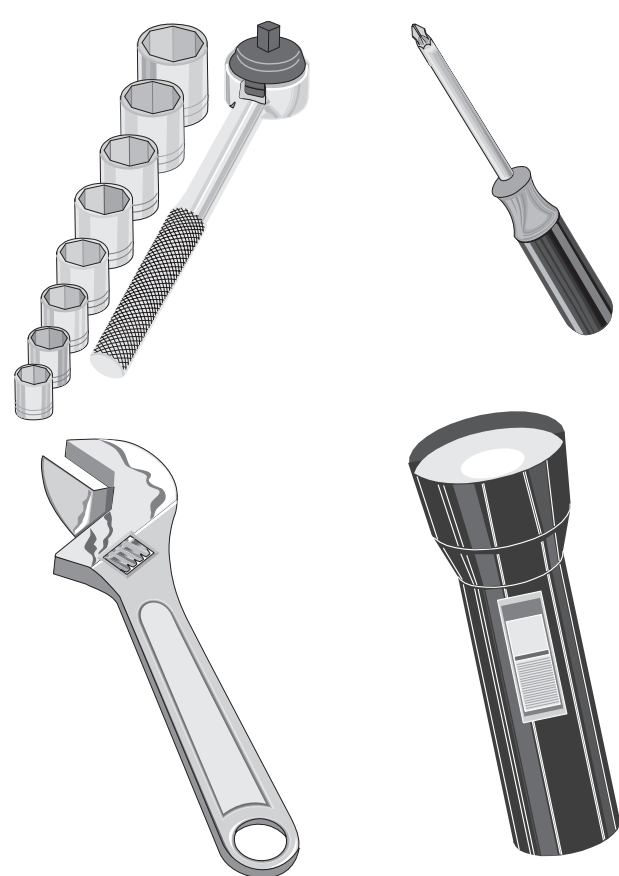


Dishwasher Installation Instructions 18" built-in



INSTALLER: Leave Installation Instructions with owner.

OWNER: Read your dishwasher *Use and Care Manual*. It contains important safety information for operating this appliance. It also has many suggestions for getting the best results from your dishwasher.

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Before You Begin

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 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.

Read all instructions before installing dishwasher. For your safety, please read and observe all safety instructions. This guide will help you anticipate drain, water, and electrical connections, and help you select the best location for the dishwasher.

Observe all local codes and ordinances for electrical and plumbing connections. All electrical and plumbing work should be performed by qualified persons.

Installation Tips 1

Tools and Materials Needed for Installation

- Drill, Electric
- Driver, Socket $\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{9}{16}$ "
- Flaring Tool / Tube Cutter (for copper tubing)
- Flashlight
- Level
- Pipe Joint Compound (for iron pipe plumbing) or Pipe Thread Tape (for sealing threads)
- Pliers
- Safety Glasses
- Saw, Keyhole or $\frac{1}{2}$ ", $1\frac{1}{2}$ " to 2" Hole Cutters
- Screw Drivers, Slotted and #2 Phillips (magnetic tip preferred)
- Tape, Electrical or Duct
- Tape, Measuring
- Wire Stripper or Utility Knife
- Wrench, Hex-end
- Wrenches, 2 Adjustable (for copper tubing) or 2 Pipe wrenches (for iron pipe plumbing)

Parts You Will Need* (Not Included)

- Drain Hose Clamp, $1\frac{1}{2}$ " Diameter
 - Elbow, 90° with a $\frac{3}{8}$ " National Pipe Thread
 - Strain Relief Bushing
 - Wire Nuts, two (2)
- * If required: Available at:
- "Y" Branch Tailpiece and Connector Kit (See Step 4) Plumbing Supply Store
 - Air Gap Kit (See Step 4) Plumbing Supply Store
 - Fasteners for floor anchoring (See Step 9) Hardware Store

- Examine dishwasher and locate connections. See Step 4.
- Locate dishwasher where there is easy access to drain, water, and electrical lines. The best location is on either side of the kitchen sink for access to existing plumbing and ease in loading dishes. See Step 4.
- Electrical, water, and drain connections are not the same for all age, brands, or models of dishwashers. Check the location and length of home utilities. See Step 4.
- A 15-20 amp, grounded, 120 volt AC only, electrical supply is required. See Steps 4 and 8.
- If dishwasher drain hose will be connected to a food disposer for the first time, knock out plug located inside disposer inlet. See Steps 4 and 6.
- Kinked water or drain hoses can cause problems. See Step 6.
- Dishwashers need to be connected to a hot water supply with enough water pressure to insure an adequate fill. See Steps 4 and 7.
- Each home installation differs. You will need additional parts listed above to complete your installation. See Steps 4 and 7.
- Flush water line prior to making the final connection to prevent clogging of dishwasher's filter screen. See Step 7.
- The dishwasher will look, sound, and perform best when properly leveled. See Step 5. (NOTE: If levelers are removed during installation, make sure the floor is flat and free of any obstruction.)
- Anchor the dishwasher to countertop. See Step 9.

Installation Preparation 2

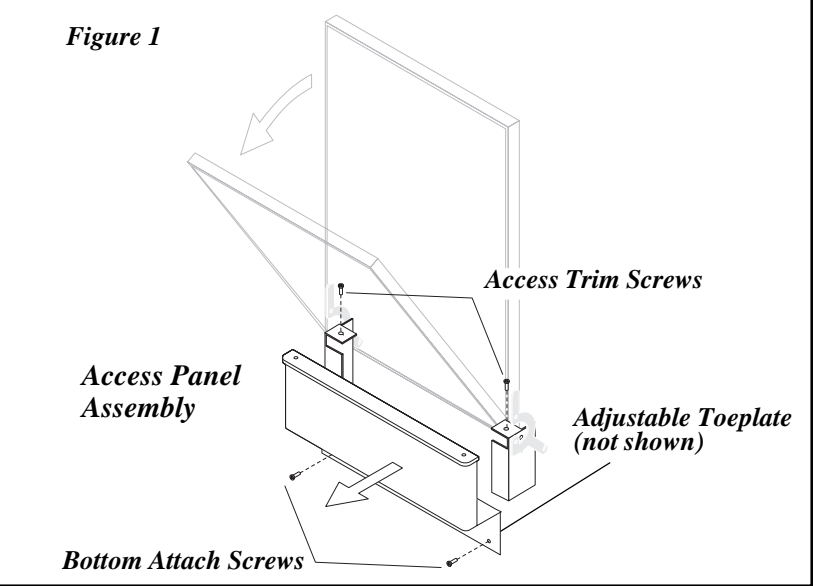
▲ WARNING

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.

- Remove access panel assembly by opening door all the way and removing two (2) screws on top of access trim. See Figure 1.
- Close door. Remove two (2) bottom attach screws in access panel assembly.
- The access panel assembly can now be removed by pulling it forward.



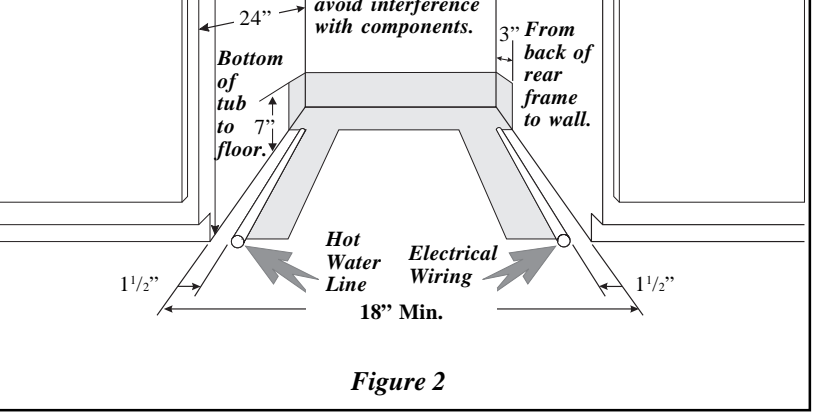
- Locate water inlet valve behind kickplate on bottom left underside of unit. The valve has a $\frac{3}{8}$ " NPT female fitting.
- Wrap 90° elbow (not included) with pipe thread tape (or apply joint compound) and thread it into water inlet valve.
- Tighten elbow with a wrench, leaving elbow pointing toward rear of unit. To prevent bending of bracket or breaking of valve, avoid overtightening.

Roughing In 3

▲ WARNING

Electric Shock Hazard
Enclose dishwasher completely on the top, sides and rear. Failure to do so can result in death or electrical shock.

- Make sure your location has the right drain, water, and electrical outlets to make the connections. Do not install unit under a cooktop range. Damage to plastic tub will occur.



- IMPORTANT: For proper operation and appearance of unit, cabinet opening should have dimensions as shown in Figure 2. If unit is to be placed in a corner, there must be at least a 2-inch side clearance to open door.**
- Remove any carpet from area to provide motor clearance. Floor should be flat and free of any obstruction.
- IMPORTANT: Drain, water, and electrical lines should be roughed-in before going any further.**
- Electrical, water, and drain lines must be confined to shaded areas in Figure 2. Electric conductors, water, and drain could be damaged.

Connections For Electrical, Water, and Drain 4

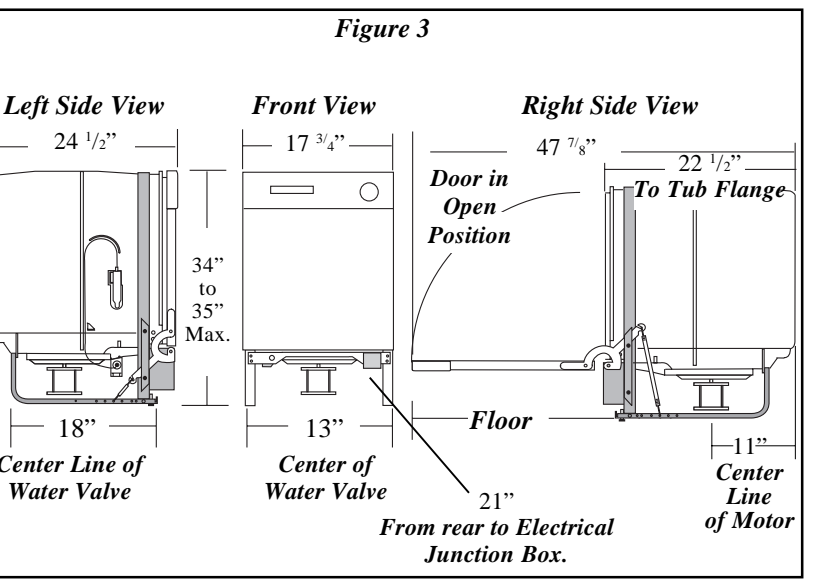
▲ WARNING

Electric Shock Hazard
Disconnect electrical power at the fuse box or circuit breaker box before beginning installation. Failure to follow this warning could result in death or serious injury.

IMPORTANT: Do not cross drain, water, and electrical lines in front of dishwasher motor or frame.

Locating the Connections

- Review dimensions in Figure 3 to locate dishwasher's drain, water, and electrical connections.
- All connections must be made in shaded area in Figure 2.



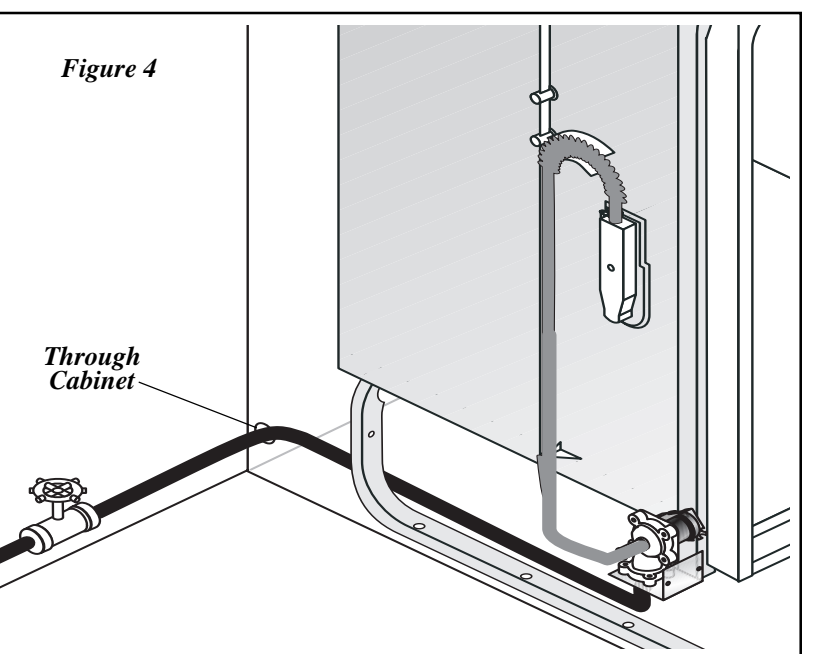
Electrical

- The dishwasher operates on a 120 volt, 60 Hz electrical supply. Provide a separate circuit with a fuse or circuit breaker rated for at least 15 amps (20 amps if connected with disposer) but not more than 20 amps. Connect with copper wire only.
- Note the locations of electrical supply and dishwasher's electrical junction box on right underside of unit behind access panel assembly. See Figure 3.
- Cut access hole in shaded area shown in Figure 2.
- Pull electrical cable through hole into installation area.

Water

Do not use the furnished drain hose or a rubber garden hose for the water supply line. Either of these hoses can burst. Flooding may occur and cause property damage.

- Determine where you will connect to hot water supply. Review Figure 3 and note the location of water inlet valve.
- Be sure water inlet valve is protected from freezing. If valve freezes and ruptures, flooding may occur.
- Determine amount of tubing needed to connect hot water supply to the unit's water inlet valve. Copper tubing must have a minimum $\frac{3}{8}$ " OD. High-pressure and high-temperature rated plastic tubing with a minimum inner diameter of $\frac{1}{4}$ " may be used. A shut-off valve installed outside dishwasher cabinet is best. See Figure 4.

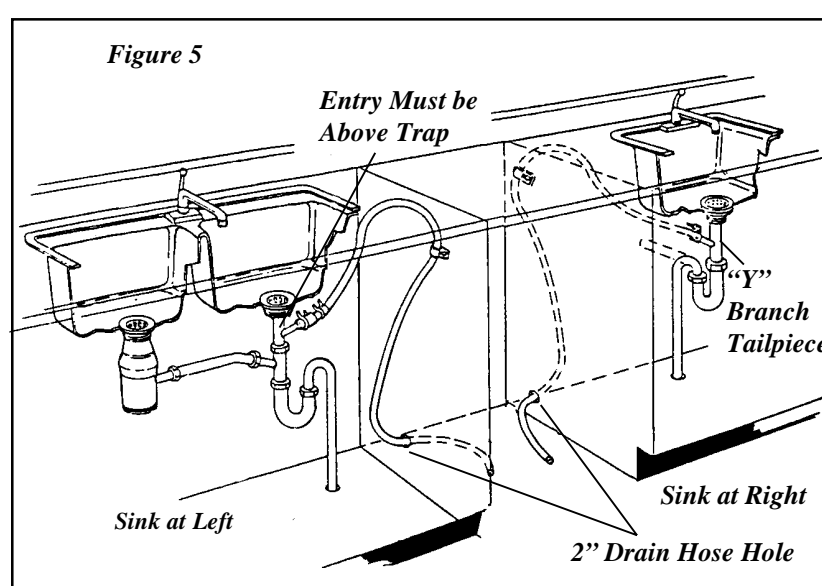


- Cut water access hole in shaded area in Figure 2.
- Route water supply line into installation area.

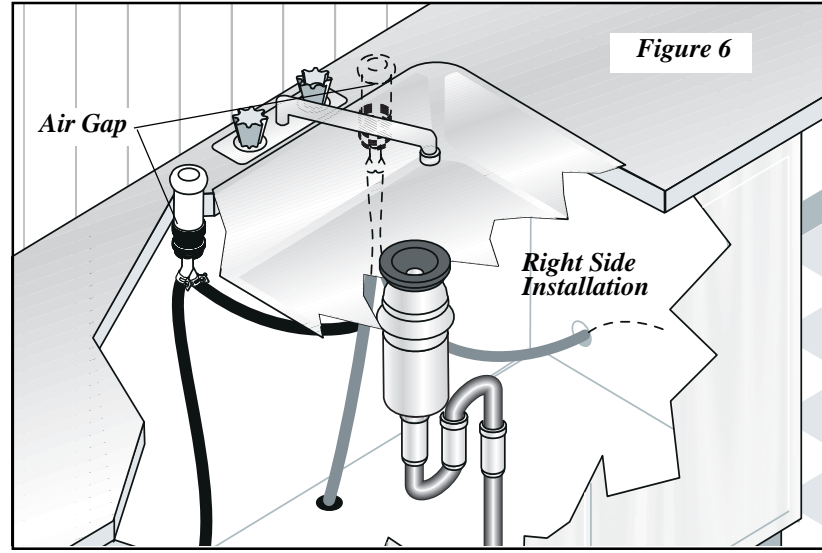
IMPORTANT: Incoming hot water temperature should be 120°F (49°C). Water pressure should be between 20-120 psi.

Drain

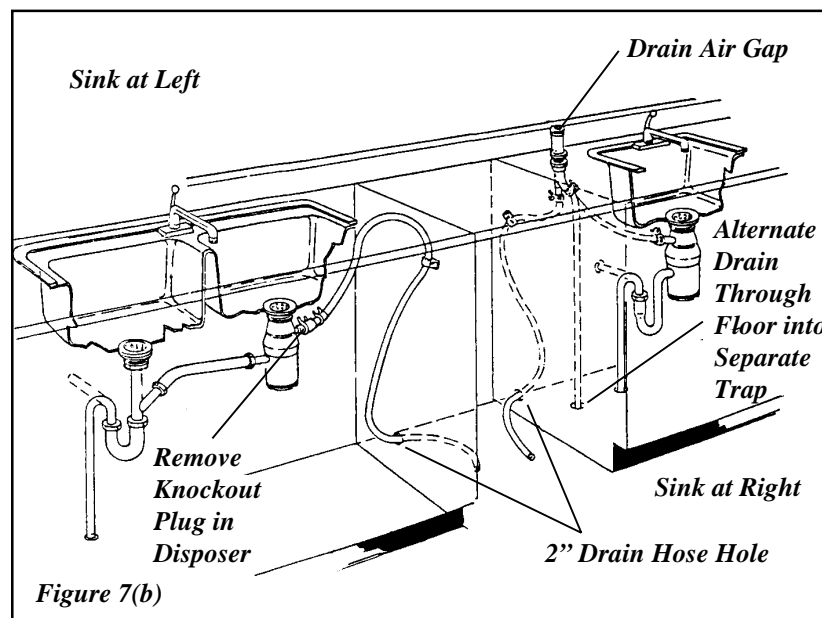
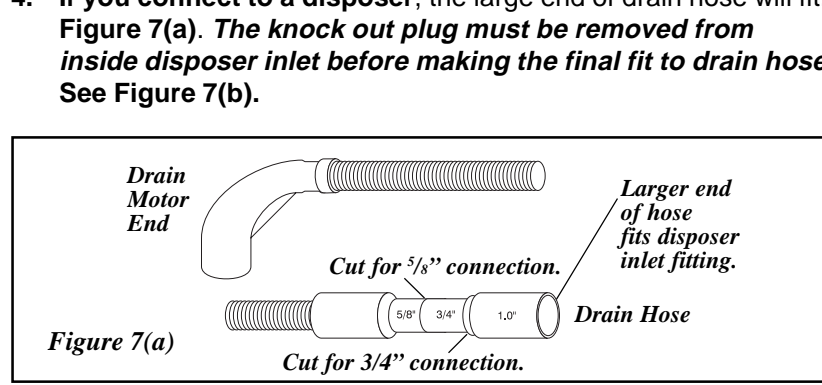
- Review Figures 5 and 6 to see the different ways to connect dishwasher to drain system. Choose method that best suits your need.



- If you connect to a sink drain, entry will need to be above trap. A "Y" branch tailpiece and connector kit, not included, will make this method easier and includes all needed fittings and instructions. See Figure 5.



- If you connect to a sink trap, local codes may require you to install an air gap kit, not included. The drain hose will be routed from dishwasher to air gap inlet as shown in Figure 6. An air gap kit is available from a plumbing supply store.
- If you connect to a disposer, the large end of drain hose will fit. Inside disposer inlet before making the final fit to drain hose. See Figure 7(b).



- Before cutting drain hose access, check both sides of selected area to avoid interference. Cut a 2" diameter hole in shaded area shown in Figure 2.
- If the cabinet wall is wood, sand edges of hole until smooth and rounded. If cabinet wall is metal, cover all sharp edges with electrical or duct tape to avoid cutting drain hose.

- Cut water access hole in shaded area in Figure 2.
- Route water supply line into installation area.

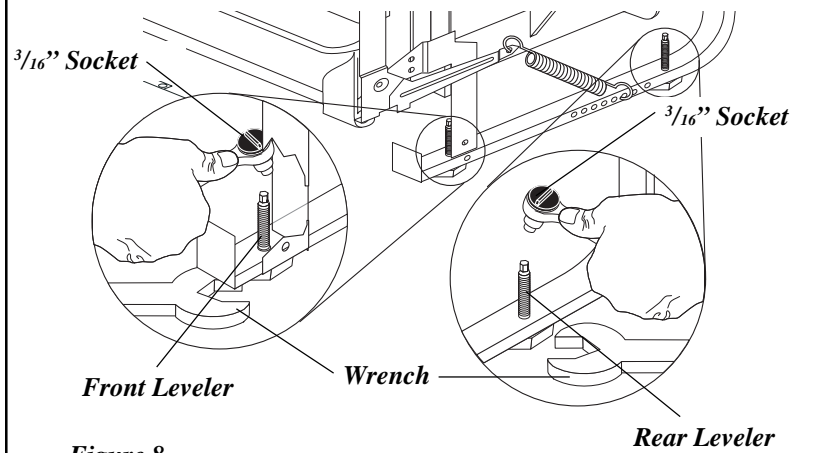
Leveling Dishwasher within Cabinets 5

- Measure height of cabinet opening from underside of countertop to floor. Check chart for height opening and suggested adjustment.

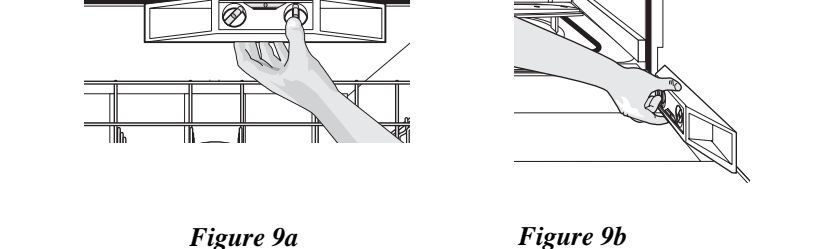
Height of Cabinet Opening	Number of Turns to Adjust Levelers
34" (86.4cm)	0
34 1/8" (86.7cm)	2
34 1/4" (87.2cm)	6
34 1/2" (87.6cm)	9

For additional height add shims under levelers.

- Move dishwasher to front of installation area.
- Loosen the front and rear leveling legs by turning counterclockwise. Refer to chart for number of turns. See Figure 8. Front levelers should allow $\frac{1}{8}$ " below underside of countertop.



- If levelers have to be removed, make sure floor is free of obstructions.
- Place dishwasher inside cabinet area so that it is centered in opening. Use caution when moving dishwasher to prevent damage to dishwasher, floor, and cabinets.
- Check that dishwasher is level from side to side by placing a level against the top front section of the tub. See Figure 9a.



- Check that dishwasher is level from front to back by placing level on side of opened door. See Figure 9b.
- Adjust levelers up or down until dishwasher is level.



Finishing the Drain Connection 6

Plumbing material and drain hose must not come in contact with wiring or electrical components.

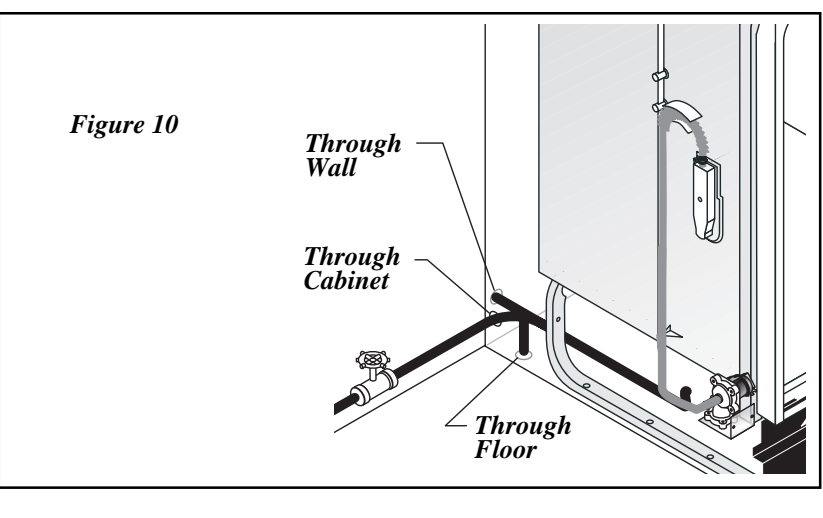
- Move unit back in place while routing drain hose through access hole. Use care to prevent damage to the dishwasher, floor and cabinets. **IMPORTANT: Make sure there are no sharp bends or kinks that might restrict drain flow.**
- Secure drain hose to sink drain, disposer, or separate trap with a clamp. **IMPORTANT: Be careful not to overtighten clamp or you may damage end of hose.** Do not connect hose to horizontal pipe between sink drain and disposer.
- Be sure unit does not rest on drain hose. It should be free of electrical components and door springs. Do not cut corrugated drain hose. Pull excess through cabinet and place under sink. Make sure hose does not come in contact with any sharp edges.

Finishing the Water Connection 7

Do not solder within 6" of the water inlet valve. Damage to the plastic parts in the valve may occur. Use care that no sealer, dirt, or other objects enter the valve. Damage to the filter screen may occur.

Be sure the dishwasher is placed where the water inlet valve will be kept from freezing. If the valve freezes, it may rupture and flooding may occur.

Water Line



- Flush water line before connecting it to water inlet valve to prevent early clogging of filter screen. Place a bunched towel over end of line to prevent splashing. Open valve for a few seconds and let water drain into a pan. Turn off water supply at shut-off valve.
- Route water line to water inlet valve as shown in Figure 10.
- While firmly pulling water supply line into 90° elbow, tightly connect water supply to water inlet valve. Supply line must be free of kinks, scales, chips, and lubricants.
- Turn on water supply and check for leaks.
- If water inlet valve clogs, make sure water supply is off. Remove four (4) screws at inlet end of valve and clean filter screen.

Finishing the Electrical Connection 8

Make sure electrical power has been disconnected at fuse box or circuit breaker box.

The dishwasher must be connected to a grounded metal, permanent wiring system. The equipment-grounding conductor must be run with the circuit conductors and connected to the appliance's equipment grounding terminal or lead. It is the consumer's responsibility to contact a qualified installer to make sure the electrical installation conforms with the National Electrical Code and local codes and ordinances.

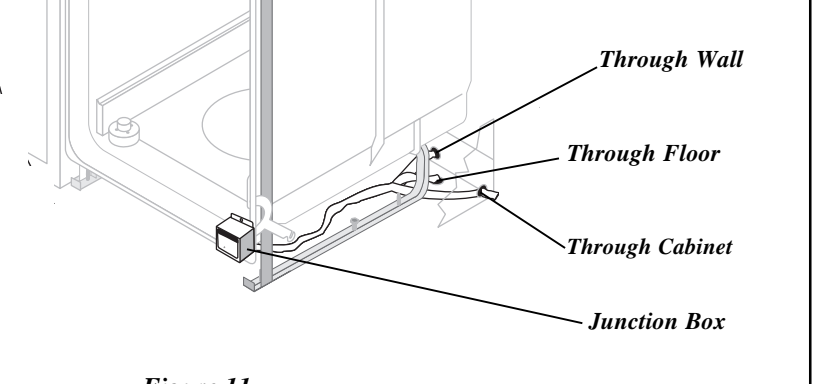
Do not connect the dishwasher to the power supply until the appliance is permanently grounded. All wiring connections must be enclosed in the junction box. This unit has copper lead wires.

Electrical Supply

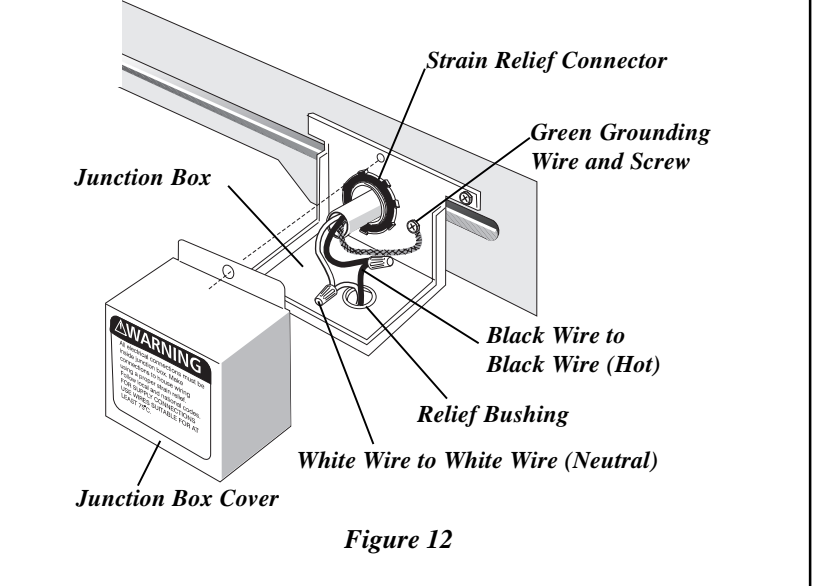
▲ WARNING

Electrical Shock Hazard
Electrically ground dishwasher. Connect ground wire to green ground connector in terminal box. Do not use an extension cord. Failure to do so can result in death, fire, or electrical shock.

- Remove junction box cover and pull house wiring into junction box. See Figures 11 and 12.
- Use a UL listed strain-relief bushing, not included, at box to stabilize wiring.



- IMPORTANT: Be sure electrical cable is not routed behind dishwasher's motor.**
- Inside junction box, attach ground wire under head of grounding screw and tighten. See Figure 12.
 - Connect incoming black lead to dishwasher's black lead and incoming white lead to dishwasher's white lead with wire nuts or other suitable connectors, not included. Wire nuts should be tight.
 - Replace junction box cover. See Figure 12.



Securing the Dishwasher 9

▲ WARNING

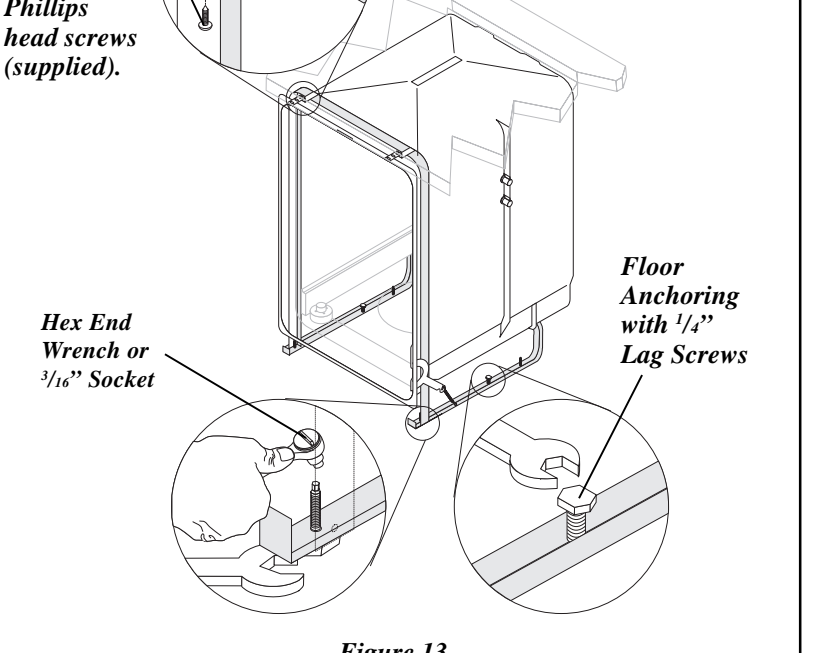
Tip Over Hazard
Do not use dishwasher until completely installed. Do not push down on open door. Doing so can result in serious injury or cuts.

The dishwasher must be secured to keep it from tilting when door is opened. Choose one of the methods described below to secure unit.

Countertop Anchoring

- Adjust levelers (see Step 5) so mounting brackets touch underside of countertop. **IMPORTANT: Dishwasher must rest on floor—do not hang from countertop.** See Figure 13.
- Screw mounting brackets firmly to countertop using screws provided in literature packet.
- Open and close dishwasher door slowly. If door hits mounting bracket screw heads, adjust front levelers.

Note: Open and close door to make sure it does not hit surrounding cabinets or countertop.



Floor Anchoring

- This procedure is difficult and should be used only if countertop mounting brackets cannot be used.
- Screw $\frac{1}{4}$ " lag screws, not included, through holes provided in frame rail. See Figure 13.
 - Use expansion fasteners if floor is concrete.

Installing Wood Panels 10

To Install a Custom Wood Panels

The dishwasher door and access panel can be customized to match wood cabinets. This will require a wood panel trim kit. Kit is available from your dealer or parts supplier—part number 154422801.

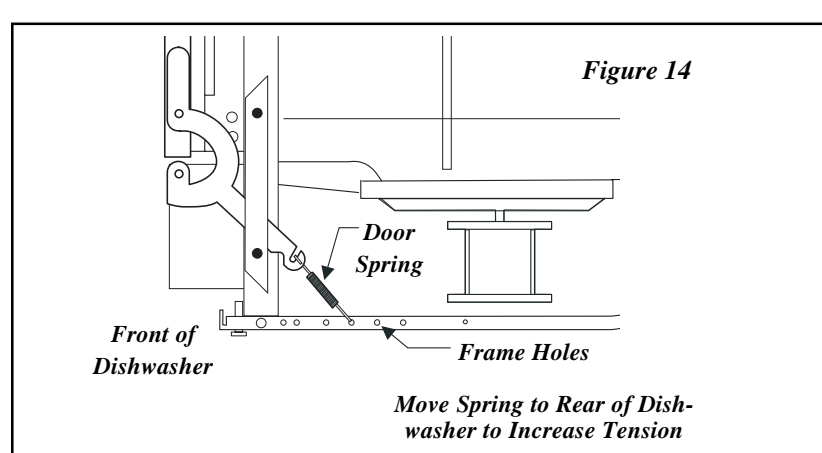
Checking the Installation 11

Before starting the dishwasher, check these items:

- All packing materials and consumer literature have been removed from unit.
- Dishwasher is level and securely fastened.
- Open and close door to make sure it does not hit surrounding cabinet or countertop.
- Water and drain lines have no kinks.
- Wiring connections to junction box are tight.
- Water supply is turned on.
- Joists are free of leaks.

Adjusting Door Spring Tension

- Adjust door springs to balance weight of door. A correct spring setting allows door to remain horizontal in opened position, yet will rise to close with slight lift of finger.
- If necessary, increase tension by moving springs to a hole toward rear of unit or decrease by moving them toward front. See Figure 14.



- Turn electrical supply on.

Operate the machine through at least one fill and pump-out, checking the following items:

- Check water level after dishwasher has filled completely. Water should fill to the heating element.
- Check for satisfactory pump-out. At end of pump-out, a small amount of water in the bottom of the tub is normal.
- Check for leaks.

If operation is satisfactory, replace the access panel assembly.

Replacing Access Panel Assembly

If all connections are correct, there are no leaks, and unit runs properly, replace the access panel assembly before placing unit into operation.

- Hold access panel assembly in place.
- Open door and replace the two (2) screws on top of access trim.
- Close door and replace the two (2) bottom screws in access panel assembly.