# **Installation Instructions**

for Frontload Washers

Original Instructions
Keep These Instructions for Future Reference.
CAUTION: Read the instructions before using the machine.
(If this machine changes ownership, this manual must accompany machine.)



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# **Washer Dimensions**

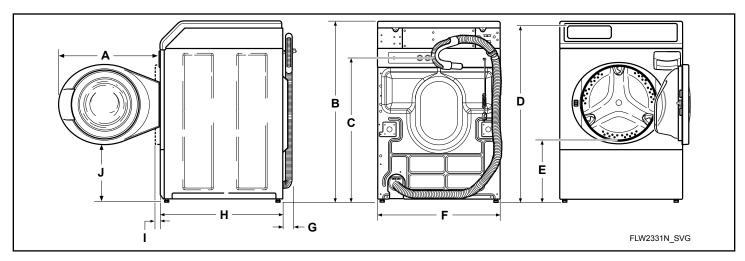


Figure 1

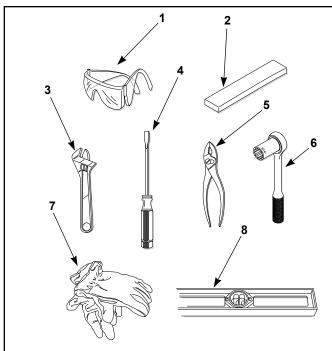
A	611 mm [24.06 in.]
В	1027 mm [40.42 in.]
С	813 mm [32 in.]
D	1006 mm [39.61 in.]
Е	371 mm [14.6 in.]
F	683 mm [26.875 in.]
G	52 mm [2.04 in.]
Н	704 mm [27.73 in.]
I (with door closed)	40 mm [1.59 in.]
J	333 mm [13.1 in.]

# Installation

#### **Before You Start**

#### **Tools**

For most installations, the basic tools you will need are:



- FLW2376N\_SVG
- 1. Safety Glasses
- 2. Wood Block
- 3. Wrench
- 4. Screwdriver
- 5. Pliers
- 6. Socket Wrench
- 7. Gloves
- **8.** Level

Figure 2

NOTE: If the washer is delivered on a cold day (below freezing), or is stored in an unheated room or area during the cold months, do not attempt to operate it until the washer has had a chance to warm up.

NOTE: Install dryer before washer. This allows room for attaching exhaust duct.

NOTE: Some moisture in the wash drum is normal. Water is used during testing at the manufacturer.

NOTE: This appliance is suitable for use in countries having a warm, damp climate.

#### Order of Installation Steps

The proper order of steps must be followed to ensure correct installation. Refer to the list below when installing your unit.

- 1. Position washer near the installation area.
- 2. Remove the shipping materials.
- 3. Connect the fill hoses.
- 4. Connect the drain hose to the drain receptacle.
- 5. Position and level the washer.
- 6. Wipe out inside of the washer.
- 7. Connect the washer to electrical power.
- 8. Check installation.

#### **Position Unit Near Installation Area**

Move unit so that it is within 1.2 meters [4 feet] of the desired area of installation.

NOTE: For best performance and to minimize vibration or movement, install washer on a solid, sturdy and level floor. Some floors may need to be reinforced, especially on a second floor or over a basement. Do not install the washer on carpeting, soft tile or other weakly supported structures.

# **Remove Shipping Materials**

1. Remove two screws at bottom of front access panel. Rotate bottom of panel out and remove panel.

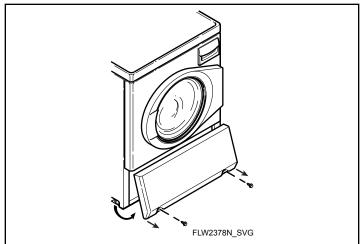


Figure 3

- 2. Remove two 9/16 inch bolts and washers holding shipping brace to weight.
- 3. Remove two 9/16 inch bolts and washers holding shipping brace to washer base and remove brace.

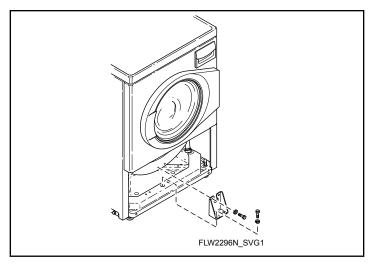


Figure 4

- 4. Go to rear of washer and pull label from rear shipping bolts.
- 5. Remove two 9/16 inch bolts. Unscrew each bolt while applying forward pressure just until bolt stops unthreading. Work each bolt and spacer out by hand using a circular motion.

NOTE: Avoid backing bolts out completely or spacers might fall into cabinet.

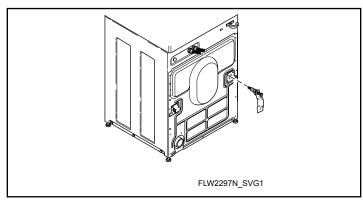


Figure 5

 Insert two plugs included in accessories bag into rear shipping bolt holes

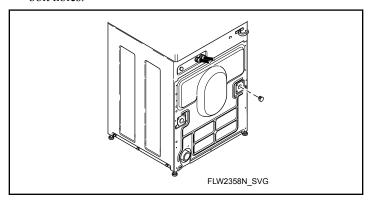


Figure 6

7. Replace front access panel.

8. Save all shipping materials. They must be reinstalled any time washer is moved more than four feet.

IMPORTANT: Do not lift or transport unit from front or without shipping materials installed. Refer to the User's Guide for proper instructions on reinstalling the shipping materials.

#### Connect Fill Hoses



## **WARNING**

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 and before using the washer, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. The gas is flammable. Do not smoke or use an open flame during this time.

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#### Water Supply Requirements

Water supply faucets must fit standard 19 mm [3/4 inch] female garden hose couplings. DO NOT USE SLIP-ON OR CLAMP-ON CONNECTIONS.

NOTE: Water supply faucets should be readily accessible to permit turning them off when washer is not being used.

Recommended cold water temperature is 10° to 24° Celsius [50° to 75° Fahrenheit]. Recommended maximum hot water temperature is 51° Celsius [125° Fahrenheit]. Warm water is a mixture of hot and cold water. Warm water temperature is dependent upon the water temperature and the pressure of both the hot and cold water supply lines.



### WARNING

To prevent personal injury, avoid contact with inlet water temperatures higher than 51° Celsius [125° Fahrenheit] and hot surfaces.

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Maximum flow rate for all water temperatures is 9.46 liters per minute [2.5 gallons per minute]  $\pm$  15%.

Water pressure must be a minimum of 138 to a maximum of 827 kPa [minimum of 20 to a maximum of 120 pounds per square inch] static pressure measured at the faucet.

NOTE: Water pressure under 138 kPa [20 pounds per square inch] will cause an extended fill time in the washer and may not properly flush out the detergent dispenser.

The appliance is to be connected to the water mains using new hose-sets and the old hose-sets should not be reused.

Turn on the water supply faucets and flush the lines for approximately two minutes to remove any foreign materials that could clog the screens in the water mixing valve. This is especially important when installing your washer in a newly constructed or renovated building. Build-up may have occurred during construction.

#### **Connecting Hoses**

1. Insert rubber washers and filter screens (from accessories bag) in water fill hose couplings (two hoses supplied with washer). The filter screen must be facing outward.

Models Through Serial Nos. Beginning 1810: NOTE:

If using black rubber hoses with black and brass couplings: Insert filter screens into the BLACK colored hose couplings (BSPP thread). Insert rubber washers into the brass colored hose couplings (Garden Hose Thread [GHT]).

If using gray braided hoses with silver hose couplings (one with hex nut): Insert filter screens into the hex nut shaped hose couplings (BSPP thread). Insert rubber washers into the knurled, round shaped hose couplings (GHT).

Models Starting Serial Nos. Beginning 1810:

NOTE: Water mixing valve connections at rear of washer are BSPP thread. Both hose couplings on fill hoses included with machine are also BSPP thread.

- 2. Connect fill hose couplings with filter screens to water supply faucets.
- 3. Connect the other hose couplings to the hot and cold valve connections at the rear of the washer.

Models Through Serial Nos. Beginning 1810: NOTE:

If using black rubber hoses with black and brass couplings: Connect the BLACK colored hose coupling (BSPP thread) end of the fill hoses (with filter screens) to the water supply faucets. Then connect end of hoses with the brass colored hose couplings (GHT) to the hot and cold water mixing valve connections at rear of washer.

If using gray braided hoses with silver hose couplings (one with hex nut): Connect the hex nut shaped hose couplings (BSPP thread, with filter screens) to the water supply faucets. Then connect couplings with

knurled, round shaped couplings (GHT) to the hot and cold water mixing valve connections at rear of washer.

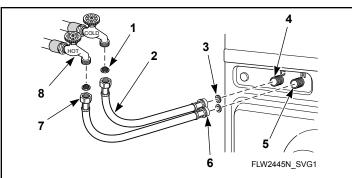
Models Starting Serial Nos. Beginning 1810:

NOTE: Water mixing valve connections at rear of washer are BSPP thread. Both hose couplings on fill hoses included with machine are also BSPP thread.

- 4. Make sure the hose from the hot water faucet goes to the water mixing valve marked "H" and the hose from the cold faucet goes to the valve marked "C".
- 5. Thread hose couplings onto valve connections finger tight. Then turn 1/4 turn with pliers.

IMPORTANT: DO NOT cross thread or overtighten couplings. This will cause them to leak.

- 6. Turn water on and check for leaks.
- 7. If leaks are found, retighten the hose couplings.
- 8. Continue tightening and rechecking until no leaks are found.



- 1. Filter Screen (Screen must be facing outward)
- 2. Fill Hose
- 3. Plain Rubber Washer
- 4. Cold Water Connection
- 5. Hot Water Connection
- Install this end of hose to valve connections at rear of washer
- 7. Install this end of hose to water supply faucet (Black colored or hex nut shaped coupling for BSPP thread)

NOTE: Both couplings on fill hoses included with models starting Serial Nos. beginning 1810 are BSPP thread.

8. Faucet

Figure 7

#### IMPORTANT:

Hoses and other rubber parts deteriorate after extended use. Hoses may develop cracks, blisters or material wear from the temperature and constant high pressure they are subjected to.

All hoses should be checked on a monthly basis for any visible signs of deterioration. Any hose showing the signs of deterioration listed above should be replaced immediately. All hoses should be replaced every five years.

IMPORTANT: Turn off water supply faucets after checkout and demonstration. Owner should turn off water supply whenever there will be an extended period of non-use.

# Connect Drain Hose to Drain Receptacle

Remove the drain hose from its shipping position on the rear of the washer by unhooking the hose from the retainer clamp and by removing the shipping tape.

Install the drain hose into the drain receptacle (standpipe, wall or laundry tub) following the instructions below.

IMPORTANT: Drain receptacle must be capable of handling a minimum of 32 mm [1-1/4 inch] outside diameter drain hose.

Drain Flow Rate - 100-127 Volt/60 Hertz			
Drain Height	Flow Rate liters per minute [gal- lons per minute]		
0.9 m [3 ft.]	32.7 [8.6]		
1.5 m [5 ft.]	25.9 [6.8]		
1.8 m [6 ft.]	22.7 [6,0]		
2.1 m [7 ft.]	19.5 [5,1]		
2.4 m [8 ft.]	15.2 [4,0]		

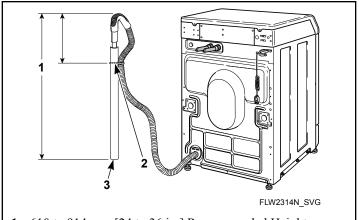
#### Drain Flow Rate - 220-240 Volt/50 Hertz

Drain Height	Flow Rate liters per minute [gal- lons per minute]
0.9 m [3 ft.]	27.7 [7,3]
1.5 m [5 ft.]	17.8 [4.7]
1.8 m [6 ft.]	13.4 [3.5]
2.1 m [7 ft.]	4.8 [1.3]
2.4 m [8 ft.]	0 [0]

Drain Flow Rate - 208-240 Volt/60 Hertz			
Drain Height	Flow Rate liters per minute [gal- lons per minute]		
0.9 m [3 ft.]	35,5 [9.4]		
1.5 m [5 ft.]	28,8 [7.6]		
1.8 m [6 ft.]	25.1 [6.6]		
2.1 m [7 ft.]	21.2 [5.6]		
2.4 m [8 ft.]	16.4 [4,3]		

### Standpipe Installation

- 1. Place the drain hose into the standpipe.
- 2. Remove the beaded tie-down strap from accessories bag and place around standpipe and drain hose. Refer to *Figure 8* .
  - a. Insert the end of the beaded strap into the larger hole found on the end of the strap.
  - b. Tighten to desired fit.
  - c. Lock strap in place by pulling beaded strap into the tapered smaller opening of the beaded strap end. A distinct snap noise should be heard once the strap is properly seated.
  - d. Pull on the strap once locked in place to ensure beaded strap is properly installed. This will prevent the drain hose from dislodging from drain receptacle during use.



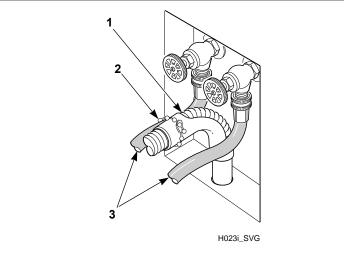
- 1. 610 to 914 mm [24 to 36 in.] Recommended Height
- 2. Beaded strap from accessory bag
- **3.** Standpipe 51 mm [2 in.] or 40 mm [1-1/2 in.]

Figure 8

#### Wall Installation

For installations of this type, the drain hose MUST be secured to one of the fill hoses using the beaded strap from accessories bag. Refer to *Figure 9*.

# NOTE: End of drain hose must not be below 610 mm [24 in.].



- 1. Drain Hose
- 2. Beaded Strap (tape if necessary)
- 3. Fill Hoses

Figure 9

#### **Laundry Tub Installation**

For this type of installation, the drain hose MUST be secured to the stationary tub to prevent hose from disloding during use. Refer to *Figure 10*. Use the beaded strap (supplied in accessories bag) to secure hose.

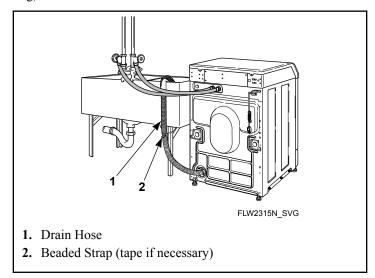


Figure 10

# **Position and Level the Washer**



### WARNING

Washers elevated above floor level must be anchored to that elevated surface, base or platform. The material used to elevate the washer should also be anchored to the floor to ensure that the washer will not walk or that the washer can not be physically pulled, tipped or slid from its installed position. Failure to do so may result in conditions which can produce serious injury, death and/or property damage.

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1. Position unit so it has sufficient clearance for installation and servicing.

NOTE: Use of the dispenser drawer or washer door as a handle in the transportation of the washer may cause damage to the dispenser or door.

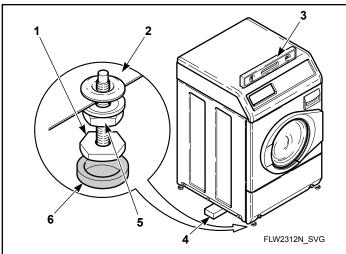
- Place unit in position on a solid, sturdy and level floor. Installing the unit on any type of carpeting, soft tile or other weakly supported structures is not recommended.
- 3. Place a level on the raised portion of cabinet top and check if the unit is level from side to side and front to back.
- 4. If unit is not level, tilt unit to access the front and rear leveling legs. For easier access to leveling legs, prop up unit with a wooden block.
- 5. Loosen 7/8 in. locknut and adjust legs by screwing into or out of unit base until the unit is level from side to side and front to back (using a level). Unit should not rock.

NOTE: Leveling legs can also be adjusted from inside the unit using an adjustable wrench.

6. Tighten the locknuts securely against the unit base. If the locknuts are not tight, unit will move out of position during operation.

NOTE: DO NOT slide unit across floor if the leveling legs have been extended. Legs and base could become damaged.

- 7. Remove rubber feet from accessories bag and place on all four leveling legs.
- 8. Verify that unit doesn't rock.



- 1. Leveling Leg
- 2. Washer Base
- 3. Level
- 4. Wood Block
- 5. Locknut
- 6. Rubber Foot

Figure 11

# Wipe Out Inside of Wash Drum

Prior to first wash, use an all purpose cleaner or a detergent and water solution and a damp cloth to remove shipping dust from inside of the washer.

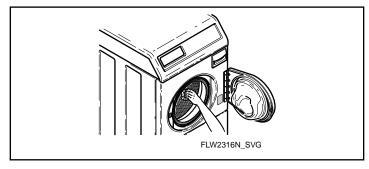


Figure 12

# **Connect the Washer to Electrical Power**

This appliance is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.



# **WARNING**

The appliance must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by a utility.

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#### **Electrical Requirements**

NOTE: Refer to the unit's serial plate for proper voltage and Hertz the unit is designed to operate on. The serial plate is located on the front panel behind the door.

NOTE: The wiring diagram is located in the control cabinet.



### WARNING

To reduce the risk of fire, electric shock, serious injury or death, all wiring and protective earth/ground connections MUST abide with local electrical codes. It is the customer's responsibility to have the wiring, fuses and circuit breakers installed by a qualified electrician to make sure adequate electrical power is available to the washer.

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When connecting the washer to electrical power:

- DO NOT overload circuits.
- DO NOT use an extension cord.
- DO NOT use an adapter.
- DO NOT operate other appliances on the same circuit.



# **WARNING**

To reduce the risk of an electric shock or fire, DO NOT use an extension cord or an adapter to connect the washer to the electric power source.

W082

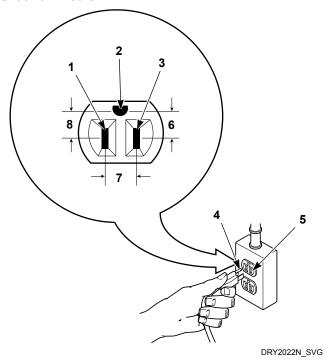
#### Models Factory-Equipped with Power Cord and Plug

#### 100 Volt/60 Hertz

This washer is designed to be operated on a separate branch, polarized, three-wire, earth/ground, 100 Volt, 60 Hertz, single-phase electrical circuit protected by a 15 ampere fuse, equivalent fuse-tron or circuit breaker.

The three-prong earth/ground plug on the power cord should be plugged directly into a polarized three-slot effective earth/ground receptacle rated 100 Volts AC (alternating current) 15 Amps. Refer to *Figure 13*.

#### Standard 100 Volt, 60 Hertz 3-Wire Effective Earth/ Ground Circuit



- **1.** L1
- 2. Earth/Ground
- 3. Neutral Side
- 4. Round Earth/Ground Prong
- 5. Neutral
- **6.** 0 V.A.C.
- 7.  $100 \pm 12 \text{ V.A.C.}$
- **8.**  $100 \pm 12$  V.A.C.

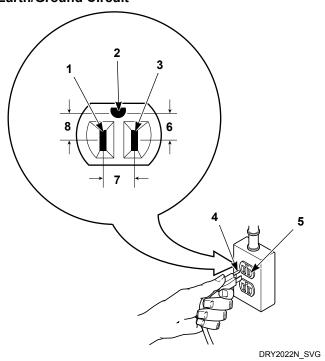
Figure 13

#### 100-127 Volt/60 Hertz

This washer is designed to be operated on a separate branch, polarized, three-wire, earth/ground, 100-127 Volt, 60 Hertz, single-phase electrical circuit protected by a 15 ampere fuse, equivalent fusetron or circuit breaker.

The three-prong earth/ground plug on the power cord should be plugged directly into a polarized three-slot effective earth/ground receptacle rated 100-127 Volts AC (alternating current) 15 Amps. Refer to *Figure 14*.

# Standard 100-127 Volt, 60 Hertz 3-Wire Effective Earth/Ground Circuit



- **1.** L1
- 2. Earth/Ground
- 3. Neutral Side
- 4. Round Earth/Ground Prong
- 5. Neutral
- **6.** 0 V.A.C.
- 7.  $100-127 \pm 12$  V.A.C.
- **8.**  $100-127 \pm 12$  V.A.C.

Figure 14

#### 230 Volt/50 Hertz

This washer is designed to be operated on a separate polarized three-wire, earth/ground, 230 Volt, 50 Hertz single-phase electrical circuit protected by a 10 ampere fuse, equivalent fusetron or circuit breaker. Refer to *Figure 15*.

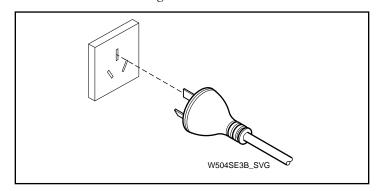
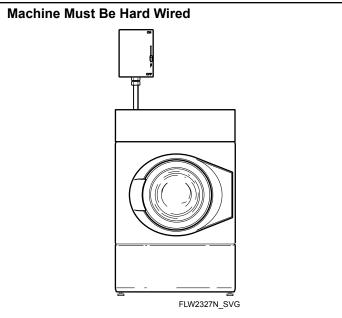


Figure 15

#### Models Factory-Equipped with Power Cord and No Plug

#### 230 Volt/50 Hertz

This washer is designed to be operated on a separate polarized three-wire, earth/ground, 230 Volt, 50 Hertz single-phase electrical circuit protected by a 10 ampere fuse, equivalent fusetron or circuit breaker. Refer to *Figure 16* for electrical connection.



NOTE: Electrical disconnect must be located so that it is easily accessible with machine in place. Machine must be hard wired. An intermediate shut-off box that provides all pole disconnection from the supply mains must be used in compliance with all local electrical codes.

Figure 16

#### Other Voltages

Refer to the unit's serial plate and electrical cord. If there is no plug on the cord, unit must be hard wired. Refer to *Figure 16*.

#### 110 Volt/60 Hertz

This washer is designed to be operated on a separate polarized three-wire, earth/ground, 110 Volt, 60 Hertz, single-phase electrical circuit protected by a 15 ampere fuse, equivalent fusetron or circuit breaker.

#### 220 Volt/60 Hertz

This washer is designed to be operated on a separate polarized three-wire, earth/ground, 220 Volt, 60 Hertz single-phase electrical circuit protected by a 10 ampere fuse, equivalent fusetron or circuit breaker.

#### 240 Volt/60 Hertz

This washer is designed to be operated on a separate polarized three-wire, earth/ground, 240 Volt, 60 Hertz single-phase electri-

cal circuit protected by a 10 ampere fuse, equivalent fusetron or circuit breaker.

#### 220 Volt/50 Hertz

This washer is designed to be operated on a separate polarized three-wire, earth/ground, 220 Volt, 50 Hertz single-phase electrical circuit protected by a 10 ampere fuse, equivalent fusetron or circuit breaker.

#### 240 Volt/50 Hertz

This washer is designed to be operated on a separate polarized three-wire, earth/ground, 240 Volt, 50 Hertz single-phase electrical circuit protected by a 10 ampere fuse, equivalent fusetron or circuit breaker.

#### **Earth/Ground Instructions**

This appliance must be properly connected to protective earth/ground. In the event of malfunction or breakdown, the earth/ground will reduce the risk of electric shock by providing a path of least resistance for electric current.

The appliance is equipped with a cord having an equipment earth/ground conductor. Some models are also equipped with an earth/ground plug. The unit must be plugged or hard wired into an appropriate power source that is properly installed and connected to a protective earth/ground in accordance with all local codes and ordinances.



### WARNING

Improper connection of the equipment earth/ground conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the unit is properly connected to a protective earth/ground.

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- DO NOT modify the plug provided with the unit if it will not fit the outlet, have a proper outlet installed by a qualified electrician.
- If the laundry room's electrical supply does not meet the above specifications and/or if you are not sure the laundry room has an effective earth/ground, have a qualified electrician or your local electrical utility company check it and correct any problems.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard.

## **Check Installation**

- 1. Refer to Installer Checklist on the back cover of this manual and make sure that unit is installed correctly.
- 2. Run washer with a test load to make sure it is operating properly and properly leveled.

- a. Put about six pounds of laundry (four bath towels and three jeans) into washer.
- b. Close door.
- c. Select Spin cycle and press Start.
- d. When washer spins at high speed, verify that it is stable.
- e. If it is not, after cycle is complete, refer to Position and Level the Washer to readjust leveling legs.

# **Installer Checklist**

### Fast Track for Installing the Washer

1	Position Washer Near In	stallation Area.	5	Position and Level the Washer.	
	СНЕСК			CHECK	FLW2312N_SVG1
2	Remove the Shipping Materials and Install Plugs.		6	Wipe Out Inside of Washer.	
	CHECK	FLW2359N_SVG		CHECK	FLW2316N_SVG
3	Connect Fill Hoses.		7	Connect Washer to Electrical Power.	
	CHECK	FLW2304N_SVG		CHECK	FLW2381N_SVG
4	Connect Drain Hose to Drain Receptacle.				
	СНЕСК	FLW2314N_SVG1			

Refer to the manual for more detailed information