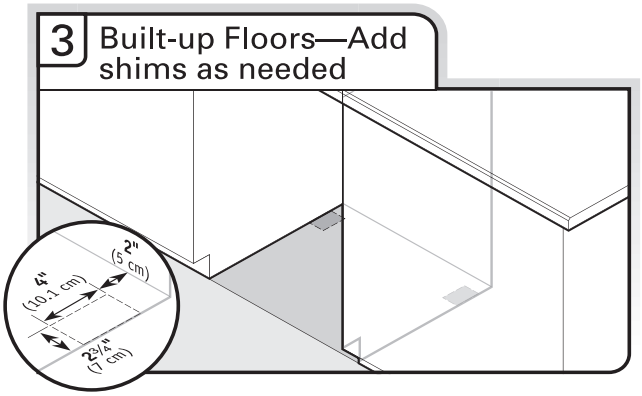

Turn both leveler legs to the same height. Put wheels in the required position determined from “Dishwasher Height Adjustment Chart.” To change wheel position, use a flat-blade screwdriver to pop out the wheel, then snap into the new position.

Proceed to Step 3.

**Stainless Steel Tub Models**




Turn both leveler legs to the same height. Put wheels in the required position determined from “Dishwasher Height Adjustment Chart.”




Built-up floors: If the kitchen floor is higher than the cabinet opening's floor - for example, the kitchen floor tile does not extend into the 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 avoid movement when the dishwasher is in use.

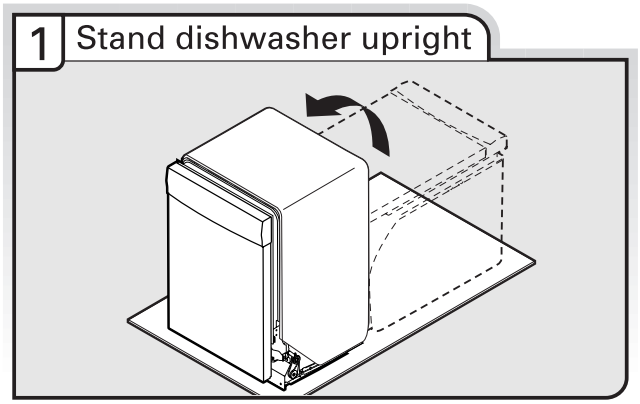
## Choose Attachment Option

**⚠WARNING**

**Excessive Weight Hazard**

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

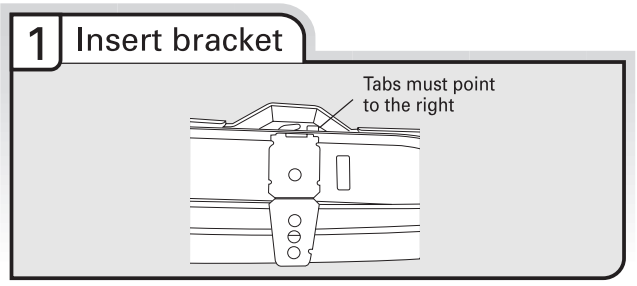
**Failure to do so can result in back or other injury.**



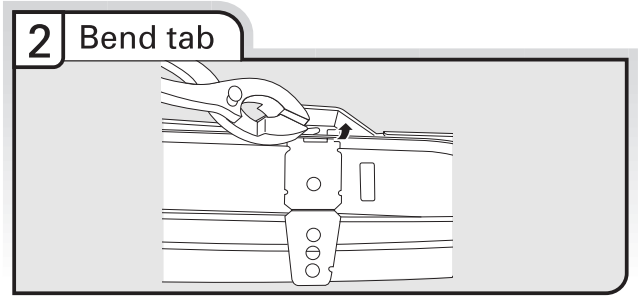

Using 2 or more people, stand the dishwasher up.

**IMPORTANT:** The dishwasher must be secured to the cabinet. There are two brackets found in the parts bag. Attach the brackets using Option Number 1 if the countertop is wood, laminate or another similar surface. If your countertop is marble, granite or another hard surface, install using Option Number 2 if you have a stainless steel tub or using Option Number 3 if you have a plastic tub.

**Option 1, Countertop Attachment**




Remove the brackets from the package and insert into the open slots on the left and right-hand top of the dishwasher collar as shown.



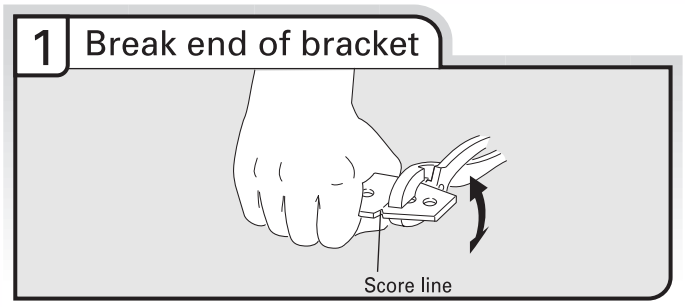

Using a pair of pliers, bend the tab down to secure the bracket in place. Repeat this step for the other side.

**NOTE:** Do not attach the dishwasher. This will be done later.

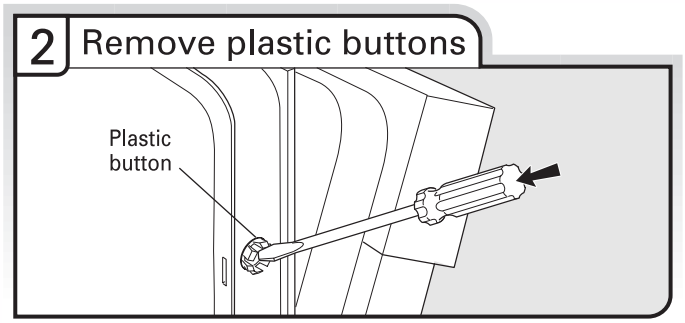
# Installation Requirements (continued)

### Option 2, Side Attachment - Stainless Steel Tub Models

**For marble, granite, or other hard surface countertops**
Remove the brackets from the parts package.

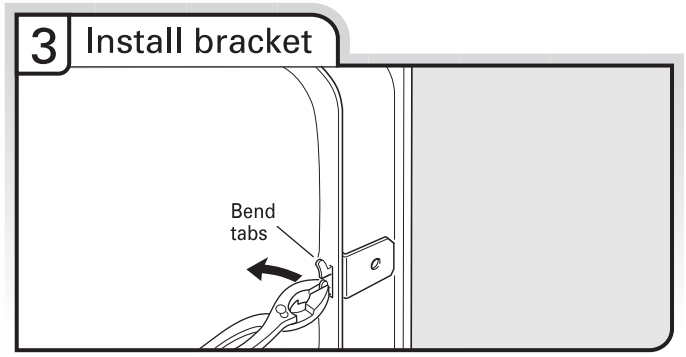



Break off the end of the bracket along the scored line.




Push the plastic buttons out of the side of the tub.

**NOTE:** Save the buttons to cover the holes after dishwasher is installed.




Push bracket into slot on the side of dishwasher and bend tab in toward the side of the dishwasher so that it keeps the bracket in place.

**NOTE:** Do not attach the dishwasher. This will be done later.

### Option 3, Side Attachment - Plastic Tub Models

**For marble, granite, or other hard surface countertops**
Order Mounting Bracket Kit Part Number 8212560.

## Move Dishwasher Close to Cabinet Opening

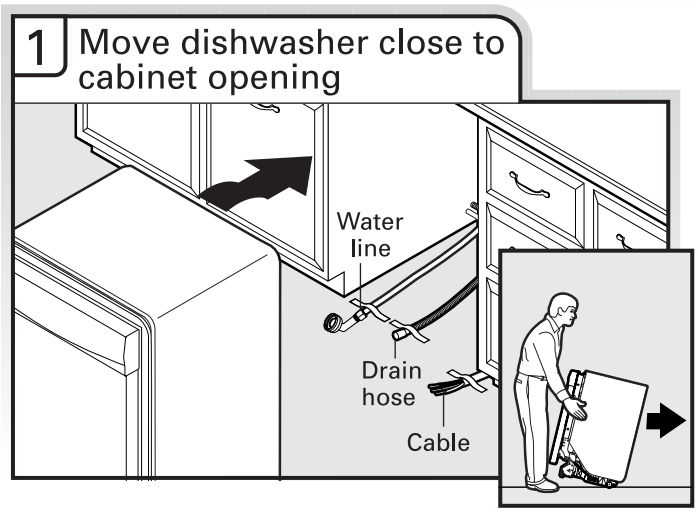
**⚠WARNING**

**Excessive Weight Hazard**

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

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

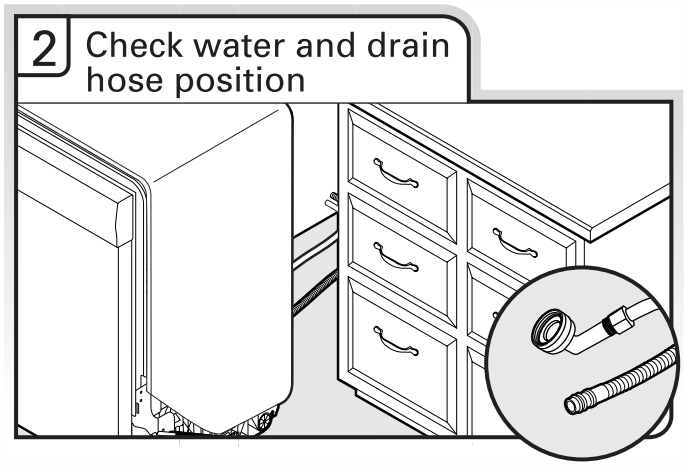
**NOTE:** Do not install kick plate until instructed to do so.




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

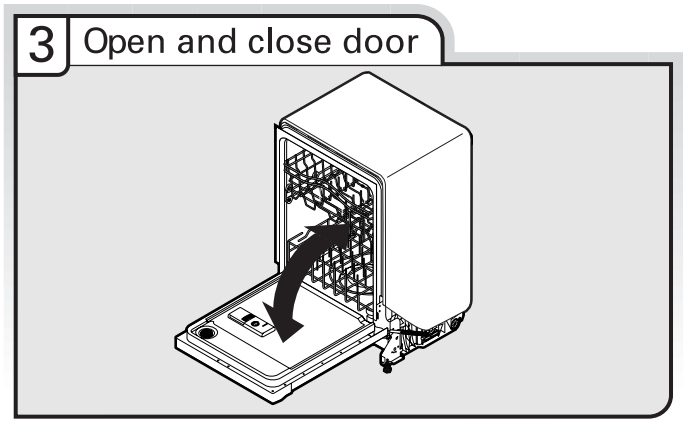
**NOTE:** Do not push on the front of the panel or on the console. Panel or console may dent.

**Helpful Tip:** Temporarily tape utilities to the floor in the locations shown to prohibit 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.

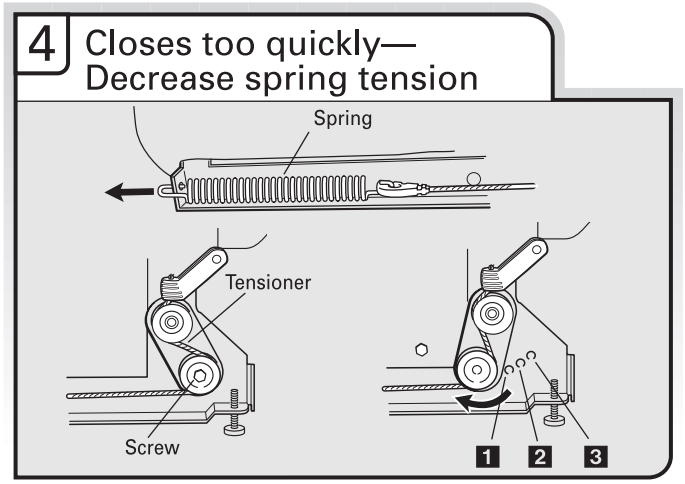
# Installation Requirements (continued)




With another person holding the dishwasher to keep 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.

**NOTE:** Depending upon the type of tub you have, the door spring tension is adjusted differently. Refer to the section that applies to your tub type.

### Adjust Door Spring Tension - Stainless Steel Tub Models

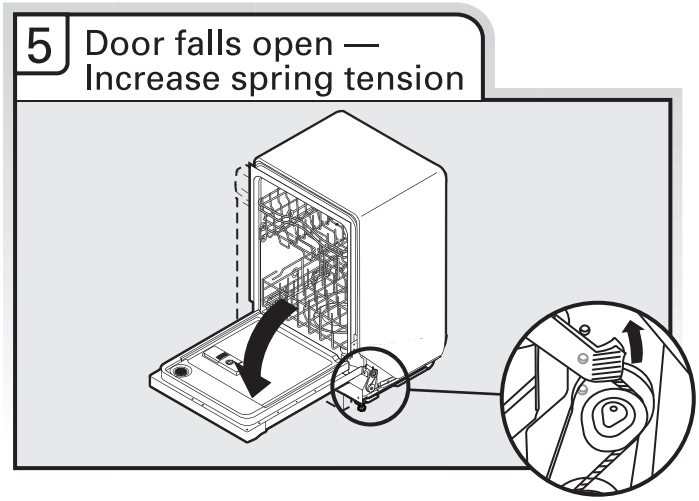



To adjust the door spring tension, unhook the spring from the rear frame of dishwasher.

Using a 5⁄16" nut driver or hex socket, remove the screw from the tensioner.

The screw can be put into one of three holes (1, 2, 3) in the front leg of dishwasher. If the door closes by itself, move the tensioner to a lower number hole and replace the screw. Reattach door spring to rear frame.

**NOTE:** Tensioners on both sides of dishwasher should be secured at same holes.

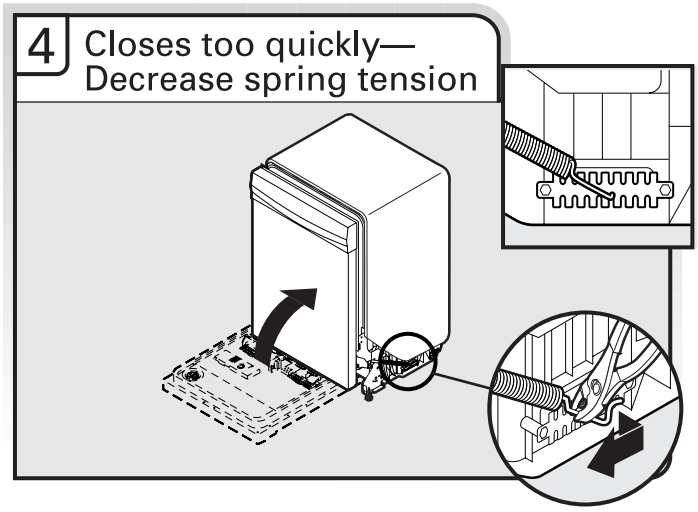



When door is unlatched and door opens by itself, move the tensioner to a higher numbered hole and replace the screw. Reattach door spring to rear frame.

**NOTE:** Tensioners on both sides of dishwasher should be secured at same holes.

Proceed to Step 6.

### Adjust Door Spring Tension - Plastic Tub Models

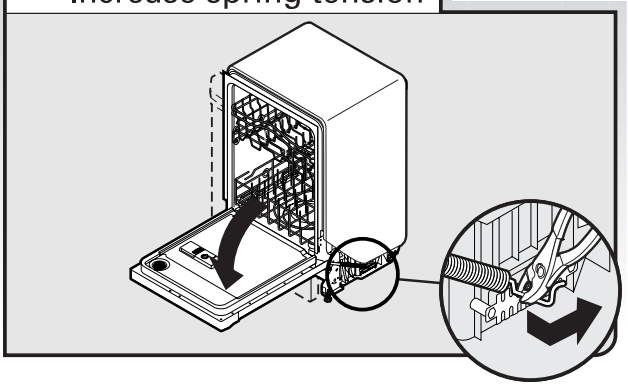



If the door closes too quickly, decrease the spring tension by moving the spring end toward the front of the dishwasher.

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

# Installation Requirements (continued)

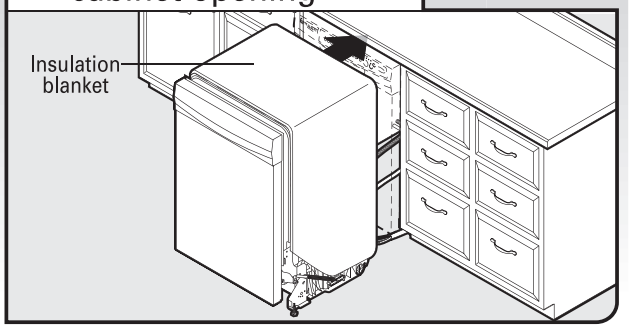
## 5 Door falls open— Increase spring tension



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.

## 6 Move dishwasher into cabinet opening

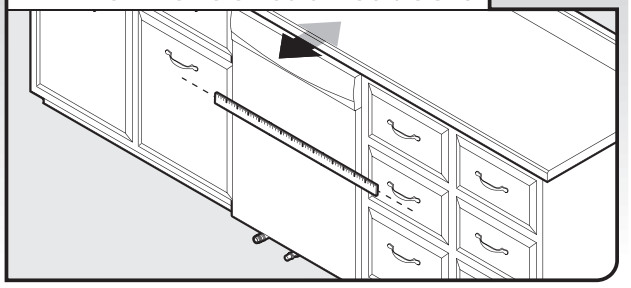



**IMPORTANT:** If wheels were removed, cover the floor when moving the dishwasher to avoid damage to the floor. Slowly move dishwasher completely into cabinet opening. Do not kink or pinch water line, drain hose, power supply cord or direct wire between dishwasher and cabinet. Remove cardboard from under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

**NOTES:**

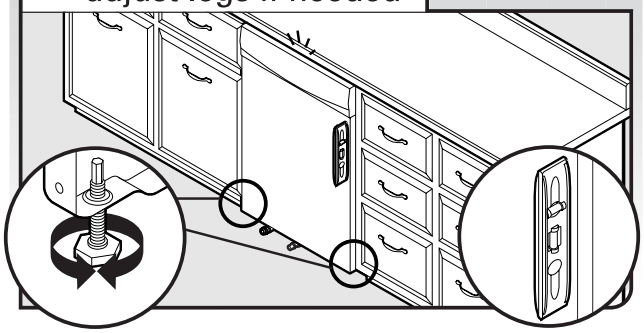
- It is all right if dishwasher fits tightly into cabinet opening. Do not remove insulation blanket – the blanket reduces the sound level.
- If using power cord, make sure to route end through hole in cutout before sliding dishwasher into cabinet opening.

## 7 Align front of dishwasher with front of cabinet doors



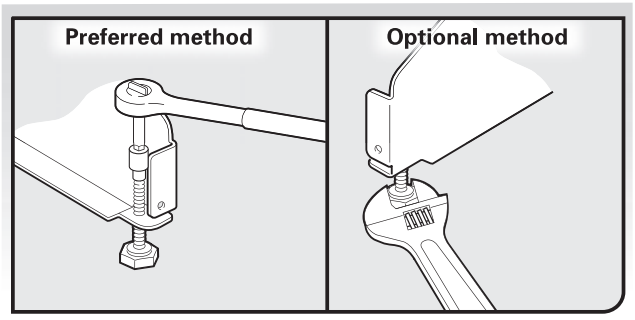
Align front of dishwasher door panel with front of cabinet doors. You may need to adjust alignment to be even with your cabinets.

## 8 Check for plumb and adjust legs if needed

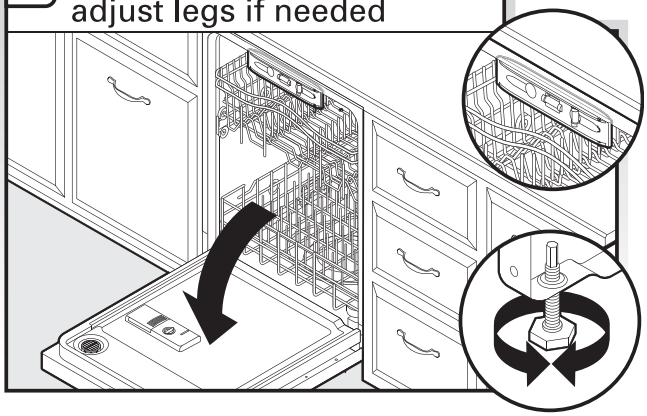


Check that leveling legs are firmly against the floor. Close and latch the door, and place level against the front panel. Check that dishwasher is centered from front to back in the opening. If needed, adjust leveling leg until dishwasher is plumb. Repeat for other side of dishwasher.

**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 leg using the 3/16" hex head socket or adjustable wrench.



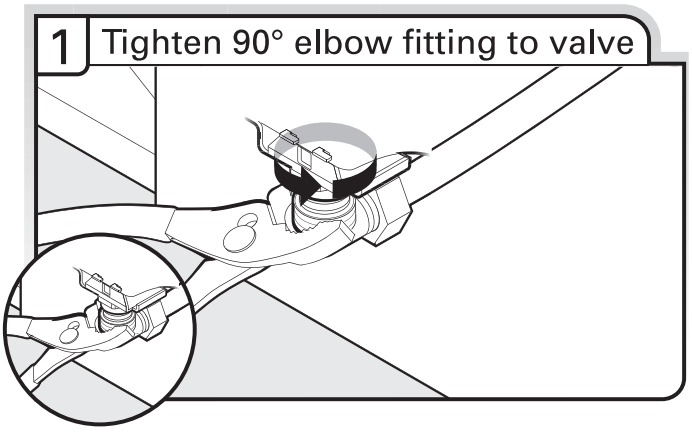

## 9 Check level side-to-side and adjust legs if needed



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.

# Installation Requirements (continued)

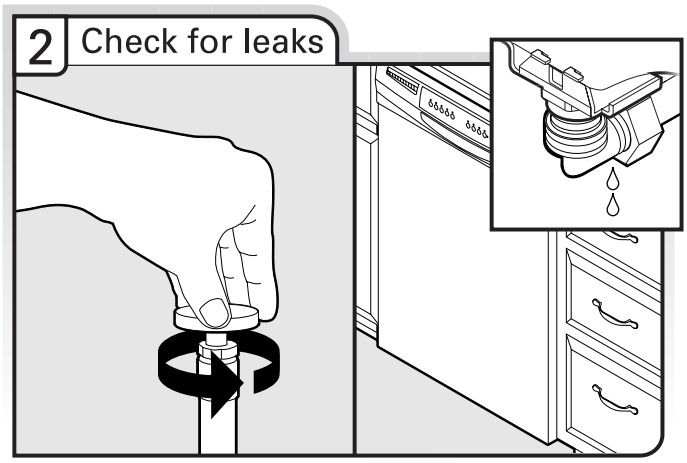
## Connect to Water Supply




Be sure rubber washer is properly seated in fitting. Slide the ¾" fitting up to the valve and hand tighten to avoid cross-threading. Hand tighten until the coupling is tight.

Using pliers, check the tightness of the coupling. An additional ¼ to ½ turn may be required to seal the rubber gasket.

**NOTE:** Do not overtighten. Damage to the coupling can result.



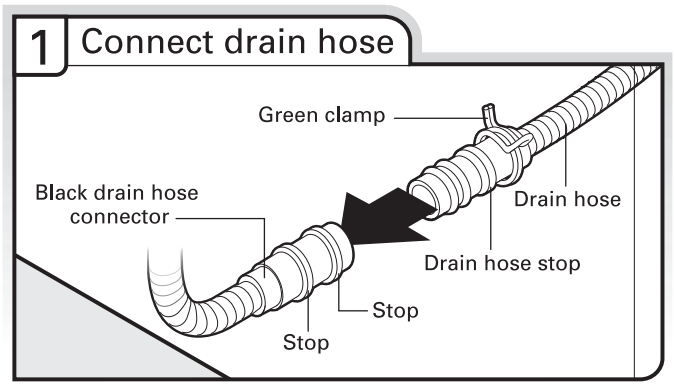

Place paper towel under 90° elbow fitting. Turn on water supply and check for leaks. If leak occurs, repeat previous step.

If needed, see website for animated representation of this step. Visit **www.whirlpool.com/watersupply** under FAQ tab.

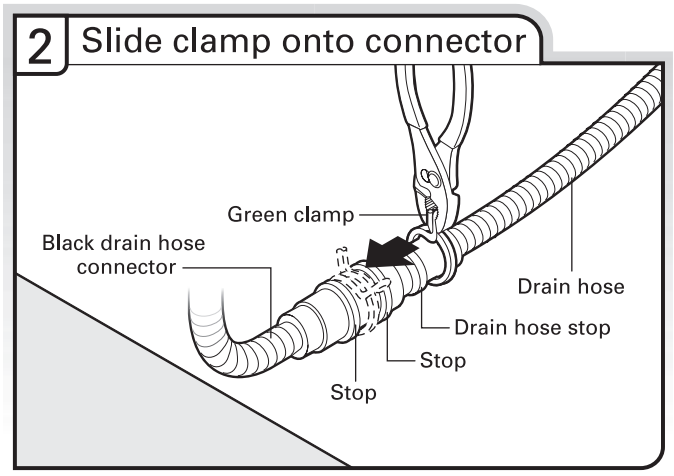
**NOTE:** Do not use Teflon®† tape with compression fittings.

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

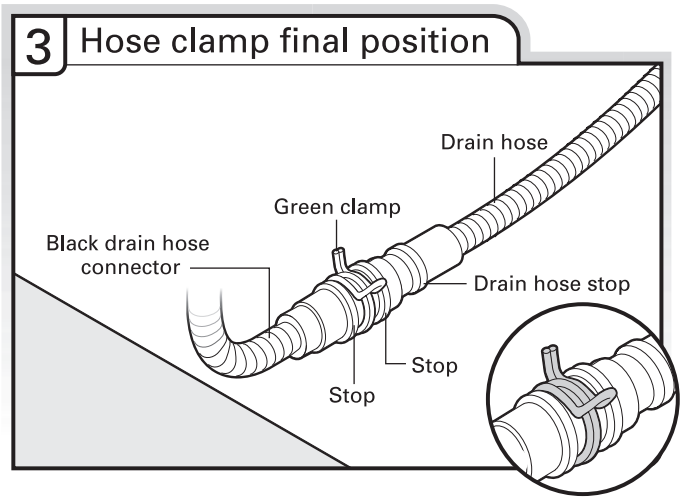
## Connect to Drain




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.




After hose is connected, remove towel.

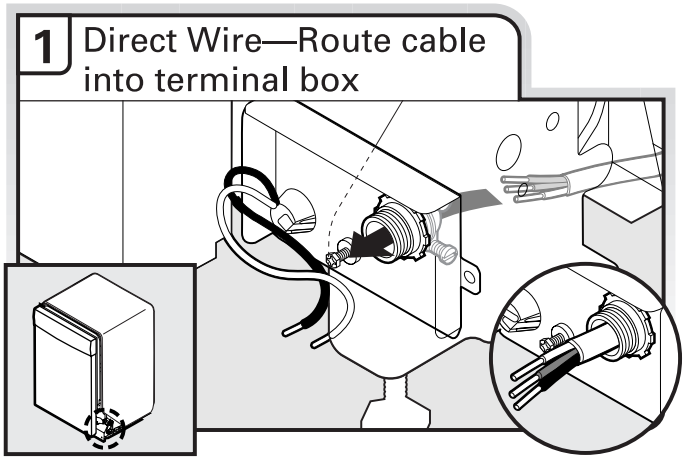
If needed, see website for animated representation of this step. Visit **www.whirlpool.com/drain** under FAQ tab.

# Installation Requirements (continued)

## 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 UL Listed/CSA Approved strain relief in terminal box. Strain relief is not supplied with the dishwasher. Owner must purchase a ⅞" screw-in type strain relief.

Select UL Listed/CSA Approved twist-on wire connectors (not included) rated to connect your household wiring to 16-gauge dishwasher wiring.

**⚠WARNING**

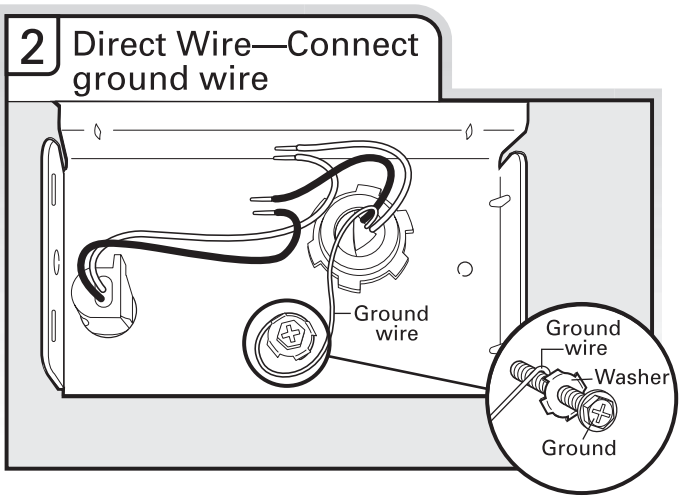
**Electrical Shock Hazard**

**Electrically ground dishwasher.**

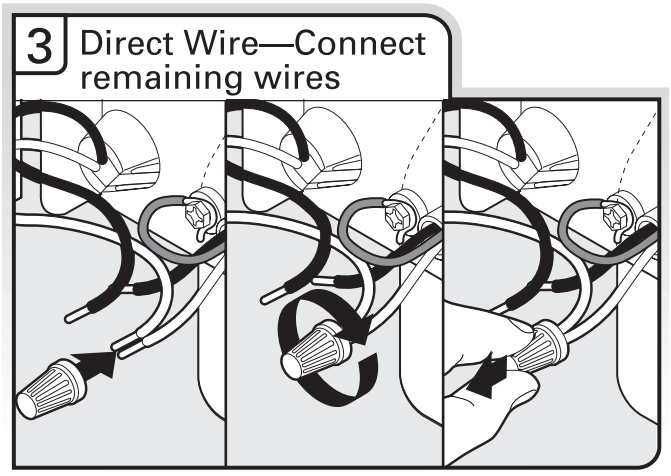
**Connect ground wire to green ground connector in terminal box.**

**Do not use an extension cord.**

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




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.




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

# Installation Requirements (continued)

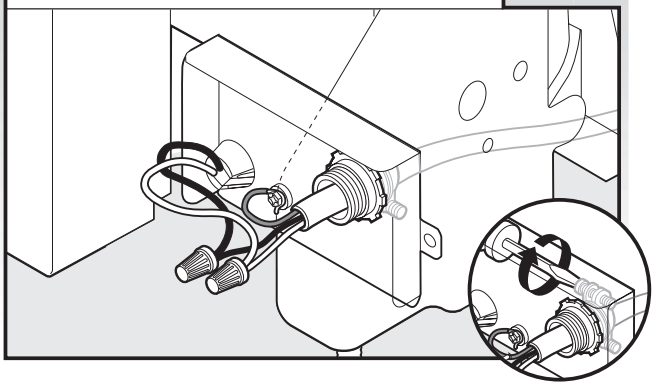
Connect wires black to black and white to white, using UL Listed/CSA Approved twist-on wire connectors (not included).

**Wiring configuration**

| Power supply wire: | | Terminal box wire: |
|---|---|---|
| white | ⟷ | white |
| black | ⟷ | black |
| ground wire | ⟷ | ground connector |

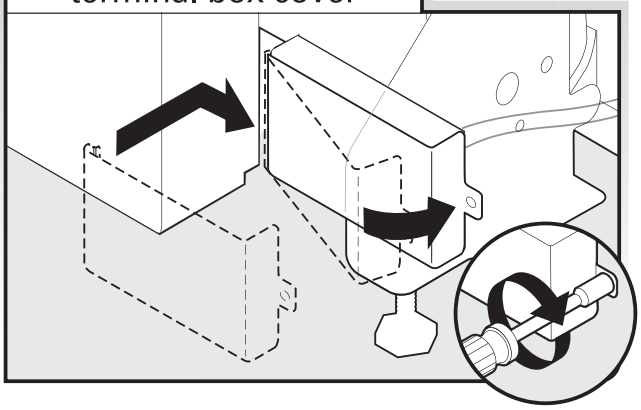
If needed, see website for animated representation of this step. Visit **www.whirlpool.com/electrical** under FAQ tab.

**4 Direct Wire—Secure cable in strain relief**



Tighten strain relief screws to secure cable.

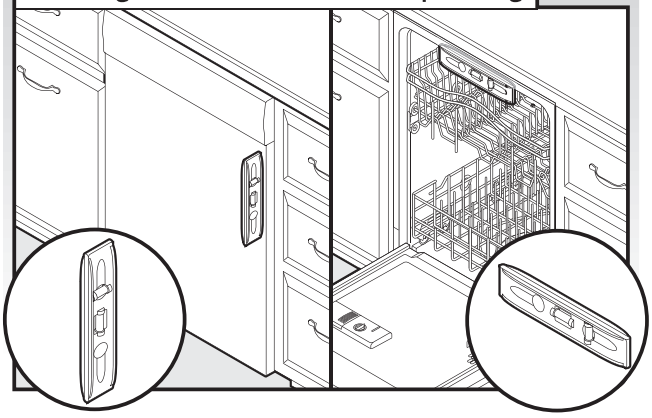
**5 Direct Wire—Reinstall terminal box cover**



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 ¼" nut driver or Torx T20 screwdriver and previously removed screw to secure cover.

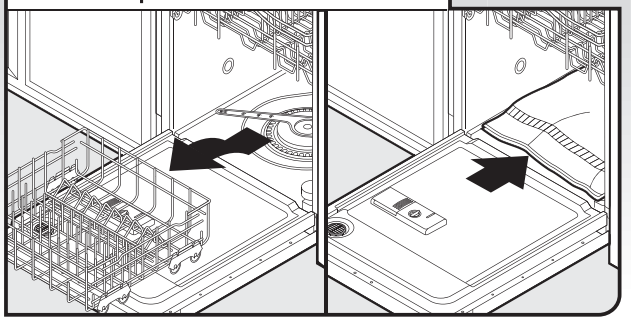
## Secure Dishwasher in Cabinet Opening

**1 Double-check dishwasher alignment in cabinet opening**



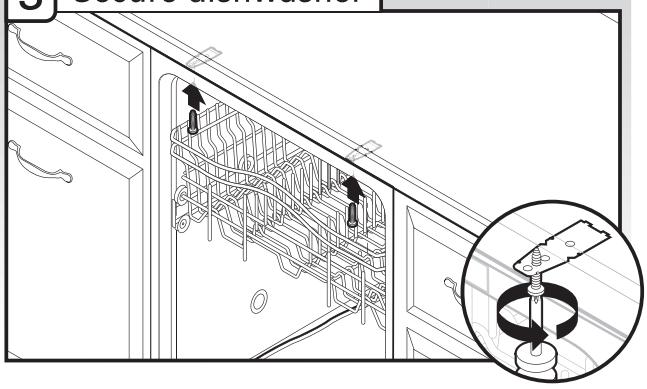
Check that dishwasher is still level front-to-back and side-to-side in cabinet opening.

**2 Remove lower dish rack and place towel**



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

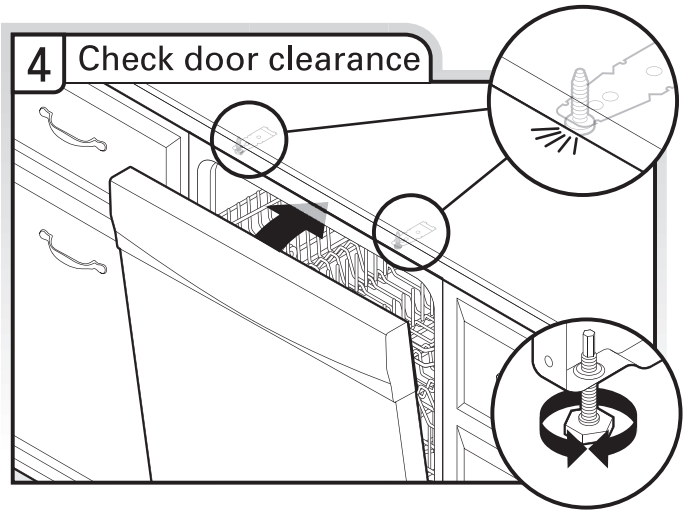
**3 Secure dishwasher**



**NOTE:** Do not drop screws into bottom of dishwasher. Locate brackets on top of dishwasher and secure dishwasher to countertop with two, #10 x ½" Phillips-head screws (included). The dishwasher must be secured to keep it from shifting when door is opened.

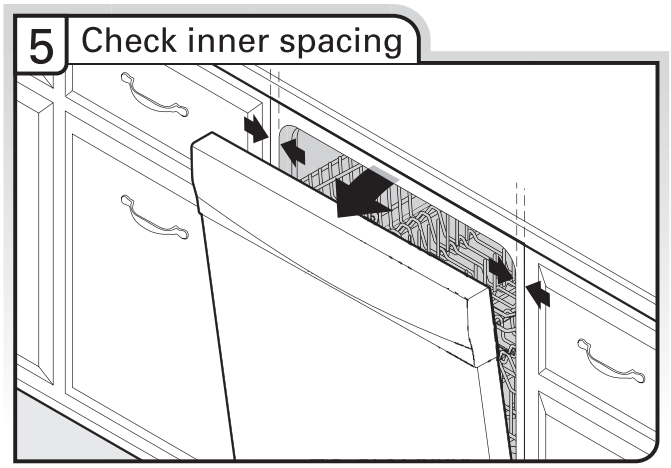
# Installation Requirements (continued)

## 4 Check door clearance



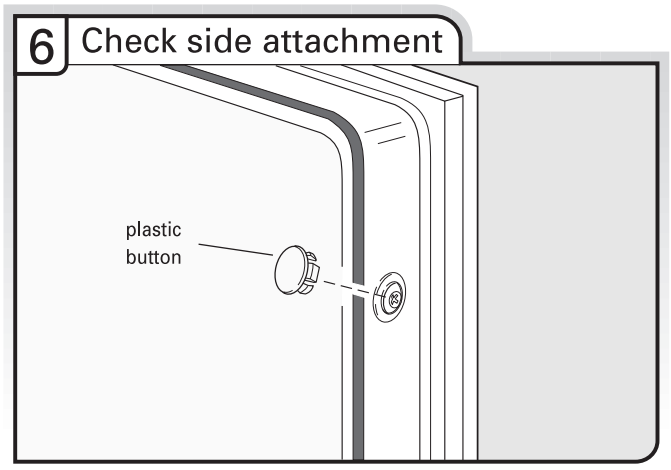
Check that top of door does not contact screws, brackets or countertop. If it does, adjust leveling legs.

## 5 Check inner spacing



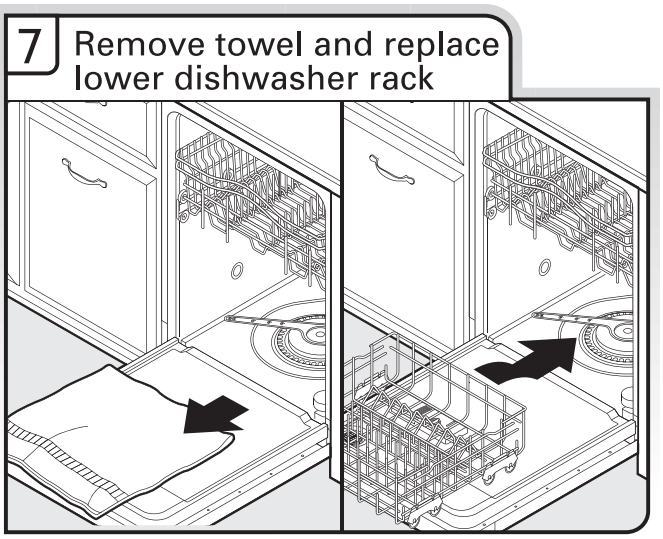
Open door and check that space between dishwasher cabinet opening and tub is equal on both sides. If spacing is not equal, loosen bracket screws secured and shift tub. Tighten bracket screws.

## 6 Check side attachment




If securing with a side attachment, replace plastic buttons.

## 7 Remove towel and replace lower dishwasher rack

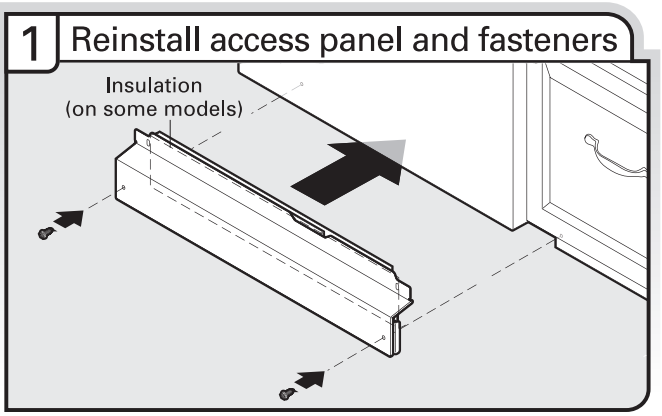


Remove towel from dishwasher. Reinstall the lower dish rack.

If needed, see website for animated representation of this step. Visit **www.whirlpool.com/anchoring** under FAQ tab.

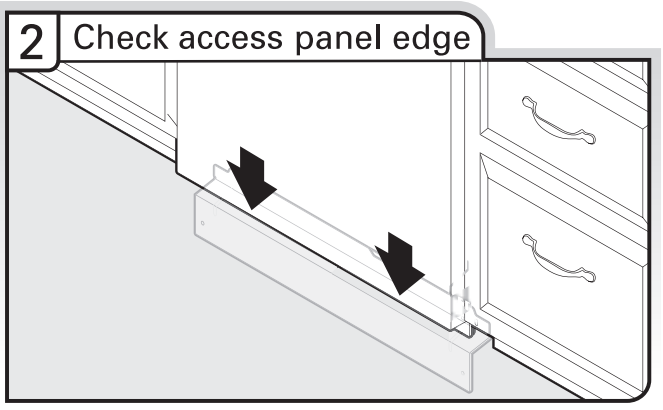
## Complete Installation

## 1 Reinstall access panel and fasteners



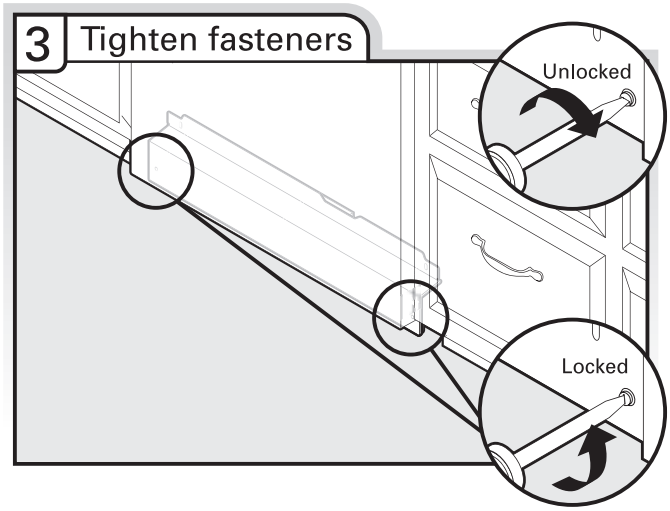

Place the plastic access panel against the dishwasher leg.

## 2 Check access panel edge



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

# Installation Requirements (continued)




Using a flat-blade screwdriver, turn the fasteners ¼ turn to lock into place. The fasteners slot will be straight up and down when properly locked.

**⚠WARNING**

**Electrical Shock Hazard**

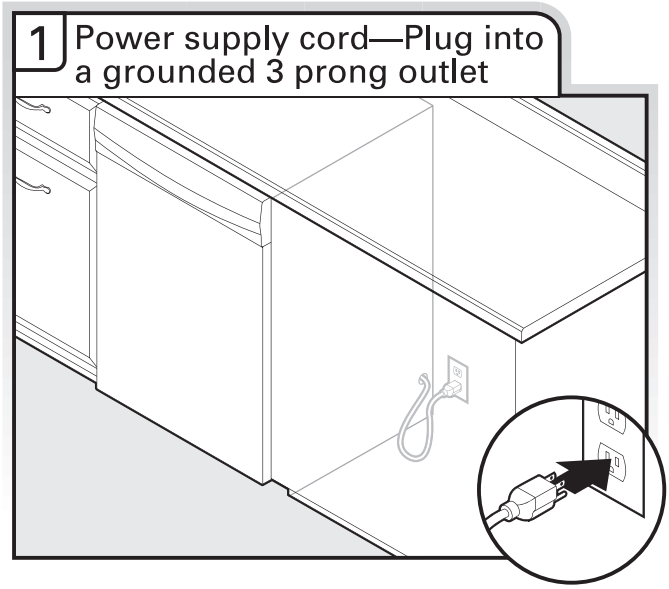
**Plug into a grounded 3 prong outlet.**

**Do not remove ground prong.**

**Do not use an adapter.**

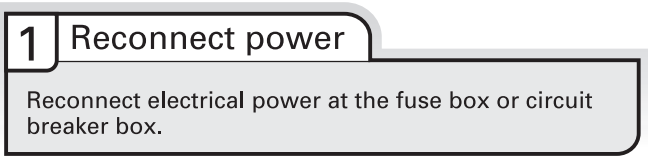
**Do not use an extension cord.**

**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 that there is water in the bottom of the dishwasher tub. Check that dishwasher is working properly.

If the dishwasher is not working properly, 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 possible solutions work, call **1-800-253-1301**, 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 buildup. 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 close the door within 3 seconds, 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.)

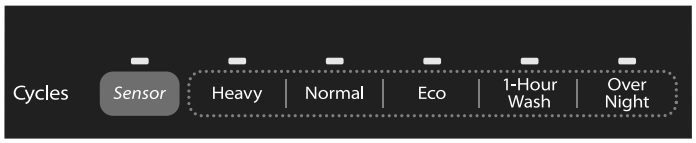
**NOTE:** If a braided supply hose is used, replace inlet hose after 5 years to reduce the risk of hose failure. Record hose installation or replacement dates on the hose for future reference.

# — NOTES —

# PRODUCT OPERATION

## Models: WDF530PAY*, WDF530PLY*, WDF730PAY*, WDF750SAY*, WDT710PAY*, WDT770PAY*, WDT790SAY*, WDT790SLY*, WDT910SAY*

### Cycle and Option Descriptions




This information covers several different models. Your dishwasher may not have all the cycles and options described.

You can customize your cycle by selecting an option.
See option selections. If you change your mind, press the option again to turn off the option, or select a different option. You can change an option anytime before the selected option begins. At each stage of the wash cycle, you may hear noises that you are not used to hearing in your previous dishwasher. Each cycle will provide a series of pauses and water sprays throughout the wash cycle. This is normal and will provide optimal cleaning performance.

*Maximum wash times depend on water temperature, heavy soil condition, dish load size and options selected.

**CYCLE SELECTIONS**

| CYCLES | DISH LOAD TYPES | DESCRIPTIONS | ESTIMATED WASH TIME (HH:MM) | |
|---|---|---|---|---|
| | | | Cycle Minimum | *Maximum (with options selected) |
| Sensor | This is the most recommended cycle for all loads. Use for all day-to-day soil types when washing full to partial dish loads. | This cycle will sense the correct wash time and temperature for the soil levels and size, while sensing the right level for drying. Throughout the cycle, the wash will repeatedly pause adjusting for optimal wash action and sensing. | 1:45 | 4:40 |
| Heavy | Use for hard-to-clean, heavily soiled pots, pans, casseroles, and regular tableware. | This cycle combines tough wash action, longer wash time and higher wash temperatures to remove the tough soils. | 2:05 | 4:40 |
| Normal | Use for loads with normal amounts of food soil. | The energy-usage label is based on this cycle. During the wash, the wash action will repeatedly pause for several seconds. | 1:45 | 4:40 |
| Eco | Use for lightly soiled items, china and crystal. | The most water and energy efficient cycle, using less water and energy, while maintaining good wash performance. | 1:45 | 2:13 |
| 1-Hour Wash | Use for fast results. The 1 Hour Wash cycle will clean normal soils using slightly more water and energy. | For improved drying, select the Heated Dry option which adds ½ hour. | 0:58 | 1:21 |
| Over Night | Use for loads with normal amounts of food soil. It is a longer cycle and therefore is ideal to run overnight. | Longer cycle developed to run overnight to save energy. This cycle has a longer soak time before the main wash begins. | 6:20 | 7:00 |

**IMPORTANT:** The sensor in your dishwasher monitors the soil level. Cycle time and/or water usage can vary as the sensor adjusts the cycle for the best wash performance. If the incoming water is less than the recommended temperature or food soils are heavy, the cycle will automatically compensate by adding time, heat and water as needed.

*** All colors**

# Product Operation (continued)


**OPTION SELECTIONS**

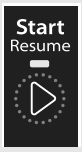
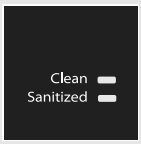
| OPTIONS | DISH LOAD TYPES | DESCRIPTIONS | USE WITH: |
|---|---|---|---|
| PowerScour | Pans, casseroles, etc., with tough food soil. | Activates the POWERSCOUR™ spray jets and provides intensified water spray to the back of the lower level rack.<br>May add heat and time to the cycle. | Sensor, Heavy or Normal cycle |
| Hi-Temp Wash | Loads containing tough, baked-on food. | Increases the target water temperature during the wash portions of the cycle.<br>Adds heat, wash time and water to the cycle. | Sensor, Heavy or Normal cycle |
| Sani Rinse | To sanitize your dishes and glassware in accordance with NSF/ANSI Standard 184 for Residential Dishwashers. | Raises the water temperature in the final rinse to approximately 155°F (68°C). This high temperature rinse sanitizes your dishes and glassware in accordance with NSF/ANSI Standard 184 for Residential Dishwashers. Certified residential dishwashers are not intended for licensed food establishments.<br>The Sanitize or Sani Rinse option adds heat and time to the cycle. | Sensor, Heavy or Normal cycle. Only these sanitization cycles have been designed to meet the NSF/ANSI requirements. |
| Eco High<br>Heat Dry | For best drying results, dry dishes with heat.<br>High Dry provides the optimum dry performance. Eco Dry provides energy savings and good dry performance. | Turn OFF (air dry) when loads contain plastic dinnerware that may be sensitive to high temperatures.<br>High Dry with the use of rinse aid will provide the best drying performance. | All cycles |
| 4-Hour Delay | To run your dish washer at a later time or during off-peak hours. | Delays the start of a cycle up to 8 hours (on models with 2-4-8 Hour Delay).<br>Select a wash cycle and options. Press Delay until reaching the desired hours for the delay to start. Press START/RESUME. Close the door firmly. | All cycles |
| Top Rack Wash | Smaller loads slightly soiled. | Uses less energy and time to clean small loads. | Sensor, Heavy or Normal cycle |

# Product Operation (continued)


**OPTION SELECTIONS**

| OPTIONS | PURPOSE | DESCRIPTIONS | USE WITH: |
|---|---|---|---|
| **Control Lock**   | To avoid unintended use of your dishwasher, or cycle and option changes during a cycle. | To turn on Lock, press and hold Control Lock for at least 3 seconds.<br>To turn off Lock, press and hold Control Lock for at least 3 seconds.<br>When Control Lock is lit, all buttons are disabled. If you press any pad while your dishwasher is locked, the light flashes 3 times. The dishwasher door can be opened while the controls are locked. | Anytime |

**CONTROLS AND CYCLE STATUS**

| CONTROL | PURPOSE | COMMENTS |
|---|---|---|
|   | Press to start or resume a wash cycle | If the door is opened during a cycle or the power is interrupted, the Start/Resume indicator flashes. The cycle will not resume until the door is closed and Start/Resume is pressed. |
|   | Press to cancel wash cycle | Close the door firmly. The dishwasher starts a 2-minute drain (if needed). Let the dishwasher drain completely. |
|   | To follow the progress of your dishwasher cycle | Clean indicator glows when a cycle is finished.<br>If you select the Sani Rinse option, when the Sani Rinse cycle is finished, the “Sanitized” indicator glows. If your dishwasher did not properly sanitize your dishes, the light flashes at the end of the cycle. This can happen if the cycle is interrupted, or the water could not be heated to the required temperature. The light goes off when you open or close the door or press CANCEL. |

# — NOTES —

# COMPONENT ACCESS

This section instructs you on how to service each component inside the Whirlpool Global Wash System (GWS). The components and their locations are shown below.


# Insulation Blanket and Door Latch Strike

**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.**

## Installing Insulation Blanket

(Plastic Tub Models Only)

1. Fasten the blanket on the hooks located on the sides of the tub, see figures 1 and 2.

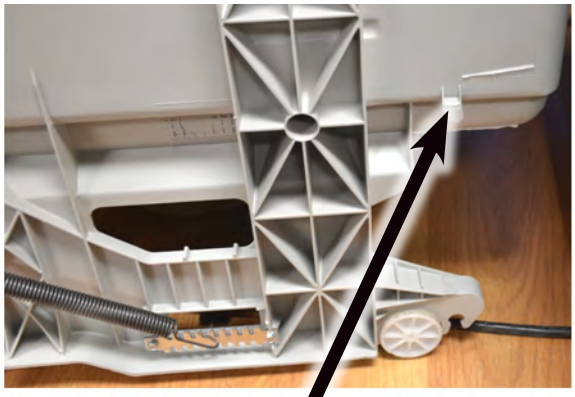


Figure 1

Figure 2

## Removing Door Latch Strike

(FID and 2 ½" Console)

1. Open the dishwasher door.
2. Depress the 2 outside bars and push down the center bar and slide out the latch, see figures 1,2 and 3.

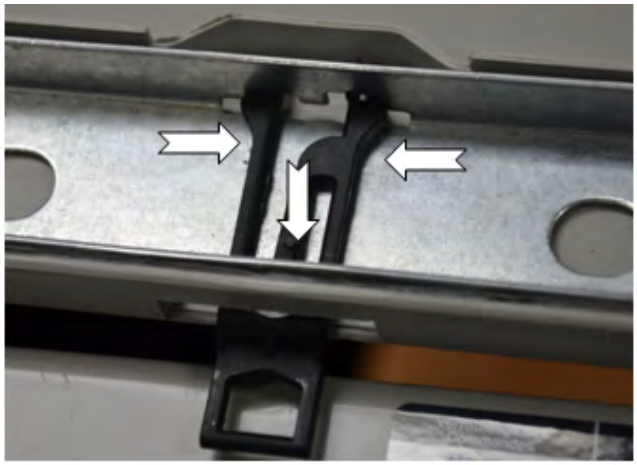


Figure 1

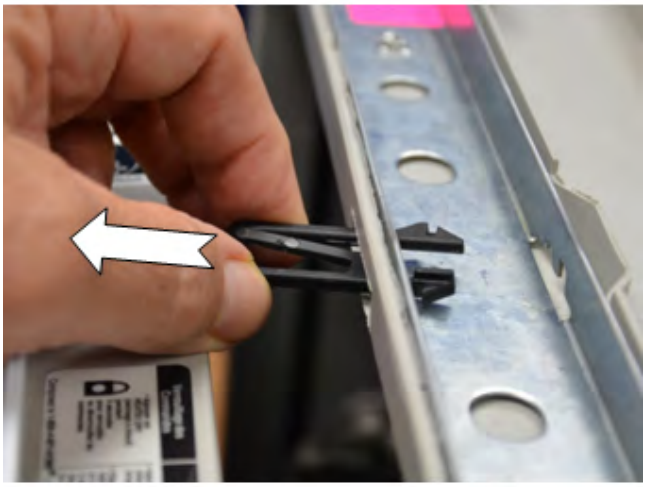


Figure 2

Figure 3

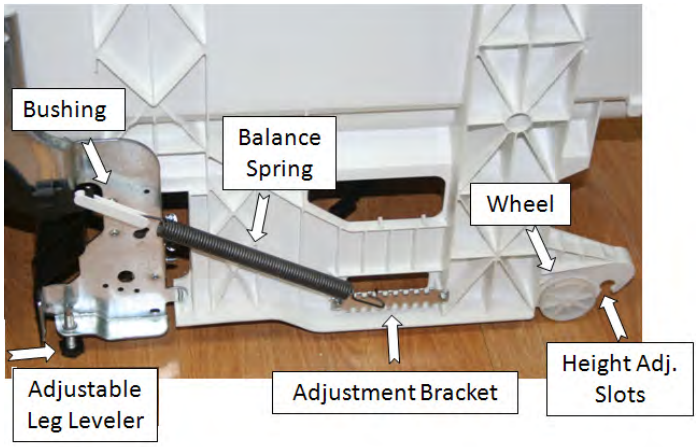
# Adjustable Door Springs, Wheels, Water Inlet and Drain Hose

**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.**

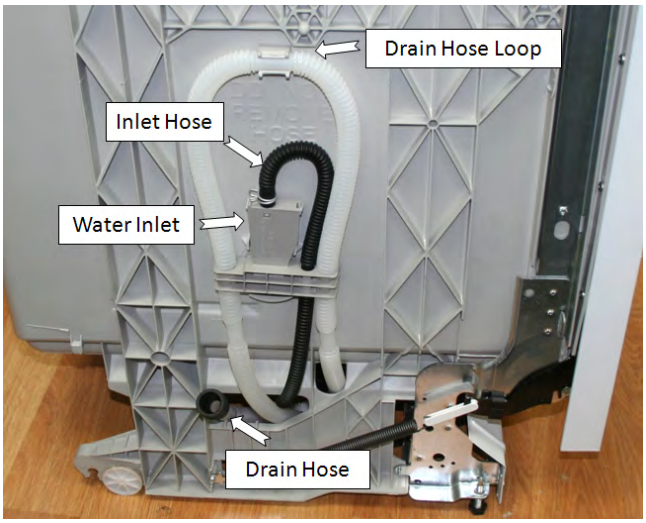
## Door Spring Adjustment

1. Unplug dishwasher or disconnect power.
2. Remove the dishwasher from the installation.
3. Adjust spring tension so door stays open with empty rack resting on the door. Move wheel into a different slot to increase or decrease the height.

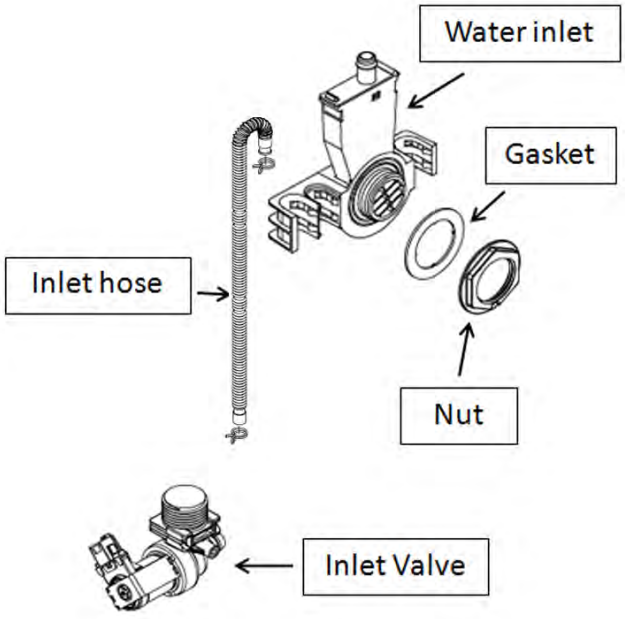



## Water Inlet and Drain Hose

Drain loop must be higher than drain to prevent siphoning.




## Water Inlet Components



# Overfill 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.**

### Overfill Assembly Components

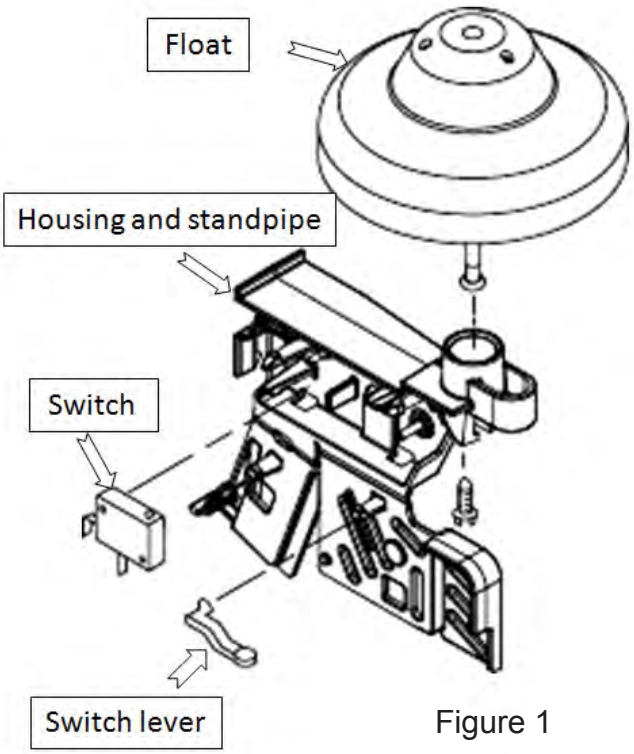



Figure 1

### Accessing Overfill Assembly

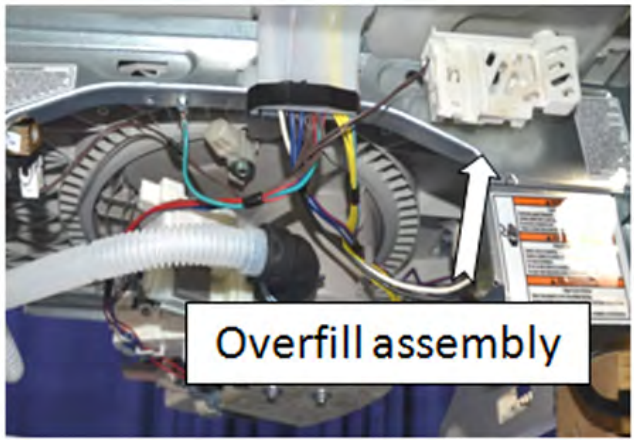



Figure 2 - Location of Overfill Assembly

1. Unplug or disconnect power.
2. Open Cover and remove 1/4” hex head screw, see figure 3.

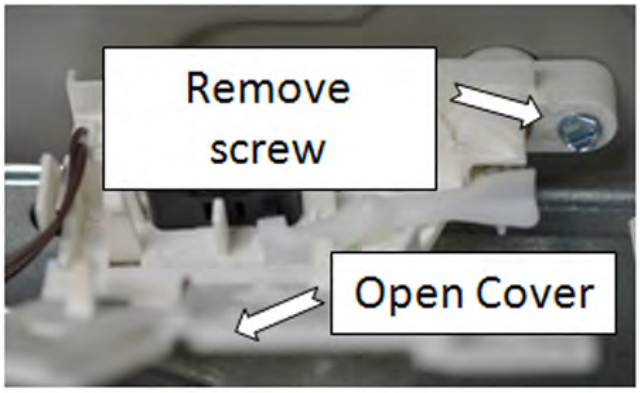



Figure 3

3. Release float stem, see figure 4.

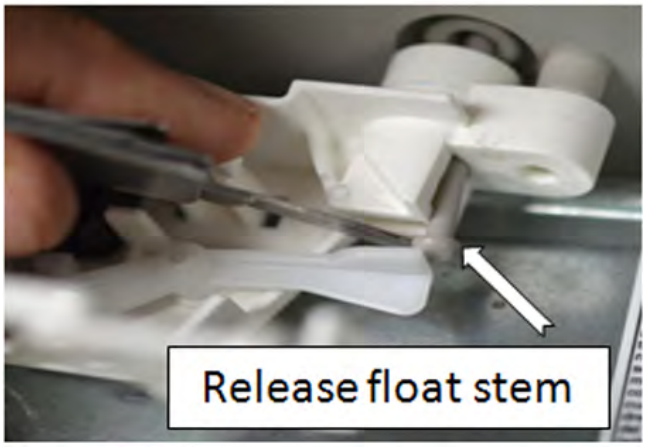



Figure 4

# Overfill Assembly (continued)

### Accessing Overfill Assembly (continued)

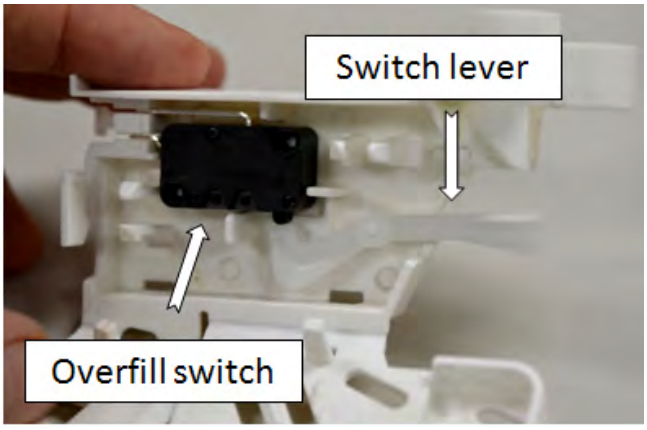



Figure 5 - Overfill Switch & Lever

4. Open door and lift out switch to replace, see figure 6.

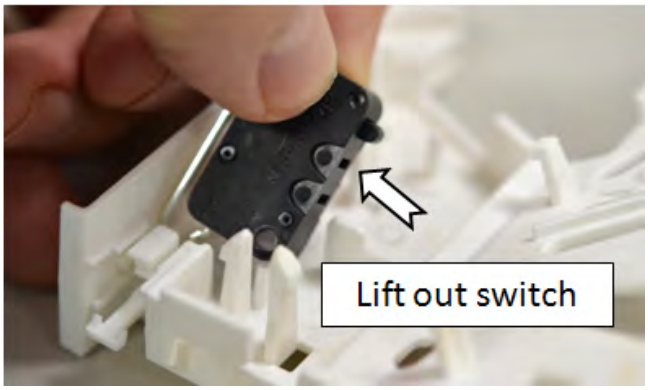



Figure 6

# Accessing Door Components

**⚠ 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 4 screws (long) across top of door 10 screws (short) on the sides, see figures 1 and 2.
3. Remove the outer door panel, see figure 3.

Figure 1

Figure 2


Figure 3

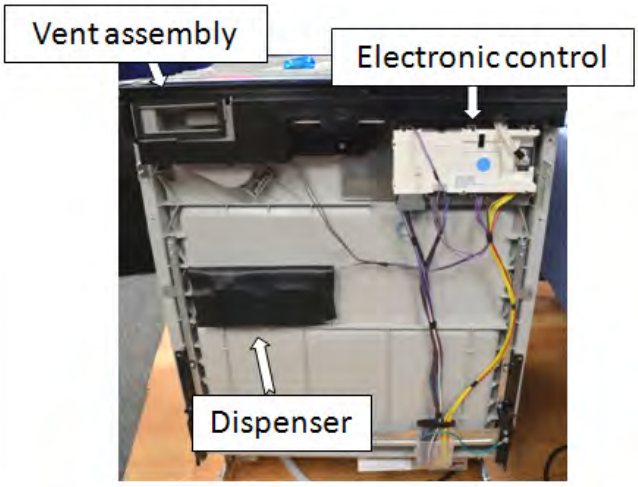



Figure 4

# Removing User Interface

**⚠ 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.**

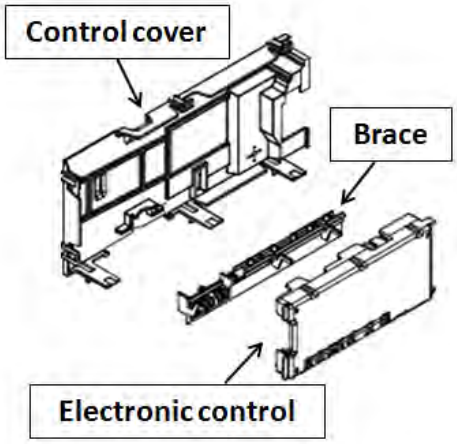
1. Unplug dishwasher or disconnect power.
2. Remove the outer panel from the door.
3. Remove 1/4” hex head screw from the user interface assembly, see figure 1.
4. Remove the user interface assembly and disconnect the wiring harness, see figures 2 and 3.

Figure 1

Figure 2

Figure 3

## Control Board and User Interface



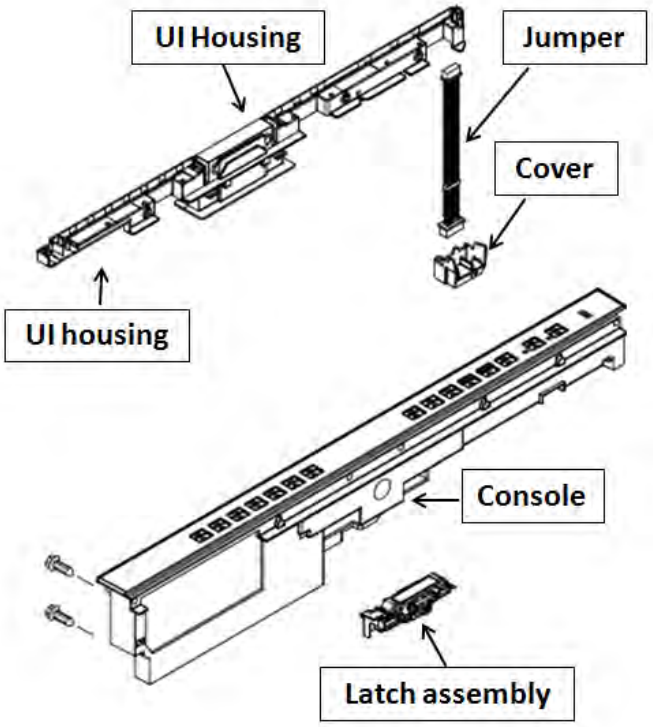




Figure 4

# Removing Electronic Control Board

**⚠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 outer panel from the door.
3. Lift up locking tab, see figure 1
4. Slide the electronic control to the left to unhook the tabs on the back of the control from the slots in the door bracket, see figures 2 and 3.

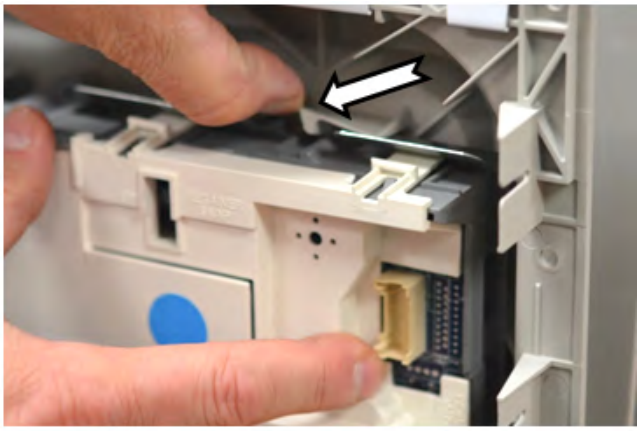


Figure 1

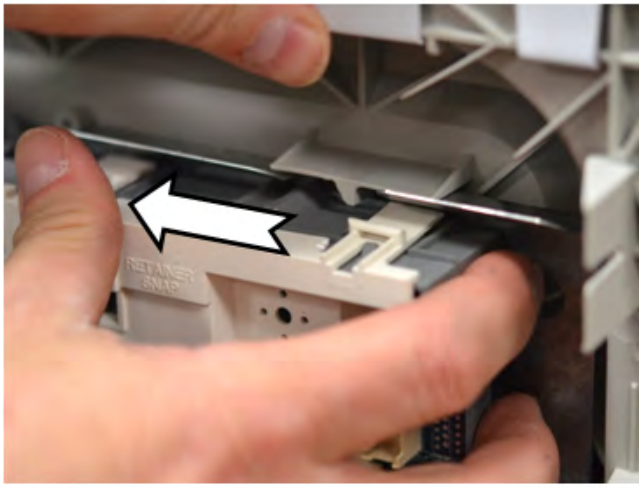


Figure 2

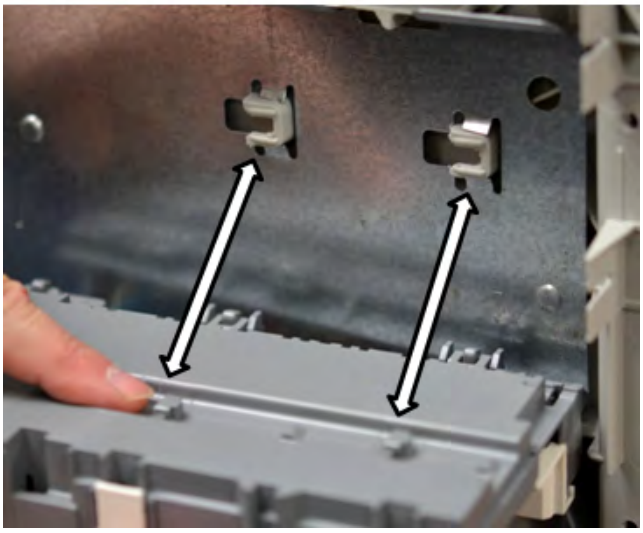


Figure 3

**NOTE:** There are 2 tabs on the back of the control that hook into slots in the door bracket.

# Removing Vent 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.**

1. Unplug dishwasher or disconnect power.
2. Remove the outer panel from the door.
3. Insert a screwdriver into the slot and tap CCW to loosen, see figure 1.
4. Rotate the vent deflector counter-clockwise and lift off, see figure 2.
5. Remove and inspect vent gasket, see figure 3.
6. Remove the vent assembly.

Figure 1

**NOTE:** The deflector may be difficult to turn Inspect the vent gasket and replace if necessary.

Figure 2

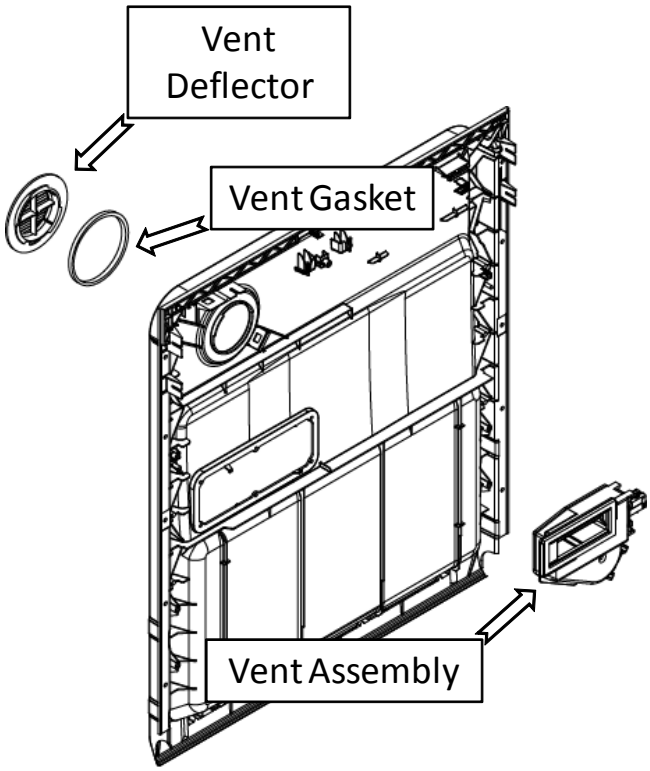
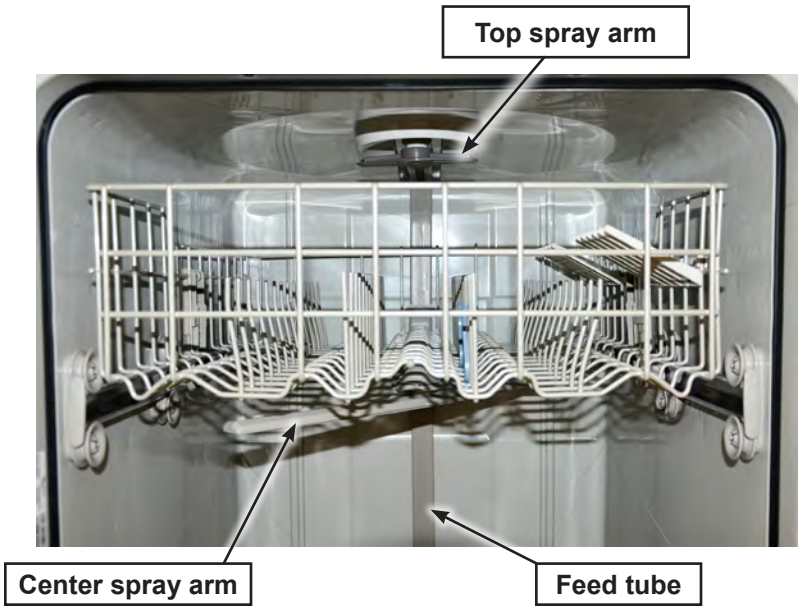
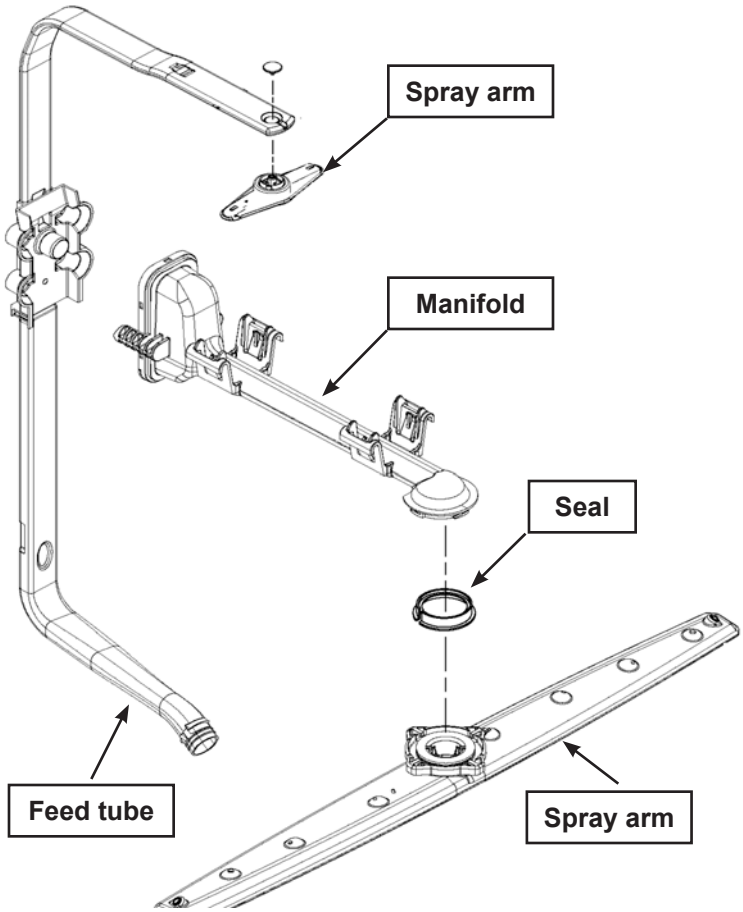



Figure 3

# Inside The Dishwasher – Upper Spray Arms

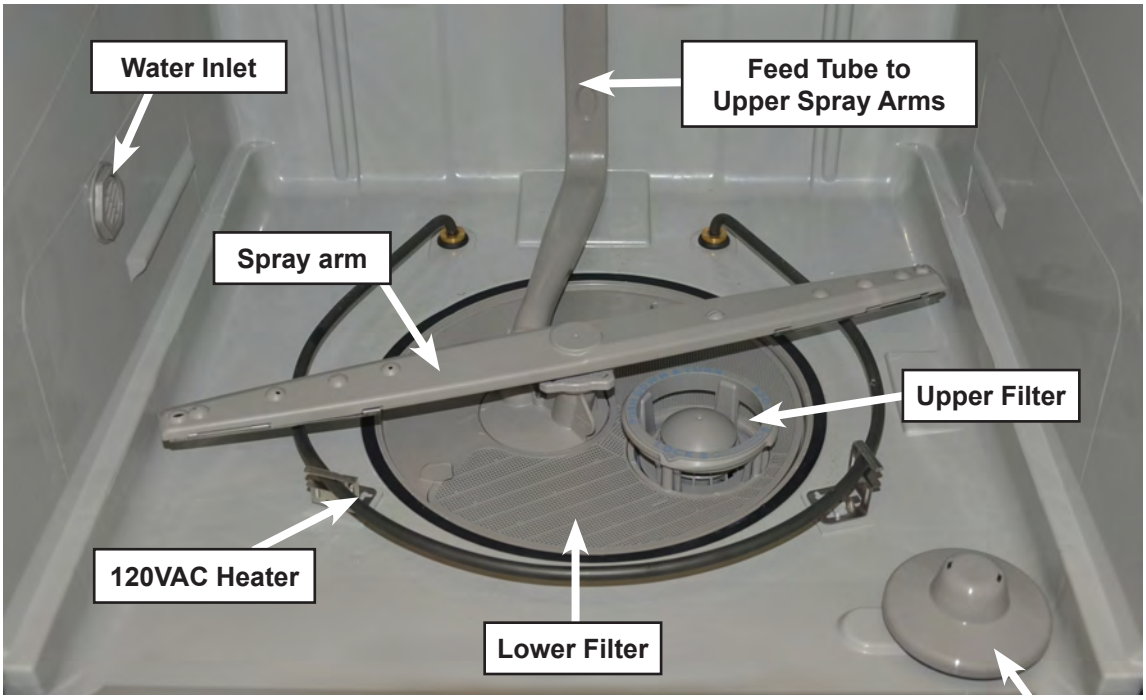
## FID and 2 1/2” Console Models



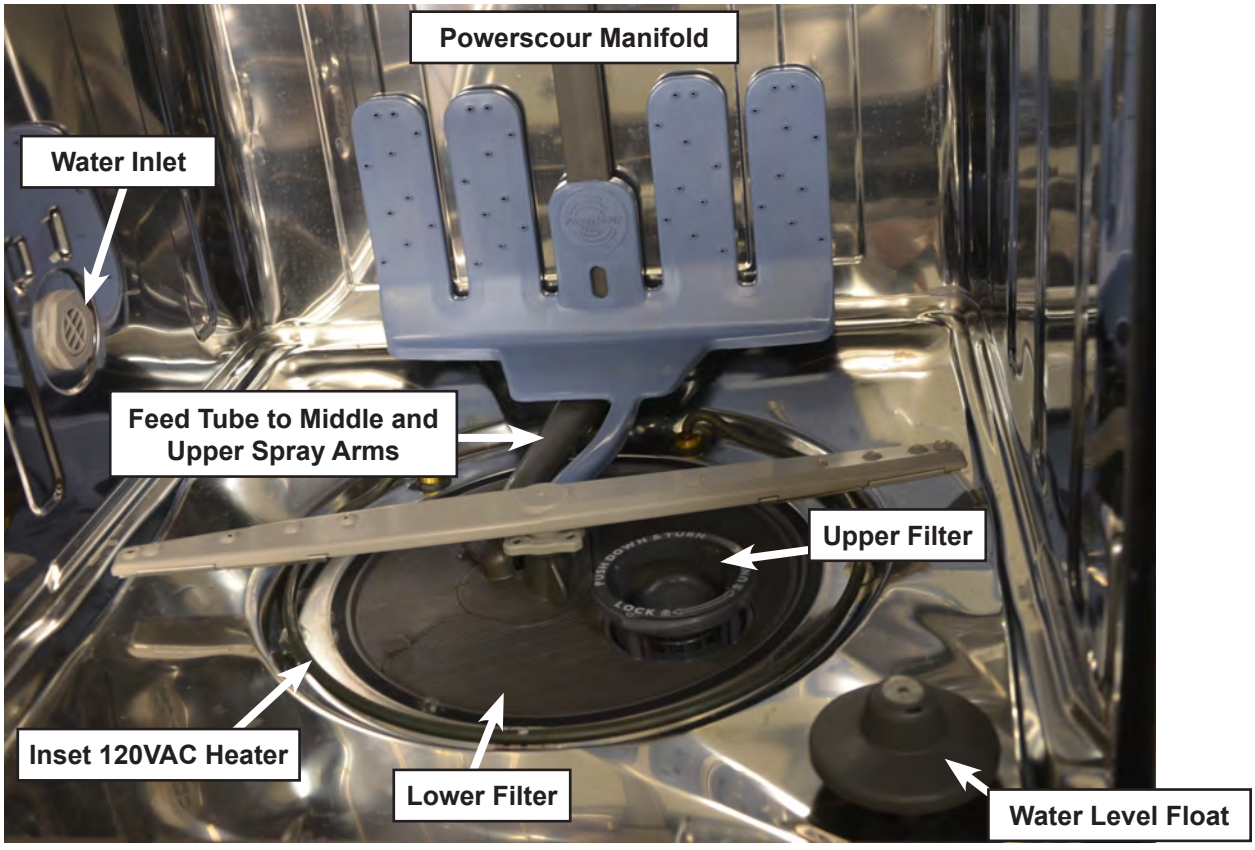




Component Identification

# Tub Components – Plastic Tub Models




# Tub Components – Stainless Steel w/Powerscour



# Removing Dispenser 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.**

1. Unplug dishwasher or disconnect power.
2. Remove the outer panel from the door.
3. Remove - 6 - ¼" hex head screws securing the dispenser to the door, see figure 1.
4. Disconnect switch wires.
5. Remove dispenser assembly, bracket and shield, see figure 2

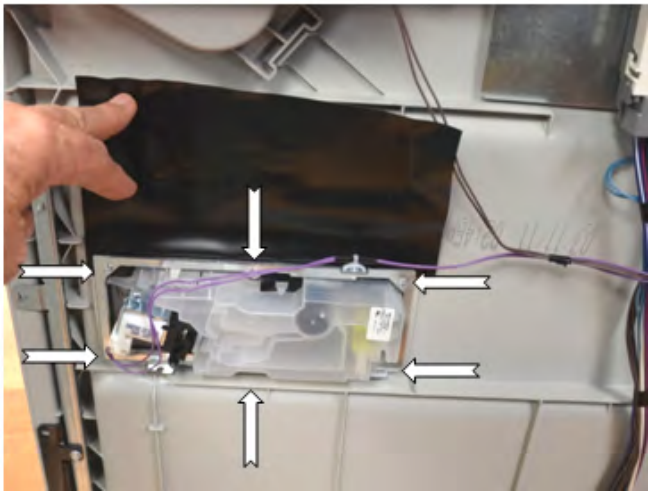


Figure 1

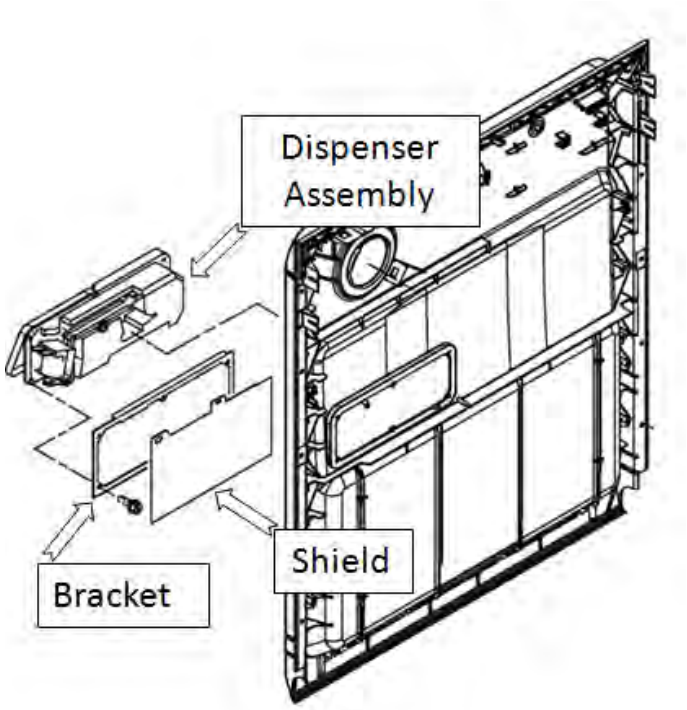



Figure 2

# Removing The Upper Basket

**Removing The Upper Basket:**

1. Unlock the left and right side locking tabs and pull out the basket, see figure 1, 2 and 3.

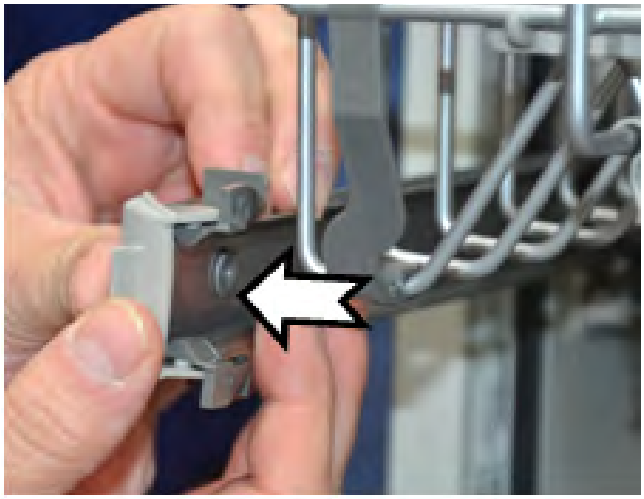


Figure 1

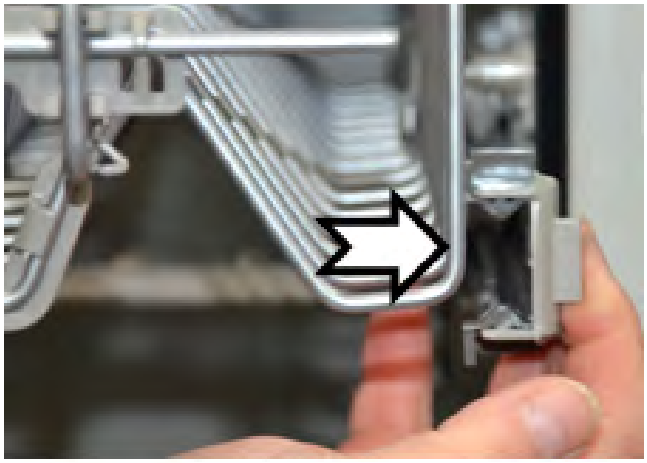


Figure 2

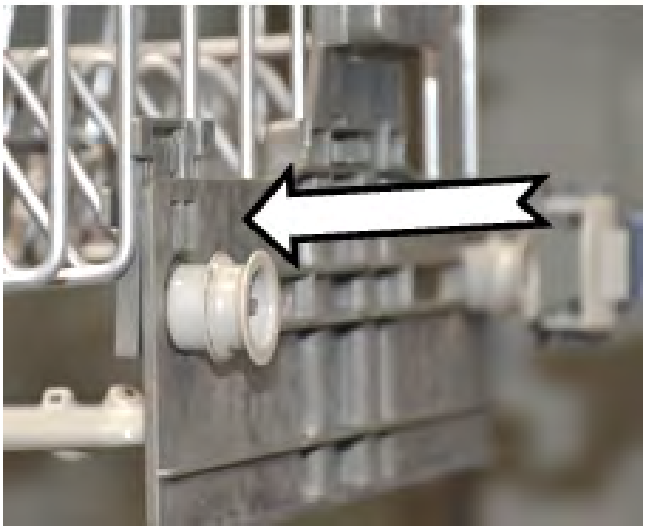


Figure 3

**To remove the rack (push tab rack stop):**

1. Roll the rack 1/3 to 1/2 of the way out.
2. Remove each plastic push tab rack stop from the end of each track by pushing inward toward the rack on the ridged area of the rack stop. The rack stop will snap open and can be easily removed by pulling straight out. Be sure to support the track while removing rack stops, see figure 4.
3. Roll the rack all the way out of the track and remove from the dishwasher.

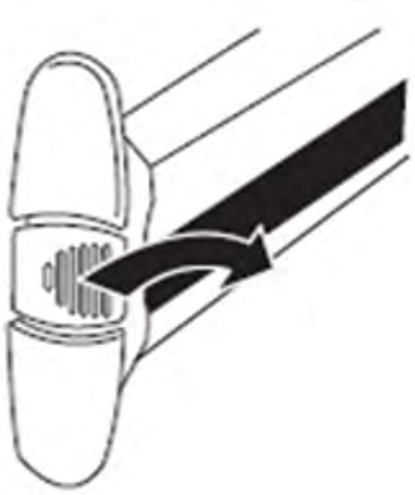


Figure 4

# Removing Lower Spray Arm

**To remove the lower spray arm:**

1. Locking cap location, see figure 1.
2. Rotate the lower spray arm nut ¼ turn counter clockwise to remove the spray arm, see figure 2.
3. Lift off, see figure 3.

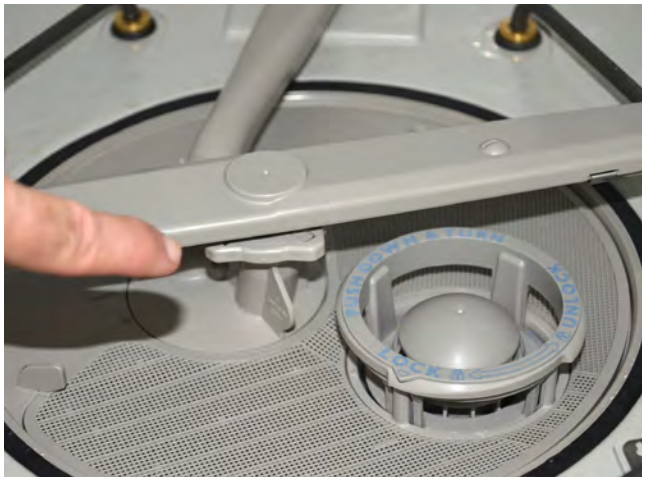


Figure 1

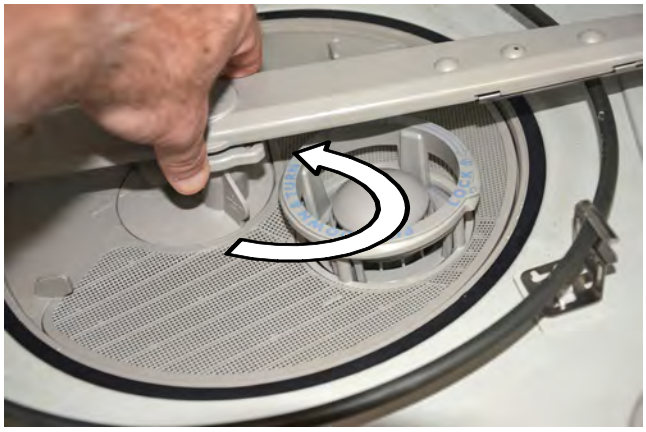


Figure 2

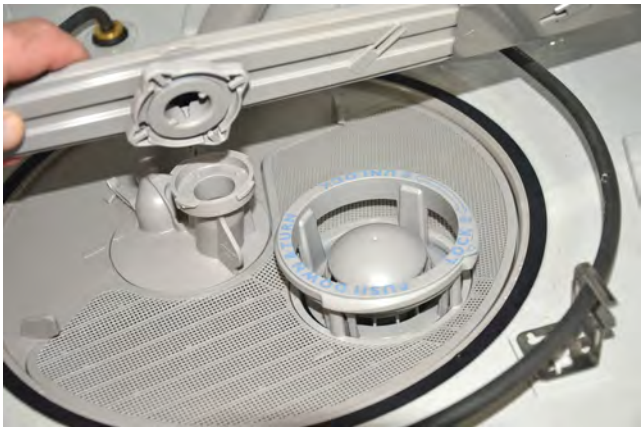


Figure 3

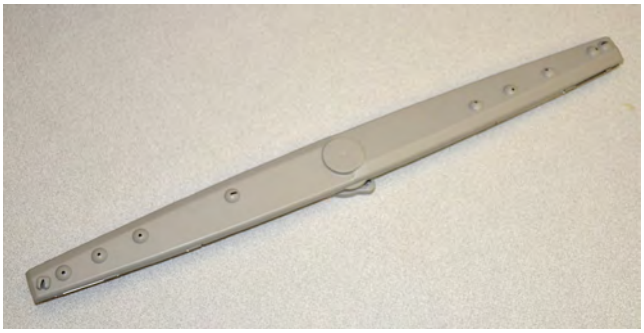


Figure 4 - Lower Spray Arm

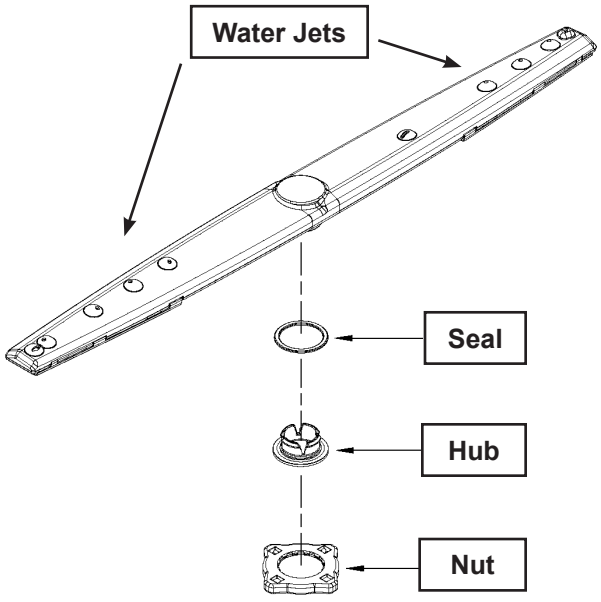



Figure 5

**Lower Spray arm components**

# Removing Filters

**To remove the filters:**

1. Upper Filter-Push down and turn filter 1/4 turn counterclockwise and lift out, see figures 1 and 2.
2. Lower Filter- Lift out of sump, see figure 3.

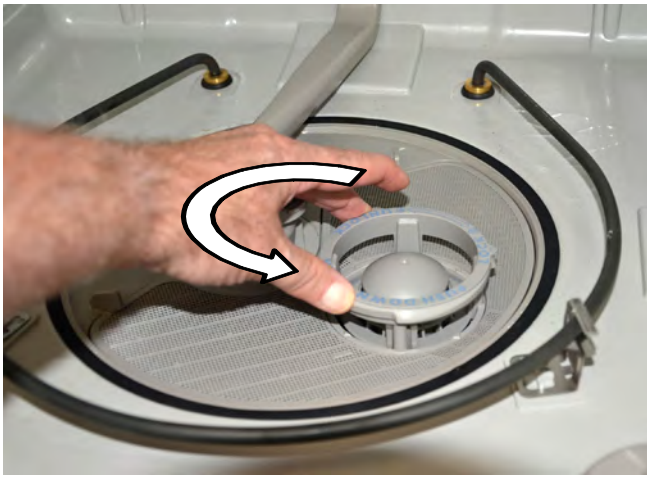


Figure 1

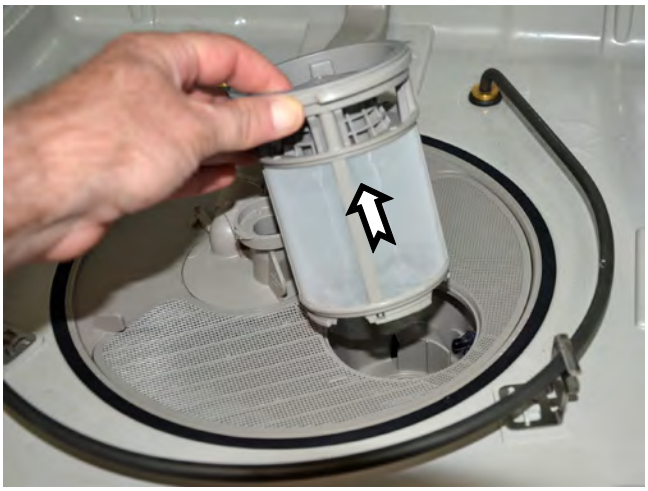


Figure 2

Figure 3

# Removing POWERSCOUR™ Manifold and Diverter Disk

**To Remove POWERSCOUR™ Manifold: (available on some models)**

1. Unsnap manifold from distribution tube.
2. Disconnect the manifold tube from the sump by lifting up, see figure 1.

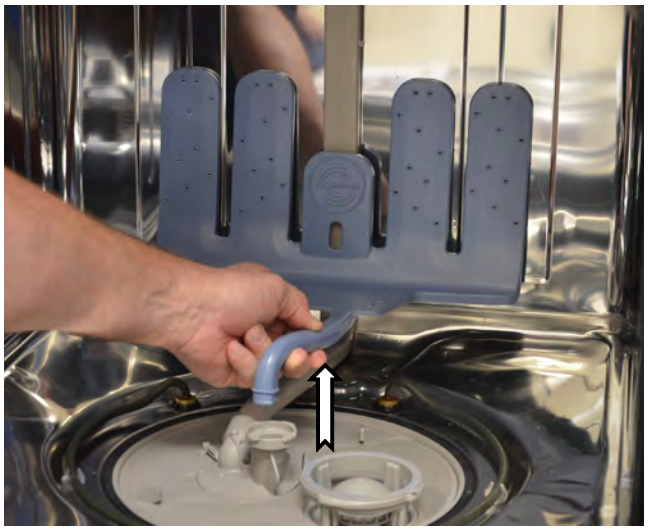


Figure 1

**Powerscour Manifold**

Figure 2

**NOTE**: Powerful fixed jets target water towards pots, pans, or casserole dishes loaded in the back of the dishwasher.

**Accessing Diverter Disk**

**Plastic Tub:**

1. Remove 1/4” hex head screw securing distribution tube to the tub, see figure 3.
2. With the screw removed, the feed tube can be disconnected from the diverter housing, see figure 4.

**Stainless Steel Tub:**

1. Unsnap distribution tube from tub clips.
2. Disconnect the feed tube from the diverter housing, see figure 4,

Figure 3

Figure 4

# Removing POWERSCOUR™ Manifold and Diverter Disk (cont.)

3. Release the lock on the diverter housing, see figure 5.
4. Rotate the housing counterclockwise, see figure 6.
5. Lift out the housing, see figure 7.

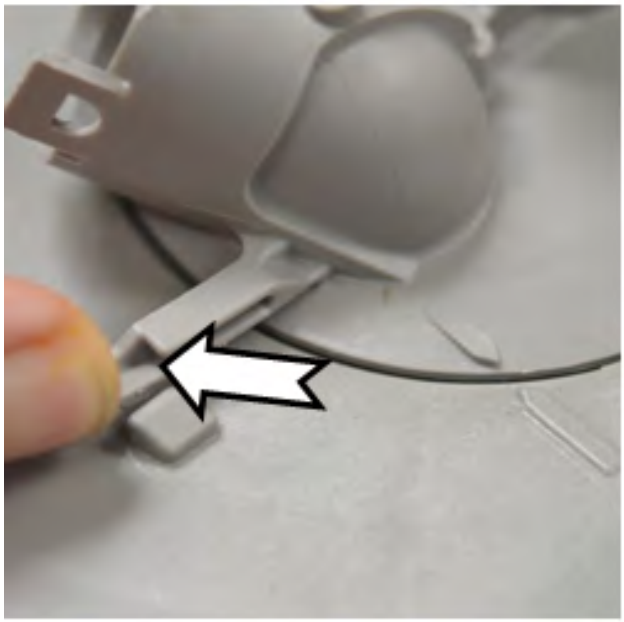


Figure 5

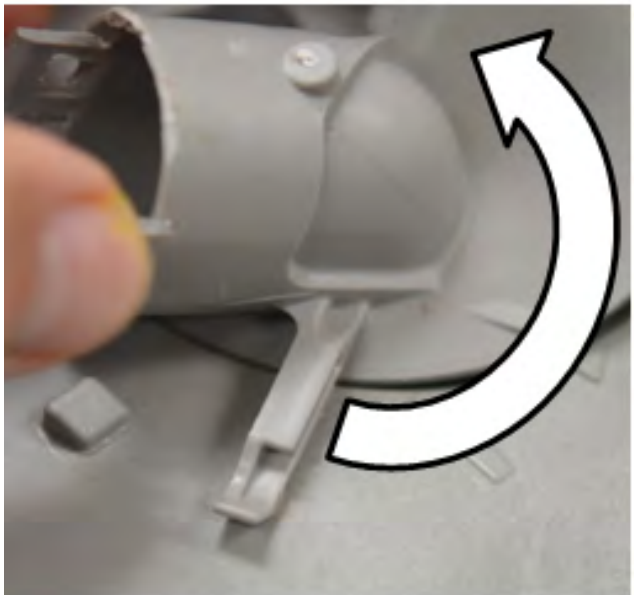


Figure 6

Figure 7

**Diverter Disk**

6. The diverter disc attaches to a keyed shaft, see figure 8.

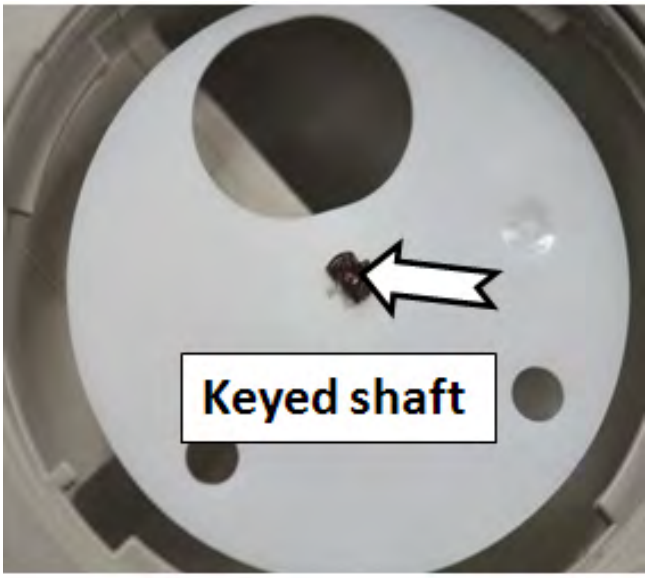



Figure 8

# Removing Diverter Disk (continued)

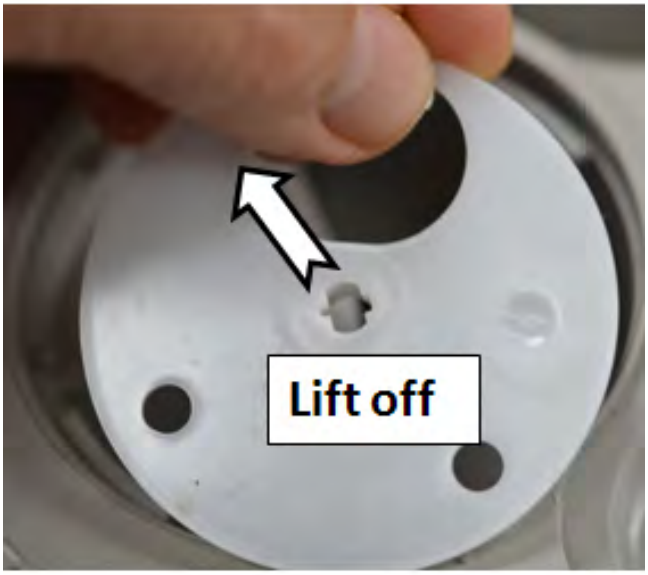



Figure 9

Figure 10

## Installing Diverter Housing

1. Align the arrow on the diverter housing to the lower arrow on the sump
2. Rotate the housing clock wise until the diverter housing locks in place, see figure 1.

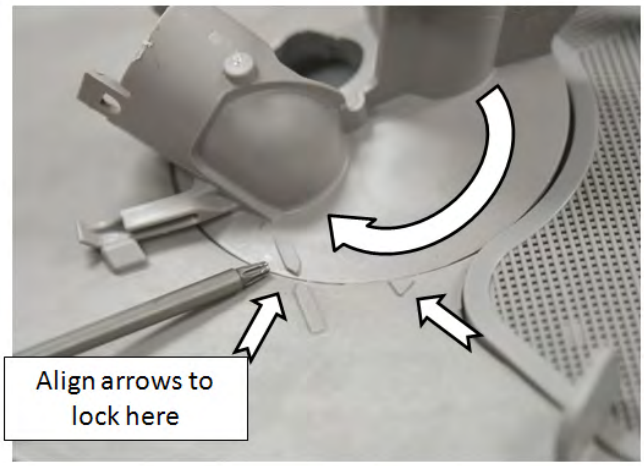
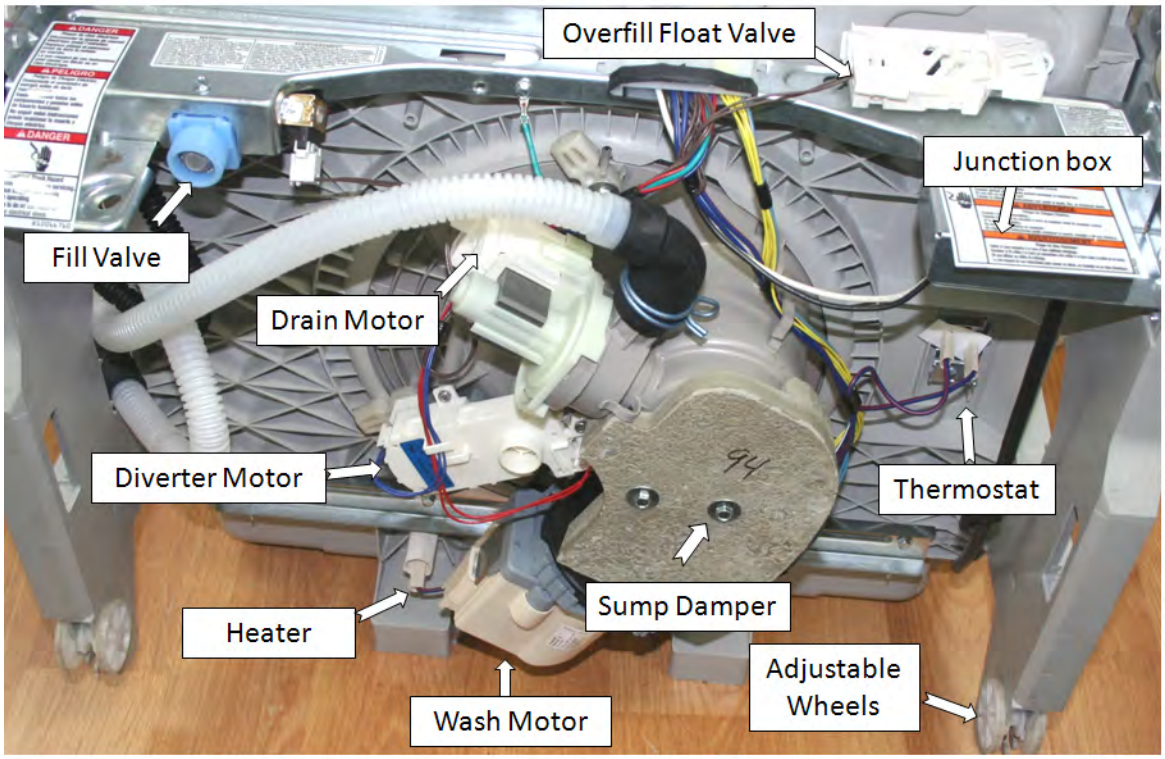
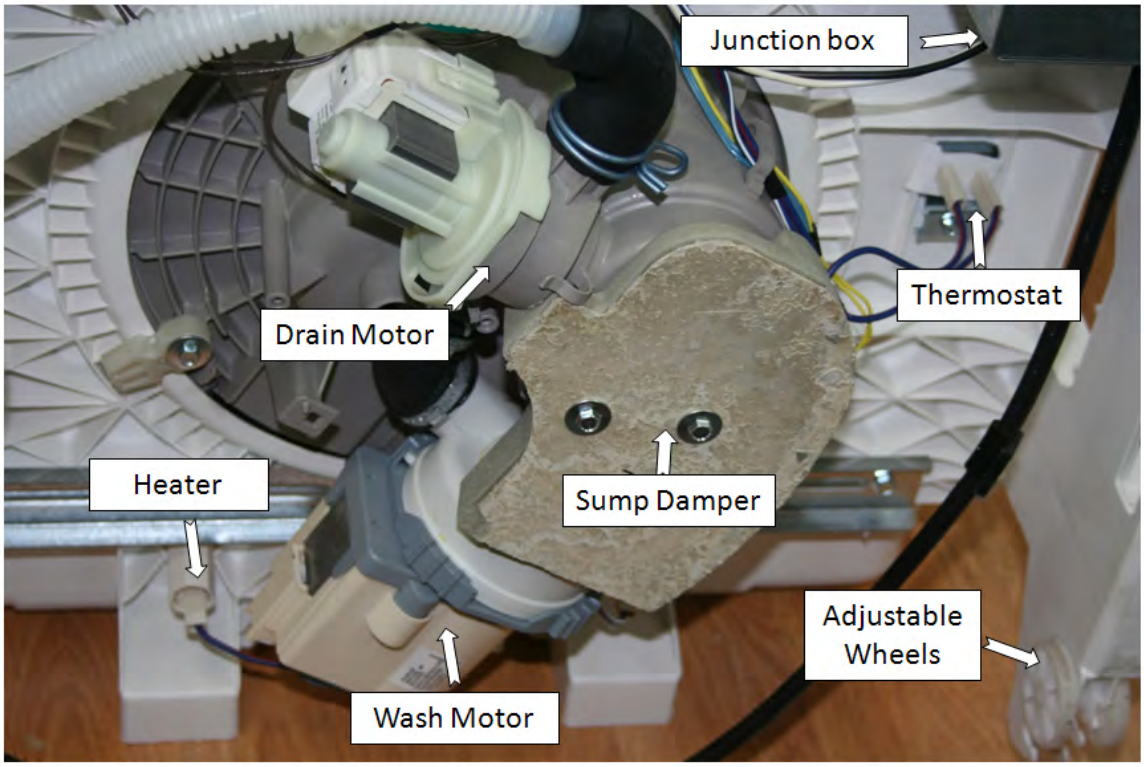



Figure 1

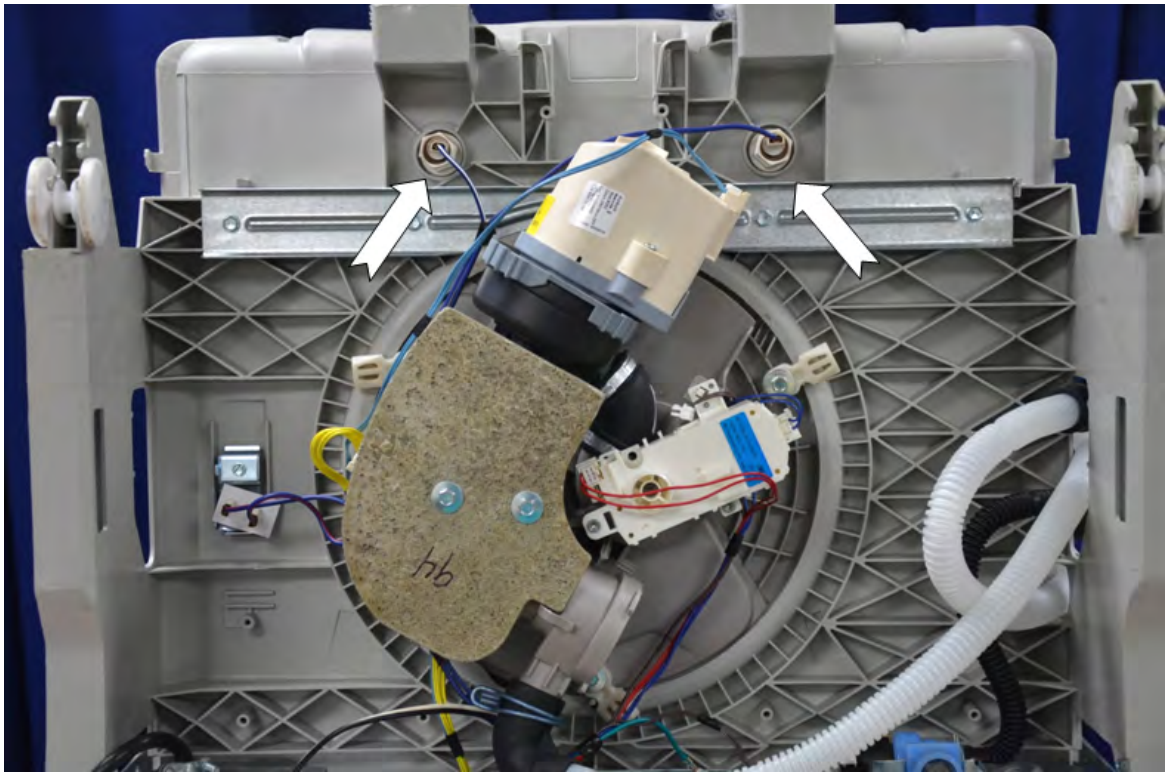
# Under The Tub Components – Diverter Valve Models

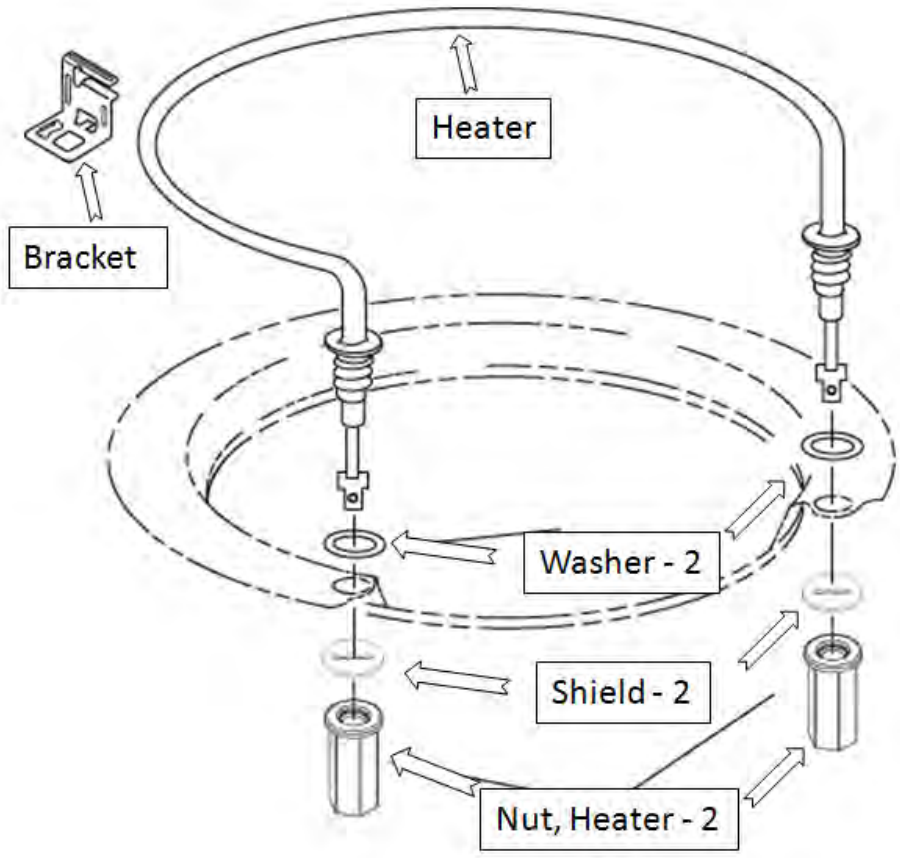



# Under The Tub Components – No Diverter Valve



# Heater






**Heater Components**

# Removing The Motor And 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.**

1. Unplug dishwasher or disconnect power.

2. Release hose clamp and pull off the hose, see figures 1 and 2.

**Note:** Be prepared to catch the water from the sump area.

Figure 1

Figure 2

3. Remove the wire harness from the bracket on the side of the sump and move off to the side, see figures 3 and 4.

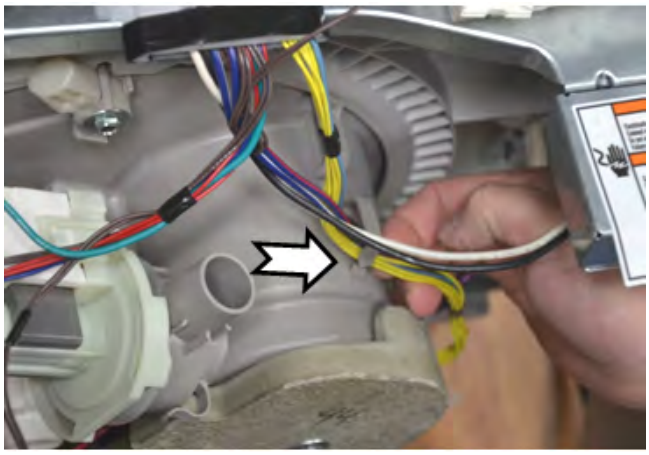


Figure 3

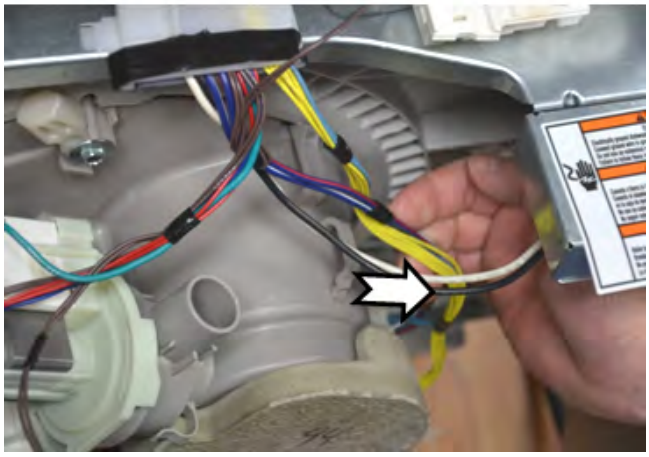


Figure 4

4. Unplug the wire harness connected to the drain pump, see figure 5.

Figure 5

continued next page

# Removing The Motor And Pump Assembly (continued)

5. Release the drain pump lock where it engages the sump, see figure 6.

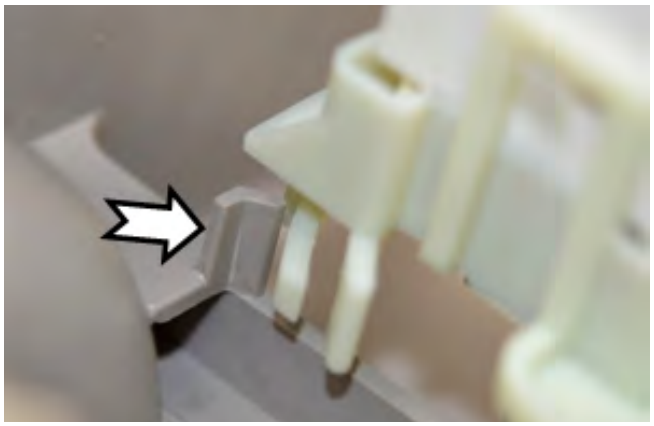


Figure 6

6. Rotate the drain pump 1/4 turn counter clockwise, see figure 7.

Figure 7

7. Remove the drain pump, see figure 8.

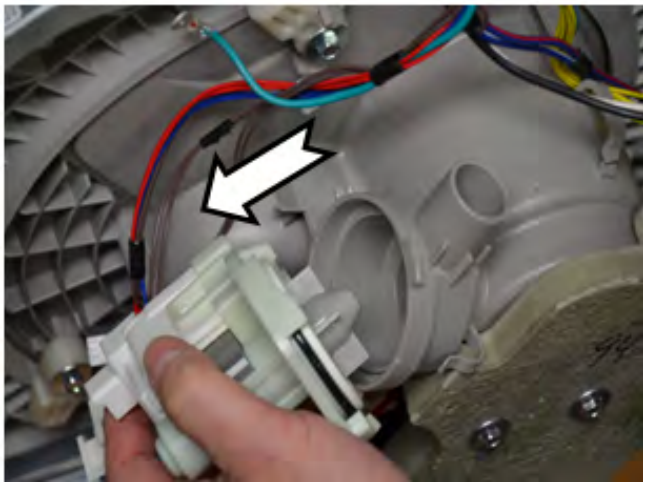


Figure 8

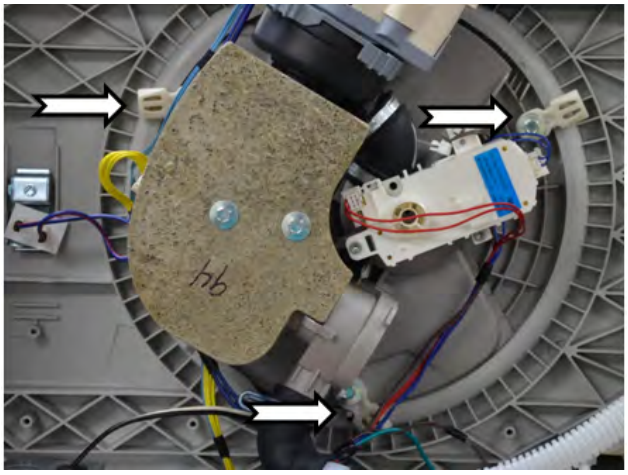


Figure 9 - Tab Locations

8. Unlock the three tabs securing the motor and sump assembly to the tub, see figures 10 and 11.

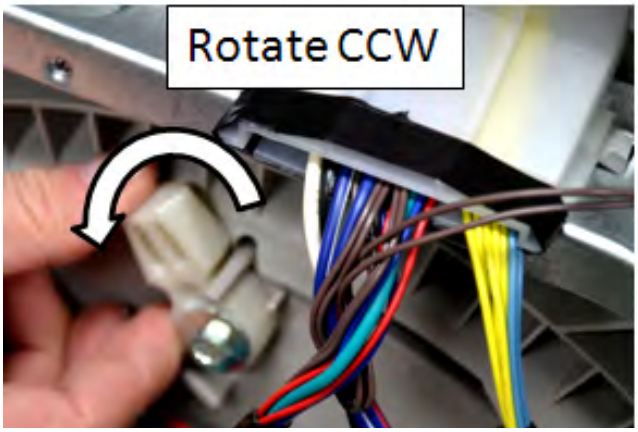



Figure 10 - Locked

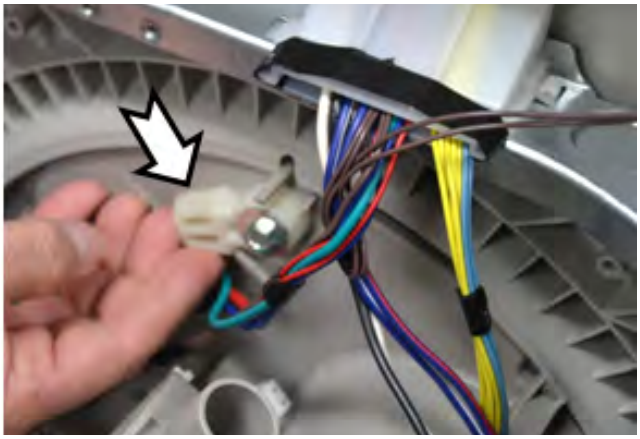


Figure 11 - Unlocked

continued next page

# Removing The Motor And Pump Assembly (continued)

9. Tilt the assembly and lift out to remove, see figures 12 and 13.

Figure 12

Figure 13

**NOTE:** When installing the assembly, align the tab on the assembly with the slot in the tub, see figures 14 and 15.

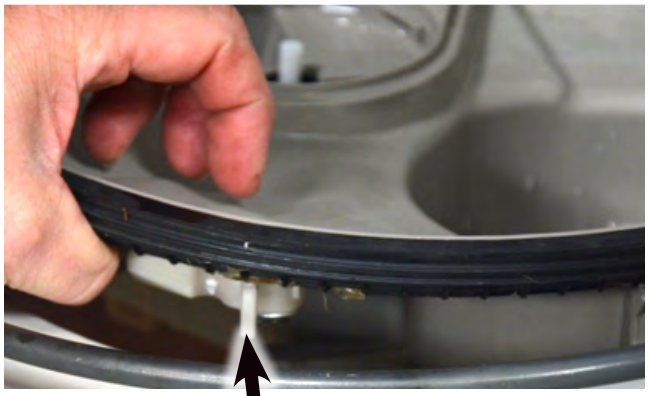


Figure 14

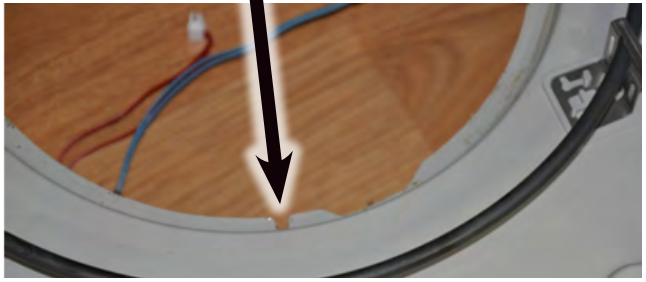


Figure 15

10. Unplug the diverter motor and washer motor wire harnesses, see figure 16 and 17.

Figure 16

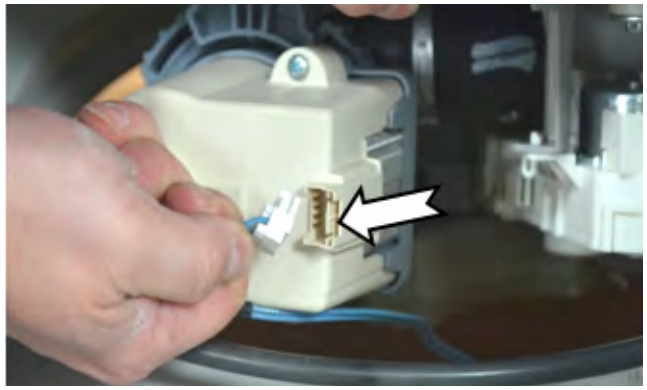


Figure 17

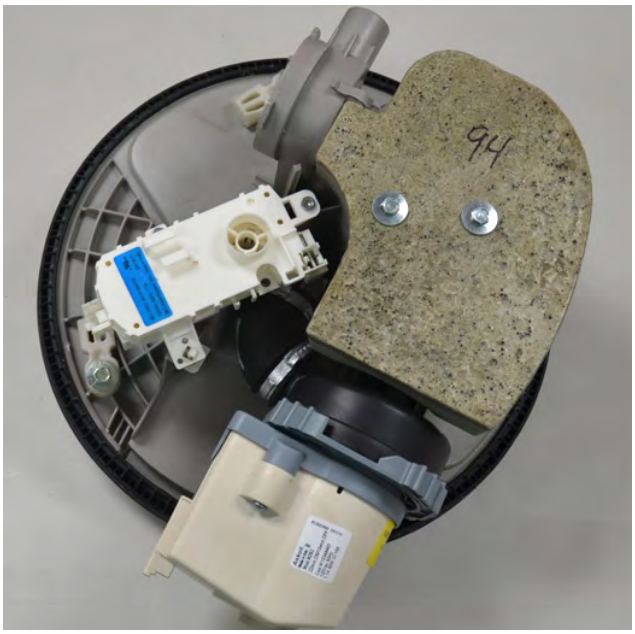



Figure 18 - Motor & Pump Assembly Removed

# Removing Optical Water Indicator

**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.**

Optical water indicator–exterior view, see figure 1.

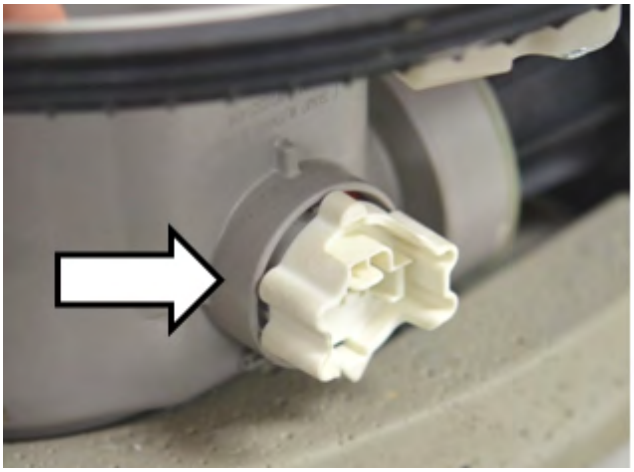


Figure 1

Optical water indicator in sump area, see figure 2.

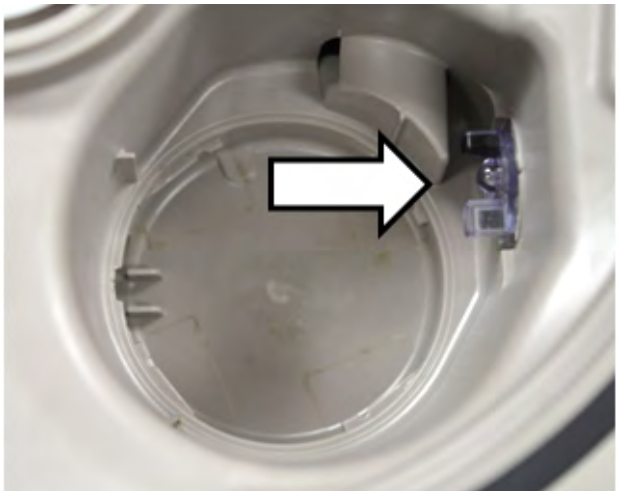


Figure 2

Rotate optical water indicator counter-clockwise 1/4 turn, see figure 3.

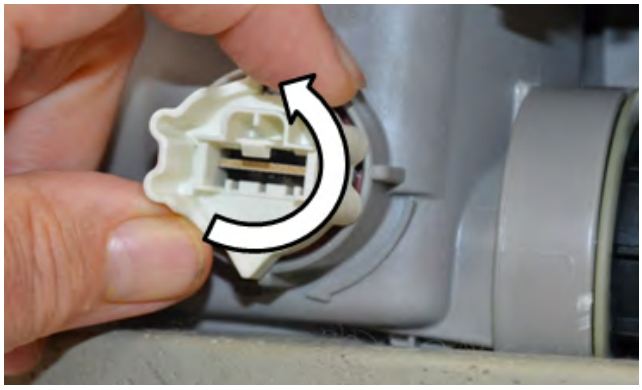


Figure 3

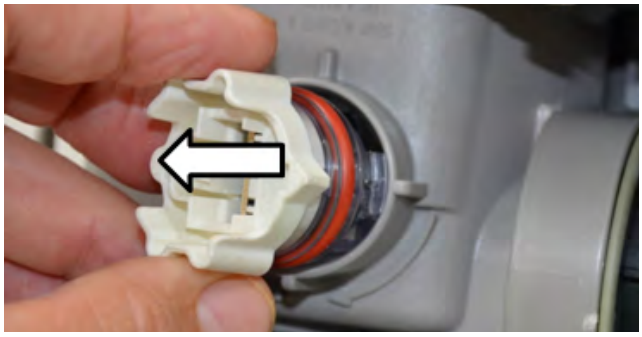


Figure 4

Pull out to remove, see figure 4.

# Removing Diverter 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.**

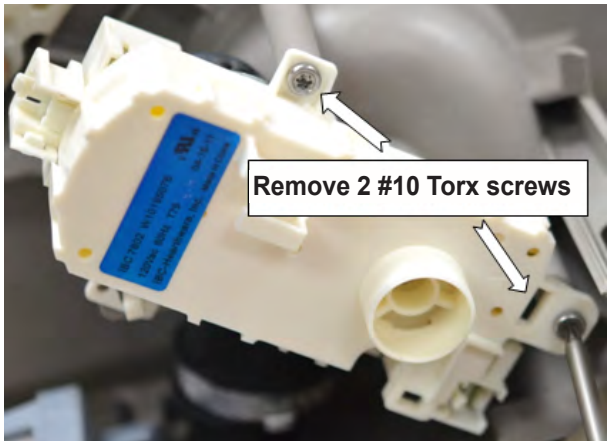



Figure 1

**To remove the Diverter Motor:**

1. Unplug dishwasher or disconnect power.
2. Remove 2 Torx screws, see figure 1.
3. Lift out, see figure 2.

**Note:** The diverter disc is keyed onto the motor shaft. The diverter motor can be removed with out removing the diverter disc first but to install the diverter motor, the diverter housing must be removed to align the diverter disc to the motor shaft.

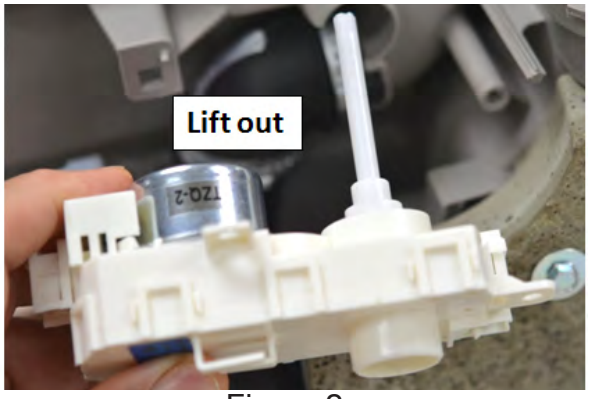
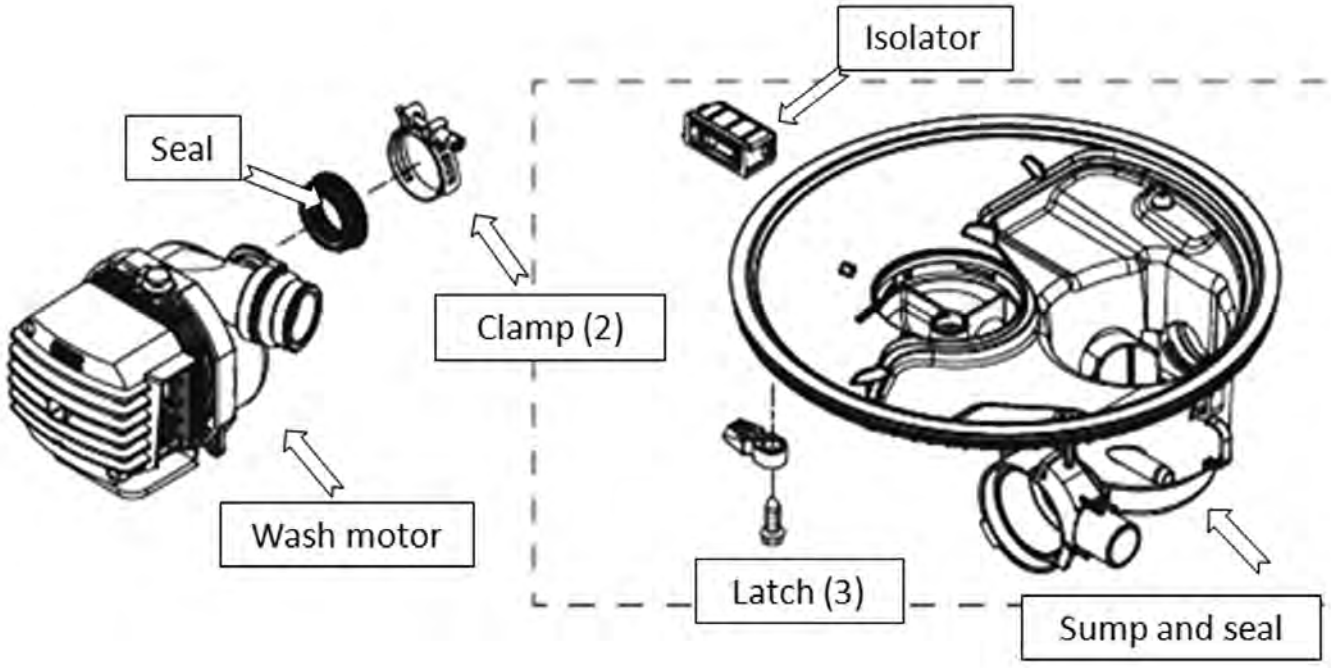



Figure 2

# Motor And Sump Assembly



# MOTOR REPLACEMENT
## Steps For Removing Old 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. Use a pair of diagonal pliers to cut off the hose clamps, see figures 1 and 2.


Figure 1


Figure 2

2. Remove old clamps, see figure 3.


Figure 3

# Steps For Removing Old Motor (continued)

3. Remove motor from seal, see figure 4.

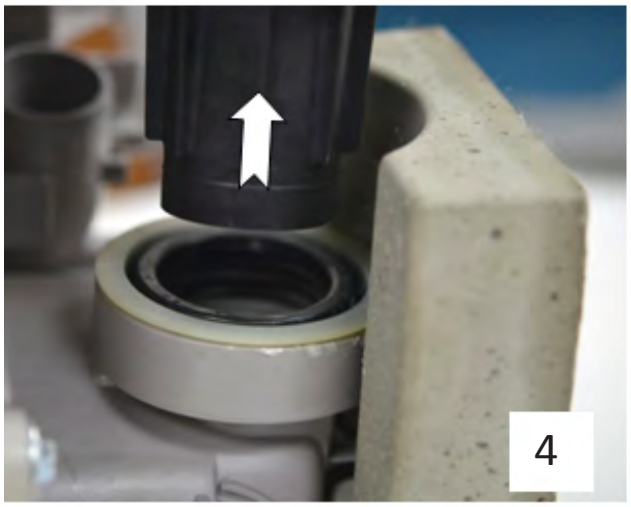



Figure 4

4. Pry up on old seal, see figure 5.

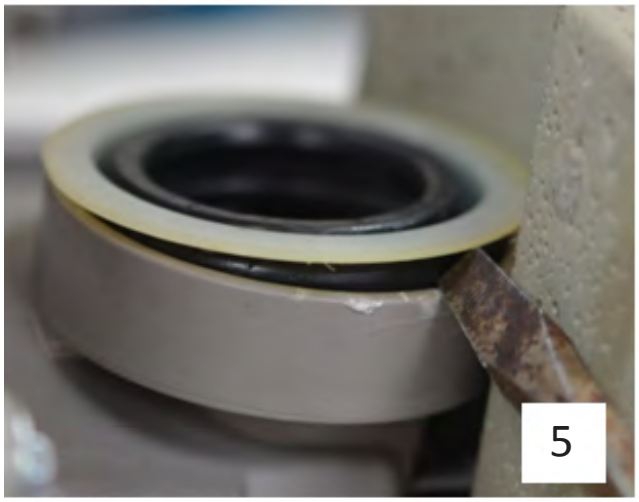



Figure 5

5. Remove seal, see figure 6.

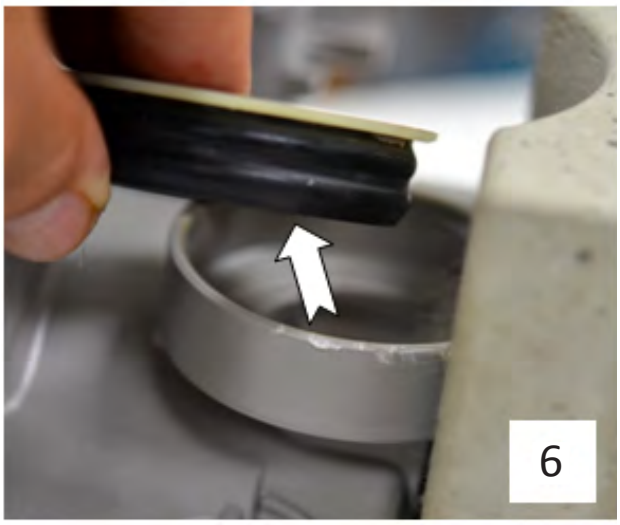



Figure 6

# Steps For Installing New 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. Install new Seal, see figure 1

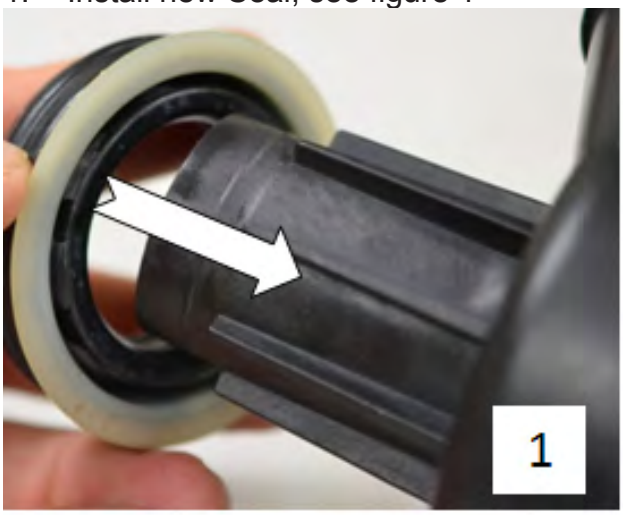



Figure 1

2. Install motor, see figure 2.


Figure 2

3. Seat new seal, see figure 3.

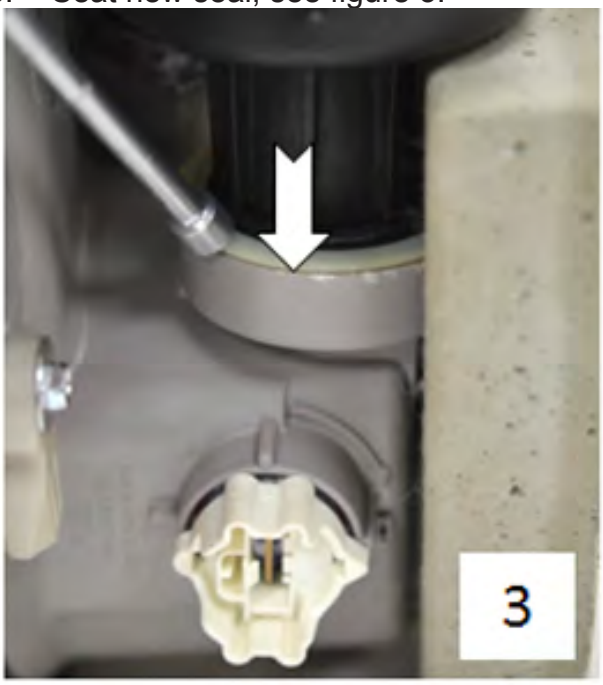



Figure 3

4. Seal installed correctly, see figure 4.


Figure 4

# Steps For Installing New Motor (continued)

5. Wash motor hose and clamps, see figure 5.


Figure 5

6. Install clamps with screws toward bottom, see figure 6.


Figure 6

7. Align tabs and tighten clamps, see figures 7 and 8.

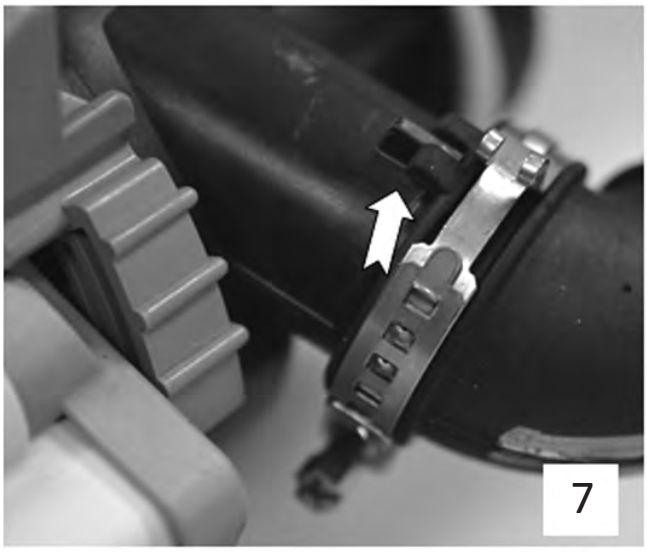



Figure 7

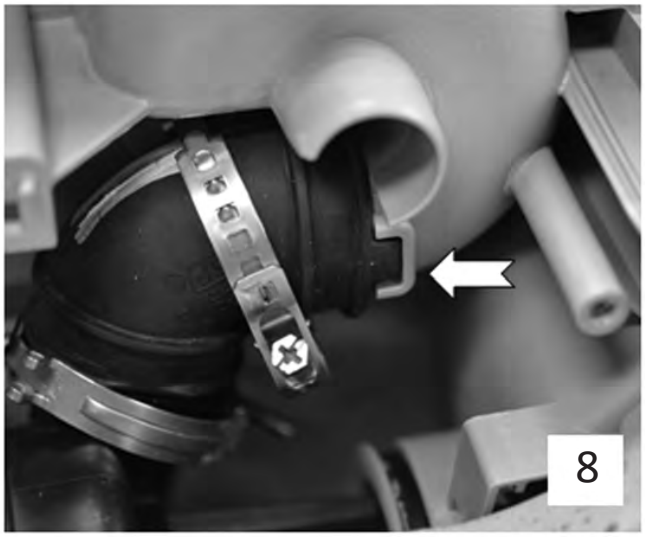



Figure 8

8. Install motor and pump assembly. Fill sump with water and check for leaks.

— NOTES —

# DIAGNOSTICS & TROUBLESHOOTING

## FOR SERVICE TECHNICIAN'S USE ONLY

**⚠ DANGER**

**Electrical Shock Hazard**

**Only authorized technicians should perform diagnostic voltage measurements.**

**After performing voltage measurements, disconnect power before servicing.**

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

**⚠ 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.**

## Voltage Measurement Safety Information

**When performing live voltage measurements, you must do the following:**

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

**IMPORTANT: Electrostatic Discharge (ESD) Sensitive Electronics**
**ESD problems are present everywhere. Most people begin to feel an ESD discharge at approximately 3000V. It takes as little as 10V to destroy, damage, or weaken the main control assembly. The new main control assembly may appear to work well after repair is finished, but a malfunction may occur at a later date due to ESD stress.**

- **Use an anti-static wrist strap. Connect wrist strap to green ground connection point or unpainted metal in the appliance**

**-OR-**

- **Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.**
- **Before removing the part from its package, touch the anti-static bag to a green ground connection point or unpainted metal in the appliance.**
- **Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.**
- **When repackaging main control assembly in anti-static bag, observe above instructions.**

**IMPORTANT SAFETY NOTICE — "For Technicians only"**

**This service data sheet is intended for use by persons having electrical, electronic, and mechanical experience and knowledge at a level generally considered acceptable in the appliance repair trade. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.**

# Troubleshooting Guide

## Dishwasher is not operating properly

- **Dishwasher does not run or stops during a cycle**

  It is normal for certain cycles to repeatedly pause for several seconds during the main wash. Is the door closed tightly and latched?

  Is the right cycle selected?

  Is there power to the dishwasher? Has a household fuse blown, or has a circuit breaker tripped? Replace the fuse or reset the circuit breaker. If the problem continues, call an electrician.

  Has the motor stopped due to an overload? The motor automatically resets itself within a few minutes. If it does not restart, call for service.

  Is the water shutoff valve (if installed) turned on?

- **The Clean light is flashing**

  Check the following:

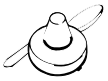
  - Is the overfill protection float able to move up and down freely? Press down to release.
  - Be sure the water supply is turned on to the dishwasher. (This is very important following the new installation of your dishwasher.)
  - Check for suds in the dishwasher. If foam or suds are detected by the dishwasher sensing system, the dishwasher may not operate properly or may not fill with water.

    Suds can come from:

    1. Using the incorrect type of detergent, such as laundry detergent, hand soap, or dish detergent for hand washing dishes.
    2. Forgetting to replace the rinse aid dispenser cap after filling (or refilling) the rinse aid.
    3. Using an excessive amount of dishwasher detergent.

- **Dishwasher will not fill**

  Is the overfill protection float able to move up and down freely? Press down to release.

- **Dishwasher seems to run too long**

  Try the 1 Hour Wash cycle.

  Is the water supplied to the dishwasher hot enough? The dishwasher runs longer while heating water.

  Is the dishwasher cycle time within the cycle times? See cycle sections wash times. A delay automatically occurs in some wash and rinse cycles until the water reaches the proper temperature.

  This dishwasher is equipped with an optical sensor wash that detects water temperature, soil and detergent amount. Wash cycles are adjusted based on the load sensing.

  **IMPORTANT:** The very first wash cycle after installation in your home will be adjusted to include an additional 2 rinses. This cycle must not be interrupted for proper sensor adjustment. If this adjustment cycle is canceled or stopped before the Clean light comes on at the end of the cycle, the next wash cycle will repeat this sensor adjustment.

- **Water remains in the dishwasher**

  Is the cycle complete?

  Was the disposer knockout plug removed during installation? (See “Install the drain hose” section in the Installation Instructions.)

- **Detergent remains in the covered section of the dispenser**

  Is the cycle complete?

  Check for items such as cookie sheets, cutting boards, or large containers that may be blocking the detergent dispenser from opening properly.

  Be sure the cycle has finished (green light is on). If it has not finished, you will need to resume the cycle by pressing START/RESUME and closing the door within 3 seconds.

  Is the detergent lump-free? Replace detergent if necessary.

- **White residue on the front of the access panel**

  Was too much detergent used?

  Is the brand of detergent making excess foam? Try a different brand to reduce foaming and eliminate buildup.

- **Odor in the dishwasher**

  Are dishes washed only every 2 or 3 days?

  Check and clean your filters regularly. See the table in “Filtration System” section for “Recommended Time Interval to Clean Your Filter.”

  Does the dishwasher have a new plastic smell? Run a vinegar rinse as described in “Dishwasher Care.”

  To avoid odor, use affresh™ dishwasher and disposal cleaner tablet once a month or as needed for a fresher dishwasher as described in “Dishwasher Care.”

- **Condensation on the kitchen counter (built-in models)**

  Is the dishwasher aligned with the countertop? Moisture from the vent in the dishwasher console can form on the counter. Refer to the Installation Instructions for more information.

- **Bottom rack does not fully slide into the dishwasher**

  Check to see if items loaded for POWERSCOUR™ wash option have shifted. Reload to keep items from interfering with spray jets or spray arm.

## Dishes do not dry completely

- **Dishes do not dry completely**

  Did you use a rinse aid? Your dishwasher is designed to use rinse aid for good drying performance. Without rinse aid your dishes and dishwasher interior will have excessive moisture. The heat dry option will not perform as well without rinse aid.

- **Dishes are not dry**

  Did you load your dishwasher to allow proper water drainage? Do not overload. Use a liquid rinse aid to speed drying.

  Are the plastics wet? Plastics often need towel drying.

  Is the rinse aid dispenser empty?

  Did you use an air-dry or energy-saving dry option? Use a heated drying option for dryer dishes.

- **Excess moisture on racks and dishwasher interior**

  Check the rinse aid indicator to see that there is rinse aid in the dispenser.

## Spots and stains on dishes

- **Spotting and filming on dishes**

  Is your water hard, or is there a high mineral content in your water? Conditioning the final rinse water with a liquid rinse aid helps eliminate spotting and filming. Keep the rinse aid dispenser filled. Always use a high-temp option. If your water hardness is 13 grains or above, it is strongly recommended that you install a home water softener. If you do not wish to drink softened water, have the softener installed onto your hot water supply.

# Troubleshooting Guide (continued)

Is the water temperature too low? For best dishwashing results, water should be 120°F (49°C) as it enters the dishwasher.

Did you use the correct amount of effective detergent? Use recommended dishwasher detergents only. Do not use less than 1 tbs (15 g) per load. Detergent must be fresh to be effective. Heavy soil and/or hard water generally require extra detergent.

Using dishwasher detergent tablets and packs have been proven better than powder, liquid or gel detergents to reduce filming on your dishes. By using these tablets and packs, over time this will start to reduce or eliminate white film. Also, by using a rinse aid you can minimize repeat buildup of white film.

Is the home water pressure high enough for proper dishwasher filling? Home water pressure should be 20 to 120 psi (138 to 828 kPa) for proper dishwasher fill. If you have questions about your water pressure, call a licensed, qualified plumber.

**NOTE:** To remove spots and film from glassware, remove all silverware and metal items and run a vinegar rinse as described in "Dishwasher Care."

- **Silica film or etching (silica film is a milky, rainbow-colored deposit; etching is a cloudy film)**

  Sometimes there is a water/chemical reaction with certain types of glassware. This is usually caused by some combination of soft or softened water, alkaline washing solutions, insufficient rinsing, overloading the dishwasher, and the heat of drying. It might not be possible to avoid the problem, except by hand washing.

  To slow this process use a minimum amount of detergent but not less than 1 tbs (15 g) per load. Use a liquid rinse aid and underload the dishwasher to allow thorough rinsing. Silica film and etching are permanent and cannot be removed. Do not use heated drying.

- **White spots on cookware with nonstick finish**

  Has the dishwasher detergent removed cookware seasoning? Reseason cookware after washing it in the dishwasher.

- **Brown stains on dishes and dishwasher interior**

  Does your water have high iron content? Rewash dishes using 1-3 tsp (5-15 mL) of citric acid crystals added to the covered section of the detergent dispenser. Do not use detergent. Follow with a Normal wash cycle with detergent. If treatment is needed more often than every other month, the installation of an iron removal unit is suggested.

- **Black or gray marks on dishes**

  Are aluminum items rubbing dishes during washing? Disposable aluminum items can break down in the dishwasher and cause marking. Hand wash these items. Remove aluminum markings by using a mild abrasive cleaner.

- **Orange stains on plastic dishes or dishwasher interior**

  Are large amounts of tomato-based foods on dishes placed in the dishwasher? It may be necessary to use a stain removal product to remove stains from your dishwasher. Stains will not affect dishwasher performance.

## Noises

- **Surging sounds**

  Surging sounds can occur periodically throughout the cycle while the dishwasher is draining

- **Valve hissing**

  Normal water valve hissing may be heard periodically, during the water fill.

- **Snapping sound**

  A normal snap sound may be heard when the detergent dispenser opens during the cycle, and when the door is opened at the end of the cycle.

- **Grinding, grating, crunching or buzzing sounds**

  A hard object has entered the wash module (on some models). When the object is ground up, the sound should stop. If the noise persists after a complete cycle, call for service.

## Dishwasher stops and starts

- **Numerous starts and stops**

  It is normal to hear numerous starts and stops during throughout your entire cycle. These starts and stops are needed to provide optimal cleaning performance and energy savings.

- **Depending on cycle selected**

  Depending on the cycle selected and the soil level sensed by the "Optical Water Sensor" (in some models), you will experience more starts and stops throughout the entire cycle.

## Dishes are not completely clean

- **Food soil left on the dishes**

  Is the dishwasher loaded correctly?

  Check and clean your filters regularly. See the table in "Filtration System" section for "Recommended Time Interval to Clean Your Filter."

  Did you choose the cycle that describes the most difficult soil in your dishwasher? If you have some items with heavier soils, use a heavier cycle.

  Is the water temperature too low? For best dishwashing results, water should be 120°F (49°C) as it enters the dishwasher.

  Did you use the correct amount of fresh detergent? Use recommended dishwasher detergents only. Do not use less than 1 tbs (15 g) per load. Detergent must be fresh to be effective. Heavy soil and/or hard water generally require extra detergent.

  Is detergent caked in dispenser? Use fresh detergent only. Do not allow detergent to sit for several hours in a wet dispenser. Clean dispenser when caked detergent is present.

  Is the pump or spray arm clogged by labels from bottles and cans?

  Is the home water pressure high enough for proper dishwasher filling? Home water pressure should be 20 to 120 psi (138 to 828 kPa) for proper dishwasher fill. If you have questions about your water pressure, call a licensed, qualified plumber.

  Are high suds slowing the wash arm? Do not use soap or laundry detergents. Use recommended dishwasher detergents only.

- **Dishes in the POWERSCOUR™ wash area are not clean**

  Are the dishes loaded to face the POWERSCOUR™ spray jets? Load soiled dish surfaces to face the back of the dishwasher toward the POWERSCOUR™ spray jets. Tilt the dishes toward the back so water can drain from surfaces, and the lower spray arm can wash the item from below.

  **NOTE:** Loaded items may shift when dish racks are pushed into the dishwasher. Make sure dishes do not interfere with the spray arms, water feed tube, or POWERSCOUR™ spray jets.

  Are items loaded so they do not overlap? Load items only one row deep without any overlap so that the POWERSCOUR™ spray jets can reach all surfaces.

## Dishes are damaged during a cycle

- **Chipping of dishes**

  Did you load the dishwasher properly? Load the dishes and glasses so they are stable and do not strike together from washing action. Minimize chipping by moving the rack in and out slowly.

  **NOTE:** Antiques, feather-edged crystal, and similar types of china and glassware might be too delicate for automatic dishwashing. Wash by hand.

## Cycle Chart

**CYCLE OPERATION**

NOTE: Cycles shown depict typical low soil version. Cycles will vary based on sensor inputs and options selected. All washes alternate spray arms and vary motor speed. To invoke Rapid Advance Mode, press HI TEMP - HEATED DRY - HI TEMP - HEATED DRY with door open or closed after starting cycle. Press START/RESUME to advance cycle interval. Each sequence box below contains multiple intervals.

| ONE HOUR WASH | DRAIN 0 MIN 50 MAX | FILL 1:02 | HEATED WASH*2 3:00 | DRAIN SEQUENCE 1:44 | FILL 0:59 | HEATED WASH*2 3:00 | DRAIN SEQUENCE 1:44 | FILL 0:59 | DETER-GENT DISPENSE | HEATED WASH*2 15:00 | DRAIN SEQUENCE 1:44 | FILL 0:54 | HEATED WASH*2 3:00 | DRAIN SEQUENCE 1:44 | FILL 0:54 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| HEATED WASH*2 15:00 | RINSE AID DISPENSE | WASH 3:00 | RINSE AID DISPENSE | WASH 3:30 | DRAIN SEQUENCE 1:39 | PAUSE*3 6:00 | DRY*2,3 13:00 PLASTIC TUB 28:30 STAIN-LESS TUB |
|---|---|---|---|---|---|---|---|

| NORMAL | DRAIN 0 MIN 50 MAX | FILL 1:02 | WASH 6:50 | DETER-GENT DISPENSE | WASH 2:30 | THERMAL HOLD*1,2 41°C (105°F) OR 40:00 | WASH 25:00 | DRAIN SEQUENCE 1:44 MAX | FILL 0:20 | WASH 5:00-7:25 | DRAIN SEQUENCE 0:40 | FILL 0:20 | WASH 5:00-7:25 | DRAIN SEQUENCE 0:40 | FILL 0:54 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| HEATED WASH*2 15:00 | THERMAL HOLD*1,2 58.5 - 60°C (137 - 140°F) OR 45:00 | RINSE AID DISPENSE | WASH 3:00 | RINSE AID DISPENSE | HEATED WASH 3:00 | DRAIN SEQUENCE 1:39 | PAUSE 6 MIN | DRY*2,3 26:00 PLASTIC TUB 45:30 STAIN-LESS TUB |
|---|---|---|---|---|---|---|---|---|

| POTS & PANS | DRAIN 0 MIN 50 MAX | FILL 1:02 | WASH 3:40 | DRAIN SEQUENCE 1:44 | FILL 0:15 | WASH SEQUENCE 0:54 - 1:39 | DRAIN SEQUENCE 0:34 | FILL 0:59 | WASH 3:40 | DRAIN SEQUENCE 1:44 | FILL 0:15 | WASH SEQUENCE 0:54 - 1:39 | DRAIN SEQUENCE 0:34 | FILL 0:59 | WASH 3:40 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| DRAIN SEQUENCE 1:44 | FILL 0:59 | DETERGENT DISPENSE | WASH 2:30 | THERMAL HOLD*1 54°C (130°F) OR 60:00 | WASH 40:00 | DRAIN SEQUENCE 1:44 | FILL 0:54 | WASH 6:00 | DRAIN SEQUENCE 1:44 | FILL 0:54 | WASH 6:00 |
|---|---|---|---|---|---|---|---|---|---|---|---|

| DRAIN SEQUENCE 1:44 | FILL 0:54 | HEATED WASH 15:00 | THERMAL HOLD*1 60°C (140°F) OR 45:00 | RINSE AID DISPENSE | WASH 3:00 | RINSE AID DISPENSE | HEATED WASH 3:00 | DRAIN SEQUENCE 1:39 | PAUSE 6 MIN | DRY*2,3 26:00 PLASTIC TUB 45:30 STAIN-LESS TUB |
|---|---|---|---|---|---|---|---|---|---|---|

*1: Thermal hold = heated wash until temperature reached or maximum time. *2: Heater not on for entire dry period. *3: If Heated Dry or Smart Dry selected. *4: Fan runs for 1 hour after cycle complete.

# FOR SERVICE TECHNICIAN'S USE ONLY
# Specifications

**⚠ 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.**

**SPECIFICATIONS**

**Electrical Supply:**
(Under load) 60 Hz, 120 VAC

**Supply Water Flow Rate:**
To fill 1.9 L (2 qt) in
27 seconds, 120 psi maximum.
20 psi minimum.

**Supply Water Temperature:**
49°C (120°F) (Before starting a cycle, run water from sink faucet until hot.)

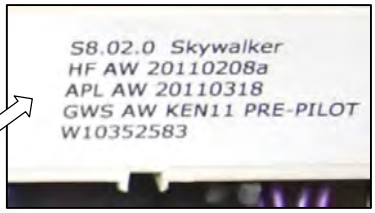
**Water Charge:**
3.5 L (0.9 gal.) approximate

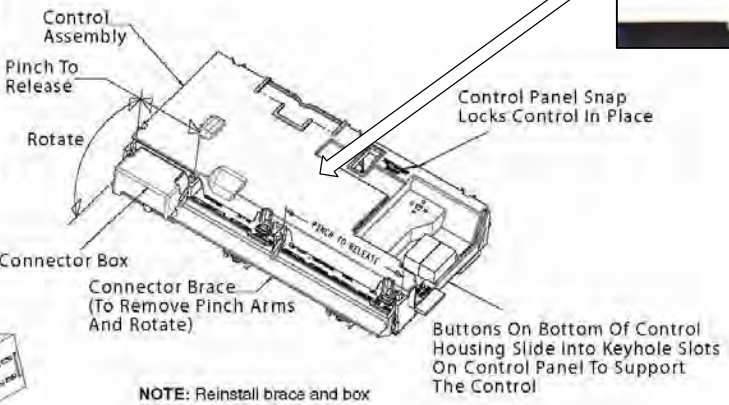
**Lower Spray Arm Rotation:**
12 to 40 rpm

**Upper Spray Arm Rotation:**
12 to 30 rpm

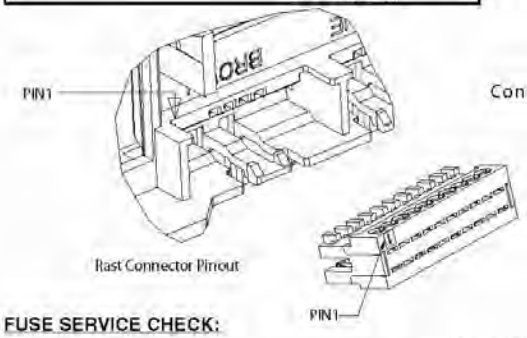
**REPAIR KITS**

**Vinyl Touch-Up Kits:**
675576 (Blue)
676453 (White)
676455 (Gray)




**NOTE:** Reinstall brace and box after service if removed.




**FUSE SERVICE CHECK:**

F8 = Motor Fuse
F9 = Small/Triac Load Fuse

Check operation of loads during Service Diagnostics Cycle.

- If any of the triac loads work, then F9 Fuse is OK. If all triac loads fail to work, then F9 Fuse could be open. See Resistance Check.
- If Wash Motor does not work, then F8 Fuse could be open. See Resistance Check.

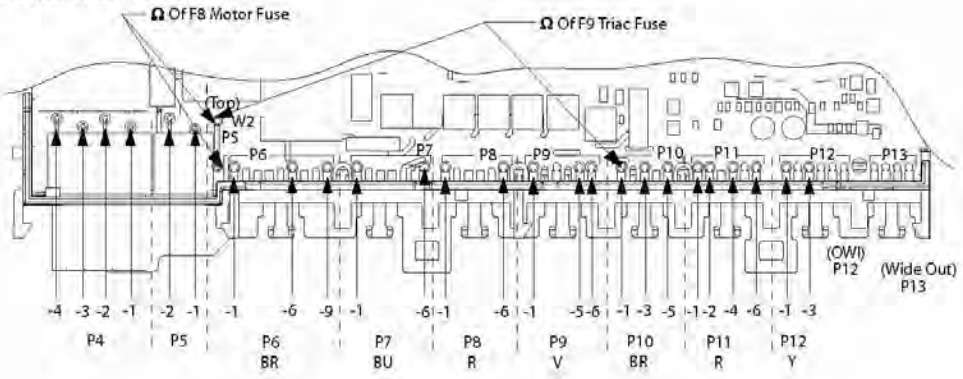
**FUSE RESISTANCE CHECK:**

1. Unplug dishwasher or disconnect power.
2. Measure resistance of fuse F8 and/or F9. Fuses are on bottom of control board, but can be checked from top side (see Meter Check diagram).
   - If < 3 ohms, then fuse OK.
   - If > 3 ohms, then fuse open.

**WHAT TO DO IF FUSE OPEN:**

Inspect and check resistance of all loads on fuse. If any loads are open, shorted, or have evidence of overheating or pinched wires, then replace them.

METER CHECK OF LOADS AND FUSES



# FOR SERVICE TECHNICIAN'S USE ONLY

## Service Diagnostic Cycle

| INTERVAL | 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 AND STATUS LEDS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 HR WASH | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | | 1HR | S |
| NORMAL | NRM | NRM | | NRM | | NRM | | NRM | | NRM | | NRM | | NRM | | NRM | | NRM | | NRM | | NRM | | NRM | | T |
| START/RESUME | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | STA | A |
| RUNNING | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | RUN | N |
| HI TEMP | HIT | | HIT | | HIT | HIT | HIT | | HIT | | HIT | | HIT | | HIT | | HIT | | HIT | | HIT | | HIT | | HIT | D |
| DRY OPTION | DRY | DRY | | DRY | | | | DRY | | DRY | | DRY | | DRY | | DRY | | DRY | | DRY | | DRY | | DRY | | B |
| SANITIZED NOTE 5 | SAN | | | | | | | | SAN | | | | | | | | | | | | | | SAN | | | Y |
| CLEAN NOTES 4,5,6 | CLN | CLN | CLN | CLN | CLN | | | | CLN | | CLN | | | CLN | | | | | | | | CLN | | CLN | CLN | |
| ALL OTHER CYCLE OPTION AND STATUS LEDS | ALL | | | | | | | | | | | | | | | | | | | | | | | | | |
| **INTERVAL TIME (min:sec)** TOTAL TIME (MAX.): 22:57 | 0:06 | 1:21 | 1:21 | 1:21 | 1:21 | 0:10 | 0:45 | 0:05 | 0:23 | 0:05 | 1:00 | 2:00 | 0:30 | 1:00 | 0:30 | 4:00 | 0:01 | 0:01 | 0:01 | 0:01 | 1:52 | 0:06 | 2:30 | 1:21 | 1:21 | |
| SOIL SENSING INTERVALS AND SENSOR CHECKS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| THERMISTOR (temperature sensor) CHECK INTERVAL NOTE 6 | | | | | | | | THR | | | | | | | THR | | | | | | | | | | | |
| O.W.I. (soil sensor) CHECK INTERVALS NOTE 6 | | | | | | | | | | OWI | | | OWI | | | | | | | | OWI | | | | | |
| NOTE: OWI has thermistor built in - see check above | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIVERTER POSITION SENSOR CHECK NOTE 3 | | | | | | | | | | | | DIV | | | | | | | | | | | | | | |
| SALT LEVEL REED SWITCH / FLOWMETER INPUT TEST NOTE 8 | | | | | | | | | | | | | | | | | | | | | | | SFM | | | |
| **LOADS** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PILOT RELAY | | | | | | | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | PLT | | | |
| VENT | | | | | | | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | VNT | | | S |
| FILL | | | | | | | FIL | FIL | FIL | | | | | | | | | | | | | | | | | T |
| WASH MOTOR | | | | | | | | WSH | WSH | | WSH | WSH | | WSH | WSH | WSH | | | | | | | | | | A |
| DISPENSER (DETERGENT RINSE AID) | | | | | | | | | | | DSP | | | | | | | | | | | | | | | N |
| DIVERTER | | | | | | | (DIV) | | | | | DIV | (DIV) | | (DIV) | (DIV) | | | | | | | | | | D |
| DIVERTER POSITION | | | | | | | UPR | UPR | UPR | UPR | UPR | ON | UPR | UPR | TZ | LOW | LOW | LOW | LOW | LOW | LOW | LOW | | | | B |
| DRAIN MOTOR | | | | | | | | | | | | | | | | | DRN | | DRN | | DRN | DRN | | | | Y |
| HEATER | | | | | | | | | | | | | | | | HTR | | | | | | | HTR | | | |
| DC FAN MOTOR (if present) NOTE 7 | | | | | | | | | | | FAN | | FAN | FAN | | | | | | | | | FAN | | | |
| REGEN (if present) | | | | | | | | | | | | | | | | | | | | | REG | | | | | |
| | | Customer Error 1 | Customer Error 2 | Customer Error 3 | Customer Error 4 | | | | | | | | | | | | | | | | | | | Service Error 1 | Service Error 2 | |
| | 2 | 1 | 1 | 1 | 1 | 4 | 3 | | 5 | 6 | 6 | 3 | 3 | | 3 | 3 | | | | | 6 | 6 | 7 8 | 1 | 1 | |

### SERVICE DIAGNOSTICS NOTES

1 To invoke the Diagnostics Cycle, perform the following while in standby:
- Press any 3 keys in the sequence 1-2-3-1-2-3-1-2-3 with no more than 1 second between keys.
- The Service Diagnostics Cycle will start when the door is closed.
- To rapid advance 1 interval at a time, press the Start/Resume key. Rapid advancing may skip sensor checks as some checks require 2 complete intervals.

**NOTE**: While in the Diagnostic Cycle, the Start/Resume feature is turned off (for example, Auto Resume after door interrupts) and the Start/Resume key becomes an interval advance key.
- Invoking Service Diagnostics clears all status and last run information from memory and restores defaults. It also forces the next cycle to be a sensor calibration cycle.
- Last run cycles and options returned to default (Normal cycle with Heated Dry option).
- Last run delay returns to the lowest delay increment.
- Calibration cycle may force an extra rinse to occur prior to Final Rinse (to assure clear water), then calibrates the OWI and the fill amount during the final rinse.
- Operating state returns to Standby upon completing or terminating the Service Diagnostics Cycle.

2 Turn on all LEDs immediately upon receiving the entry sequence (even if the door is open) and throughout this first interval as a display test.

3 Diverter will be on continuously in interval 14. In all other diverter intervals, diverter will only be on until it reaches the intended position for that interval.

4 Press Hi Temp key in this interval to clear customer error history.

5 Thermistor (temperature sensor) checks - turn clean LED on if thermistor is in its normal temperature range (32°F to 167°F). Turn sanitized LED on if fill temperature is above 85°F.

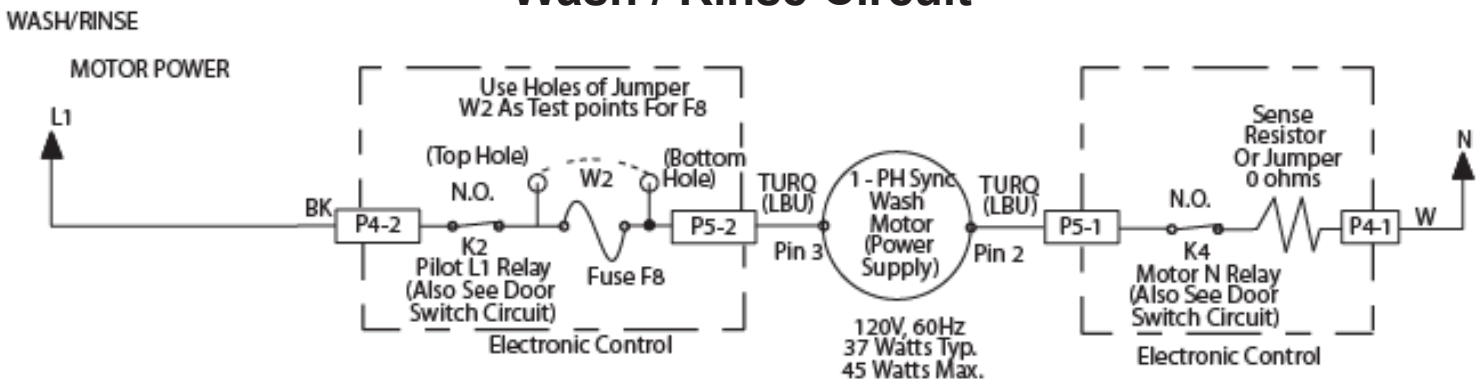
6 OWI (optical soil sensor) checks:
- Check OWI sensor for the presence of water during the 5 sec. pause in interval 16 and turn on the Clean LED in interval 15 if water detected.
- Check OWI sensor for presence of bulk soil during pause interval 13 and turn on the Clean LED in interval 12 if bulk soil detected.
- Drain until OWI sensor sees the presence of air or a max. of 1:52 during interval 5 and turn on the Clean LED in interval 4 if air detected.

7 DC Fan Motor is on during upper rack washing intervals.

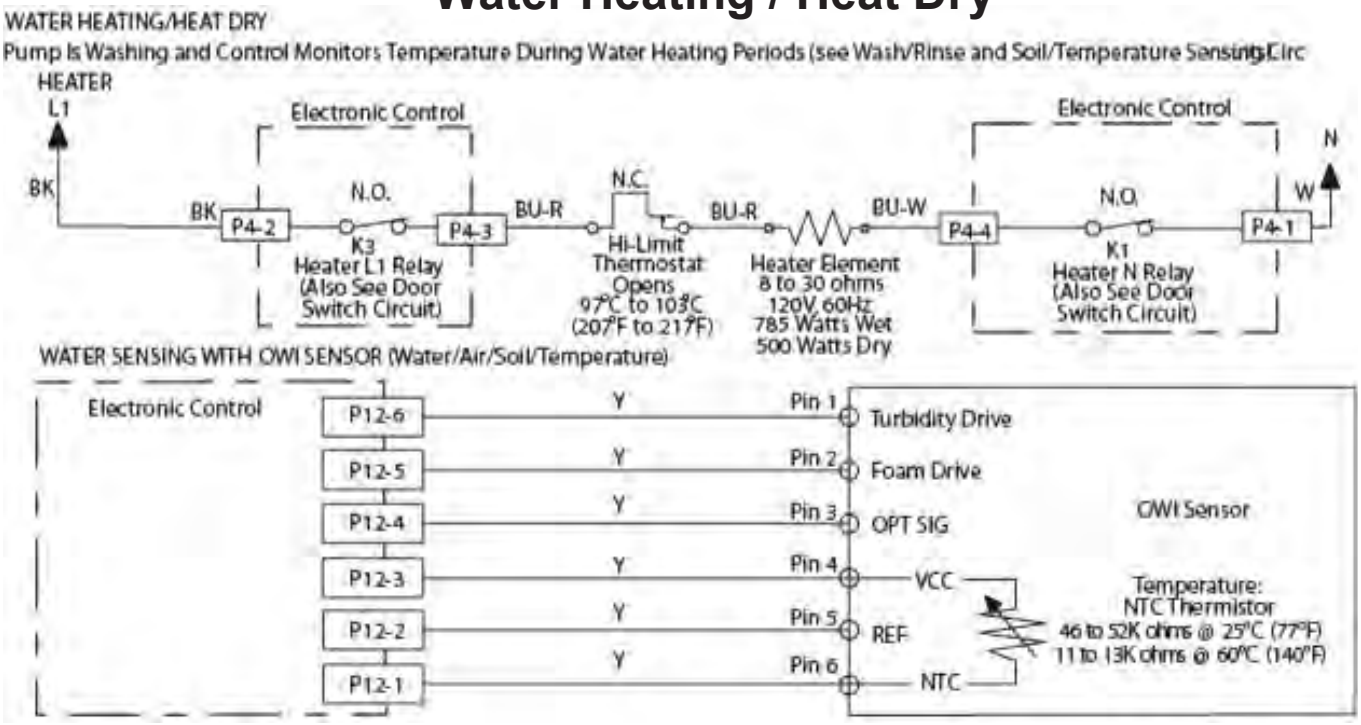
8 Turn on Sanitized LED in this interval to indicate that the salt level reed switch is closed

## FOR SERVICE TECHNICIAN'S USE ONLY

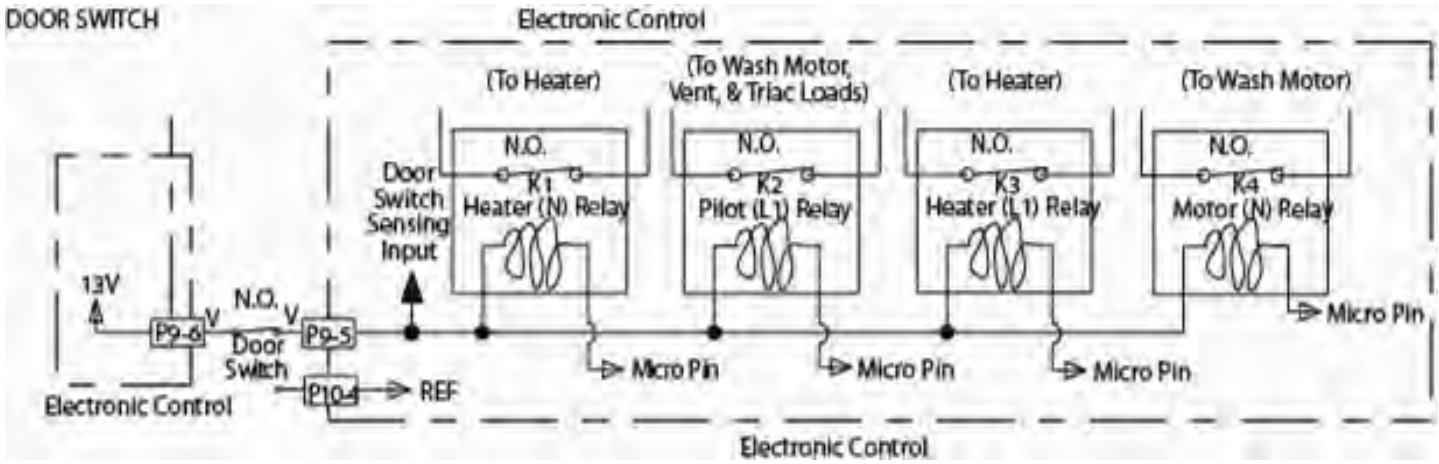
# Wash / Rinse Circuit




# Water Heating / Heat Dry

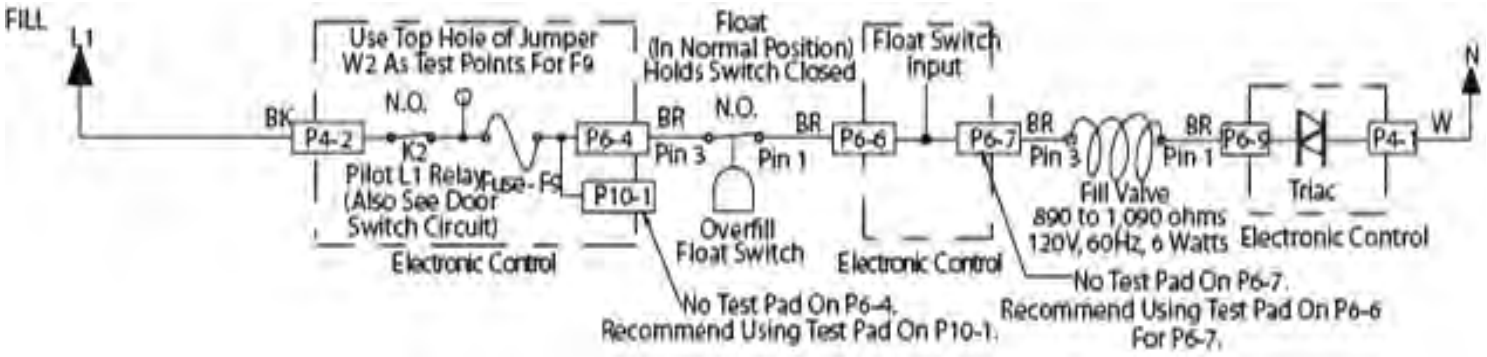



# Door Switch Circuit

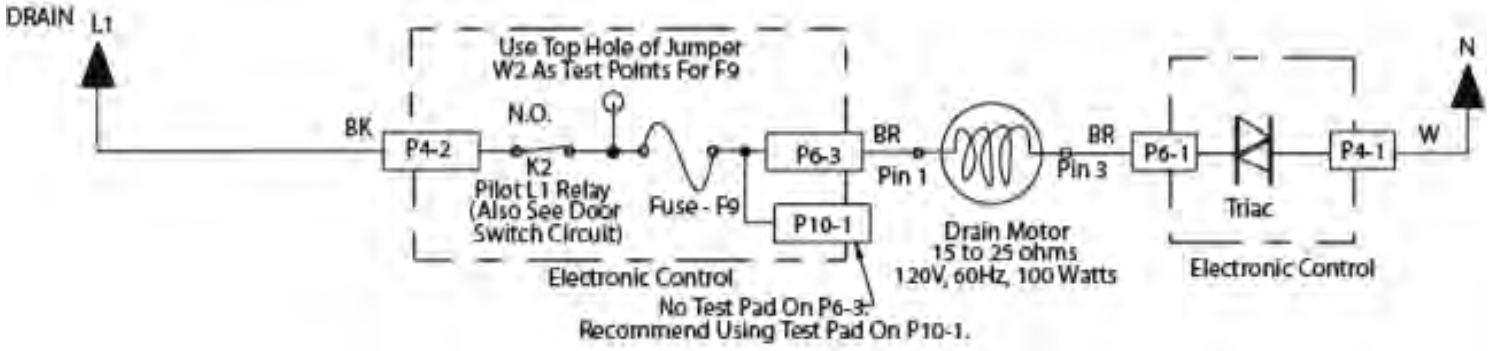


## FOR SERVICE TECHNICIAN'S USE ONLY

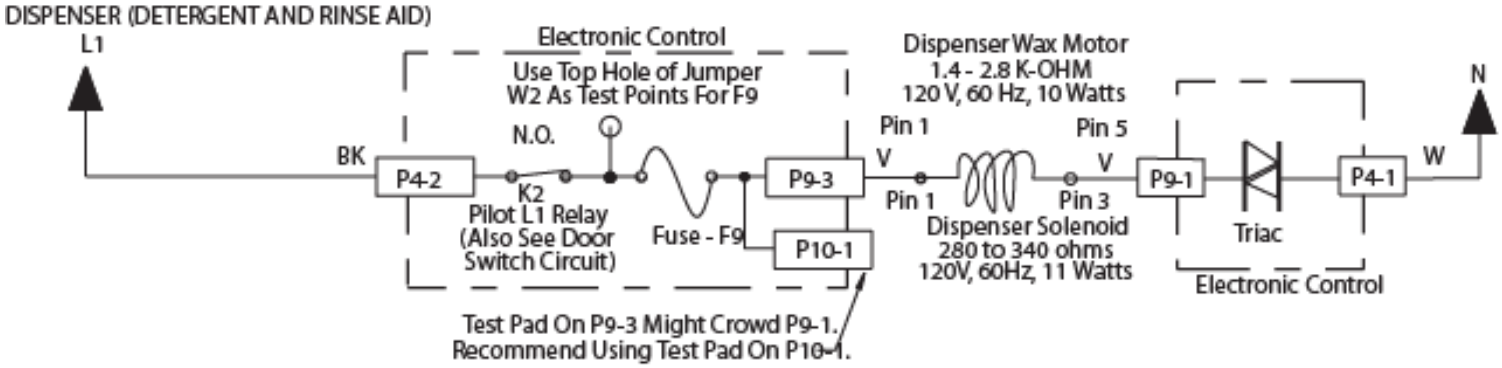
# Fill Circuit




# Drain Circuit

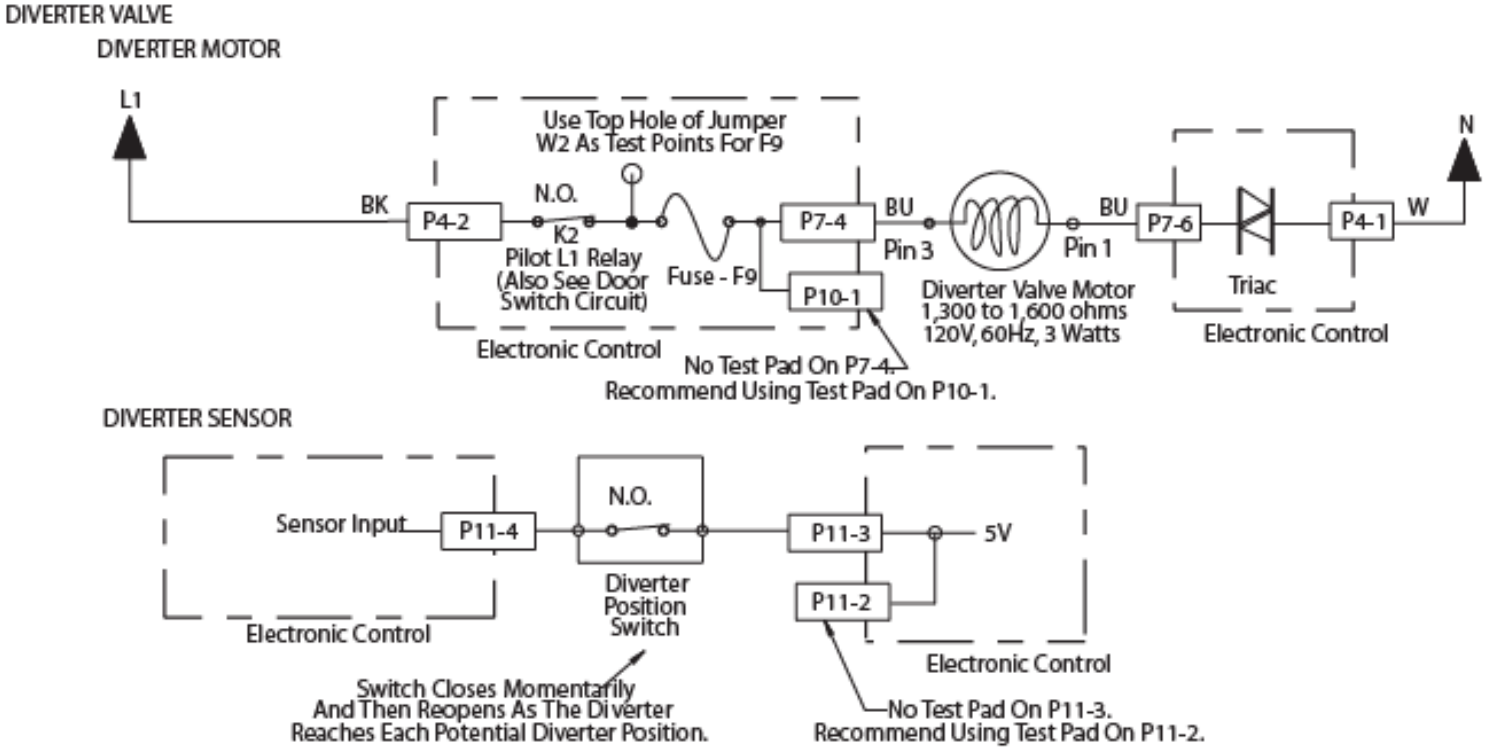



# Dispenser Circuit

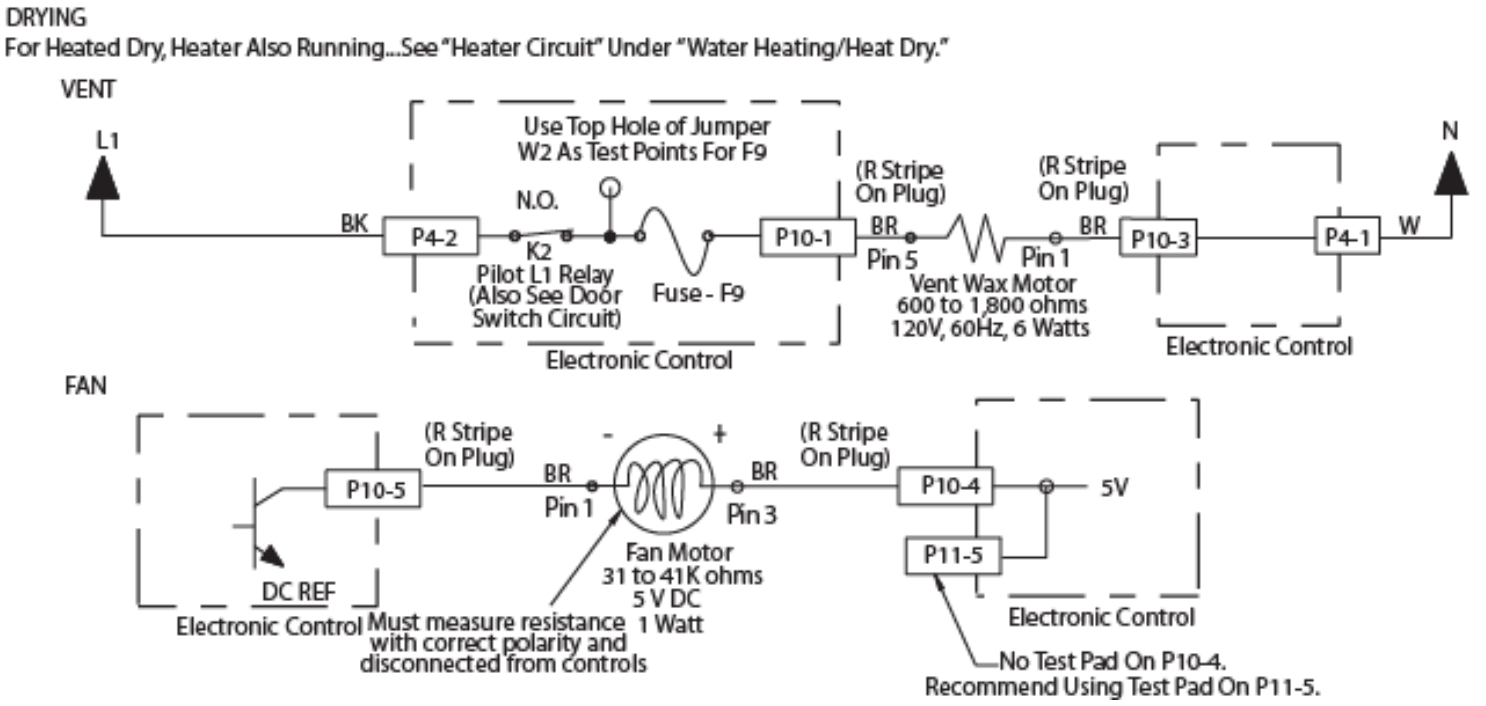


## FOR SERVICE TECHNICIAN'S USE ONLY

# Diverter Valve / Sensor Circuit




# Drying / Fan Circuit



# FOR SERVICE TECHNICIAN'S USE ONLY

# Service Error Codes

SERVICE ERROR CODES TABLE

Example: 6-1 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 pilot relay stuck closed. | 1. Unplug dishwasher or disconnect power.<br>2. Check all loads on k2 pilot relay for shorts.<br>3. Replace control and all shorted components. |
| | 2- Control Software Issue | Damaged or corrupted memory on control board. Incompatible software components inside micro. | 1. Unplug dishwasher or disconnect power.<br>2. Replace control board. |
| 2- USER INTERFACE | 1- Stuck Key | Control detected stuck key(s) in keypad or keypad connection.<br><br>**NOTE:** Control only alerts customer if Start/Resume or Cancel key is stuck. If any other keys are stuck, the stuck key(s) will be ignored and an error recorded to service history, but no alert to customer. | Check responsiveness of each key.<br>1. If some keys do not respond, then:<br>■ Unplug dishwasher or disconnect power.<br>■ Disassemble door and disconnect keypad connection from control or LCD display module.<br>■ Verify all other connections to control are made.<br>■ Reassemble door but do not close door.<br>■ Plug in dishwasher or reconnect power.<br>■ Wait at least 7 seconds for control to power up completely.<br>■ Close dishwasher door and monitor control response:<br>A. If control is OK (no longer sees stuck keys with keypad unplugged), it will respond by turning on the drain motor for 2 minutes. Replace keypad and console.<br>B. If control is not OK (still sees stuck keys with keypad unplugged), it will not turn on drain motor. Wait for at least 10 seconds. If still no drain response, then replace control or LCD display module (whichever one the keypad was connected to).<br>2. If all keys appear OK or intermittent, and keypad is capacitive touch type, then:<br>■ Verify tub brackets are screwed to underside of countertop and not hanging over keys (if screw head too close, relocate screw to alternate hole).<br>■ Check for evidence of moisture or debris on the surface of the keys. If evident, clean and instruct customer about keeping surface clean. Check error code history for Vent Error 10-2 and/or Fan Error 10-3 as potential cause of condensation on user interface. |
| 3- THERMISTOR/ OWI | 1- Open | ■ Open connector or component in Temperature Sensing Circuit.<br>■ Open or faulty temperature sensor.<br>■ Faulty temperature sensor input on control. | 1. Check operation of temperature sensor in Service Diagnostic Cycle.<br>2. Unplug dishwasher or disconnect power.<br>3. Check all components and connections in the Temperature Sensing Circuit with meter. Fix/replace open connection/part. |
| | 2- Shorted | ■ Incoming water temperature above 75°C (167°F).<br>■ Shorted connection or component in Temperature Sensing Circuit.<br>■ Shorted or faulty temperature sensor.<br>■ Faulty temperature sensor input on control. | 1. Check Incoming water temperature.<br>2. Check operation of temperature sensor in Service Diagnostic cycle.<br>3. Unplug dishwasher or disconnect power.<br>4. Check all components and connections in the Temperature Sensing Circuit with meter. Fix/replace shorted wires/part. (See OWI Sensor strip circuit.) |
| | 3- Failed Calibration | OWI failure. | 1. Run Service Diagnostics to check OWI operation. OWI should see low soil with clear water.<br>2. Check OWI lens surface. Clean if needed.<br>3. Unplug dishwasher or disconnect power.<br>4. Check all connections in Soil Sensing Circuit with meter. Fix/replace bad connection/part.<br>**NOTE:** Run Diagnostics after replacing new OWI to force calibration on next wash cycle. |
| | | Drain hose check valve not sealing. | Dirty water backs into dishwasher after draining.<br>1. Disconnect drain hose at plumbing connection.<br>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). |
| 4- WASH MOTOR | 3- Motor Not Running | Loose connection in Motor Circuit, and/or faulty wash motor. | 1. Check operation of wash motor during diagnostics.<br>2. Unplug dishwasher or disconnect power.<br>3. Check resistances of connections in the wash circuit.<br>■ Check for loose connections or replace wash motor. |
| | | Faulty control motor drive circuit or sense circuit. | 1. Unplug dishwasher or disconnect power.<br>2. If meter check of wash motor circuit shows normal resistance and still not getting power to the wash motor, then replace control. |

# FOR SERVICE TECHNICIAN'S USE ONLY

## Service Error Codes (continued)

**SERVICE ERROR CODES TABLE (Continued)**

Example: 6-1 means "Inlet Water" function, "Low Water/Air in Pump" problem.

| FUNC-TION CODE | PROB-LEM CODE | CAUSES | WHAT TO CHECK |
|---|---|---|---|
| 5- DOOR SWITCH | 1- Door Stuck Open | Door was not latched within 3 seconds of pressing the Start/ Resume key. | Instruct customer. Refer to Use and Care Guide. |
| | | Loose connection in door switch circuit and/or door switch contacts stuck open and/or Door switch not making contact.<br>■ Faulty or sloppy door latch assembly (which can be aggravated by high door closure force, keeping strike plate from fully seating).<br>■ Faulty door switch (high resistance). | 1. Check strike plate and door closure force. Verify door seal is seated properly. Check for interference between dish racks and door. Try bending strike plate down for better engagement.<br>2. Unplug dishwasher or disconnect power.<br>3. Check door switch contacts and all connections in the door switch circuit with meter while opening and closing the door latch.<br>■ If high resistance with door closed, check/fix loose connections.<br>4. Measure resistance of door switch contacts while checking mechanical operation of latch assembly. Check for broken plastic pieces on latch assembly. Replace latch if faulty. |
| | | Faulty control. | 1. With door open, verify 13 VDC present across P9-5 and P9-6<br>2. If no voltage present, unplug dishwasher or disconnect power and replace control. |
| | 2- Door Stuck Closed | Control programmed to not start if it suspects the door switch is stuck closed. Control looks for the door switch to open between cycles.<br>■ Customer didn't open the door between cycles or door switch contacts stuck closed. | 1. Open and close door and then press Start/Resume key. If works now, instruct customer to open door between cycles.<br>2. Unplug dishwasher or disconnect power.<br>3. Measure resistance of door switch contacts while checking mechanical operation of latch assembly. |
| 6- INLET WATER | 1- Low/No Water (Mecha-nical Problem) | No water to dishwasher. | Verify water supply is turned on and supply line adequate. |
| | | Bowls or pots loaded or flipped upside down and captured wash water. | Instruct customer on loading. Refer to Use and Care Guide. |
| | | Drain loop detached from tub and/or improper drain connection. | Check for water siphoning out of unit:<br>1. Allow dishwasher to complete normal fill.<br>2. Drain for 5-10 seconds by pressing CANCEL/DRAIN.<br>3. Open door and confirm water does not siphon out of unit.<br>If it does, confirm drain loop is attached to side of dishwasher and drain hose is connected to a drain at least 20" (50.8 cm) off the floor. |
| | | Water leaking from dishwasher. | Check for leaks under dishwasher. |
| | | Fill valve or water line plugged with debris. | Turn off water supply to dishwasher, disconnect water line to inlet valve, inspect/clean the inlet screen of fill valve, and reconnect water. |
| | 1- Low/No Water (Mecha-nical Problem) (cont.) | Overfill switch stuck in "Overfill" position and/or dishwasher not level. | Check other error codes to see if 6-4 also occurred. See 6-4 Error Code below. |
| | | Fill valve electrical problem. | Check other error codes to see if 6-2 also occurred. See 6-2 Error Code below. |
| | 2- Fill Valve (Electrical Problem) | Loose connection in the fill valve circuit, and/or open fill valve solenoid. | Unplug dishwasher or disconnect power and check resistances of fill valve solenoid and all connections in the Fill Circuit with meter. Fix/replace open connection/part. |
| | | Open fuse on control to fill valve. | Refer to Fuse Service and Resistance Checks on Page 1 (next to Meter Check diagram). |
| | | Faulty fill valve drive circuit on the control. | Unplug dishwasher or disconnect power and replace control. |
| | 3- Suds/Air in Pump | Too many suds. | 1. Allow unit to fill and wash for 1 minute. Open door and check for excessive sudsing.<br>2. Confirm using proper dishwasher detergent, not hand detergent.<br>3. Check for excessive rinse aid leakage. |
| | | Bowls or pots loaded or flipped upside down and captured wash water. | Instruct customer on loading. Refer to Use and Care Guide. |
| | | Water leaking from dishwasher. | Check for leaks under dishwasher. |
| | | Diverter disk in sump is missing. | Remove lower spray arm, turbo zone assembly, rear feedtube and outlet cover and verify whether the red diverter disk is installed. |

# FOR SERVICE TECHNICIAN'S USE ONLY
# Service Error Codes (continued)

**SERVICE ERROR CODES TABLE (Continued)**

Example: 6-1 means "Inlet Water" function, "Low Water/Air in Pump" problem.

| FUNC-TION CODE | PROB-LEM CODE | CAUSES | WHAT TO CHECK |
|---|---|---|---|
| 6- INLET WATER (cont.) | 4- Float Switch Open | 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 levelness of dishwasher. |
| | | Drain hose check valve not sealing. | Water backs into dishwasher after draining and elevates water level.<br>1. Disconnect drain hose at plumbing connection.<br>2. Elevate hose above dishwasher and fill with water. If water flows into dishwasher, replace entire drain loop (install as high as possible). |
| | | Fill valve Triac on control shorted. | If still filling while door is open, fill valve is mechanically stuck open (see below). If no fill with the door open, check operation in Service Diagnostics Test Cycle. Advance Service Cycle until detergent dispenser opens. Fill valve should be off. Listen to see if dishwasher is still filling. If still filling, then unplug dishwasher or disconnect power and replace control. |
| | | Fill valve mechanically stuck open. | Confirm dishwasher fills while the door is open. If yes, then unplug dishwasher or disconnect power, turn off water to dishwasher, replace fill valve, and turn water back on. |
| | | Too many suds. | 1. Allow unit to fill and wash for 1 minute. Open door and check for excessive sudsing.<br>2. Instruct customer if using improper dishwasher detergent (hand detergent).<br>3. Disconnect power and replace dispenser if see excessive rinse aid leakage. |
| | | Open fuse F9 to fill valve and other triac loads | Refer to Fuse Service and Resistance Checks on Page 1 (next to Meter Check diagram). |
| | 6- Cool Water | Incoming water under 29°C (84°F). | 1. Be sure dishwasher is connected to the hot water supply.<br>2. Confirm temperature at sink (recommend 49°C/120°F). Instruct customer to run water at sink before running dishwasher.<br>3. Unplug dishwasher or disconnect power and check all connections and measure resistance in "Temperature Sensing Circuit." Replace OWI if resistance is high. |
| | 7- Flow Meter | Disconnected or damaged flowmeter | 1. Disconnect power or unplug unit.<br>2. Check connections at salt level sensor and at flowmeter.<br>3. Use meter to check for flowmeter switch closed. Use meter to check salt level sensor. Switch is open when salt reservoir is filled and closed when salt reservoir is low/empty.<br>4. Disconnect flowmeter and leave salt sensor connected. Apply a magnet to side of salt tank near the sensor connection to force the switch closed.<br>5. With magnet in place, run the complete service diagnostics cycle. If the sanitized LED turns on in interval 3, the control is good; replace the flowmeter assembly. If the sanitized LED does not turn on, the control input has failed; replace the control. |
| | 8- Regen Valve Electrical Problem | Loose connection in Regen valve circuit, and/or open Regen valve solenoid. | Unplug dishwasher or disconnect power and check resistances of Regen valve solenoid and all connections in the Regeneration Valve Circuit. Fix/replace open connection/part. |
| | | Open fuse on control to Regen valve. | Refer to Fuse Service and Resistance Checks on Page 1 (next to Meter Check diagram). |
| | | Faulty Regen valve drive circuit on the control. | Unplug dishwasher or disconnect power and replace control. |
| 7- HEATING | 1- No Heat | Control is programmed to disable heater, but continue running cycles if it detects a water heating problem. | Running diagnostics clears the control, allows the heater to turn on again. Water heating problem must be corrected, or the control will disable the heater again. See heater circuit problem below. |
| | | Heater Circuit problem:<br>■ Open in heater.<br>■ Open connection or component in Heater Circuit. | 1. Unplug dishwasher or disconnect power.<br>2. Measure resistance of heater and all components and connections in Water Heating Circuit/Heat Dry Circuit. Fix/replace open connection/part. |
| | | Faulty Heater Drive Circuit on the control. | Unplug dishwasher or disconnect power and replace control. |
| | 2- Heater Stuck On | Faulty Heater Drive Circuit on the control. | 1. Unplug dishwasher or disconnect power and replace control.<br>2. Inspect heater and connections for overheating/shorting. If evidence of overheating or shorts exists, replace. |

# FOR SERVICE TECHNICIAN'S USE ONLY

# Service Error Codes (continued)

**SERVICE ERROR CODES TABLE (Continued)**

Example: 6-1 means "Inlet Water" function, "Low Water/Air in Pump" problem.

| FUNC-TION CODE | PROB-LEM CODE | CAUSES | WHAT TO CHECK |
|---|---|---|---|
| 8-DRAIN-ING | 1-Slow Drain | Obstructed drain hose or path. | 1. Unplug dishwasher or disconnect power.<br>2. Check for blockages from sump check valve to customer's plumbing. Potential items: plugged garbage disposal or plug not knocked out, drain loop check valve stuck and/or plugged hoses. |
| | | Drain pump impeller fractured. | 1. Unplug dishwasher or disconnect power.<br>2. Remove drain pump and check impeller (normally there is some uneven resistance). If it is stripped, replace drain pump. |
| | 2-Drain Motor Electrical Problem | Loose connection in drain motor circuit, and/or open drain motor winding. | Unplug dishwasher or disconnect power and check resistances of drain motor winding and all connections in the drain motor circuit. Fix/replace open connection/part. |
| | | Open fuse on control to drain motor. | Refer to Fuse Service and Resistance Checks on Page 1 (next to Meter Check diagram). |
| | | Faulty drain motor drive circuit on the control. | Unplug dishwasher or disconnect power and replace control. |
| | 3-Drain Stuck On | Faulty drain motor drive circuit on the control. | 1. Unplug dishwasher or disconnect power and replace control.<br>2. Inspect drain motor and connections for overheating/shorting. If evidence of overheating/shorting exists, replace. |
| 9-DIVERT-ER | 1-Can't Find Position | Corroded or loose connection in diverter sensor/motor circuit, or open/shorted sensor/motor. | 1. Check operation in Service Diagnostics Cycle. Listen for CAM clicking as it rotates or inspect shaft with mirror to see if rotating during diverter interval. If rotating, then likely the sensor circuit.<br>2. Unplug dishwasher and parts disconnect power and check connections in Diverter Sensor and Motor Circuit with meter. Fix/replace open connections/parts.<br>3. Inspect diverter sensor for evidence of water or contaminants. If yes, replace. |
| | | Mechanical binding of diverter shaft/disc. | Check operation of diverter motor during diagnostics. Inspect diverter shaft with mirror. If motor appears to be on (vibrates, hums), but you see limited rotation, then replace diverter and seal. |
| | | Open fuse on control to diverter motor. | Refer to Fuse Service and Resistance Checks on Page 1 (next to Meter Check diagram). |
| | | Faulty Diverter Motor Drive Circuit on the control. | Unplug dishwasher or disconnect power and replace control. |
| | 2-Stuck On | Faulty Diverter Drive Circuit on the control. | 1. Unplug dishwasher or disconnect power and replace control.<br>2. Inspect diverter motor and connections for overheating/shorting. If evidence of overheating/shorting exists, replace. |
| | 3-Disk Missing | Control detected diverter disk in sump is missing. | Remove lower spray arm, turbo zone assembly, rear feed tube and outlet cover; and verify the round diverter disk is installed. |
| 10-OTHER | 1-Dispenser Electrical Problem | Loose connection in dispenser circuit and/or open dispenser solenoid. | Unplug dishwasher or disconnect power and check resistances of dispenser solenoid and all connections in the dispenser circuit. Fix/replace open connection/part. |
| | | Open fuse on control to dispenser. | Refer to Fuse Service and Resistance Checks on Page 1 (next to Meter Check diagram). |
| | | Faulty dispenser drive circuit on the control. | Unplug dishwasher or disconnect power and replace control. |
| | 2-Vent Wax Motor Electrical Problem | Loose connection in vent circuit and/or open vent wax motor. | Unplug dishwasher or disconnect power and check resistances of vent wax motor and all connections in the vent circuit. Fix/replace open connection/part. |
| | | Open fuse on control to vent. | Refer to Fuse Service and Resistance Checks on Page 1 (next to Meter Check diagram). |
| | | Faulty vent drive circuit on the control. | Unplug dishwasher or disconnect power and replace control. |
| | 3-Drying Fan Error | Loose connection in fan circuit, and/or open fan motor. | Unplug dishwasher or disconnect power and check resistances of fan motor and all connections in the fan circuit. Fix/replace open connections or fan. |
| | | Faulty fan drive circuit on the control. | Unplug dishwasher or disconnect power and replace control. |

# Troubleshooting

## 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 "Normal Cycle Operation" section.

| 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. Run service diagnostics test cycle to read full history of error codes. | |
| **Won't Run or Power Up ("Dead" Keypad/ Console)**<br>■ **No operation**<br>■ **No keypad response**<br>■ **No LEDs or display** | 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.<br>2. Check continuity of power connections to control and connections between keypad(s) and control. | |
| | Model has an LCD display and the control has been exchanged for one that is not compatible with the LCD display module. | Verify correct control is installed. Control should have no 4-pin user interface connector present at P1B if it is configured for an LCD model. Replace control. | |
| | Faulty user interface or control. | Replace UI/console and/or control. | |
| **Won't Run and LED for Start/Resume Key is Blinking Slowly** | By design, if the door is opened for more than 5 seconds or power is interrupted during a cycle, the user must press the Start/Resume key to resume operation. | Instruct customer. Refer to Use and Care Guide. | |
| | 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 and LED Above Key is Flashing Rapidly and Continuously.** | Stuck key or short circuit(s) in keypad, or in control's input lines that read the keys. | Refer to "Service Error Codes" table. | 2-1 |
| **Won't Run and All LEDs On** | Software or hardware incompatibility problem with control. | Refer to "Service Error Codes" table. | 1-2 |
| **Won't Start and Start/Resume key LED Flashes 3 Times When Start/Resume Key is Pressed** | Control looks for switch to open between cycles.<br>■ Customer has not opened door since last cycle.<br>■ Door switch contacts stuck closed. | Refer to "Service Error Codes" table. | 5-2 |
| **Won't Accept Key Presses and Control Lock LED On** | Control Lockout feature accidentally turned on by customer. | Instruct customer. Refer to Use and Care Guide (press and hold Control Lock key 5 seconds to turn On/Off). | |
| **One or More Keys Won't Respond Or Unusual LED/ Display/Key Behavior** | Stuck key or short circuit(s) in keypad or in control's input lines that read the keys. | Refer to "Service Error Codes" table. | 2-1 |
| | Capacitive touch keypad adhesive coming loose from console. | 1. Unplug dishwasher or disconnect power.<br>2. Inspect keypad board for separation from console. Replace keypad and console if separation is seen. | |
| | Loose connections between keypad and control and/or bent or contaminated connector pins. | 1. Unplug dishwasher or disconnect power.<br>2. Inspect connections in user interface circuits. Reconnect loose connections. Replace part(s) if pins are damaged or contaminated. | |
| | Excessive condensation on user interface parts due to vent and/or fan problem | Check error history for 10-2 vent error or 10-3 fan error. Refer to "Service Error Codes" table. | 10-2, 10-3 |
| | Defective user interface. | 1. Unplug dishwasher or disconnect power.<br>2. Replace user interface console assembly. | |
| **Dishwasher Beeps Constantly (for Models with Beepers)** | User opened door during cycle and closed door without pressing Start/Resume to resume cycle. | Instruct customer. Dishwasher control is designed to beep if dishwasher is in "Cycle Interrupt" mode with door latched. Control will stop beeping when door is opened and/or Start/Resume key is pressed to resume cycle. | |
| | Normal beeper operation is excessive to customer. | Instruct customer how to turn beeper off and on. Press and hold Hi Temp key for 3 seconds (tone sounds). | |

# Troubleshooting (continued)

**TROUBLESHOOTING GUIDE (Continued)**

**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 "Normal Cycle Operation" section.

| CUSTOMER DESCRIPTION | POTENTIAL CAUSES | CHECK | RELATED ERROR CODE(S) |
|---|---|---|---|
| **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 clear water.<br>2. Check lens surface. Clean if needed.<br>3. Unplug dishwasher or disconnect power.<br>4. Replace OWI and run Diagnostics after installing new OWI to force calibration on next wash cycle. | |
| | Diverter problem prevented water from heating (plastic tub models only). | Refer to "Service Error Codes" table. | 9-1, 9-2 |
| | A water heating problem could cause long cycles but will typically cause a "water heating fault." | Refer to "Service Error Codes" table. | 7-1 |
| | Heater takes a long time to heat water with low voltage. | Check for at least 100 VAC at power source. | |
| | Incoming water too cold. | Refer to "Service Error Codes" table. | 6-6 |
| | Suds or air in pump requires repeated wash periods. | Refer to "Service Error Codes" table. | 6-3 |
| | Motor problems force cycle to start and stop repeatedly. | Refer to "Service Error Codes" table. | 4-2 |
| | OWI or NTC sensor problem. | Refer to "Service Error Codes" table. | 3-1, 3-3 |
| **LEDs or Displays Run for Short Time (but No Loads Running) and then Shuts Off** | Unit is in Sales Demo mode. | Check operation of Cancel key. If no Cancel LED response to multiple Cancel key presses, the control is likely in Sales Demo Mode. Run Service Diagnostics Cycle to clear Demo mode. | |
| | Open F8 (Wash motor) fuse or F9 (Triac load fuse) on control disabled loads. | Refer to Fuse Service and Resistance Checks on Page 1 (next to Meter Check Diagram). | |
| **Can Start a Cycle, but Only Runs for a Short Time - Cycle Does Not Complete (Clean LED or Completed May Blink)** | Control canceled cycle due to error detected with wash motor, float switch, low water, or suds. | Refer to "Service Error Codes" table. | 4-1, 6-1, 6-2, 6-3, 6-4, 8-3 |
| | Unit in Sales Demo mode. | Run Service Diagnostics cycle to clear Demo mode. | |
| **Will Not Drain, or Excess Water Left in Dishwasher. NOTE: Check Error History. If No Error Codes for Electrical Problems, Problem is Mechanical, Do Not Replace Control.** | Drain loop check valve not sealing. | 1. Disconnect drain hose at plumbing connection.<br>2. Elevate hose above dishwasher and fill with water. If water flows into dishwasher, replace entire drain loop (install as high as possible). | |
| | Customer misunderstands water level after drain. | Instruct customer. Sump will normally have about 1" (2.5 cm) of water remaining in filter cup hole after cycle. | |
| | Draining problem. | Refer to "Service Error Codes" table. | 8-1, 8-2 |
| **Detergent Not Dispensing or Detergent Left in Dispenser NOTE: Check Error History. If No Error Codes for Electrical Problems, Problem is Mechanical. Do Not Replace Control.** | 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.<br>2. Check/replace dispenser. | |
| | Lid latch binding due to excess detergent in mechanism. | Instruct customer on proper dispenser filling. | |
| | Dispenser electrical problem. | Refer to "Service Error Codes" table. | 10-1 |
| | Control canceled cycle before dispensing due to error detected with wash motor. | Refer to "Service Error Codes" table. | 4-3 |

# Troubleshooting (continued)

**TROUBLESHOOTING GUIDE (Continued)**

**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 "Normal Cycle Operation" section.

| CUSTOMER DESCRIPTION | POTENTIAL CAUSES | CHECK | RELATED ERROR CODE(S) |
|---|---|---|---|
| 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.<br>■ Filter cup coarse screen<br>■ Filter cup fine screen<br>■ Sump fine screen | |
| | Spray arms not rotating or plugged. | 1. Check arm rotation. If arms are blocked by dish item, instruct customer. Also check for correct upper spray arm alignment with docking station located on feed tube at back tub wall.<br>2. Check nozzles. If plugged, clean nozzles and confirm filters installed properly. | |
| | Poor wash due to draining, dispensing, and/or temperature problem. | 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." | |
| | Control canceled cycle due to error detected with wash motor. | Refer to "Service Error Codes" table. | 4-3 |
| | Soil sensor problem. | Refer to "Service Error Codes" table.<br>**NOTE:** Even if no error code recorded, confirm OWI passes all OWI checks in Service Diagnostics cycle and see checks for Error 3-3. | 3-2, 3-3 |
| | Diverter problem. | Refer to "Service Error Codes" table. | 9-1, 9-2 |
| | Diverter disc missing. | Remove outlet cover and inspect for red plastic disc through holes in outlet. Install new disc if missing. | |
| | Heating problem. | Refer to "Service Error Codes" table. | 7-1 |
| | Softener problem (on some models). | Refer to "Service Error Codes" table. | 6-8 |
| Film or Spots on Glasses and/or Dishes | Customer not using rinse aid and/or heated dry. | Check rinse aid gauge level on dispenser; Instruct customer how to fill and monitor, add or use rinse aid. | |
| | Rinse aid dispenser problem. | Refer to "Service Error Codes" table. | 10-1 |
| | Hard water leaving film on dishes. | Check water hardness. If hard, instruct customer to use maximum detergent or try pouring ¼ cup (60 mL) of Glass Magic into bottom of dishwasher. Also recommend the 1 HR Wash cycle. | |
| | | For models with water softener: Check for "Add Salt" LED at the end of cycle; If on, add salt and instruct customer. | |
| | | For models with water softener: Regen valve electrical problem. Refer to "Service Error Codes" table. | 6-8 |
| | Detergent carryover or over sudsing. | Check water hardness. If below 10 grains, then instruct customer to use less detergent and recommend the 1 HR Wash cycle. | 6-3 |
| | Etching of glass from too much detergent at too high of temperature. | Check water hardness. If below 10 grains, then instruct customer to use less detergent and recommend the 1 HR Wash cycle. | |
| | Diverter problems. | Refer to "Service Error Codes" table. | 9-1, 9-2 |
| | Drain loop check valve not sealing. | 1. Disconnect drain hose at plumbing connection.<br>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 or dispenser is empty. | Check rinse aid gauge level on dispenser. Instruct customer how to fill and monitor, add or use rinse aid. | |
| | Customer not using Heated Dry option. | Recommend the use of Heated Dry or Smart Dry to customer. | |
| | Rinse Aid dispenser problem. | Refer to "Service Error Codes" table. | 10-1 |
| | Vent stuck closed due to pilot relay stuck on. | Refer to "Service Error Codes" table. | 1-1 |
| | Diverter problem prevented water from heating in final rinse (plastic tub models only). | Refer to "Service Error Codes" table. | 9-1, 9-2 |
| | Fan problem (on models with fan). | Refer to "Service Error Codes" table. | 10-3 |
| | Control canceled cycle due to error detected with wash motor. | Refer to "Service Error Codes" table. | 4-3 |
| | Heating problem. | Refer to "Service Error Codes" table. | 7-1 |

# Troubleshooting (continued)

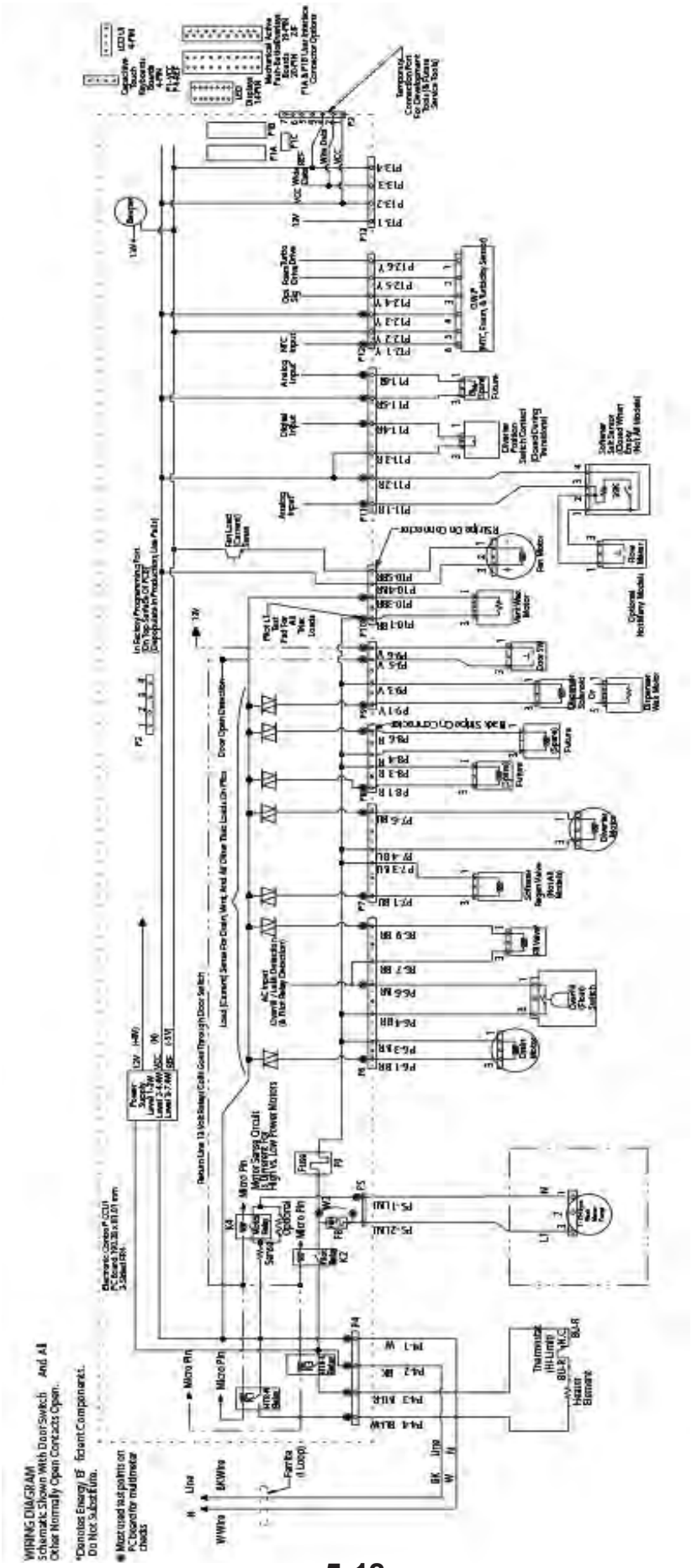
**TROUBLESHOOTING GUIDE (Continued)**

**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 "Normal Cycle Operation" section.

| CUSTOMER DESCRIPTION | POTENTIAL CAUSES | CHECK | RELATED ERROR CODE(S) |
|---|---|---|---|
| Sanitized LED Blinks or Incomplete Sanitization Message 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. | 6-6 |
| | Heating problem. | Refer to "Service Error Codes" table. | 7-1 |
| | Thermistor/OWI sensor problem. | Refer to "Service Error Codes" table. | 3-1, 3-2 |
| | Intermittent door switch/ latch connection. | See the same checks as for 5-1 Error. Refer to "Service Error Codes" table. | |
| | Diverter problem prevented water from heating in final rinse (plastic tub models only). | Refer to "Service Error Codes" table. | 9-1, 9-2 |
| | Line voltage too low to heat fast enough. | Check power source. Confirm at least 100 VAC. | |
| | Air pressure surges in dishwasher due to washing with high suds causes brief opening of door switch contacts during final rinse. | Refer to "Service Error Codes" table. | 6-3 |
| Melted Dishware and/or Spray Arm and/or Dishwasher Always Hot | Customer uses non-dishwasher safe dishes or loads plastic dishes directly over heater. | Instruct customer. | |
| | Temperature sensing problem. | Refer to "Service Error Codes" table. | 3-1 |
| | Water heating problem. Heater stuck on. | Refer to "Service Error Codes" table. | 7-2 |
| | Water heater displaced from mounting clip and/or pulled off center. | Inspect heater. Adjust back into position as needed. | |
| Noisy Operation | Spray arm stalled or blocked and spraying on the door. | ■ Instruct customer if blocked.<br>■ Check spray arm rotation and inspect for plugged nozzles. If plugged, clean nozzles and confirm filters installed properly. | |
| | Diverter problem. | Refer to "Service Error Codes" table. | 9-1, 9-2, 9-3 |
| | Motor problems force cycle to start and stop repeatedly. | Refer to "Service Error Codes" table. | 4-2 |
| | No or low water. | Refer to "Service Error Codes" table. | 6-1, 6-2, 6-3, 6-4 |
| | Drains too long. | 1. Long drain due to OWI sensor problem - Refer to "Service Error Codes" table for 3-3.<br>2. Slow drain problem - Refer to "Service Error Codes" table for 8-1. | 3-3, 8-1 |
| | Vent stuck open. | Refer to "Service Error Codes" table. | 10-2 |
| | Fan runs (makes noise) after cycle completed (on models with fan). | Dishwasher is designed to keep fan running after cycle to avoid moisture buildup in dishwasher. Fan will turn off if door is opened longer than 5 seconds. Instruct customer. | |
| | Excessive fan noise due to faulty fan. | 1. Check fan operation during Service Diagnostics test cycle.<br>2. Unplug dishwasher or disconnect power.<br>3. Replace fan if fan does not spin freely. | |
| Leaks or Drips on Cabinet or Floor | Vent wax motor problem. | Refer to "Service Error Codes" table. | 10-2 |
| | Fan problem (on models with fan). | Refer to "Service Error Codes" table. | 10-3 |
| | Too many suds. | Refer to "Service Error Codes" table. | 6-3, 6-4 |
| | Leaking dishwasher. | Check door/tub gasket and all water connections under dishwasher. Refer to "Service Error Codes" table. | 6-1, 6-3 |
| | Unit not level (leaning forward) and water surges over front lip during cycle. | Check error history for Float Error 6-4. Error 6-4 is likely to occur if unit is significantly out of level and leaning forward. Refer to "Service Error Codes" table. | 6-4 |
| | Air pressure surge when door is opened and immediately closed while dishwasher is hot can force droplets out of the vent duct. | Instruct customer to leave door open a few minutes before re-closing, if opened while dishwasher is hot. | |

# Wiring Diagram



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