

Technical Service Manual

Wave-Touch™ and IQ-Touch™ Front-Load Washer Models EIFLW55H & EWFLW65H



 **Electrolux**

Section 1

Basic Information

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The service technician should be aware of the safety instructions below to make sure the customer is operating the washer in accordance to the Use and Care Manual.

PREVENT FIRE

- Do not wash items that have been previously cleaned in, soaked in, or spotted with gasoline, cleaning solvents, kerosene, cooking oils, waxes, etc. Do not store these items on or near the washer. These substances give off vapors or chemical reactions that could ignite or explode.
- Do not put oily or greasy rags or clothing on top of the washer. These substances give off vapors that could ignite the materials.
- Do not add gasoline, cleaning solvents, or other flammable or explosive substances to the wash water. These substances give off vapors that could ignite or explode.
- Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for 2 weeks or more. **HYDROGEN GAS IS EXPLOSIVE.** If the hot water system has not been used for such a period, 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. Hydrogen gas is flammable; do not smoke or use an open flame during this time.
- Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.
- Failure to comply with these warnings could result in fire, explosion, serious bodily injury and/or damage to the rubber or plastic parts of the washer.

PROTECT CHILDREN

- Do not allow children to play on or in the washer. Close supervision of children is necessary when the washer is used near children. As children grow, teach them the proper, safe use of all appliances.
- Destroy the carton, plastic bag and other packing materials after the washer is unpacked. Children might use them for play. Cartons covered with rugs, bedspreads or plastic sheets can become airtight chambers.
- Keep laundry products out of children's reach. To prevent personal injury, observe all warnings on product labels.
- Before the washer is removed from service or discarded, remove the washer door to prevent accidental entrapment.
- Failure to comply with these warnings could result in serious personal injuries.

PREVENT INJURY

- To prevent shock hazard and assure stability during operation, the washer must be installed and electrically grounded by a qualified service person in accordance with local codes. Installation instructions are packed in the washer for installer's reference. Refer to **INSTALLATION INSTRUCTIONS** for detailed grounding procedures. If the washer is moved to a new location, have it checked and reinstalled by a qualified service person.
- To prevent personal injury or damage to the washer, the electrical power cord of the washer must be plugged into a properly grounded and polarized 3-prong outlet. The third grounding prong must never be removed. Never ground the washer to a gas pipe. Do not use an extension cord or an adapter plug.
- Follow package directions when using laundry products. Incorrect usage can produce poisonous gas resulting in serious injury or death.
- Do not combine laundry products for use in 1 load unless specified on the label.
- Do not mix chlorine bleach with ammonia or acids such as vinegar.

PREVENT INJURY AND DAMAGE TO THE WASHER

To prevent serious personal injury and damage to the washer:

- All repairs and servicing must be performed by an authorized servicer unless specifically recommended in the Use & Care Guide. Use only authorized factory parts.
- Do not tamper with controls.
- Do not install or store the washer where it will be exposed to the weather.
- Do not install on carpet. Install washer on a solid floor. It may be necessary to reinforce the floor to prevent vibration or movement.
- To reduce the risk of electric shock, disconnect this appliance from the power supply before attempting any user maintenance. Turning the controls to the OFF position does not disconnect this appliance from the power supply.
- To prevent injury, do not reach into the washer while parts are moving. Before loading, unloading or adding items, push in the cycle selector knob and allow the drum to coast to a complete stop before reaching inside.
- This washer is equipped with an electrical overload protector. The motor will stop if it becomes overheated. The washer will automatically restart after a cool down period of up to 30 minutes, if the washer has not been manually turned off during this time.
- Failure to comply with these warnings could result in serious personal injuries.

Safe Servicing Practices

Avoid personal injury and/or property damage by observing important Safe Servicing Practices. Following are some limited examples of safe practices:

1. DO NOT attempt a product repair if you have any doubts as to your ability to complete the repair in a safe and satisfactory manner.
2. Always Use The Correct Replacement Parts as indicated in the parts documentation. Substitutions may defeat compliance with Safety Standards Set For Home Appliances.
3. Before servicing or moving an appliance:
 - Remove power cord from the electrical outlet, trip circuit breaker to the OFF position, or remove fuse.
 - Turn off water supply.
4. Never interfere with the proper operation of any safety device.
5. Use ONLY REPLACEMENT PARTS CATALOGED FOR THIS APPLIANCE. Substitutions may defeat compliance with Safety Standards Set For Home Appliances.
6. GROUNDING: The standard color coding for safety ground wires is GREEN, or GREEN with YELLOW STRIPES. Ground leads are not to be used as current carrying conductors. It is EXTREMELY important that the service technician reestablish all safety grounds prior to completion of service. Failure to do so will create a hazard.
7. Prior to returning the product to service, ensure that:
 - All electrical connections are correct and secure.
 - All electrical leads are properly dressed and secured away from sharp edges, high temperature components, and moving parts.
 - All non-insulated electrical terminals, connectors, heaters, etc. are adequately spaced away from all metal parts and panels.
 - All safety grounds (both internal and external) are correctly and securely connected.
 - All panels are properly and securely reassembled

WARNING

This service manual is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. Electrolux Home Products, Inc. cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this manual.

Product Specifications IQ-Touch™ Washer

White and 1 Premium Color
Smooth Glide on Drawers & Dispenser
Largest Capacity (4.7 cu.ft. IEC)
Push2Open: Door, Dispenser, Pedestal
Inclined Axis with 1200 RPM
Electrolux Blue LEDs
Custom Cycles Including My Favorite
Intelligent and Adaptive LCD Controls
Quiet (52-72 dBA) and Low Vibration
Best in Class Vibration and 2nd Floor Installation Ready
11 cycles with My Favorite and NSF Sanitary
ATC with Heater, 5 Soil Levels, 5 Temps and 5 Spin Speeds, 14 Hour Delay Start
CEE Tier 3 for Super Efficient Appliances
Fastest Cycle Time

Cycles

NSF Certified Deep Clean Sanitize
Heavy Duty
Whites
Colors
Normal
Casual – Use for Permanent press items
Quick Wash – Fastest cycle in the industry
Delicates – Gentler than any cycle available
Hand Wash
Spin Only
My Favorite – Programmable by consumer

Additional Options

Up to 14 hour delay start – use this to save \$ by running in off peak energy demand hours
Control Lock – to prevent accidental operation by children
5 Temperature Selections
5 Spin Speed Selections
3 Soil Level Selections
ATC – Automatic Temperature Control

Product Specifications Wave-Touch™ Washer

2 Premium Colors
Enhanced LCD Controls with larger trilingual display
1350 RPM
Quiet (52-72 dBA)
Multiple User Mode – 3 User Modes with Favorite and Custom Cycles
11 Standard + 3 Favorite Cycles with custom settings to reach 42 Total Cycles
Enhanced ATC Control with on/off selection
22 hour delay start
Drum Light with Manual Switch
More efficient with Higher MEF
Fastest Cycle Time

Cycles

NSF Certified Deep Clean Sanitize
Heavy Duty
Whites
Colors
Normal
Active Wear – Use for sports/workout gear
Casual – Use for permanent press items
Quick Wash – Fastest cycle in the industry
Delicates – Gentler than any cycle available
Hand Wash
Spin Only
My Favorites – 3 favorites Programmable by consumer

Additional Options

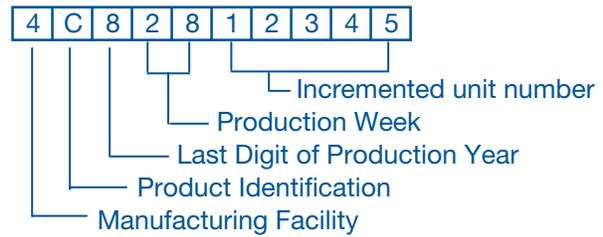
Up to 22 hour delay start – use this to save \$ by running in off peak energy demand hours
Automatic Control Lock – to prevent accidental operation by children
5 Temperature Selections
6 Spin Speed Selections
4 Soil Level Selections
ATC – Automatic Temperature Control with additional heater

Model Number Breakdown

Each model follows the following nomenclature:

- Efor Electrolux
- Ifor IQ Touch
- Wfor Wave Touch
- FLWfor Front Load Washer
- EDfor Electric Dryer
- GDfor Gas Dryer
- MED/MGDSteam Electric/Steam Gas Dryer
- Pfor Pedestal

Serial Number Breakdown



The Language of Laundry

				
Machine Wash Instructions	Special Care	Bleaching Instructions	Dryer Instructions	Dry Cleaning
 Normal Wash	 Hand Wash	 Bleach as Needed	 Normal Dry	 Dry Clean
 Permanent Press	 DO NOT Wring	 Non-chlorine Bleach as Needed	 Permanent Press	 Dry Clean w/ Any Solvent
 Gentle Cycle	 DO NOT Bleach	 Gentle Setting	 Drip Dry	 Dry Clean w/ Petroleum Solvent
 DO NOT Machine Wash	 DO NOT Tumble Dry	 Dry Flat	 DO NOT Steam	 Dry Clean w/ Solvents Other Than Trichloroethylene
 Cold (<85°F)	 Dry in Shade	 DO NOT Iron	 DO NOT Dry Clean	
 Warm (<105°F)	 No Heat			
 Hot (<120°F)	 Low Heat			
 Hot (<140°F)	 Normal/ Med. Heat			
	 High Heat			

Automatic Temperature Control (ATC) System

This method of temperature control uses a thermistor input from the drum water Negative Temperature Coefficient Thermistor to sense the water temperature in the drum. It also controls the amount of hot water used for a given fill and temperature selection.

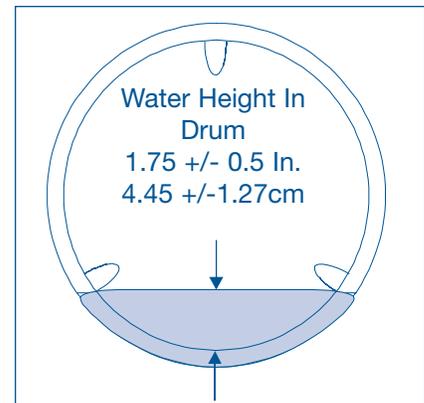
The following are the temperature ranges for the wash/rinse cycles:

Temperature Setting	Temperature Range
Sanitize	67°C (152°F) +/- 5°C
Hot	55°C (131°F) +/- 5°C
Eco Hot	45°C (113°F) +/- 5°C
Warm	29°C (84°F) +/- 4°C
Eco Warm	27°C (81°F) +/- 3°C
Warm Rinse	24°C (75°F) +/- 3°C
Cold	15°C (59°F) +/- 5°C

Water Level

The spinner tub vanes must not be in water during this check. Check is taken at the back and center of the washgroup.

Water Pressure must be between 20 and 120 P.S.I.



All Models

Installation Cycle

This cycle checks the basic functionality of the unit. It also verifies that the water hoses have been hooked up properly, hot to hot and cold to cold. To verify that the hoses have been hooked up properly, the unit turns on the hot water valve until the water reaches 130 mm (5.11 inches) in height. The temperature in the drum has to increase from ambient to a specified value for the algorithm to recognize the water lines have been properly hooked up. If the temperature doesn't increase to the specified value either within the 130 mm fill level or a given amount of time, the "CHECK HOSES" warning will be displayed, the machine will drop out of the install cycle and drain what water has accumulated. When this happens verify that the hoses were properly connected and if they have been, then push the Cancel button (clears the message) and the unit is ready for use.

If water remains in the unit after following the procedure above, move the cycle knob to the Drain Spin Cycle and drain the rest of the water from the tub. When the drum starts moving, the water has been completely drained and the cycle can then be cancelled.

Component Description

Door Lock Assembly Operation

The door lock has a push push mechanism that is either in the latched position, where the strike is in the cam, or an unlatched position, where the strike is not in the cam.

When in the locked position, the user can push the Start/ Pause button which activates a solenoid causing the door to lock. When the Start/ Pause button or Cancel button is pushed, the solenoid is activated again causing the door to unlock. The solenoid does not require a constant current, but only an impulse to lock or unlock. If the door lock is locked when the power goes out, there is a manual override switch in the back of the door lock assembly to unlock the door lock. When the door lock assembly is mounted in the front panel on the right (when facing the front panel) the manual override switch lever would need to be pulled up, and when assembled on the left, the lever would be pushed down.

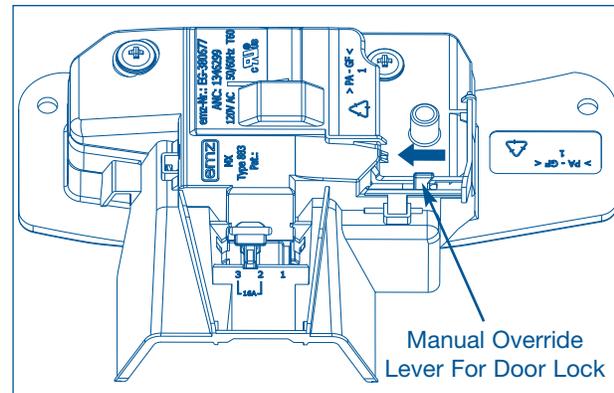
There is a child entrapment safety feature that allows a child to push from the inside of the unit with less than 15 pounds of force and the door will open, but only when the door is unlocked.

When in the unlatched position, there is one electrical and two mechanical features that prevent the door lock from being able to lock.

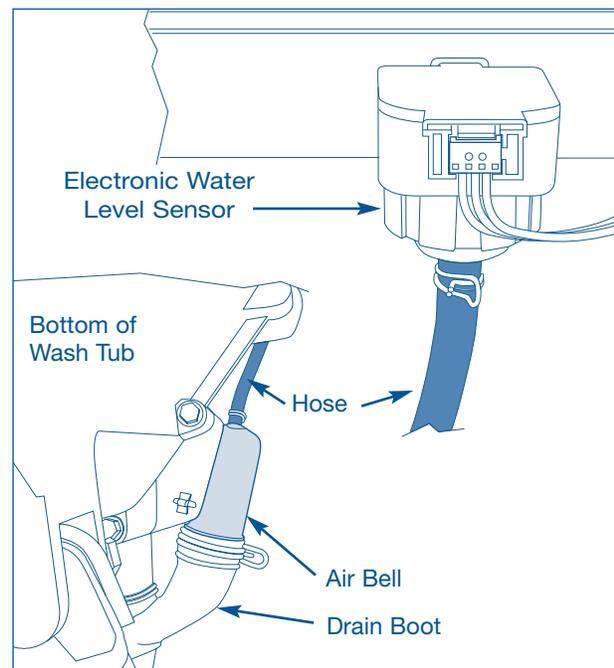
Electronic Water Level Switch

The electronic water level sensor is mounted to the right side panel under the top of the washer and controls the water level in the washer.

The electronic water level sensor is made up of an electronic board and a bellow inside a sealed chamber. The chamber is connected by a hose to the air bell located at the bottom of the washer attached to the drain boot. The electronic board reads the pressure in the bellow and converts it into an electronic signal. This signal is then sent to the control board which governs the incoming water by connecting or disconnecting a neutral line to the water solenoids.



Door Lock Manual Override Lever



Electronic Water Level Sensor Components

Mass Damper Operation

The mass damper is a simple assembly consisting of a heavy mass supported by gel. This device reduces cabinet vibration through the dissipation of energy coming from “gel” deformation. The use of the mass damper is effective for a wide range of drum speeds and installation conditions.

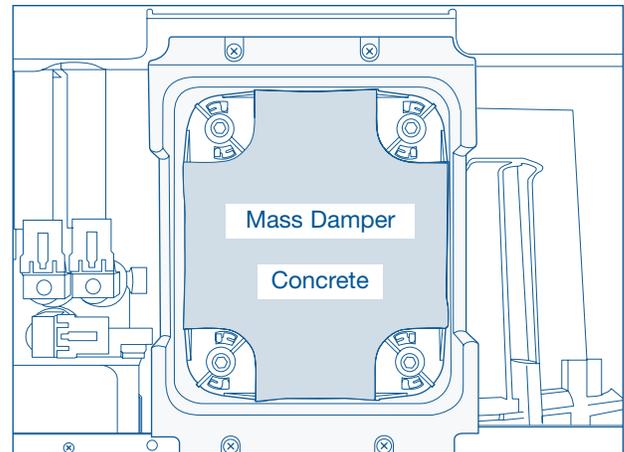
Drive Motor Operation

The motor is an induction, three phase AC motor that varies speeds when the voltage from the speed control board varies in frequency and amount. The motor has a tachogenerator that inputs the speed of the motor to the speed control board.

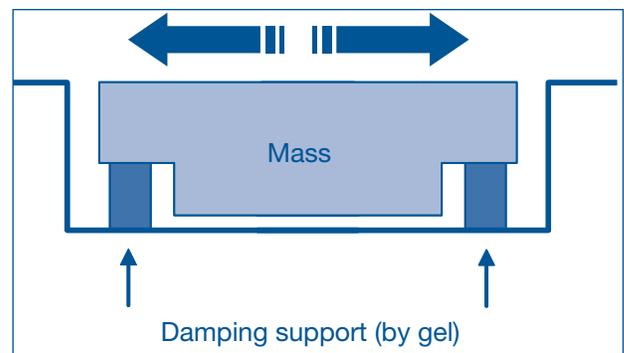
Speed Control

The speed control board is mounted to the base plate of the washer in the left rear corner of the washer. The speed control board controls the following operations:

1. The speed of the drive motor is controlled by converting input line to neutral single phase 60 Hertz voltage, to a varying frequency, three phase output voltage from zero to 300 VAC. By varying the amount, frequency, and polarity of the voltage and comparing the input from the tachogenerator on the drive motor, the speed control board can operate the drive motor at a preprogrammed speed and direction.
2. The balance of the load in the washer is monitored during the spin cycle by converting the sine wave from the tachogenerator to square waves and comparing the distance between the square waves. If this distance exceeds a specified parameter, the wash load is determined to be unbalanced and the washer responds accordingly.



Mass Damper Mounted on Unit



Mass Damper Cross Section

Automatic Dispenser Operation

The automatic dispenser for the detergent, liquid bleach and fabric softener system is made up of the dispenser cavity, and a removable drawer with four cavities: one for pre-wash, one for detergent, one for bleach and one for fabric softener. A plastic conveyer is snapped to the bottom of the drawer to direct the outputs from the bleach and softener chambers to the dispenser housing outlet channel. This prevents the mixtures from coming out the front of the drawer.

The 3 outlets of the water inlet valve assembly are inserted into the rear of the automatic dispenser. During the fill cycles, water is directed into the top of the cavity through 3 inlets. The inlet on the right, as viewed from the front of the washer, is connected to the combination output of the hot water solenoid and the center cold water solenoid.

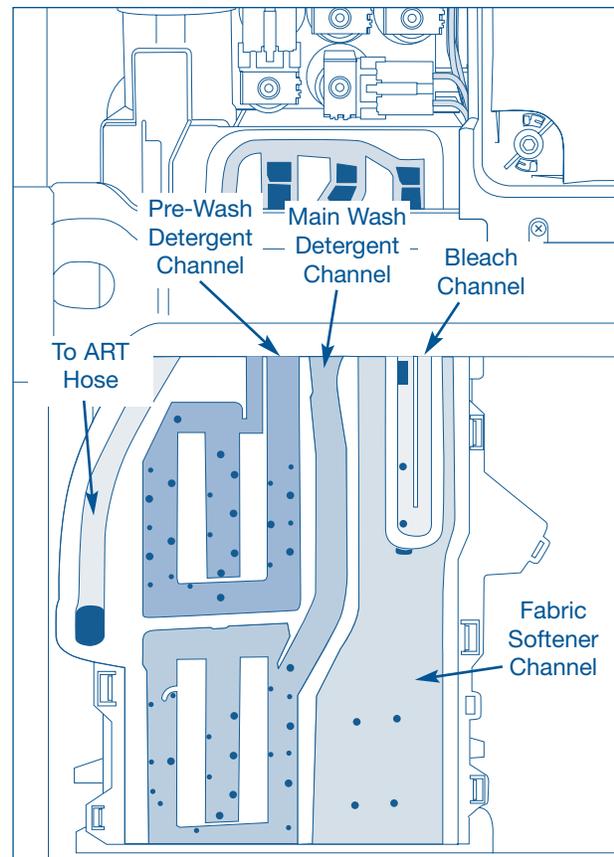
The left and middle inlet, as viewed from the front of the washer, are connected to the cold water solenoid.

In the fill cycle, water enters into the top of cavity and is directed across the top of the cavity by 5 channels: the dispenser advanced rinsing technology channel, the pre-wash channel (cold water only), the detergent channel, bleach channel and the fabric softener channel. The channel that receives the water is determined by which inlet supplies the water or if both inlets supply the water.

The dispenser advanced rinsing technology channel receives water whenever the inlet on the right, as viewed from the front of the washer, is activated. This path allows the water to bypass the dispenser drawer and enter the tub by the advanced rinsing technology hose connected between the cavity and the bellows.

The pre-wash dispenser channel receives water from the left-hand input, as viewed from the front of the washer. The pre-wash channel forms a loop that allows the water to pass over the pre-wash detergent section of the drawer.

As the water passes over the pre-wash detergent section, holes in the cavity allows some of the water to enter and flush the pre-wash detergent cavity. Since the flow of the incoming water is more than the holes can dispense, the excess water backs up into a channel across the rear of the dispenser. Water in this channel and the mixture from the detergent drawer flow into the tub through the large hose at the rear of the dispenser.



Dispenser Flow Pattern

The detergent dispenser channel receives water from the right-hand input, as viewed from the front of the washer. The detergent channel forms a loop that allows the water to pass over the detergent section of the drawer. As the water passes over the detergent section, holes in the cavity allow some of the water to enter and flush the detergent cavity. Since the flow of incoming water is more than the holes can dispense, the excess water backs up into a channel across the rear of the dispenser. Water in this channel and the mixture from the detergent drawer flow into the tub through the large hose at the rear of the dispenser.

Detergent is dispensed at the start of the cycle, but bleach and fabric softener are not dispensed until later in the cycle. The bleach and softener cavities in the drawer have tubes molded into the bottom of them.

These tubes allow bleach or fabric softener to be added to their cavity without being dispensed as long as the liquid is below the top of the tubes. At the proper time in the cycle when bleach or fabric softener is to be dispensed, water is added to the cavity. This raises the mixture above the top of the tube and the bleach or fabric softener starts flowing into the tub.

To allow the cavities to empty, the cover of the detergent drawer cover has tubes molded into it that fit over the tubes in the cavities.

These tubes are larger than the tubes in the cavity and are designed to fit over the tubes, but not touch the bottom of the cavity when the cover is installed. When water is added to either the bleach or fabric softener liquid, the mixture level rises between the tubes above the tubes in the cavity and flows into the washer tub. Since the end of the tube on the insert does not touch the bottom of the cavity, a siphoning action will occur when the solenoid activates and allows water into the cavity. The added water creates an “overflow” condition and starts the siphoning. The cavity will empty itself when the water is turned off by the solenoid.

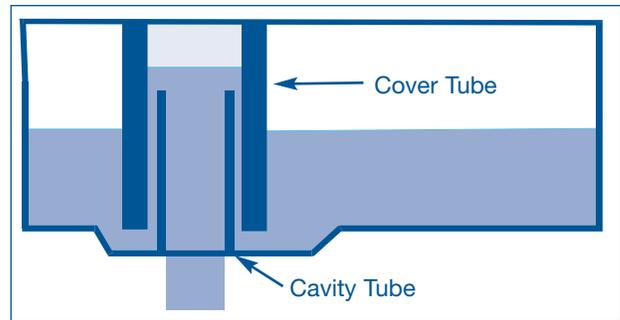
The bleach dispenser channel receives water from the middle input, as viewed from the front of the washer. The bleach channel forms a path that allows the water to pass over the bleach cavity section of the cavity.

As the water passes over the bleach section, holes in the cavity allow some of the water to enter and mix with the bleach. This raises the mixture level above the tubes in the drawer bleach cavity allowing the mixture to flow into the tub.

Like the detergent channel, the flow of the incoming water is more than the holes can dispense, allowing the excess water to back up into the channel across the rear of the dispenser and flow into the tub. For water to enter the fabric softener channel, both the middle and right inlets must be activated. As water from the left inlet passes over the channel, it collides with the water from the right inlet. This collision changes the water path directing it to the front of the cavity and into the fabric softener channel. The fabric softener channel forms a loop that allows the water to pass over the fabric softener cavity section of the drawer.

As the water passes over the fabric softener section, holes in the cavity allow some of the water to enter and mix with the fabric softener.

This raises the mixture level above the tubes in the drawer fabric softener cavity allowing the mixture to flow into the tub. Like the detergent channel, the flow of the incoming water is more than the holes can dispense allowing the the excess water to backup into the channel across the rear of the dispenser and flow into the tub.



Bleach and Fabric Softener Flow Tubes

An available option is for a liquid detergent cup that is placed within the main wash compartment. This allows for the liquid detergent to be dispensed at the proper time, and allows the liquid detergent to be poured and held during a delay start or held during the pre-wash.

The drawer front has a button that when pushed, releases a latch that secures the drawer in the unit. When the latch is released, a spring in the dispenser housing assembly pushes the drawer partially open. The drawer can then be pulled open to pour additives into the drawer. The drawer is then pushed back into place and the latch on the drawer front assembly latches to the console to keep the dispenser closed.

Oversudsing Detection

Oversudsing is detected after the wash cycle by two methods.

1. Suds are detected when torque is very high and the pressure can not be drawn down to zero at the drain pump. The spin cycle is then skipped, and a slower rinse agitation is performed with longer pauses and less time in agitation, and the fabric softener is moved from the last rinse cycle to the second rinse cycle. If suds are still detected after the first rinse, or after the wash cycle for a Fast Cycle, up to 3 rinse cycles are added to clear the suds.
2. Suds are detected when the machine tries to spin and the pressure goes above a given threshold, and when the drum speed is reduced back down to 120 RPM the pressure does not go back to zero within a given amount of time. The drum will then stop (0 RPM) and sit for 30 seconds with the drain pump off. The drain pump will then turn on for one minute and attempt to drain the tub of water and/or suds. If pressure can not be brought to zero and this happens twice in a given intermediate rinse cycle, then the spin cycle is skipped and if it is the second intermediate spin (first for the Fast Cycle) then up to 3 rinse cycles will be added to eliminate suds in the tub.

Unbalance Sensing

This algorithm determines the amount of either static unbalance (point unbalance) or dynamic unbalance (two points of unbalance that are equal and opposite each other in the drum) in the unit. When distributing the load the unit monitors the point unbalance until it drops below a set threshold. When this happens the machine speeds up to 120 RPM and verifies that the load unbalance is ready to spin. If the point unbalance is low enough to allow spin, the unit will accelerate to 250 RPM from 120 RPM, during which time it monitors the dynamic unbalance. If this unbalance is high enough, the spin will terminate and the algorithm will proceed to try and rebalance the load.

Section 2

Installation Information

IMPORTANT SAFETY INSTRUCTIONS

Safety Precautions

Do not attempt to install or operate this appliance until you read the safety precautions in this guide. Safety items throughout this guide are labeled with a Warning or Caution based on the risk type.

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Caution indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

WARNING

ELECTROLUX CANNOT BE HELD RESPONSIBLE FOR DAMAGE TO PROPERTY OR INJURY TO PERSONS CAUSED BY FAILURE TO COMPLY WITH THE INSTALLATION, MAINTENANCE AND SAFETY INSTRUCTIONS CONTAINED IN THIS SERVICE MANUAL.

WARNING

TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK, OR INJURY WHEN USING A WAVE-TOUCH™ OR IQ-TOUCH™ FRONT-LOAD WASHER, FOLLOW BASIC SAFETY PRECAUTIONS INCLUDING THE FOLLOWING:

- **READ ALL INSTRUCTIONS BEFORE OPERATING THE WASHER.**
- **BEFORE PERFORMING ANY TYPE OF SERVICE OR INSTALLATION, MAKE SURE THAT ELECTRIC POWER TO THE WASHER IS DISCONNECTED.**
- **TO AVOID THE POSSIBILITY OF EXPLOSION OR FIRE, DO NOT STORE OR USE COMBUSTIBLE, FLAMMABLE, OR EXPLOSIVE LIQUIDS OR VAPORS (SUCH AS GASOLINE) INSIDE OR IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**
- **THIS APPLIANCE IS EQUIPPED WITH A THREE-PRONG GROUNDING PLUG FOR PROTECTION AGAINST POSSIBLE ELECTRIC SHOCK HAZARDS. PLUG IT ONLY INTO A DEDICATED, GROUNDED ELECTRICAL OUTLET. WHEN ONLY A STANDARD TWO-PRONG ELECTRICAL OUTLET IS AVAILABLE, THE CUSTOMER MUST HAVE IT REPLACED WITH A DEDICATED, PROPERLY GROUNDED THREE-PRONG ELECTRICAL OUTLET BEFORE USING THIS APPLIANCE. DO NOT UNDER ANY CIRCUMSTANCES, CUT OR REMOVE THE THIRD (GROUND) PRONG FROM THE POWER CORD. DO NOT USE AN ADAPTER PLUG. DO NOT USE AN EXTENSION CORD. DO NOT USE A POWER CORD THAT IS FRAYED OR DAMAGED. THE USE OF A GROUND FAULT INTERRUPTER (GFI) IS NOT RECOMMENDED.**
- **DO NOT INSTALL OR USE A DAMAGED APPLIANCE. IF YOU RECEIVE A DAMAGED APPLIANCE, IMMEDIATELY CONTACT YOUR DEALER OR BUILDER.**
- **DO NOT USE THE WASHER UNTIL IT HAS BEEN PROPERLY INSTALLED BY A QUALIFIED INSTALLER ACCORDING TO THESE INSTALLATION INSTRUCTIONS. THE INSTALLER MUST SHOW THE CUSTOMER THE LOCATION OF THE POWER PLUG SO THAT THEY KNOW WHERE AND HOW TO DISCONNECT POWER TO THE WASHER.**
- **DO NOT INSTALL, REPAIR, OR REPLACE ANY PART OF THE WASHER UNLESS SPECIFICALLY RECOMMENDED IN THE LITERATURE ACCOMPANYING IT. A QUALIFIED SERVICE TECHNICIAN SHOULD PERFORM ALL OTHER SERVICE.**

WARNING

DESTROY CARTON, PLASTIC BAGS, AND ANY EXTERIOR WRAPPING MATERIAL IMMEDIATELY AFTER THE WASHER IS UNPACKED. CHILDREN SHOULD NEVER USE THESE ITEMS FOR PLAY. CARTONS COVERED WITH RUGS, BEDSPREADS, PLASTIC SHEETS OR STRETCH WRAP MAY BECOME AIR TIGHT CHAMBERS AND CAN QUICKLY CAUSE SUFFOCATION.

KEEP LAUNDRY PRODUCTS OUT OF CHILDREN'S REACH. TO PREVENT PERSONAL INJURY, OBSERVE ALL WARNINGS ON PRODUCT LABELS.

CUT HAZARD. TO PREVENT SERIOUS INJURY FROM SHARP EDGES, WEAR WORK GLOVES WHEN HANDLING, UNPACKING OR DISASSEMBLING UNIT.

CAUTION

EXCESSIVE WEIGHT HAZARD

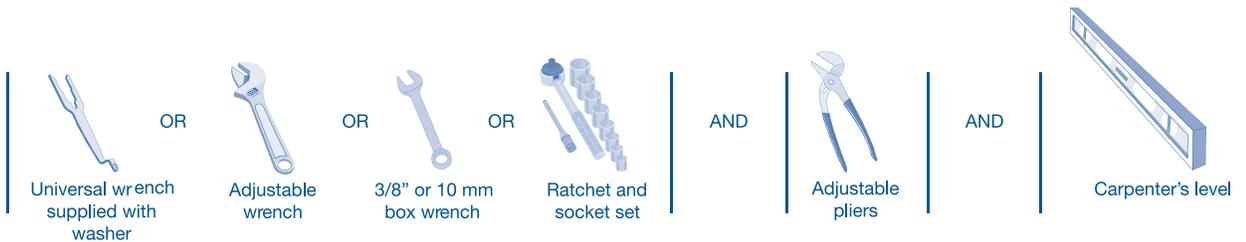
To avoid back or other injury, have more than one person move or lift the washer.

NOTE

The electrical service to the washer must conform with local codes and ordinances and the latest edition of the National Electrical Code, ANSI/NFPA 70, or in Canada, the Canadian electrical code C22.1 part 1.

Pre-installation Requirements

Tools and materials needed for installation:



Electrical System Requirements

Circuit - Individual, properly polarized and grounded 15 amp. branch circuit fused with 15 amp. time delay fuse or circuit breaker.

Power Supply - 2 wire, with ground, 120 volt single phase, 60 Hz, alternating current.

NOTE

Because of potentially inconsistent voltage capabilities, the use of this washer with power created by gas powered generators, solar powered generators, wind powered generators or any other generator other than the local utility company is not recommended.

GFI (Ground Fault Interrupter) receptacle is not required.

Outlet Receptacle - Properly grounded 3-prong receptacle to be located so the power supply cord is accessible when the washer is in an installed position.

Grounding Requirements

WARNING

IMPROPER CONNECTION OF THE EQUIPMENT GROUNDING CONDUCTOR CAN RESULT IN A RISK OF ELECTRICAL SHOCK. CHECK WITH A LICENSED ELECTRICIAN IF YOU ARE IN DOUBT AS TO WHETHER THE APPLIANCE IS PROPERLY GROUNDED.

1. The washer **MUST** be grounded. In the event of malfunction or breakdown, grounding will reduce the risk of electrical shock by a path of least resistance for electrical current.
2. Since your washer is equipped with a power supply cord having an equipment-grounding conductor and a grounding plug, the plug **MUST** be plugged into an appropriate, copper wired receptacle that is properly installed and grounded in accordance with all local codes and ordinances or in the absence of local codes, with the National Electrical Codes, ANSI/NFPA 70 (latest edition). If in doubt, call a licensed electrician. **DO NOT** cut off or alter the grounding prong on the power supply cord. In situations where a two-slot receptacle is present, it is the owner's responsibility to have a licensed electrician replace it with a properly grounded three prong grounding type receptacle.

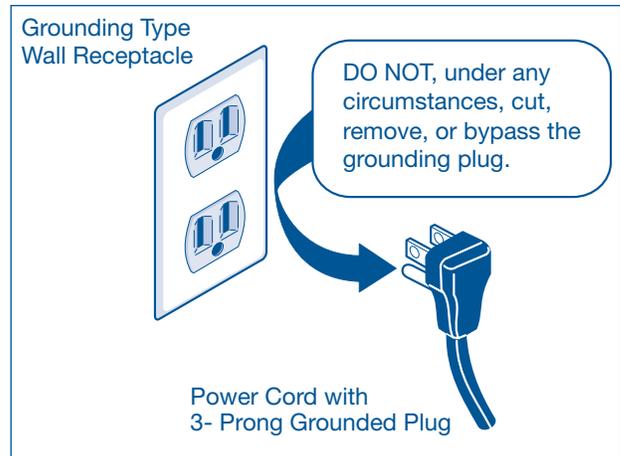


Figure 2-1

Water Supply Requirements

Hot and cold water faucets **MUST** be installed within 42 inches (107 cm) of the washer's water inlet. The faucets **MUST** be 3/4 inch (1.9 cm) with threading for laundry hose connection. Water pressure **MUST** be between 30 and 120 psi. Pressure difference between hot and cold cannot be more than 10 psi. The local water department can advise the customer of the line water pressure.

Drain System Requirements

1. Drain capable of eliminating 17 gals (64.3 L) per minute.
2. A standpipe diameter of 1-1/4 in. (3.18 cm) minimum..
3. The standpipe height above the floor should be:
Minimum height: 24 in. (61 cm)
Maximum height: 96 in. (244 cm)

NOTE

Drain hose attached to the washer can reach a 79 in. (201 cm) high standpipe. For higher standpipe, use hose P/N 137098000.

Removing Foam Packaging

1. Temporarily remove door tape.
2. Open washer door and remove everything from the drum.
3. Close door and reapply door tape.
4. Using a rug, blanket or piece of cardboard to protect the floor, carefully lay washer on it's back.

CAUTION

EXCESSIVE WEIGHT HAZARD

To avoid back or other injury, have more than one person move or lift the washer.

5. Remove styrofoam base and shipping plug and set them aside.
6. Carefully return washer to an upright position.
7. Carefully move the washer to within 4 feet (1 m) of its final location.

IMPORTANT

Save styrofoam base and shipping plug for use to help prevent washer damage during any future moves.

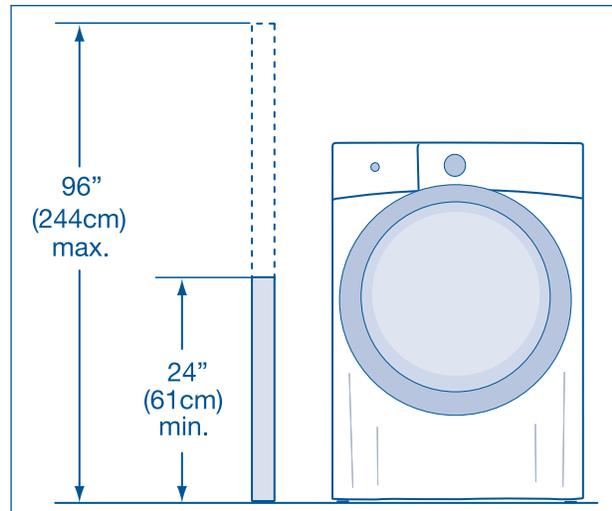


Figure 2-2. Standpipe Dimensions

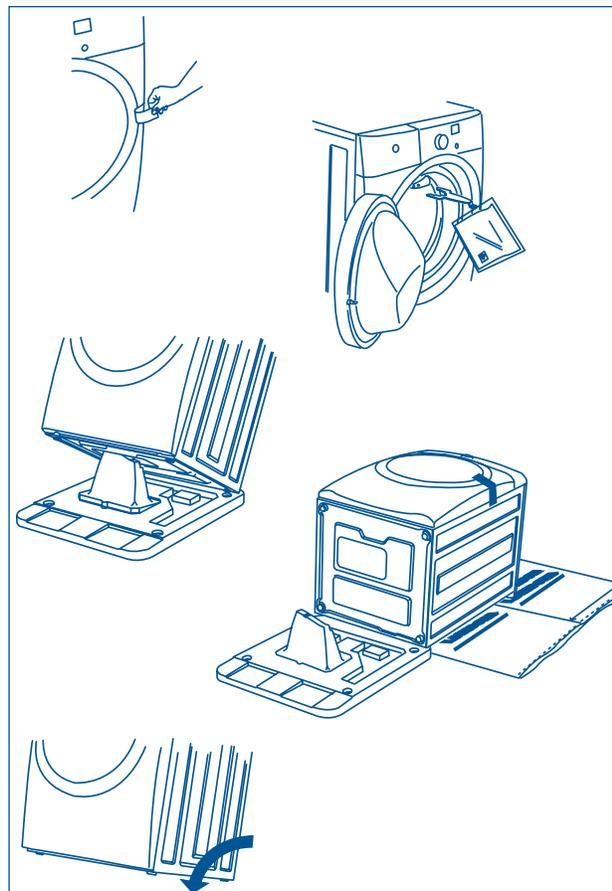


Figure 2-3. Unpacking Unit

Clearance Requirements

▶ IMPORTANT

DO NOT INSTALL THE WASHER:

1. In an area exposed to dripping water or outside weather conditions. The ambient temperature should never be below 60° F (15.6° C) to maximize detergent effectiveness.
2. In an area (garage or garage-type building) where gasoline or other flammables (including automobiles) are kept or stored.
3. Floor **MUST** be solid with a maximum slope of 1 inch (2.54 cm). To minimize vibration or movement, reinforcement of the floor may be necessary.

Installation in a Recess or Closet

If washer and dryer are installed in the same closet, door ventilation is required: A minimum of 120 square inches (774.2 cm²) of opening, equally divided at the top and bottom of the door, is required. Louvered openings should be located 3 inches (7.6 cm) from bottom and top of door. Air openings are required to be unobstructed when a door is installed. A louvered door with equivalent air openings for the full length of door is acceptable.

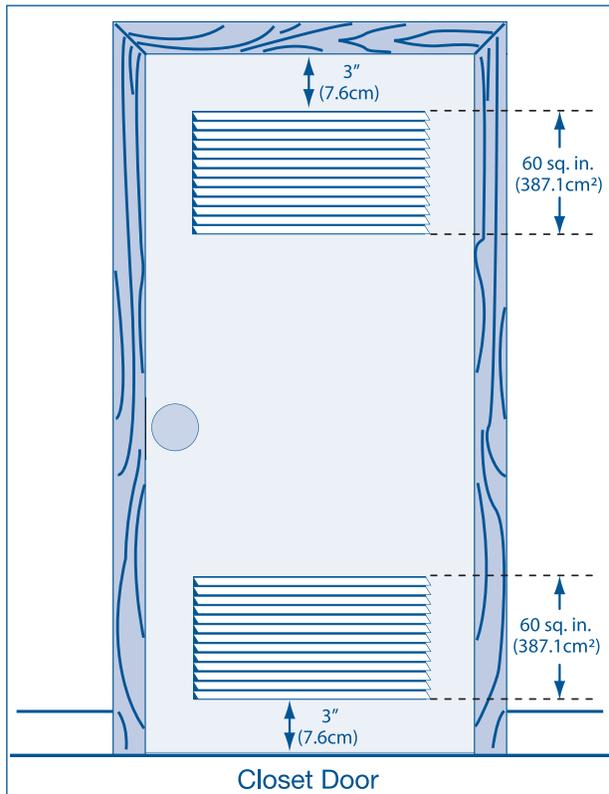


Figure 2-4. Closet Installation

MINIMUM INSTALLATION CLEARANCES - Inches (cm)				
	SIDES	REAR	TOP	FRONT
Alcove	0" (0 cm)	0" (0 cm)*	0" (0 cm)	n/a
Under-Counter	0" (0 cm)	0" (0 cm)*	0" (0 cm)	n/a
Closet	0" (0 cm)	0" (0 cm)*	0" (0 cm)	1" (2.54 cm)

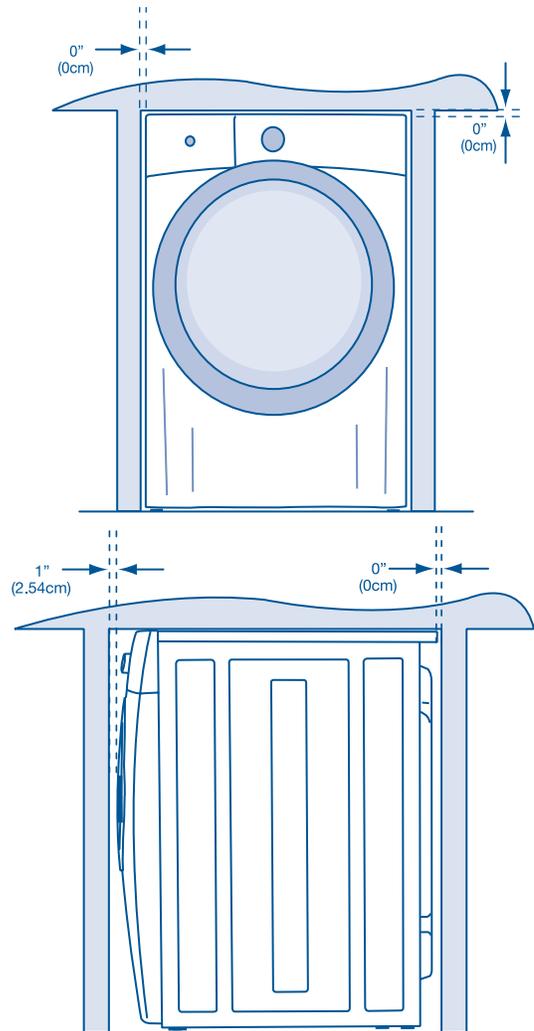
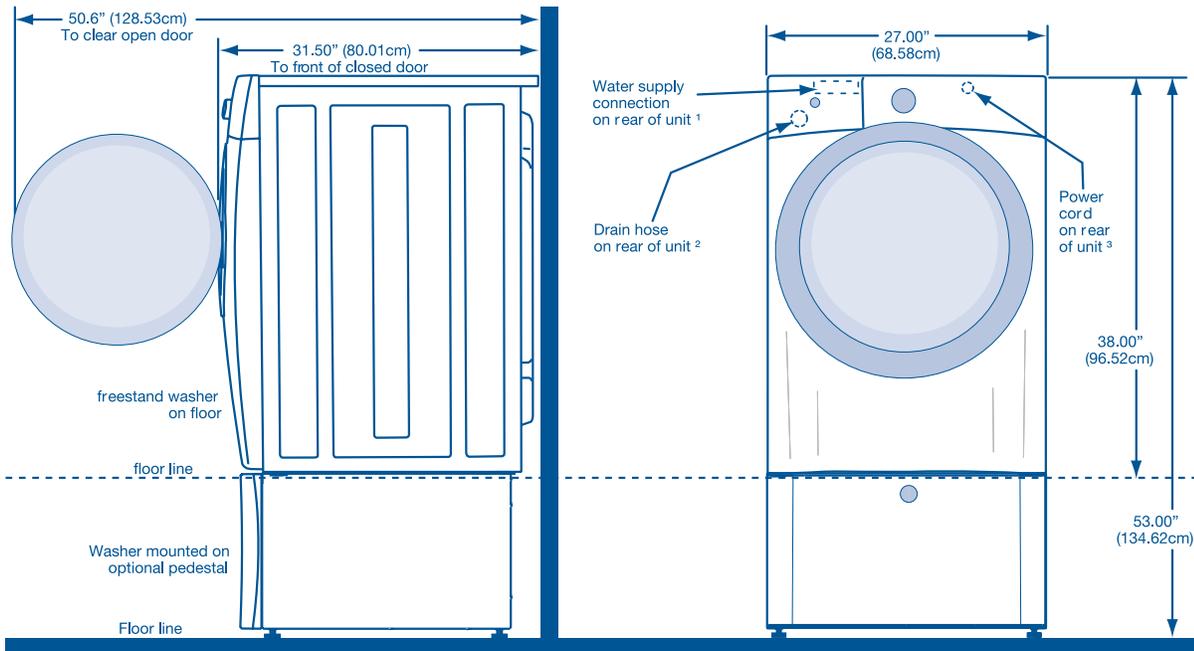
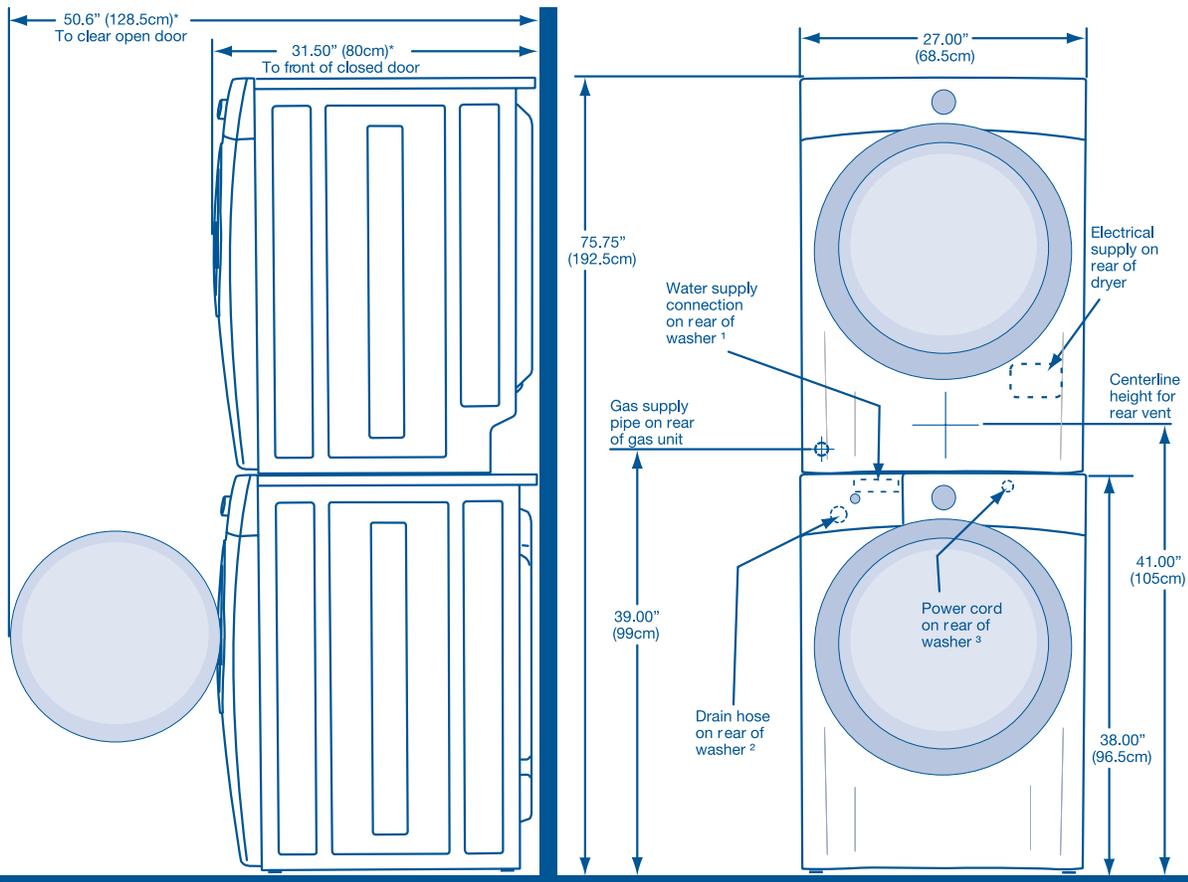


Figure 2-5. Clearances

Installed Washer Dimensions

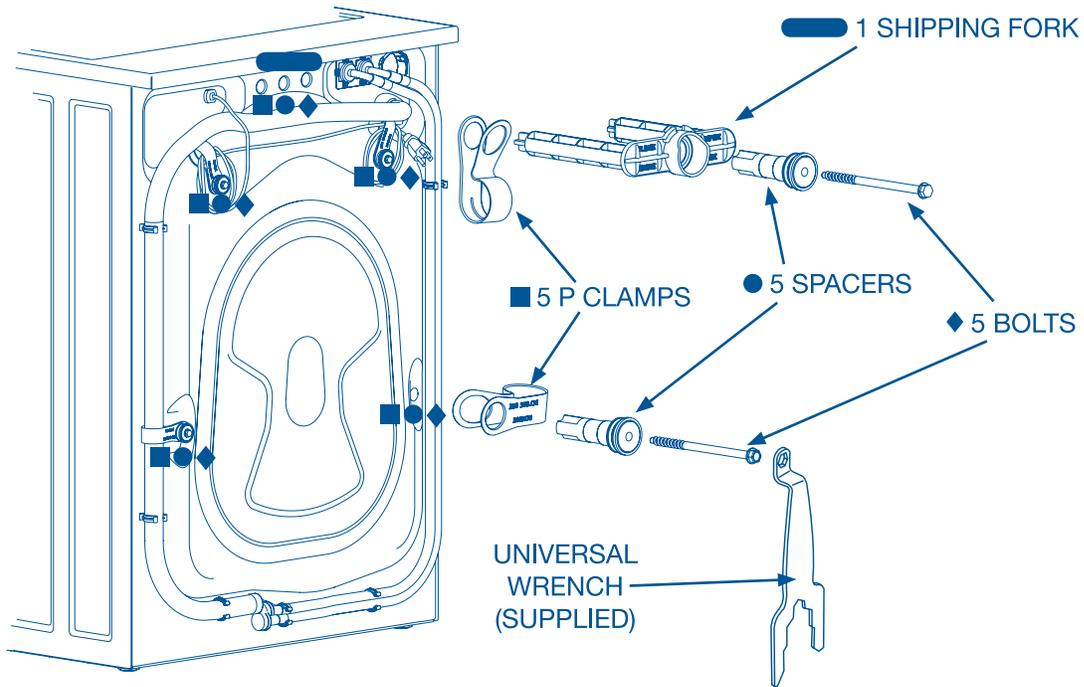


- * To obtain these minimal depth dimensions, dryer must either be vented straight back or with a quick-turn 90° elbow. Connection of water inlet hose on Steam Models adds 3/4 in. (2 cm) to installation depth.
- ¹ Hot and cold inlet hose length approximately 48.5 inches (123cm)
- ² Drain hose length approximately 59 inches (150cm).
- ³ Power supply cord length approximately 60 inches (152.5cm).



- * To obtain these minimal depth dimensions, dryer must either be vented straight back or with a quick-turn 90° elbow. Connection of water inlet hose on Steam Models adds 3/4 in. (2 cm) to installation depth.
- ¹ Hot and cold inlet hose length approximately 48.5 inches (123cm)
- ² Drain hose length approximately 59 inches (150cm).
- ³ Power supply cord length approximately 60 inches (152.5cm).

Removing Shipping Hardware



Remove all of the following:

1 SHIPPING FORK ● 5 SPACERS

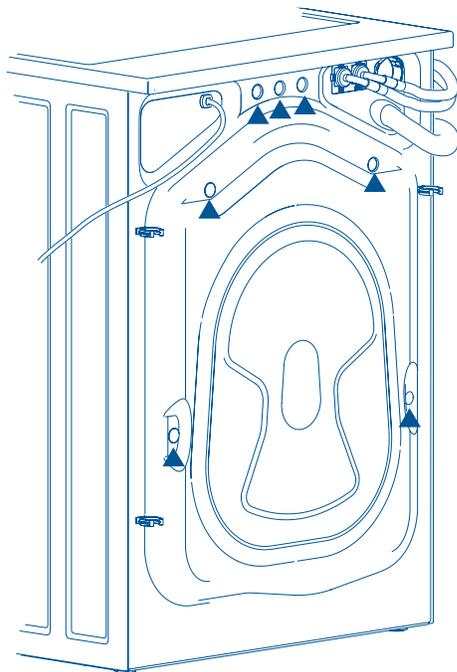
5 P CLAMPS ◆ 5 BOLTS

NOTE

Rubber expansion material on spacers may need time to relax before they can be easily pulled through shipping hole.

IMPORTANT

Save all shipping bolts and spacers for future use. If the washer is to be transported at a later date, the shipping hardware must be reinstalled to help prevent shipping damage.



▲ 7 HOLE PLUGS (IN BAG)

Locate 7 hole plugs in the small bag supplied with washer instruction guides. Insert them in the holes in washer back panel.

Leveling Washer

Excessive noise and vibration can be prevented by properly leveling the washer.

1. For free standing installation and with the washer within 4 feet (1 m) of its final location, place a level on top of the washer.
2. Use the universal wrench to adjust the leveling legs so the washer is level front-to-rear and side-to-side, and stable corner-to-corner.
3. Press down on alternate corners and sides and feel for the slightest movement. Adjust the appropriate leg(s) so the washer sits solidly on the floor on ALL four legs.
Keep the leveling leg extension at a minimum for best performance of the washer.

NOTE

For pedestal installations, see additional installation instructions included with the pedestal.

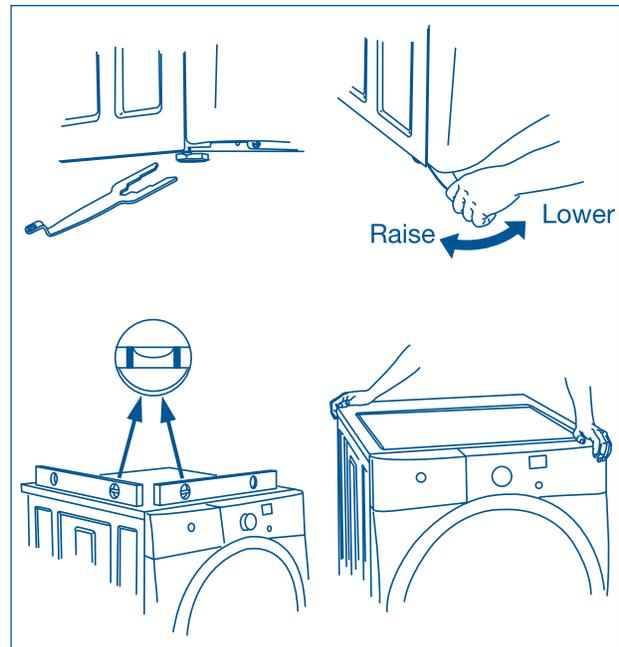


Figure 2-6. Leveling Washer

Connecting Inlet Water

1. Run some water from the hot and cold faucets to flush the water lines and remove particles that might clog the water valve screens and to determine which faucet is hot and which is cold supply.
2. Look in the end of each water supply inlet hose and verify that the rubber washers are in place.
3. Connect the HOT inlet hose to the HOT water supply and the COLD inlet hose to the COLD water supply. Tighten by hand until snug.

NOTE

HOT and COLD water inlet hoses are color coded for identification. The HOT inlet hose is marked with a RED band and the COLD inlet hose is marked with a BLUE band.

4. Tighten each supply connection another 2/3 turn with pliers.
5. Turn on the water and check for leaks.

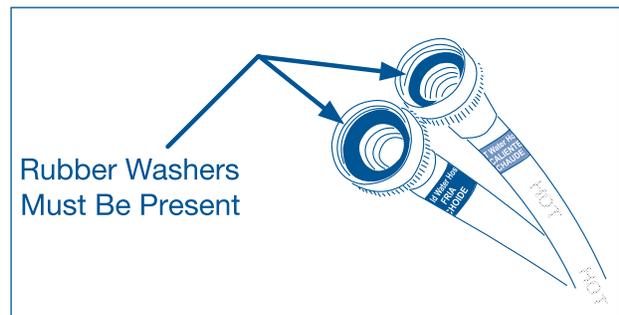


Figure 2-7. Connecting Inlet Water

Connecting Drain and Electrical

1. Snap one end of the drain hose hanger (shipped in washer drum) onto the drain hose. Continue wrapping it around the hanger and snap it in place.
2. Place the hook end of the drain hose in the drain opening. Secure the drain hose with the cable tie (provided in the enclosure package) to the standpipe, inlet hose, laundry tub, etc. so the hose does not pull out from the force of the water.
3. Plug the power cord into a grounded outlet.
4. Turn on the power at a circuit breaker/fuse box.
5. Carefully slide the washer to its final position. Recheck for level and rock corners for stability. Remove and discard door tape.

NOTE

A wiring diagram and technical data sheet are located under the washer top panel, on top of the detergent dispenser housing.

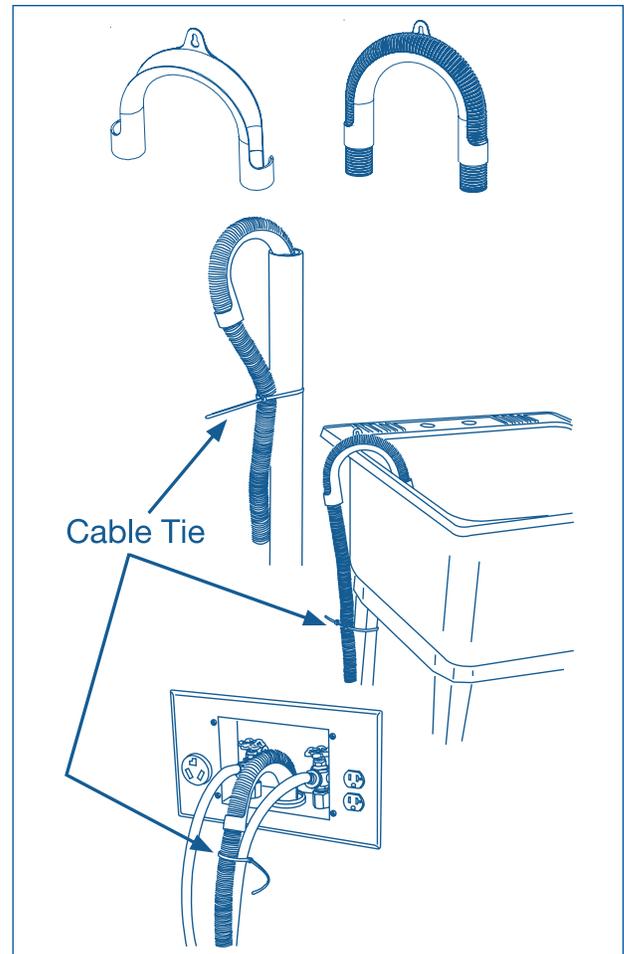


Figure 2-7. Drain Hose Installation

Wave-Touch™ Installation Cycle

1. After plugging in the washer the first time: wake up the washer by pressing any button and then follow the prompts on the LCD User Interface, including language selection. The Installation Cycle will automatically test for if the water has been turned on.
2. At cycle completion, the LCD window may display **INSTALL PASS!**, meaning the washer is properly installed and ready for use. If it prompts an action such as **NO WATER, CHECK HOSES** or **CALL SERVICE 877-435-3287**, review the installation steps and make the necessary corrections before attempting to use the washer.
3. The washer will exit the Installation Cycle and return to normal operation the next time the washer is used.

 **NOTE**

Washer will stay awake for 3 minutes after the Installation Cycle. If you wish to immediately run the washer through a washing cycle, press the cancel button to put the unit to sleep and then rewake it immediately, to continue the normal operating mode.

IQ -Touch™ Installation Cycle

1. Empty washer's drum and close door.
2. After you plug in the washer the first time: wake up the washer by pressing any button, rotate cycle knob to hand wash cycle, press the start button and then the cancel button.
3. Wake up the washer again by pressing any button, then immediately and simultaneously press and hold both the eco friendly and my favorite buttons for 5 seconds, or until the LCD display changes.
4. The LCD window will display **INSTAL CYCLE** and show estimated time of cycle completion. Press the start button. The Installation Cycle will automatically test for if the water has been turned on. At cycle completion, the LCD window may display **INSTALL PASS!**, meaning the washer is properly installed and ready for use. If it prompts an action such as **NO WATER, CHECK HOSES** or **Call Service 877-435-3287**, review the installation steps and make the necessary corrections before you attempt to use the washer.
5. The washer will exit the Installation Cycle and return to normal operation the next time the washer is used.

 **NOTE**

Washer will stay awake for 3 minutes after the Installation Cycle. If you wish to immediately run the washer through a washing cycle, press the cancel button to put the unit to sleep and then rewake it immediately, to continue the normal operating mode.

Reversing Door

Preparing to Reverse Door Swing

1. Be sure you have adequate swing area before reversing door.
2. You will need a screw driver with a #2 square bit.
3. Protect flat work surface, such as top of washer or floor near washer, with a soft cloth or towel.
4. Be sure washer is unplugged from power source.

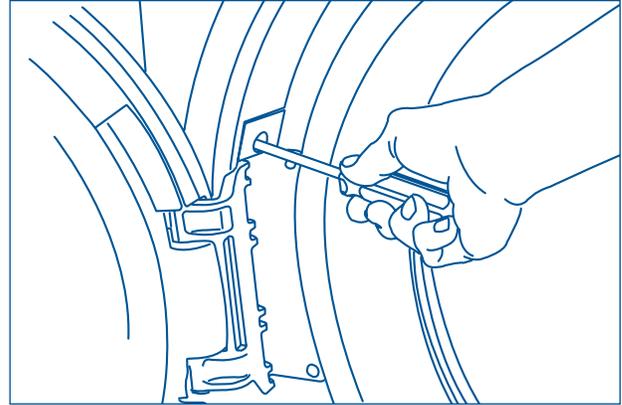


Figure 2-8.

Removing Trim Ring

1. Open the door to a 90 degree angle.
2. Remove and save the trim plug and long, course-thread, panhead screw. (See Figure 2-8)
3. Close the door.
4. Rotate the door trim approximately $\frac{3}{4}$ " counter-clockwise and pull it away from the front of the door. (See Figure 2-9)

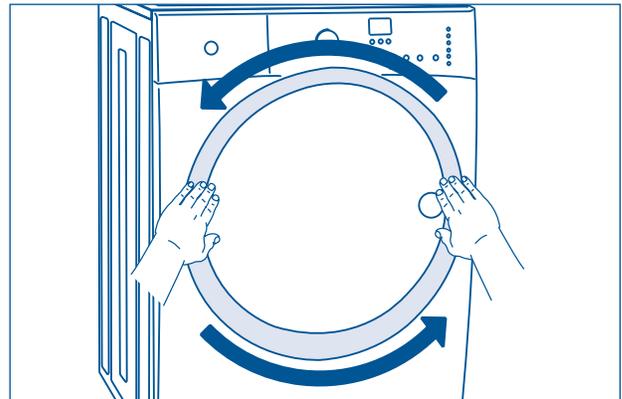


Figure 2-9.

Removing Door from Hinge

1. Reopen door to 90 degree angle.
2. Remove 4 long, course-thread, counter-sunk hinge screws from door. (See Figure 2-10)
3. While supporting the weight of the door with both hands, separate the door from the hinge. (See Figure 2-11)
4. Gently place the door face down on a flat, covered work surface.

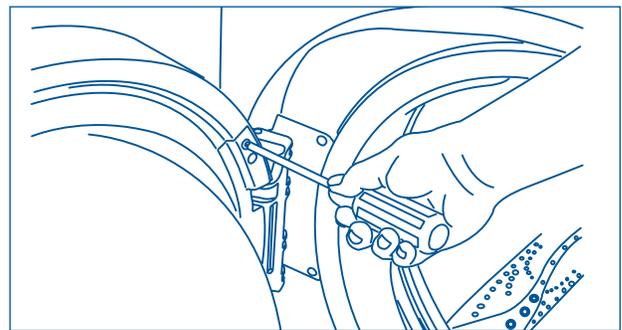


Figure 2-10.

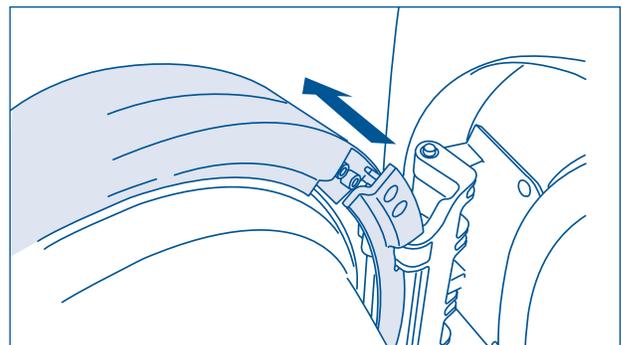


Figure 2-11.

Removing Hinge from Front Panel

1. With the hinge in open position, remove 2 short, course-thread, panhead screws on hinge plate. (See Figure 2-12)
2. Remove 3 short, fine-thread, counter-sunk screws in hinge side. (See Figure 2-13)
3. Slide the hinge toward the center of the front panel, and then pivot the hinge inward while slowly pulling it away from the front panel to expose the attached harness.
4. Lift up on the tab and the release harness from the retainer, allowing the harness to lay outside the front panel. (See Figure 2-14)

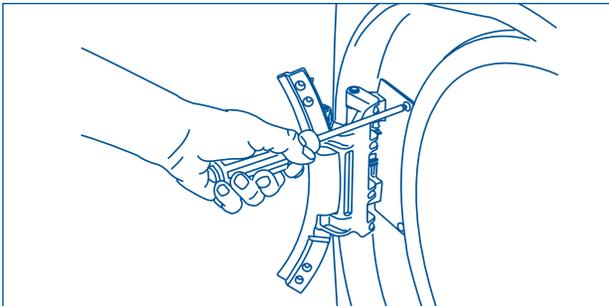


Figure 2-12.

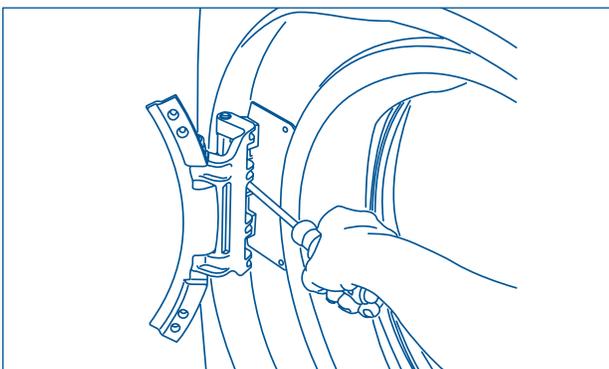


Figure 2-13.

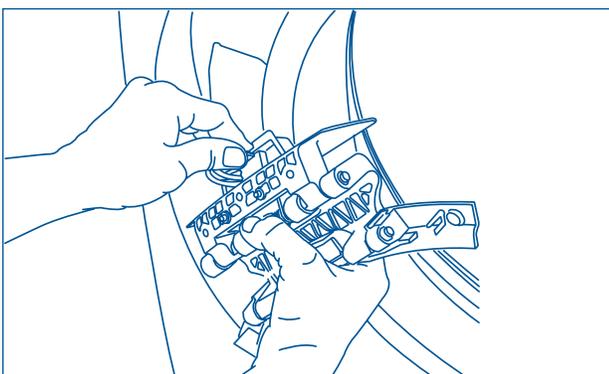


Figure 2-14.

Removing Door Lock from Front Panel

1. Remove 2 short, course-thread, panhead screws from the door lock. (See Figure 2-15)
2. Slide the lock toward the outer edge of the front panel. Pivot the lock slightly outward while slowly pulling it through opening to expose the attached harness. (See Figure 2-16)
3. Release the harness from the terminal with the small lever on back of the lock. Separate the harness from the lock, allowing the harness to lay outside the front panel. (See Figure 2-17)

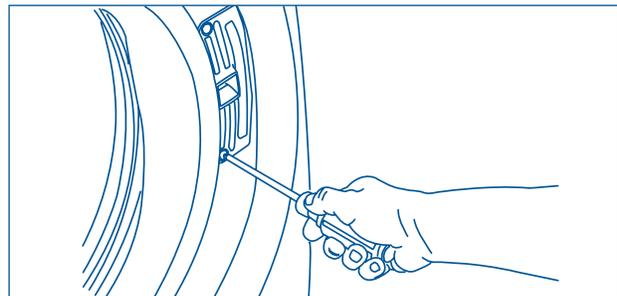


Figure 2-15.

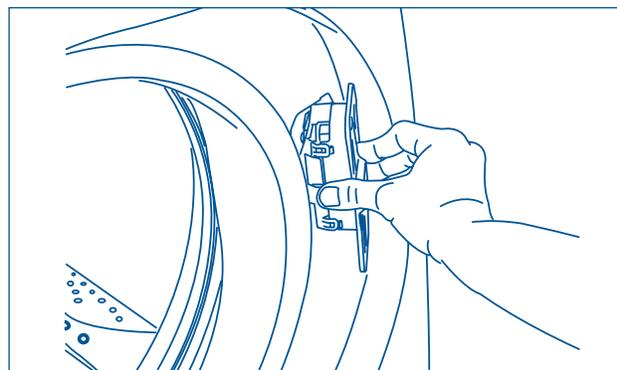


Figure 2-16.

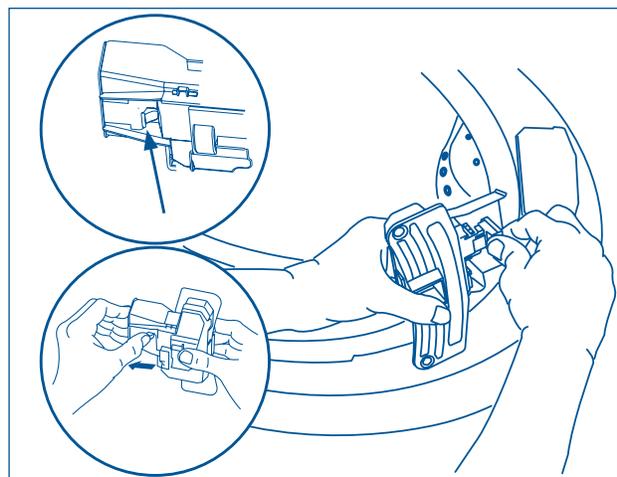


Figure 2-17.

Reattaching Door Lock to Front Panel

1. Rotate the door lock and move it to the opposite opening.
2. Connect the harness to the door lock by inserting it in the terminal and firmly pushing it in place. (See Figure 2-18)
3. Insert the harness connection through the front panel first, and then pivot the lock until it is flush. Slide the lock toward the center of the front panel until the screw holes line up. (See Figure 2-19)
4. Secure the lock with 2 short, course-thread, panhead screws. (See Figure 2-20)

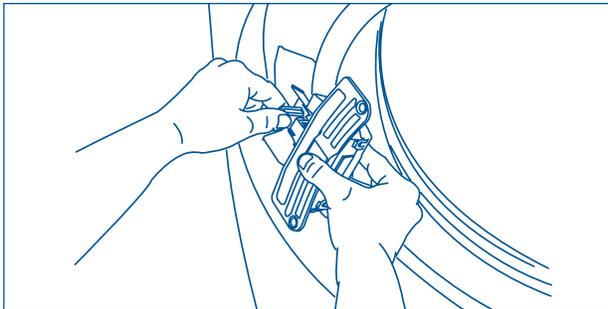


Figure 2-18.

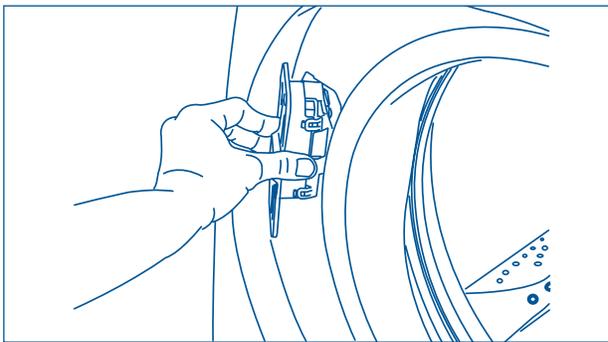


Figure 2-19.

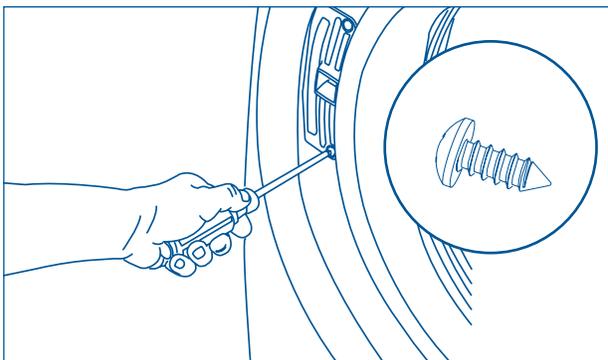


Figure 2-20.

Reattaching Hinge to Front Panel

1. Rotate the hinge and move it to the opposite opening.
2. Connect the harness to the hinge retainer by inserting it in the retention terminal and gently pushing until you hear the fastening tab click. (See Figure 2-21)
3. Gently pull on the harness to be sure it is secure.
4. Use the side locating pins to align the hinge and install 1 short, fine-thread, counter-sunk screw in the center hole of hinge side. (See Figure 2-22)
5. Install the other 2 short, fine-thread, counter sunk screws in upper and lower holes of hinge side.
6. Install 2 short, course-thread, panhead screws through hinge plate. (See Figure 2-23)

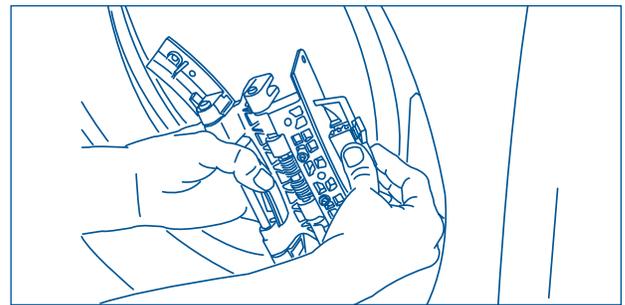


Figure 2-21.

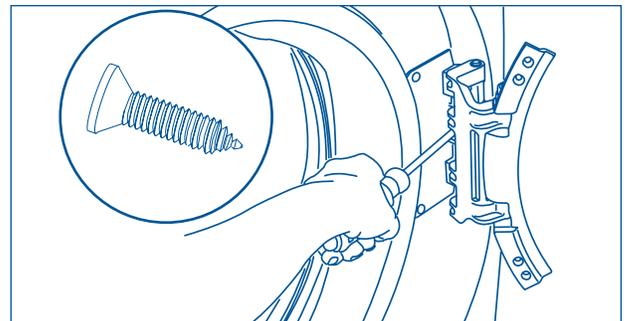


Figure 2-22.

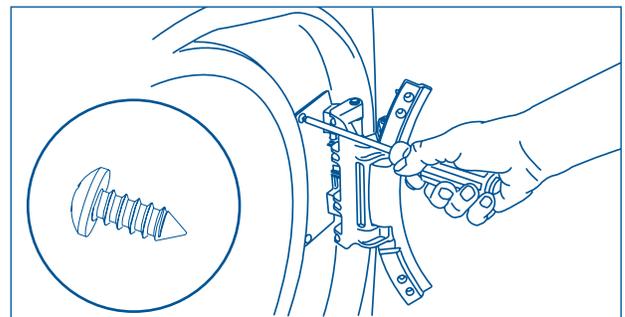


Figure 2-23.

Removing Striker Plate

1. Remove 2 long, coarse-thread, counter-sunk screws and striker plate. (See Figure 2-24)
2. Set the striker plate to the side for later.

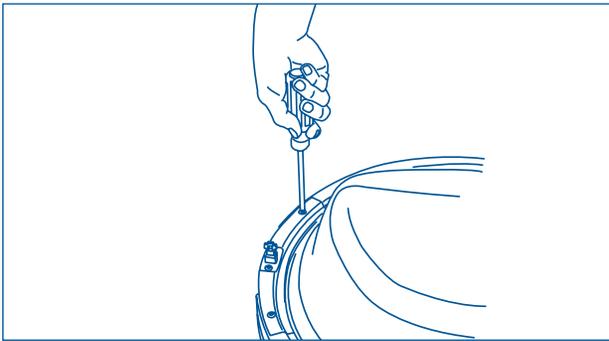


Figure 2-24.

Removing Latch Indicator

1. Grasp the indicator on the latch side between finger and thumb and rock it upward, pivoting away from the center of the glass. (See Figure 2-25)
2. Gently push the indicator toward the center of the lens to release the tab. (See Figure 2-26)
3. Rock the tab upward. (See Figure 2-26)
4. Pull the indicator out and set it aside. (See Figure 2-27)

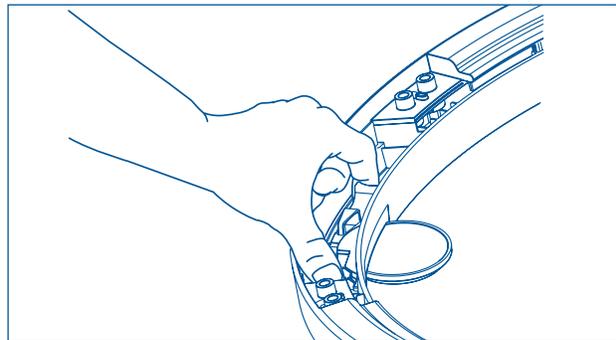


Figure 2-25.

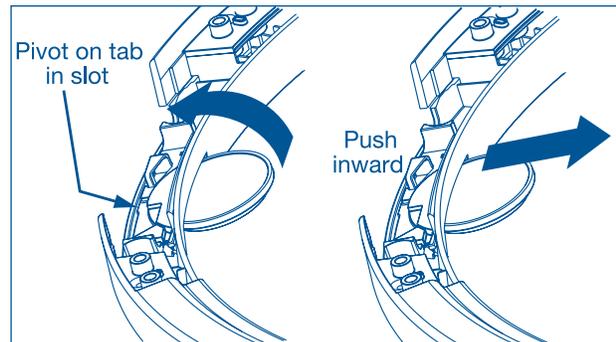


Figure 2-26.

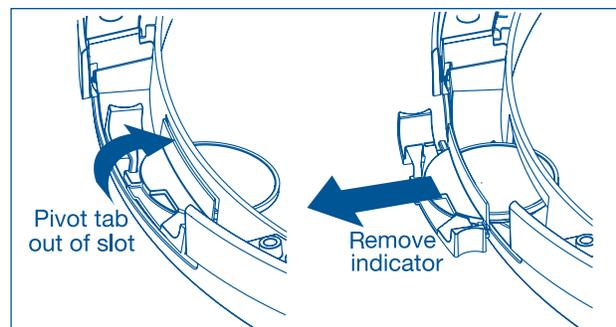


Figure 2-27.

Removing Hole Plug

1. Grasp the hole plug between finger and thumb and rock it upward, pivoting it away from the center of the glass, releasing the tab. (See Figure 2-28)
2. Connect the harness to the door lock by inserting it in the terminal and firmly pushing it in place.
3. Insert the harness connection through the front panel first, and then pivot the lock until it is flush. Slide the lock toward the center of the front panel until the screw holes line up. (See Figure 2-29)
4. Secure the lock with 2 short, coarse-thread, panhead screws.

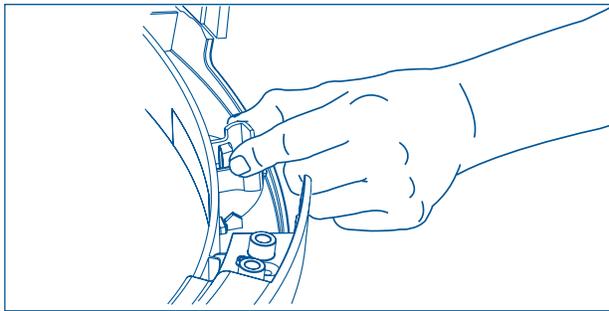


Figure 2-28.

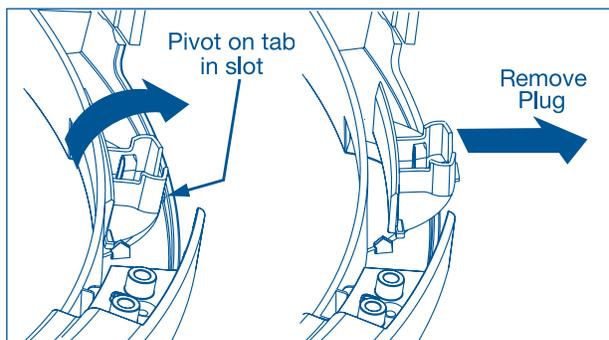


Figure 2-29.

Reinserting Latch Indicator

1. Rotate the latch indicator and move it to the opposite hole in the door.
2. Grasp the indicator between finger and thumb and slide it through the opening. (See Figure 2-30)
3. Gently push the indicator toward the center of the glass and pivot the tab downward into the retaining slot. (See Figure 2-31)
4. Pivot the indicator downward toward the center of the glass until it is in place.

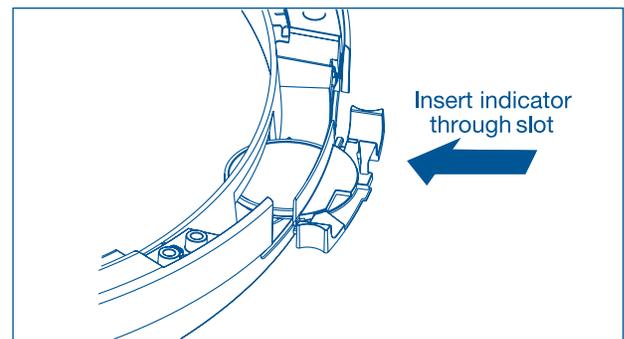


Figure 2-30.

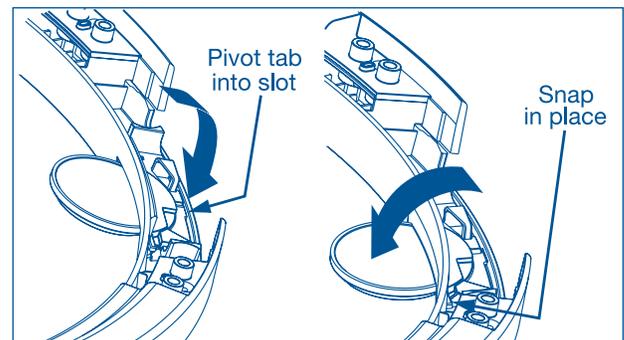


Figure 2-31.

Reattaching Striker Plate

1. Rotate the striker plate and move it to the opposite side of door above the indicator.
2. Reattach with 2 long, coarse-thread, counter-sunk screws. (See Figure 2-32)

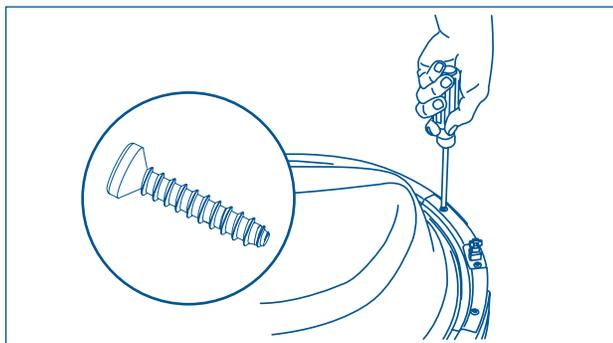


Figure 2-32.

Reinserting Hole Plug

1. Rotate the hole plug and move it to the opposite hole in the door.
2. Grasp the hole plug between finger and thumb and insert the tab into the retaining slot. (See Figure 2-33)
3. Pivot the hole plug downward toward the center of the glass until it is in place.

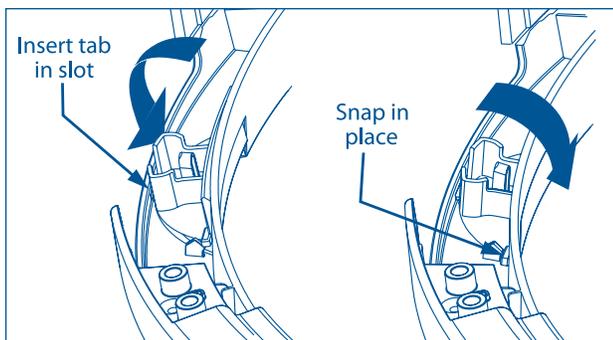


Figure 2-33.

Reattaching Door Assembly

1. Open the hinge to a 90 degree angle.
2. Install the door onto the hinge locating pins. (See Figure 2-34)
3. Secure the door with 4 long, coarse-thread, counter-sunk screws. (See Figure 2-35)
4. Close the door and test the operation of the latch.

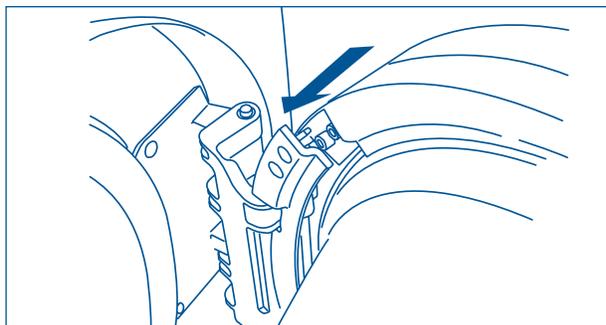


Figure 2-34.

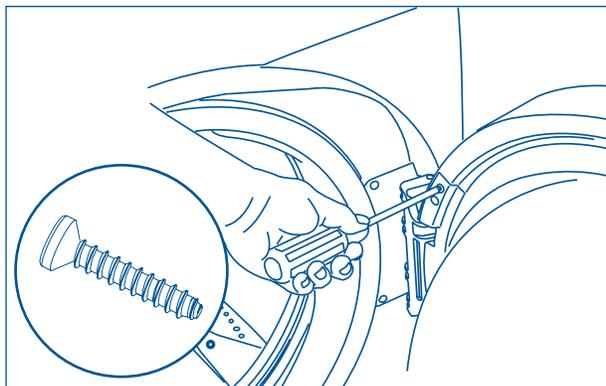


Figure 2-35.

Reversing Trim Ring

1. Trim ring orientation is marked on the back.
2. Remove the trim ring cover plate. To remove the cover plate from the right, pivot point is up. To remove the cover plate from the left, pivot point is down. (See Figure 2-36)

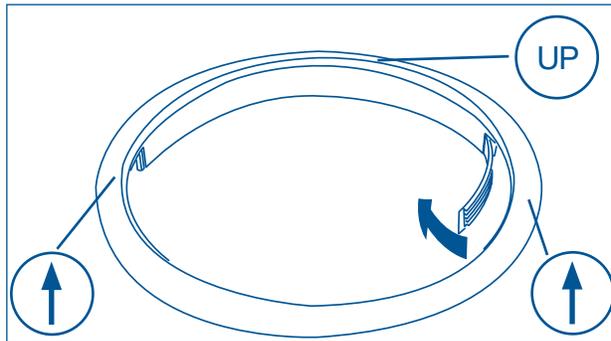


Figure 2-36.

Reinstalling Trim Plug

1. Open the door to a 90 degree angle.
2. Install the trim plug with 1 long, coarse thread, panhead screw. (See Figure 2-38)
3. Plug in washer and continue operation.

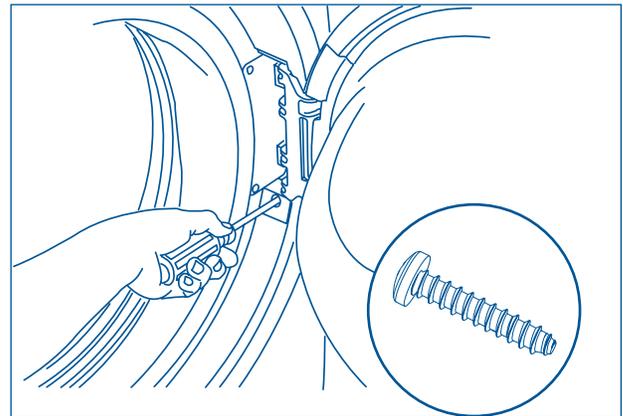


Figure 2-38.

Reinstalling Trim Ring

1. Close the door.
2. Orient the trim so 12 position is approximately $\frac{3}{4}$ " to the left of top center. The opening in the trim ring should be on the hinge side.
3. Insert the trim ring in the slots and rotate it clockwise approximately $\frac{3}{4}$ ". (See Figure 2-37)

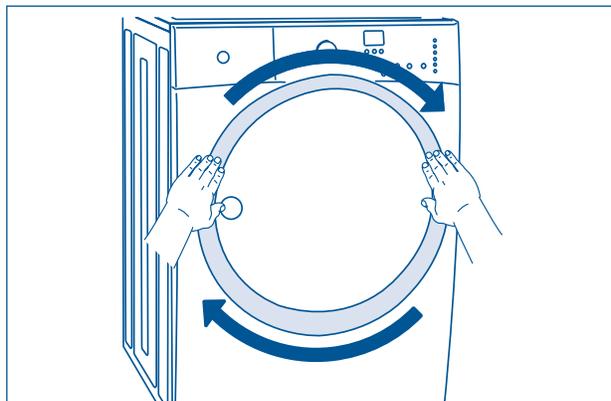


Figure 2-37.

Accessories

Matching Storage Pedestal

Island White Pedestal - P/N EPWD15IW
Mediterranean Blue - P/N EPWD15MB
Silver Sands Pedestal - P/N EPWD15SS
Turquoise Sky Pedestal - P/N EPWD15TS

A storage pedestal accessory, specifically designed for this washer may be used to elevate the dryer for ease of use. This pedestal will add about 15" (38.1cm) to the height of your unit for a total height of 53" (134.62 cm).

Dryer Stacking Kit

A kit for stacking the matching dryer on top of this washer is available with the purchase of the matching dryer.

Drain Hose Extension Kit

In order to reach standpipe heights or distances beyond the reach of the drain hose supplied, order the DRAIN HOSE EXTENSION KIT.

Universal Appliance Wrench

The washer was supplied with a UNIVERSAL APPLIANCE WRENCH.

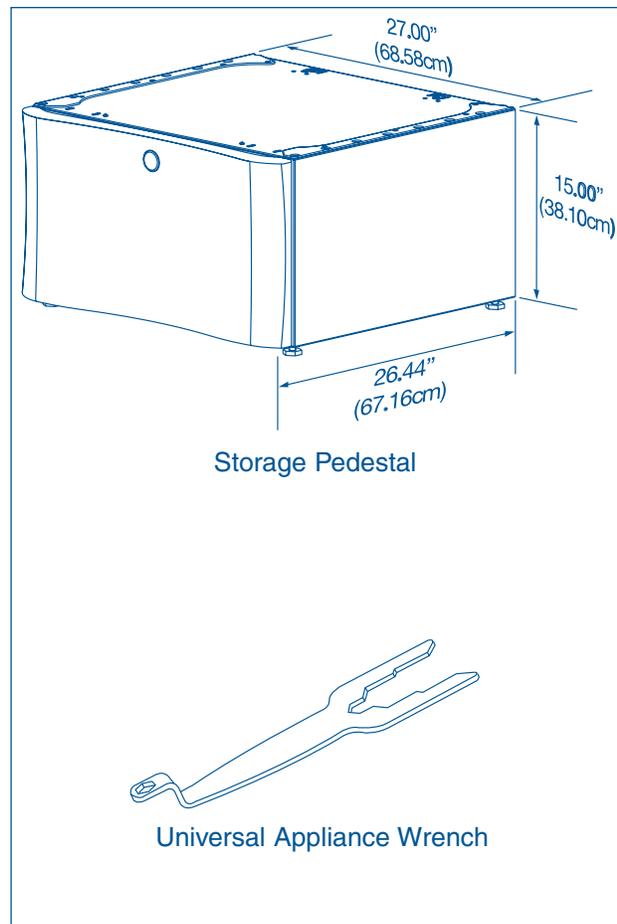


Figure 2-39. Accessories

Dryer Stacking Instructions

Kit Components: (See Figure 2-40)

- A 1 Dryer Stacking Instructions.
- B. 1 Front bracket with adhesive strip.
IMPORTANT - DO NOT remove RED backing from adhesive strip until instructed to do so.
- C. 2 rear brackets.
- D. 2 strips of self-adhesive protective film.
- E. (6) #10 (16 x 3.75) screws.

Preparing to Stack

1. Be sure there is adequate space to stack dryer on top of washer.
2. You will need a screw driver with a #2 square bit, isopropyl alcohol and a clean cloth.
3. Read washer and dryer installation instructions packed with each appliance prior to stacking.
4. Be sure washer and dryer are both unplugged.

Preparing Dryer for Stacking

1. If already installed, disconnect dryer from electrical and gas connections and exhaust venting. On models with Steam Option, disconnect water supply to dryer.
2. Protect floor with cardboard or other covering and carefully tip dryer onto its back. (See Figure 2-41)
3. Remove adjustable leveling legs and save for future use.
4. Attach front stacking bracket to dryer front with (2) - #10 screws. (See Figure 2-42)

IMPORTANT

DO NOT REMOVE RED BACKING FROM ADHESIVE STRIP YET!

DO NOT REMOVE ANY EXISTING SCREWS FROM FRONT PANEL!

5. Carefully return dryer to upright position.

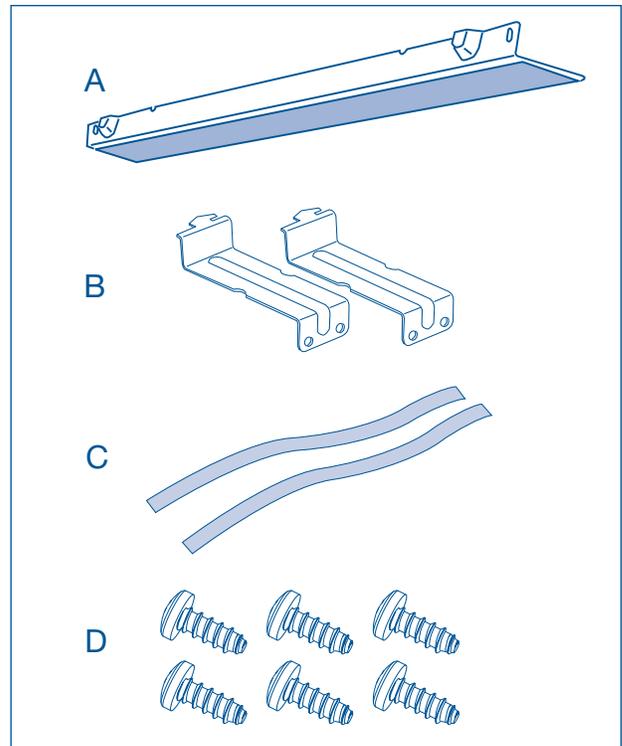


Figure 2-40.

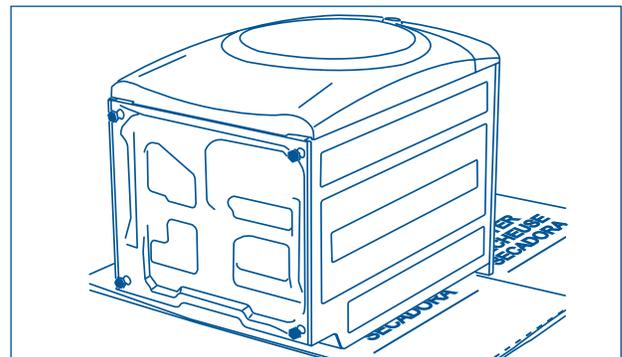


Figure 2-41.

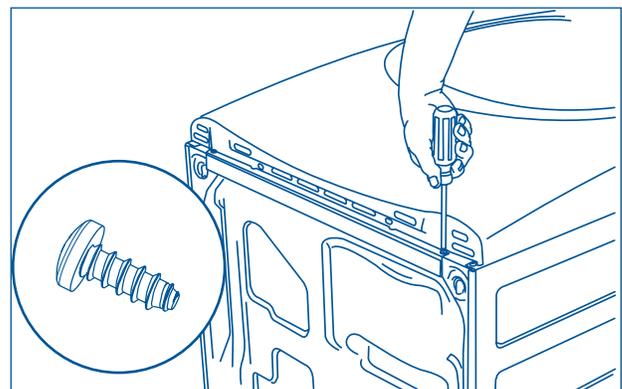


Figure 2-42.

Preparing Washer for Stacking

1. Wipe front portion of top with isopropyl alcohol and a clean cloth. (See Figure 2-43)
2. Carefully remove BLUE backing from clear self adhesive strips. Apply to each side edge of the washer top. (See Figure 2-44)
3. Attach each rear bracket to washer top with 2 #10 screws. (See Figure 2-45)

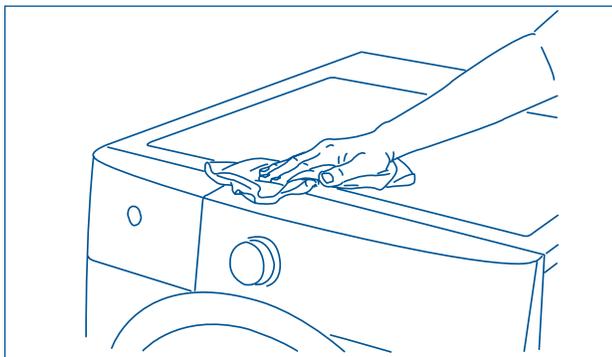


Figure 2-43.



Figure 2-44.

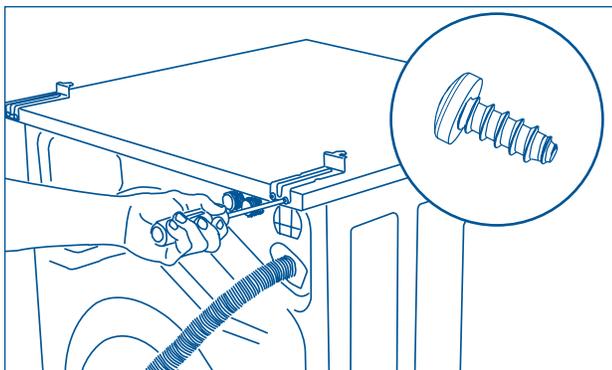


Figure 2-45.

Stacking Dryer

1. When washer is within 4 feet of its final installation site, electrical and water connections have been completed, and washer is level, have two or more people lift dryer onto washer.
2. Hold the front of the dryer up slightly carefully slide the dryer back.
3. Slide hook tabs on rear brackets into slots in back sheet of dryer. Dryer will be approximately ¼" left of center. Continue sliding dryer back until tabs are fully engaged. (See Figure 2-46)
4. Slide dryer approximately ¼" to the right, centering it on washer and hooking rear bracket tabs into slots on back.
5. Lift front of dryer and remove RED backing from adhesive strip on front bracket. (See Figure 2-47)
6. Gently lower dryer to adhere front bracket to washer top. Align dryer side panel to washer side panel as you lower dryer.
7. Refer to installation instructions to connect dryer venting, power and accessories.

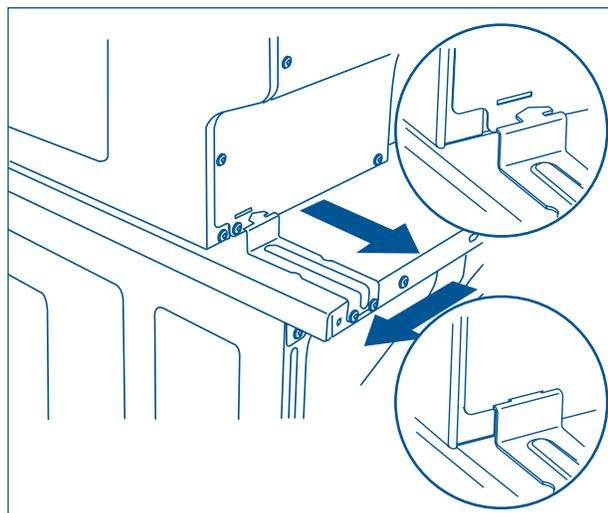


Figure 2-46.

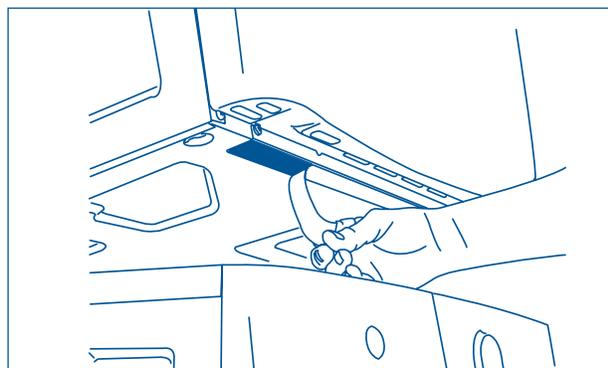


Figure 2-47.

Removing Stacked Dryer

1. Disconnect dryer from electrical and gas connections and exhaust venting. On models with Steam Option, disconnect water supply to dryer.
2. Disconnect washer from electrical source.
3. With #2 square bit screwdriver, remove two front bracket screws and save for reinstallation. (See Figure 2-48)
4. Slide the dryer approximately ¼" to the left to disengage dryer from rear brackets.
5. Support the front of the dryer, clearing the front bracket, while sliding the dryer forward. Have two or more people lift the dryer off the washer and gently place it on the floor.

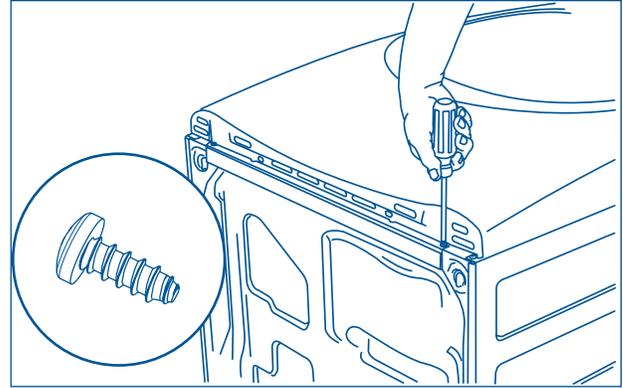


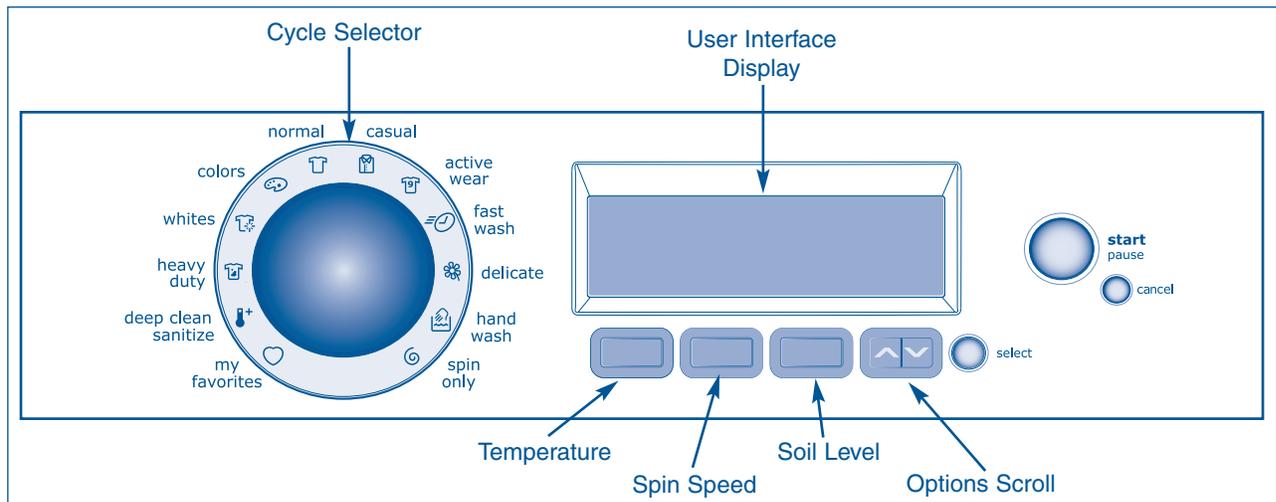
Figure 2-48.

NOTE

If laundry appliances must be moved, front and rear mounting brackets may remain attached to the washer top until the dryer is restacked. To permanently unstack the units and remove the front bracket, use a 24" piece of monofilament (fishing) line to carefully saw back and forth under the adhesive strip. Remove residue with a general adhesive remover.

Section 3

Electronic Control

Control Panel (User Interface Layout) Wave-Touch™

Figure 3-1. Wave-Touch™ Control Panel
Selecting the Appropriate Cycle and Settings Overview

Turn the cycle selector knob in either direction to select the cycle desired. The icon for that cycle will be illuminated and if the cycle description feature is turned on, the cycle and estimated cycle time are displayed on the User Interface screen for 5 seconds. Press any key to advance the User Interface to select settings and options.

Press any key or the User Interface screen will automatically advance after 5 seconds and display the pre-set wash water temperature, final spin speed and soil level for each cycle.

To change the settings, press the temp, spin speed, and soil level buttons to scroll to the desired settings. Press the scroll up or scroll down buttons under options to scroll through the options menu. Press the select button to add or delete options. The estimated cycle time will be displayed at the top of the screens.

Adjustments to a cycle will be remembered and recalled each time that cycle is selected in the future. To return to the factory default settings, select RESET in set prefs under the options scroll buttons.

Demo Mode

Demo Mode will standby for 10 minutes then perform an LED on/off sequence for 3 minutes. During the standby sequence the drum light and start button will be activated. The controls will be fully functional during Demo Mode with abbreviated cycles lasting about 1 minute. Some features will be deactivated during Demo Mode for safety purposes. When the units are in Demo Mode the text “DEMO MODE” will be displayed in the LCD screen. Demo mode will be saved if the units are unplugged or if there is a power outage. To deactivate Demo Mode repeat steps 1-3 below.

NOTE: Set the controls to the desired language in the SET PREFS menu. After the unit has been set to DEMO mode the language can not be changed.

1. Turn the cycle selector knob to SPIN ONLY cycle, press the START button then the CANCEL button.
2. Activate the controls by turning the cycle selector knob and turn to SPIN ONLY cycle.
3. Press and hold CANCEL button and SOIL LEVEL (Third button from the left) for 3 seconds.
4. DEMO MODE instructions have to be completed by 7 seconds of the control activation.
5. Press the CANCEL button to begin DEMO MODE.
6. To deactivate DEMO MODE repeat steps 1 – 3.

Wave-Touch™ Washer Cycle Chart

These temperature, spin speeds, soil levels and options are available with the following cycles:

	deep clean sanitize	heavy duty	whites	colors	normal	casual	active wear	fast wash	delicate	hand wash	spin only
Estimated Cycle Duration**	144 min	57 min	52 min	31 min	52 min	31 min	36 min	18 min	31 min	31 min	08 min

Temperature

sanitize	✓*										
hot		✓	✓*		✓	✓		✓			
eco hot		✓	✓		✓	✓		✓			
warm		✓*		✓	✓*	✓*	✓*	✓*	✓	✓	
eco warm		✓		✓	✓	✓	✓	✓	✓	✓	
cold		✓		✓*	✓	✓	✓	✓	✓*	✓*	✓

Spin speed

maximum spin	✓*	✓*	✓*	✓	✓*	✓	✓	✓*	✓	✓	✓*
high spin	✓	✓	✓	✓*	✓	✓*	✓*	✓	✓	✓	✓
medium spin	✓	✓	✓	✓	✓	✓	✓	✓	✓*	✓	✓
low spin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓*	✓
minimum spin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
no spin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Soil level

heaviest soil	✓	✓	✓	✓	✓	✓	✓				
xtra heavy soil	✓	✓	✓	✓	✓	✓	✓				
heavy soil	✓	✓	✓	✓	✓	✓	✓				
normal soil	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓	✓*	✓*	
light soil			✓	✓	✓	✓	✓	✓	✓	✓	
xtra light soil			✓	✓	✓	✓	✓	✓*	✓	✓	

Options

delay start	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
warm rinse		✓			✓		✓	✓	✓	✓	
prewash		✓	✓	✓	✓	✓	✓				
extra spin	✓	✓	✓	✓	✓	✓	✓				
auto temp	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
extra rinse	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
stain clean		✓	✓	✓	✓	✓	✓		✓		
eco friendly		✓	✓	✓	✓	✓	✓	✓	✓	✓	

* Factory presets

✓ Available selections

**Estimated cycle duration is based on factory settings and does not include water fill times, out-of-balance, or oversudsing conditions.

Control Panel (User Interface Layout) IQ-Touch™

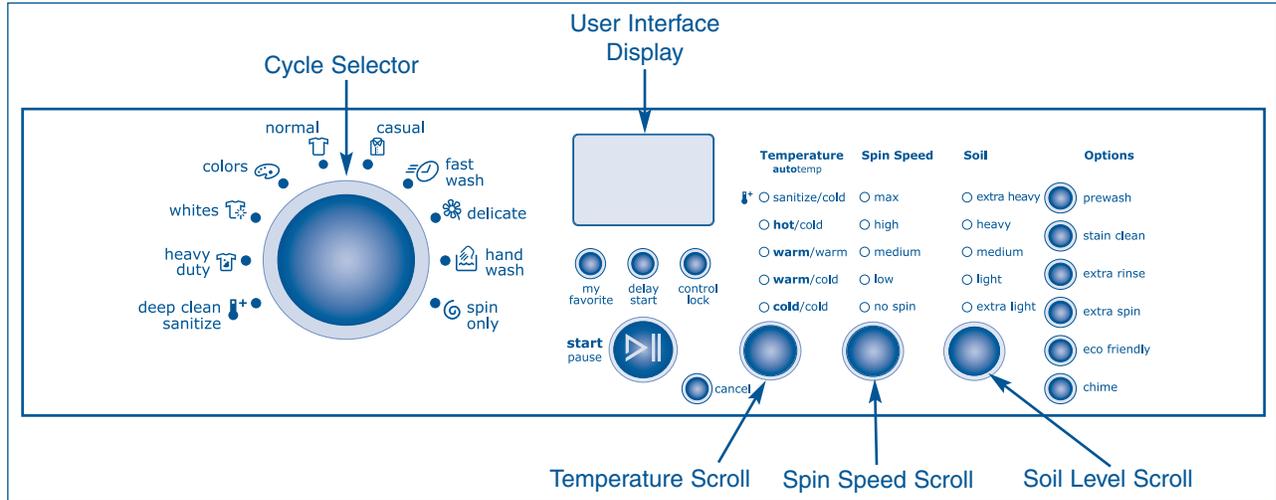


Figure 3-2. IQ-Touch™ Control Panel

Selecting the Appropriate Cycle and Settings Overview

Turn the cycle selector knob in either direction to select the cycle desired. The indicator for that cycle will be illuminated.

The estimated cycle time, suitable wash and rinse water temperatures, final spin speed, soil level, and options for each cycle will be indicated for the cycle selected.

To change the settings, press the temperature, spin speed, soil, and options buttons to scroll to the desired settings.

To select or delete an option, press the button for that option. The indicator will light when the option has been selected. It will no longer be lighted when the option has been deleted.

Adjustments to a cycle will be remembered and recalled each time that cycle is selected in the future.

To return to factory default settings, press and hold the spin speed and soil buttons at the same time for 5 seconds.

Demo Mode

Demo Mode will standby for 10 minutes then perform an LED on/off sequence for 3 minutes. During the standby sequence the drum light and start button will be activated. The controls will be fully functional during Demo Mode with abbreviated cycles lasting about 1 minute. Some features will be deactivated during Demo Mode for safety purposes. When the units are in Demo Mode the text "DEMO MODE" will be displayed in the LCD screen. Demo mode will be saved if the units are unplugged or if there is a power outage. To deactivate Demo Mode repeat steps 1-3 below.

1. Turn the cycle selector knob to SPIN ONLY cycle, press the START button then the CANCEL button.
2. Activate the controls by turning the cycle selector knob and turn to SPIN ONLY cycle.
3. Press and hold CANCEL button and CTRL LOCK button for 3 seconds
4. DEMO MODE instructions have to be completed by 7 seconds of the control activation.
5. Press the CANCEL button to begin DEMO MODE.
6. To deactivate DEMO MODE repeat steps 1 – 3.

IQ-Touch™ Washer Cycle Chart

These temperature, spin speeds, soil levels and options are available with the following cycles:

	deep clean sanitize	heavy duty	whites	colors	normal	casual	fast wash	delicate	hand wash	spin only
Estimated Cycle Duration**	144 min	57 min	52 min	31 min	52 min	31 min	18 min	31 min	31 min	08 min

Temperature

sanitize/ cold	✓*									
hot/ cold		✓	✓*		✓	✓	✓			
warm/ warm		✓			✓		✓	✓	✓	
warm/ cold		✓*		✓	✓*	✓*	✓*	✓	✓	
cold/ cold		✓		✓*	✓	✓	✓	✓*	✓*	✓

Spin Speed

max	✓*	✓*	✓*	✓	✓*	✓	✓*	✓	✓	✓*
high	✓	✓	✓	✓*	✓	✓*	✓	✓	✓	✓
medium	✓	✓	✓	✓	✓	✓	✓	✓*	✓	✓
low	✓	✓	✓	✓	✓	✓	✓	✓	✓*	✓
no spin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Soil

extra heavy	✓	✓	✓	✓	✓	✓				
heavy	✓	✓	✓	✓	✓	✓				
medium	✓*	✓*	✓*	✓*	✓*	✓*	✓	✓*	✓*	
light			✓	✓	✓	✓	✓	✓	✓	
extra light			✓	✓	✓	✓	✓*	✓	✓	

Options

delay start	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
extra spin	✓	✓	✓	✓	✓	✓				
extra rinse	✓	✓	✓	✓	✓	✓		✓	✓	✓
prewash		✓	✓	✓	✓	✓				
eco friendly		✓	✓	✓	✓	✓	✓	✓	✓	
stain clean		✓	✓	✓	✓	✓		✓		
chime	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Factory presets

✓ Available selections

**Estimated cycle duration is based on factory settings and does not include water fill times, out-of-balance, or oversudsing conditions.

Cycle Selection

NOTE

The following cycle descriptions are for the Wave Touch™ and IQ Touch™ Washers. The IQ Touch™ models do not feature the Eco Hot and Eco Warm temperature settings, the active wear preset, and the Auto temp option.

Turn the cycle selector in either direction to the cycle desired. The icon for that cycle will be illuminated. Press on the cycle selector knob to extend it or return it flush to the console.

To change the selection after the cycle begins, press cancel before making another choice. Just turning the cycle selector knob to another selection will not change the cycle.

Normal

The normal cycle provides 9-21 minutes of reversing tumble wash action for most loads. All water temperatures except sanitize temp, all spin speeds, soil levels and options are available with this cycle.

Colors

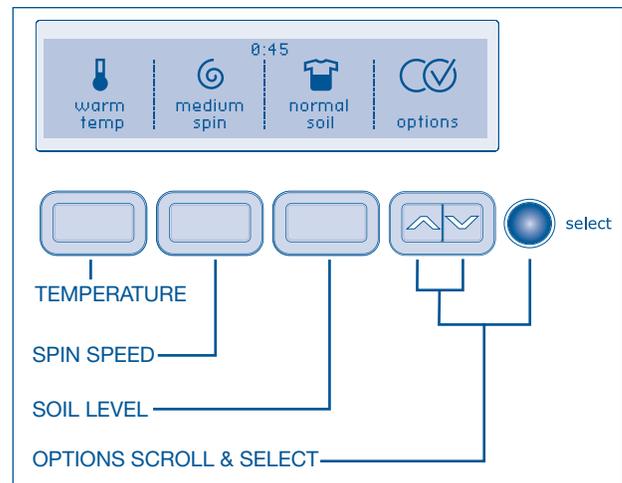
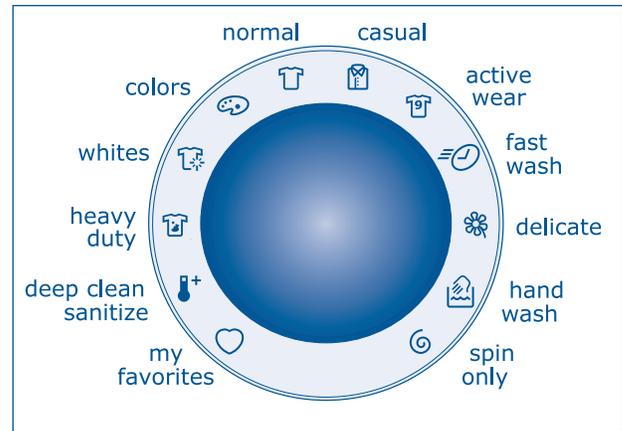
The colors cycle provides 5-20 minutes of reversing tumble wash action for mixed color loads. Warm temp, eco warm temp or cold temp water, all spin speeds, soil levels and options except warm rinse are available with this cycle.

Whites

The whites cycle provides 9-21 minutes of reversing tumble wash action for whiter cottons. The use of liquid chlorine bleach is recommended. Hot temp and eco hot temp water, all spin speeds and soil levels, and all options except warm rinse are available with this cycle.

Heavy Duty

The heavy duty cycle provides 9-21 minutes of reversing tumble wash action for heavily soiled sturdy items such as jeans. For best soil and stain removal, use the hottest water safe for the fabrics being washed. All temperatures except sanitize temp, all spin speeds, all soil levels except light soil and extra light soil, and all options are available with this cycle.



Deep Clean Sanitize

Use the deep clean sanitize cycle to clean and sanitize heavily soiled, colorfast fabrics including towels, bedding, and children's clothing. Very hot water, all spin speeds, all soil levels except light soil and extra light soil, and all options except prewash, eco friendly, stain clean, and warm rinse are available with this cycle.

It is recommended to set the water heater to 120° F (49° C) or higher to ensure proper performance during this cycle. If the setting is lower or the load is extra large, the cycle time will be extended by 30 minutes or more. The deep clean sanitize cycle will kill 99.9% of bacteria with no carry over of bacteria between loads. No bleach or harsh chemicals are needed, but higher temperatures are required. Please check fabric care labels to prevent damage.

The wash water is heated by an internal boost heater to a maximum of 152° F (67° C) as the load tumbles for up to 4 hours. Cold water is added to cool down the load prior to drain and spin.

As a precaution, the washer door is locked once the water temperature reaches 130° F (55° C). If the cycle is cancelled during the wash phase and the water temperature is greater than 150° F (66° C), an automatic cool down and drain will occur before the door can be opened.

Casual

The casual cycle provides 5-20 minutes of reversing tumble action for cottons and blends with a permanent press or no-iron finish. All temperatures except sanitize temp, all spin speeds and soil levels, and all options except warm rinse are available with this cycle.

Active Wear

The active wear cycle provides 5-17 minutes of reversing tumble wash action for lightweight, synthetic athletic apparel. All temperatures except sanitize temp, hot temp and eco hot temp, all spin speeds, soil levels and options are available with this cycle.

Fast Wash

The fast wash cycle provides 5-11 minutes of re-versing tumble action to quickly wash small, lightly soiled loads in 18 minutes. All water temperatures except sanitize temp, all spin speeds, all soil levels except heavy soil, extra heavy soil and heaviest soil, and eco friendly, delay start and warm rinse options are available with this cycle.

NOTE

This cycle has been certified by NSF International, an independent third party testing and certification organization dedicated to public health, safety and environmental protection.

NOTE

If the voltage at your outlet is under 110V, the internal heater may not adequately heat the wash water. If the cycle is interrupted while the water is heating, the final temperature of the wash water may be lower and sanitation may be reduced.



NSF Protocol P172
Sanitization Performance of Residential
and Commercial, Family-Sized Clothes
Washers

Delicate

The delicate cycle provides 6-12 minutes of gentle reversing tumble action for knits and delicates. All water temperatures except eco hot temp, hot temp and sanitize temp, all spin speeds, all soil levels except heavy soil, extra heavy soil and heaviest soil, and all options except prewash and extra spin are available with this cycle.

Hand Wash

The hand wash cycle provides 5-11 minutes of intermittent gentle tumbling for items labeled “Hand Wash”. All water temperatures except eco hot temp, hot temp and sanitize temp, all spin speeds, all soil levels except heavy soil, extra heavy soil and heaviest soil, and the eco friendly, delay start and extra rinse options are available with this cycle.

Spin Only

Use the spin only cycle anytime you want to drain water from the washer and spin out the load or as a follow-up to the no spin setting. Select the speed appropriate for the load for 8 minutes of spin. To add a cold water rinse prior to the spin, select the extra rinse option.

My Favorite (IQ Touch™)

To program a cycle with your preferred water temperature, spin speed, soil level and options, press and hold the my favorite button for 3 seconds.

To use that customized cycle to wash future loads, simply press the my favorite button and the selected cycle, water temperature, spin speed, soil level and options will be indicated.

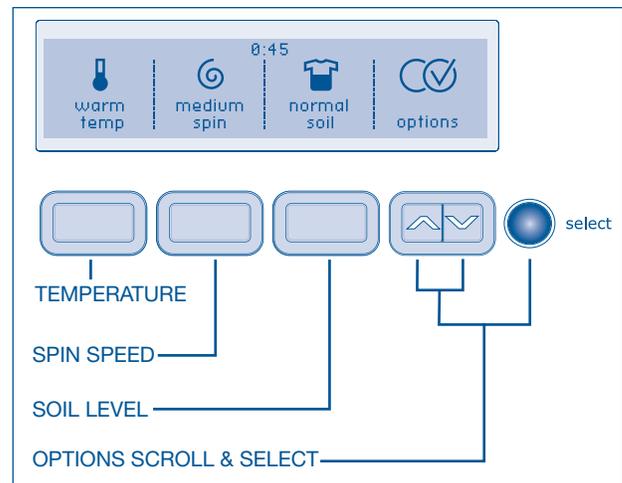
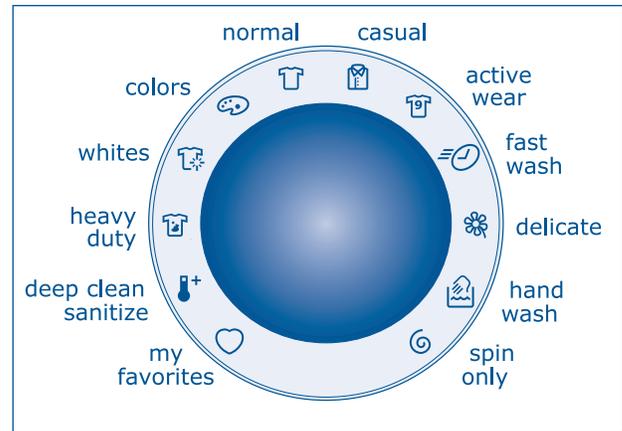
The personalized cycle can be changed by repeating the my favorite procedure.

My Favorites (Wave Touch)

To select one of your 3 favorite cycles:

- Turn the cycle selector knob to my favorites.
- Press the button corresponding to the favorite cycle desired. The custom cycle, settings, and options saved will automatically be displayed.
- Press the start button to begin the cycle.

For example, to select your my shirts cycle, turn the cycle selector knob to my favorites. Press the button corresponding to my shirts, and then press start.



My Favorites (Wave Touch)

If more than one user has been entered in CUSTOM MODE:

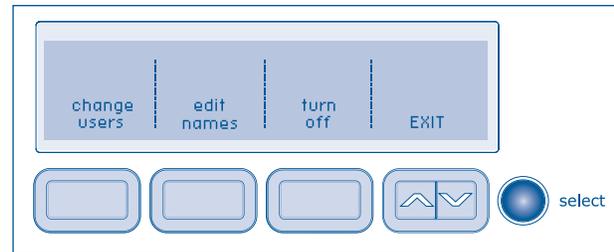
1. The current user's name will be displayed when the washer is turned on if CUSTOM MODE is on.
2. Press the button under OK to continue using that user's favorite cycles.
3. The icon for the last cycle run will light up.
4. Turn the cycle selector knob to my favorites.
5. Select one of the 3 customized cycles by pressing the corresponding button.
6. Press the start button.

To change users:

1. Press the select button when the washer turns on and shows the current user's name.
2. Press the button under change users.
3. Select another user's name.
4. Press the button under EXIT.
5. The icon for the last cycle run will light up.
6. Turn the cycle selector knob to my favorites.
7. Select one of the 3 customized cycles by pressing the corresponding button.
8. Press the start button.

To select a user if a user's name is not displayed when the washer is turned on:

1. Press the options buttons to scroll to set prefs and then press the select button.
2. If necessary, press the options buttons to scroll to CUSTOM MODE and then press the select button.
3. Press the button corresponding to the user's name.
4. The icon for the last cycle run will light up.
5. Turn the cycle selector knob to my favorites.
6. Select one of the 3 customized cycles by pressing the corresponding button.
7. Press the start button.



Wave Touch™ Washing/Rinsing Temperature

The appropriate washing temperature will automatically be indicated for the cycle selected.

To change the temperature, press the temperature button to scroll to the desired setting. To protect fabrics, not all temperatures are available with every cycle. Settings will not be displayed if they are not available with that cycle.

The temperature selected for the cycle will be remembered and recalled each time that cycle is selected in the future.

All wash water temperatures are automatically regulated to maximize detergent effectiveness and improve washing performance. The water heater setting and its distance from the washer, water usage in other parts of the home, and seasonally low ground water temperature in some geographic areas can affect water temperature.

Cold Temp

Use this setting for lightly soiled, brightly colored items, knits, delicates, hand washables and washable silk.

Eco Warm Temp

Reduces the warm water temperature a few degrees to save energy when washing normally soiled, colorfast cottons, sheets, casual items and washable woolens.

Warm Temp

Use this setting for normally soiled, colorfast cottons, sheets, perm press items and washable woolens.

Eco Hot Temp

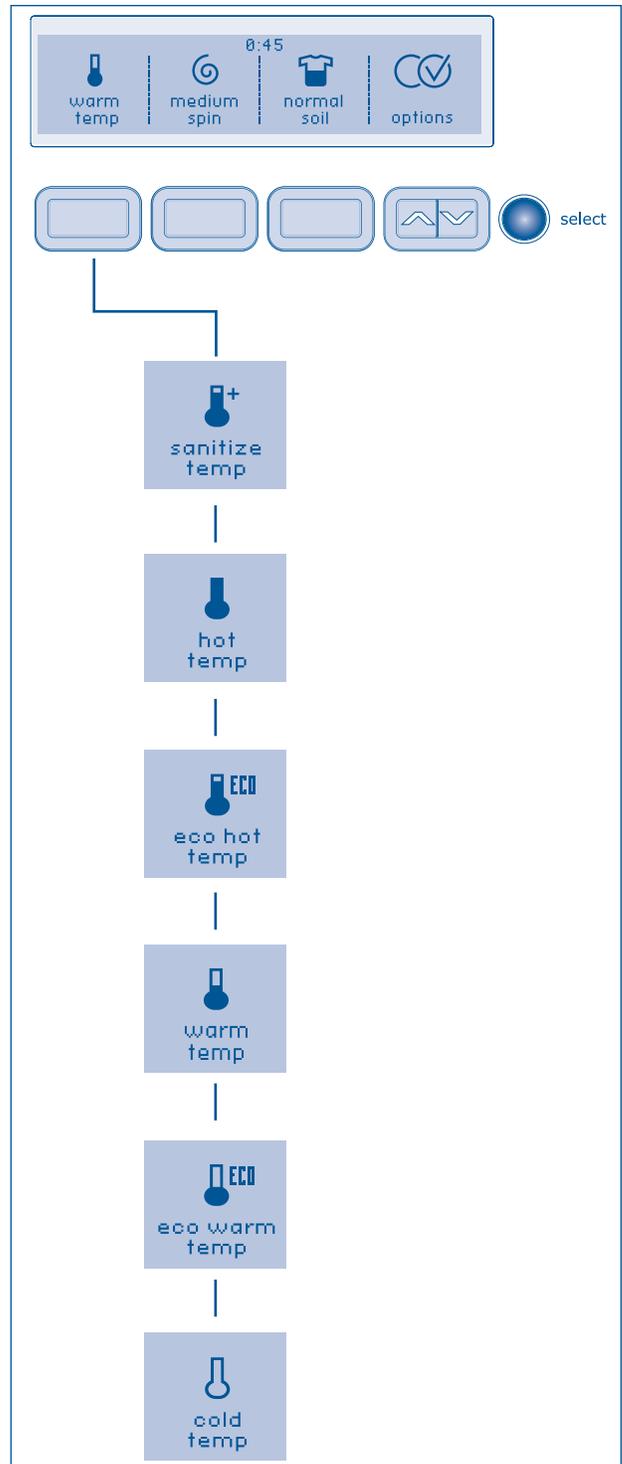
Reduces the warm water temperature a few degrees to save energy when washing heavily soiled, white and colorfast cottons and towels.

Hot Temp

Use this setting for heavily soiled, white and colorfast cottons and towels.

Sanitize Temp

This setting sanitizes heavily soiled white and color-fast fabrics by killing 99.9% of bacteria using wash water heated with a boost heater to 152° F (67° C). Cold water is used to cool and rinse the load. This setting is only available with deep clean sanitize cycle.



Spin Speed

Maximum spin, high spin, medium spin, minimum spin, and low spin speeds are available for each cycle. The spin speeds and/or duration of final spin vary from cycle to cycle. Increasing the spin speed will extract more water, decrease drying time and conserve energy. Decreasing the spin speed will reduce wrinkling. Use no spin to omit the final spin at the end of the cycle. The load will be very wet. Remove items from the wash drum to drip dry or select the spin only cycle to remove excess water at a more convenient time.

Soil Level

Adjust the wash time in 3-minute increments based on the soil level of each load. Normal soil, heavy soil, extra heavy soil, heaviest soil, light soil and extra light soil levels are available.

IQ Touch™ Washing/Rinsing Temperature

Sanitize/Cold

This setting sanitizes heavily soiled colorfast fabrics such as towels, bedding, and children's clothing by killing 99.9% of bacteria using wash water heated with a boost heater to 152° F (67° C). Cold water is used to cool and rinse the load. This setting is only available with the deep clean sanitize cycle.

Hot/Cold

Use this setting for heavily soiled white or colorfast cottons and blends.

Warm/Cold

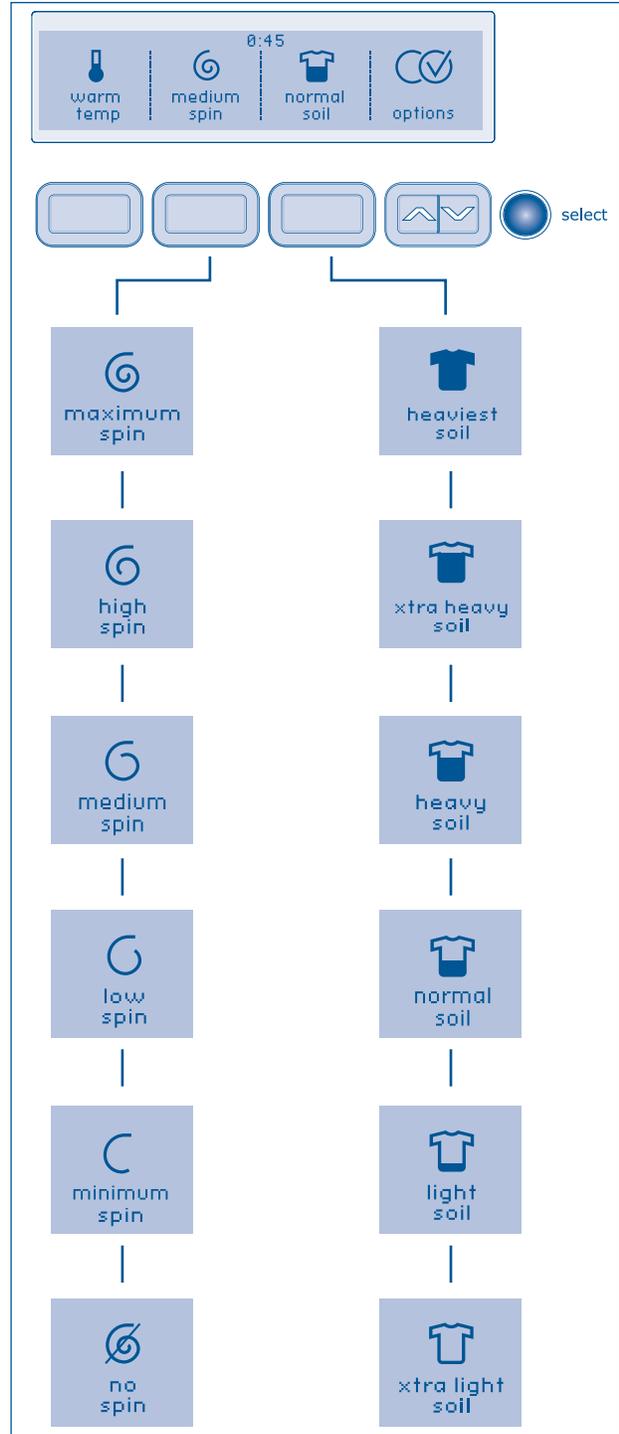
Use this setting for normally soiled white or colorfast cottons or blends.

Warm/Warm

Use this setting for washable woolens or when a warm water rinse is desired.

Cold/Cold

Use this setting for lightly soiled non-colorfast items, knits, delicates, and hand washables.



Options

Suitable options will automatically be indicated when the cycle is selected.

To select or clear the eco friendly, stain clean, extra rinse, auto temp, extra spin, prewash, warm rinse and delay start options, press the scroll up or scroll down buttons until the desired option is displayed. Press select and ON will be displayed in the upper right corner. To clear the option, press select again and ON will disappear.

If an option is not appropriate for the cycle, it will not be displayed.

To change the options once the cycle has begun, press the pause button, make the new selections and press start again. The options selected for the cycle will be remembered and recalled each time that cycle is selected in the future.

Eco Friendly

The eco friendly option reduces the hot and warm water temperature a few degrees to save energy. It is available with all cycles except deep clean sanitize and spin only.

Stain Clean

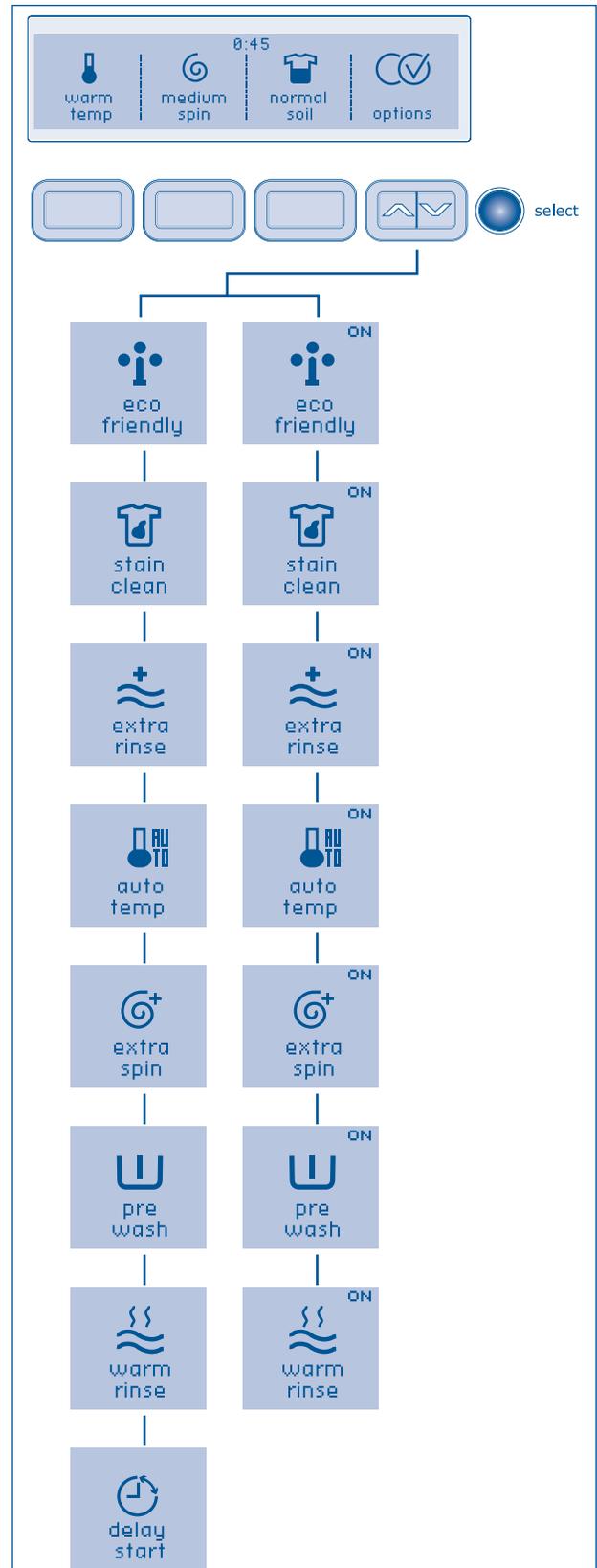
Use the stain clean option to add a 5-minute soak in the middle of the wash portion of the normal, colors, casual, active wear, whites, heavy duty and deli-cates cycles.

Extra Rinse

Use this option when additional rinsing is desired to remove excess dirt or detergent. It is recommended for heavily soiled loads or if household members have sensitive skin. It is available with all cycles except fast wash. Extra rinse occurs before the final rinse when the liquid fabric softener is dispensed.

Auto Temp

The wash and rinse water temperatures are automatically regulated to maximize detergent effectiveness and improve washer performance. It is available with all cycles. To delete this option and operate the washer with tap water temperatures, press select and ON will no longer be displayed. However, the water heater setting and its distance from the washer, water usage in other parts of the home, and seasonally low ground water temperature in some geographic areas can affect water temperature and impact the performance of the washer.



Extra Spin

Use this option to add several minutes to the final spin at the selected speed. This will improve water extraction, decrease drying time and save energy. Extra spin is available with all cycles except fast wash, delicates, hand wash and spin only.

Prewash

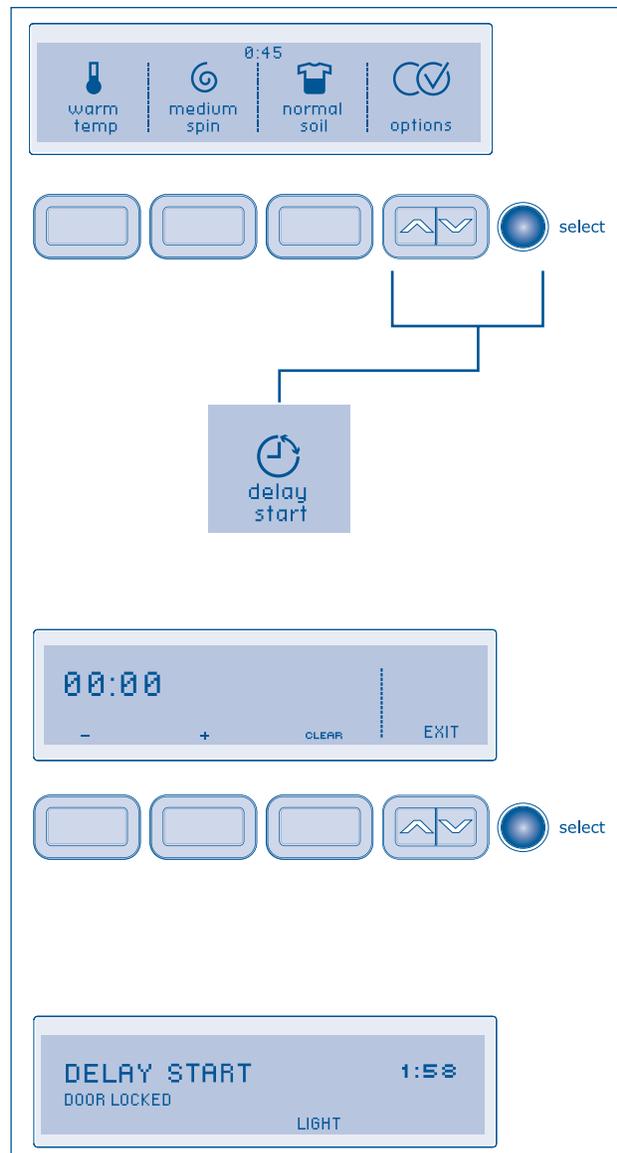
Select this option to add a short wash period prior to the normal, colors, casual, active wear, whites, and heavy duty cycles. Heavily soiled and stained loads will prewash in cold water for 5 minutes. The water will drain and the load will automatically advance to the selected wash cycle.

Warm Rinse

Select the warm rinse option with the normal, heavy duty, active wear, fast wash, delicates and hand wash cycles.

Delay Start

Use delay start to select a wash time convenient to your schedule or during off-peak energy hours. The start of any cycle can be delayed for 30 minutes to 22 hours. Select delay start option and press the button under the plus (+) or minus (-) symbols to scroll to the delayed time setting desired. Press the select button again and the delay time will be displayed and begin counting down.



User Interface Features

Save as Favorite

The save as favorite feature allows personalization for up to 3 custom cycles for each custom user.

Set Prefs

The set prefs feature allows you to personalize cycles, hide cycle descriptions, select the language, volume, brightness and contrast of the display, reset settings, clean the washer, and run the installation cycle.

User Guides

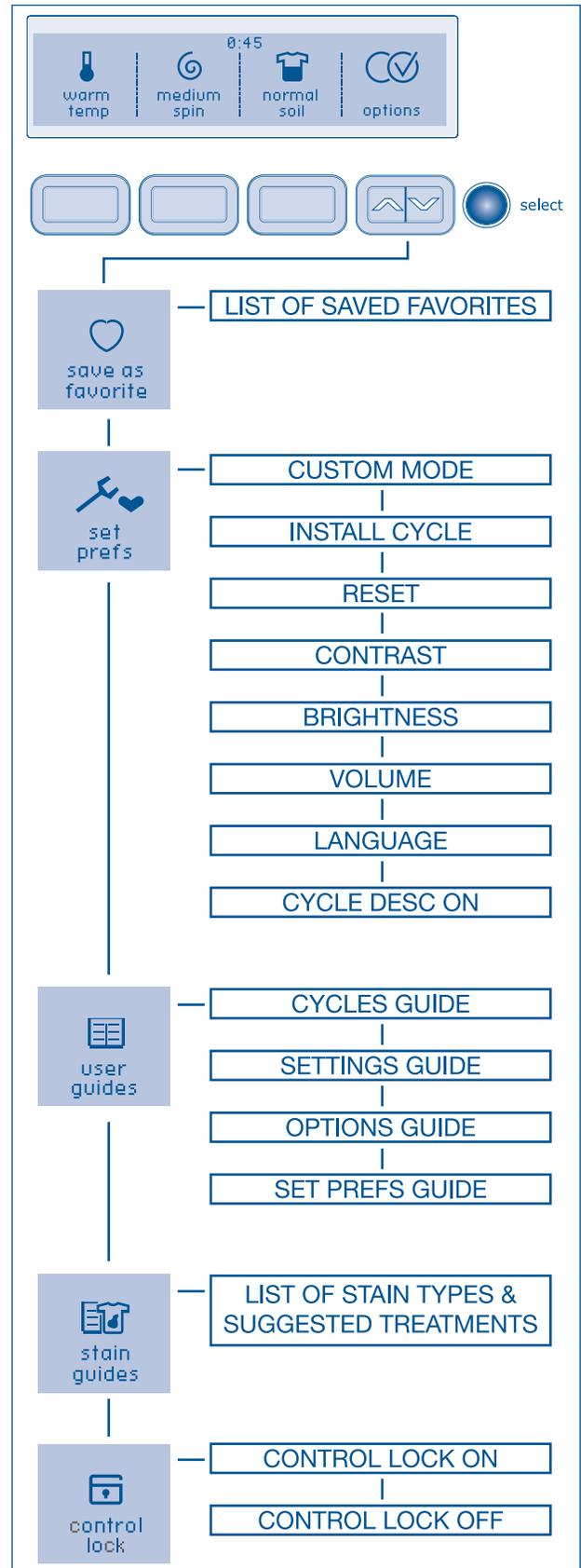
Scroll through this option for the CYCLES GUIDE, SETTINGS GUIDE, OPTIONS GUIDE, and SET PREFS GUIDE for descriptions of the cycles, water temperatures, spin speeds, soil levels, cycle options and features for user preferences.

Stain Guides

Scroll through the stain guide to the desired stain category. Press the select button for safe, successful stain removal instructions.

Control Lock

To lock the controls between cycles, scroll to the control lock feature, press select and “**CONTROL LOCK OFF - PRESS SELECT TO LOCK THE PANEL**” will be displayed. Press the select button to lock the controls. To unlock the controls, press and hold select again for 3 seconds. Use this feature to reduce the likelihood of accidental operation by children.



Save as Favorite

The save as favorite feature allows personalization for up to 3 custom cycles for each custom user.

1. Select a cycle, washing temperature, spin speed, soil level and other options desired.
2. Use the scroll up or scroll down button until you reach save as favorite.
3. Press the select button to enter the favorite cycle choice screen.
4. Choose 1 of the 3 buttons for naming the cycle.
5. See below for naming your favorite cycle.

For example, to customize the normal cycle for your shirt loads with a warm water wash, medium final spin speed and normal soil level:

1. Turn the cycle selector knob to normal.
2. Press the temp button to select medium temp.
3. Press the spin speed button to select medium spin speed.
4. Press the soil level button to select normal soil.
5. Press the scroll up or scroll down button until you reach save as favorite.
6. Press the select button to enter the favorite cycle choice screen.
7. Press the button under my favorite 1.

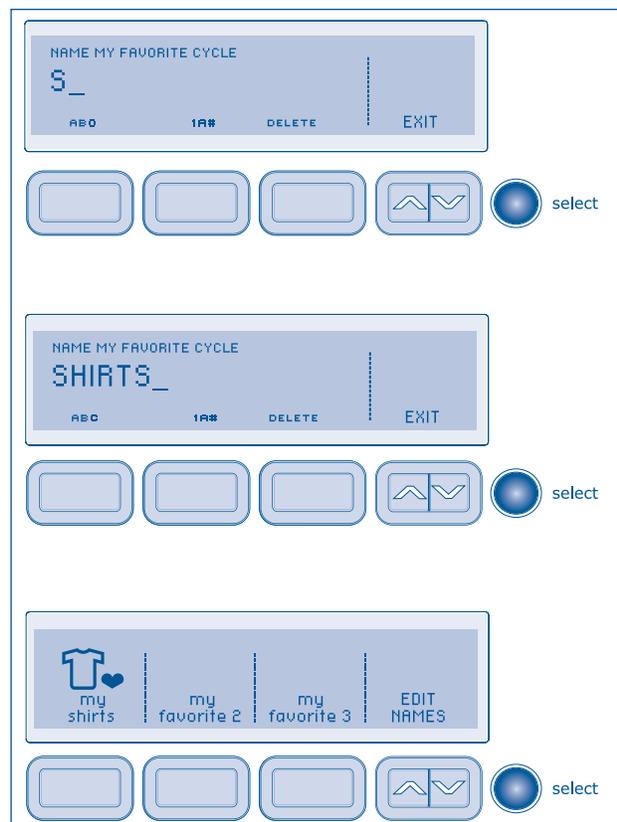
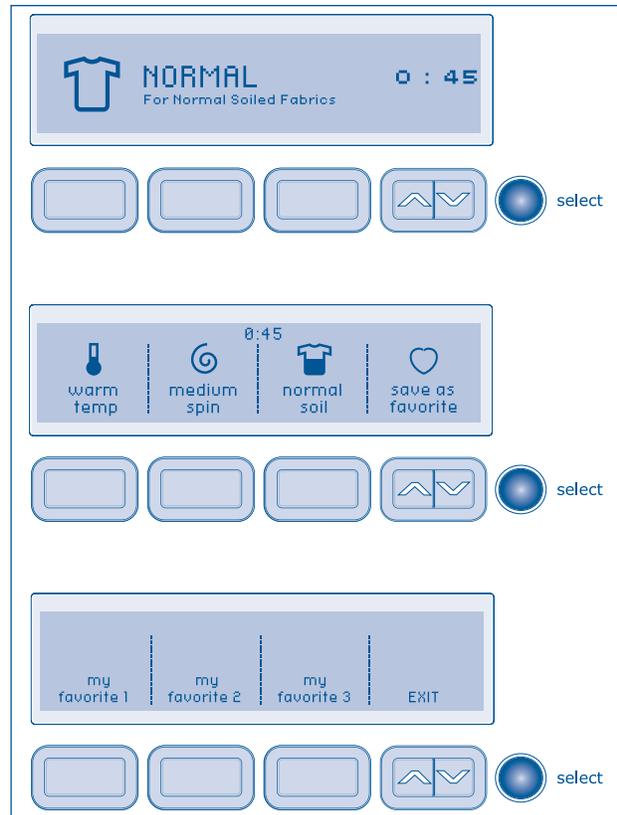
To name the customized cycle for shirts, press my favorite 1.

Press the button under ABC to name the favorite cycle alphabetically. Use the button under 1A# to add numbers, foreign language characters or symbols to the name.

Rotate the cycle selector knob in either direction to select the letters S-H-I-R-T-S, pausing after each character to let the cursor advance. Press the button under DELETE to erase incorrect entries. There is a blank character between Z and A for inserting spaces in your custom name. Pause momentarily on this character as you would to insert any other character, then continue.

Press select to save the favorite cycle name.

Repeat the steps to customize 2 other cycles as my favorite 2 and my favorite 3. Any of the favorite cycle names can be changed in the future by turning the cycle selector knob to my favorites and pressing the button under EDIT NAMES.



Setting Preferences

Custom Mode

CUSTOM MODE allows up to 3 household members to personalize up to 3 favorite cycles each.

To enter custom users and personalize favorite cycles:

1. Use the scroll up or scroll down buttons until you reach set prefs. Press the select button to enter the preference menu.
2. Press select again to enter CUSTOM MODE.
3. Press the button for user 1, user 2 or user 3.
4. Press select.

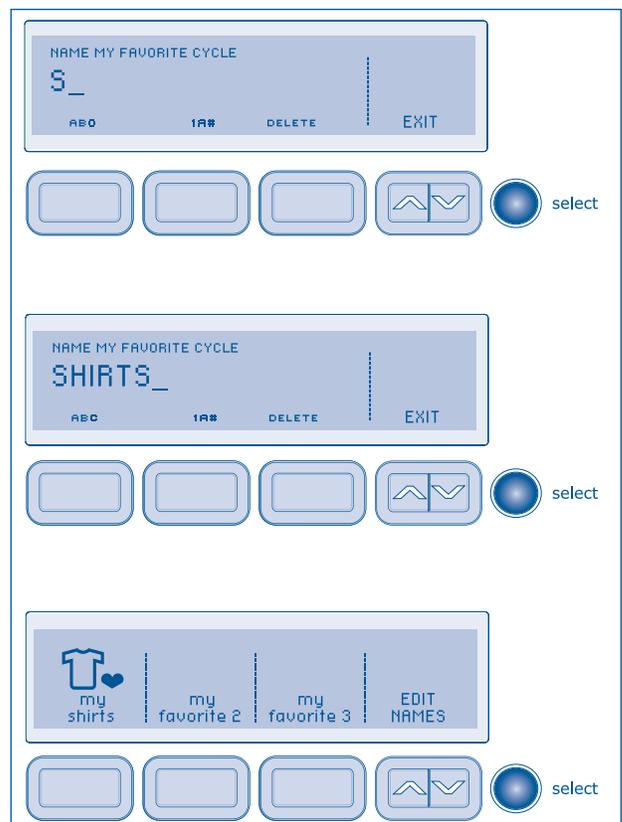
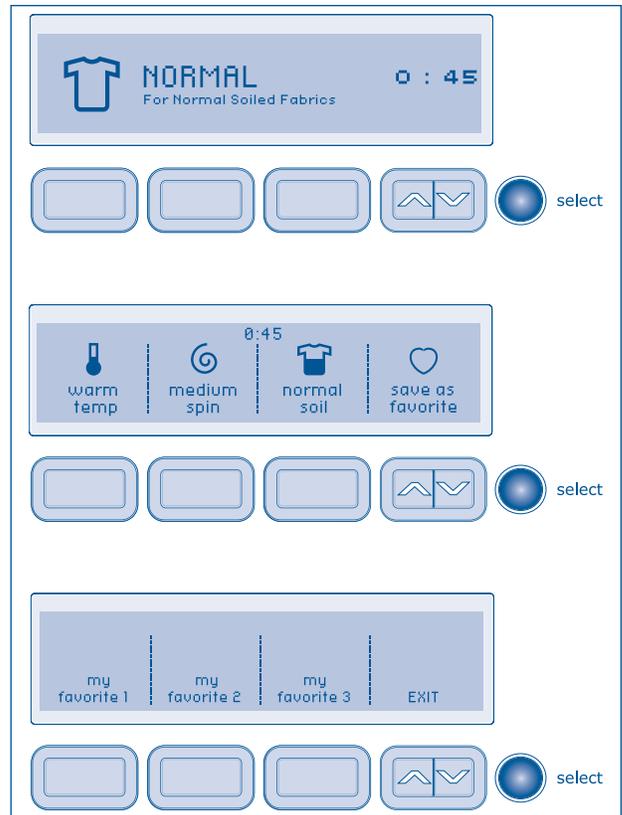
Press the button under ABC to name the favorite cycle alphabetically. Use the button under 1A# to add numbers, foreign language characters or symbols to the name.

Rotate the cycle selector knob in either direction to select the characters in the name, pausing after each character to let the cursor advance. Press the button under DELETE to erase incorrect entries. There is a blank character between Z and A for inserting spaces in your custom name. Pause momentarily on this character as you would to insert any other character, then continue.

When the name has been entered, press select to save the name.

To edit names while in CUSTOM MODE, turn the washer off by pressing cancel. Press any other button to wake the washer up. Screen will display to change or turn off USERS press SELECT. You must press select within 5 seconds or washer will return to normal operation with previous user selected. After pressing select you have the choice of change users, edit names, turn off or EXIT. Make your selection and follow the directions displayed.

Each custom user may select up to 3 favorite cycles. The washer will remember cycle settings, options, preferences, etc. for each user.



System Clean

To clean and freshen the washer, perform the SYSTEM CLEAN cycle. If you wish to begin the cycle, press select when prompted. The next screen will instruct you to remove all items from the wash drum, fill the bleach dispenser and press start. This maintenance cycle uses hot water and two rinses to remove residue that may cause odor.

The washer will automatically prompt you to run the SYSTEM CLEAN cycle every 50 cycles. You may press the button under EXIT to manually perform the cycle at another time.

Reset (WaveTouch™)

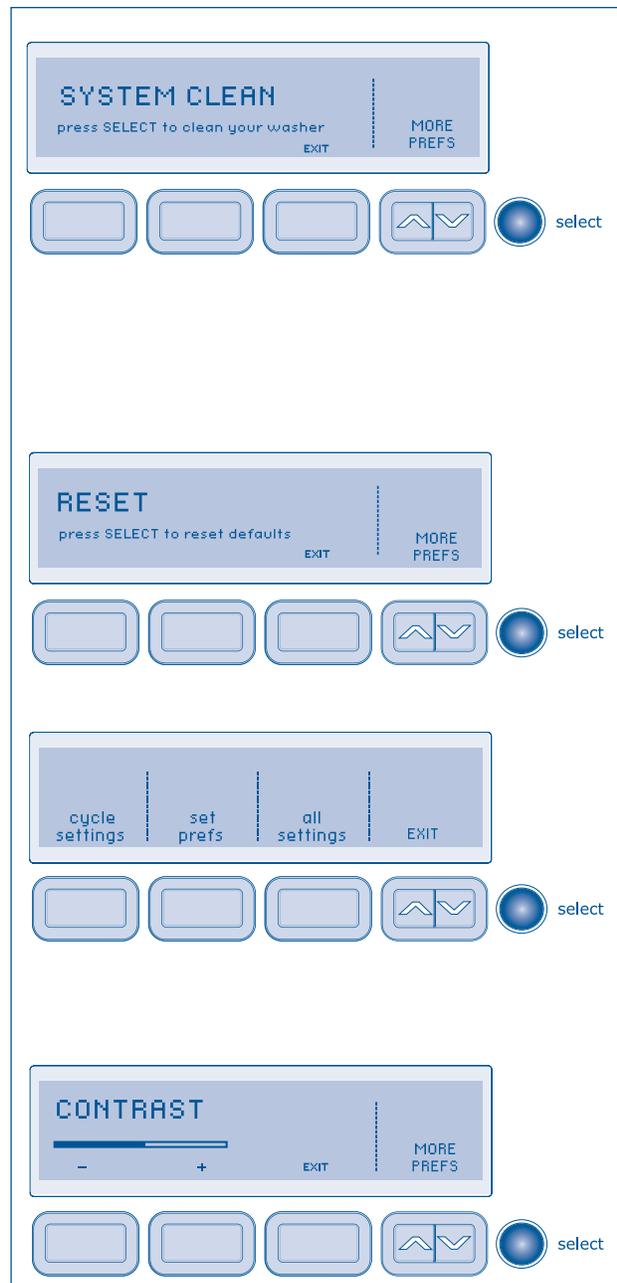
Press the buttons indicated to restore only cycle settings, reset only factory preferences (users, language, brightness, volume, etc.) or restore all factory defaults (both cycle settings and factory preferences). Press the button under EXIT to return to normal operation or press the cancel button to turn the washer off without making any changes. If you do not make a selection within 30 seconds the washer will return to normal operation without any changes. If you reset all settings, “INSTALL CYCLE” will be displayed as though the washer were just turned on for the first time. Press the button under CANCEL if you do not wish to rerun the INSTALL CYCLE.

Reset (IQTouch™)

For IQTouch™ models, wake machine, push the spin speed and soil selection keys simultaneously and hold until you hear a beep.

Contrast

Press the button beneath plus (+) or minus (-) symbols to increase or decrease the contrast of the display. Press select to accept the change or press the button under EXIT to return to normal operation without any changes.



Brightness

Press the button beneath the plus (+) or minus (-) symbols to increase or decrease the brightness of the display. Press select to accept the change or press the button under EXIT to return to normal operation without any changes.

Volume

Press the button beneath the plus (+) or minus (-) symbols to increase or decrease the volume of the chime. Press select to accept the change or press the button under EXIT to return to normal operation without any changes.

Language

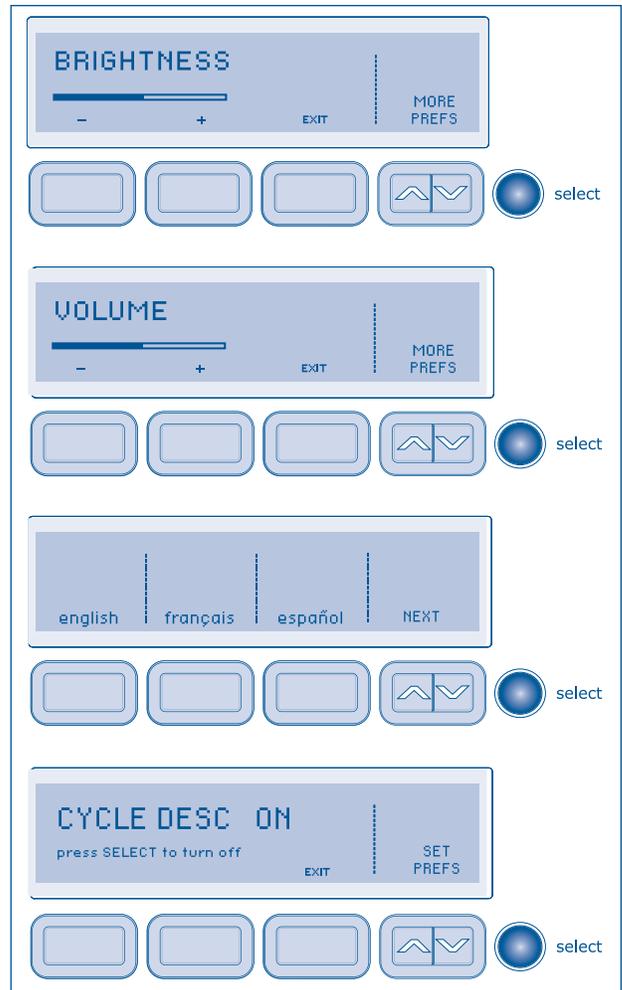
Select English, French or Spanish for the display language.

Cycle Description

The name, an icon and a brief description are displayed for each cycle. To delete the display, press select. To restore the display, press select and **“CYCLE DESC ON - PRESS SELECT TO TURN OFF”** will appear in the LCD User Interface.

Status Display

The estimated total cycle time will be displayed when the cycle is selected. The time may increase if water pressure is low, oversudsing occurs or the load becomes unbalanced. The approximate time remaining will be displayed during the cycle. A situation where oversudsing has been detected by the washer will result in the washer automatically adding up to 4 extra rinses to attempt to clear the suds. Each extra rinse the washer performs to clear the suds will add 5 minutes to the cycle display time. If an excessive amount of detergent has been added and additional rinsing has not corrected the issue, **“TOO MUCH DETERGENT”** will be displayed.



Install Cycle (WaveTouch™)

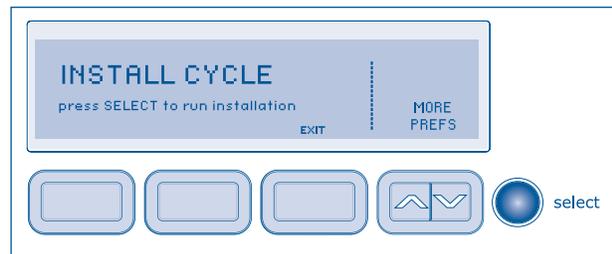
1. The machine will first wake up on setting up the unit to display language selection. Press NEXT to display the Install cycle. The Install cycle can be run at this time. If not, the Install cycle can be accessed through the PREF menu in the option window. Press the select key once you scroll to the PREF selection. Then scroll through this menu until you get to the Install cycle. Press the select key then follow the instructions (remove all articles from the washer drum).
You can also get to this cycle by performing a full reset of factory settings.
2. At cycle completion, the LCD window may display “**INSTALL PASS!**”, meaning the washer is properly installed and ready for use. If it prompts an action such as “**NO WATER**”, “**CHECK HOSES**” or “**CALL SERVICE 877-435-3287**”, review the installation steps and make the necessary corrections before attempting to use the washer.
3. The washer will exit the Installation Cycle and return to normal operation the next time the washer is used.

Install Cycle (IQ Touch™)

1. Wake the washer up by pressing any button (except the cancel button).
2. Rotate the cycle knob to the “HAND WASH” cycle.
3. Press the START/PAUSE button, then the CANCEL button.
4. Wake the unit up again, immediately and simultaneously press and hold the MY FAVORITE and ECO FRIENDLY buttons for 5 seconds. The display will show “**INSTALL CYCLE**” with the estimated time of cycle completion.
5. Press the START/PAUSE button to begin the cycle. Installation cycle will test for electronic issues, wiring issues & water flow issues. At cycle completion, the display will show **INSTALL PASS!** or prompt an action during the cycle such as “**CALL SERVICE**”, “**NO WATER**” or “**CHECK HOSES**”. Correct the action and repeat the cycle for proper installation. Washer will exit the Install Cycle and return to normal operation the next time the knob is turned.

NOTE

The **INSTALL CYCLE** is prompted automatically only once when the washer is turned on the first time at the end of installation. After that, if you wish to run a subsequent **INSTALL CYCLE** when moving the washer or modifying your installation, you may perform your own **INSTALL CYCLE** by selecting it in the set prefs feature and then following the screen prompts.



NOTE

Washer will stay awake for 3 minutes after the Installation Cycle. If you wish to immediately run the washer through a washing cycle, press the cancel button to put the unit to sleep and then rewake it immediately, to continue the normal operating mode.

The errors may result from the following conditions:

- **NO WATER** error — Water inlet hoses have not been attached to water supply or water supply valves have not been turned on. Install hoses correctly and turn on water supply valves.
- **CHECK HOSES** error — The hot inlet hose may have been connected to the cold water supply and the cold inlet hose may have been connected to the hot water supply. Check hoses for correction supply connection. If incorrect, disconnect hoses and connect to correct inlets according to Installation Instructions.
- **CALL SERVICE** — Troubleshoot and repair as needed. Repeat the **INSTALL CYCLE** when corrections are completed.

Diagnostics and Error Codes

Acronyms:

MB – Main Board (Board located inside machine on right side just behind control panel.)

MC – Motor Control

UI – User interface board (board located inside the front control panel)

DL – Door Lock

Reading Error Codes

1. Wake the washer up by pressing any button (except the cancel button).
2. Press and hold the “CANCEL” and “START” buttons simultaneously for 6 seconds. The failure code will appear in the display as an E followed by two numbers.

NOTE: E00 means no failure code experienced. See Troubleshooting Section. If there is no error displayed and the washer momentarily starts then turns back off:

1. Listen for a relay closure inside the control shortly after the “START/PAUSE” key is pressed.
2. Check the connections on the MB make sure that they are firmly snug and secured.

To Clear Latest Stored Error Code

Press the “CANCEL” button to enter standby mode and enable diagnostic entry.

1. Within 10 seconds after pressing “CANCEL”, press any button to wake up the control.
2. Within 5 seconds of wake up, turn the selector knob to the far left cycle and press and hold the “CANCEL” and the far left button under the display simultaneously for 3 seconds to enter the Diagnostic Mode.

NOTE: To save time at wake up, the welcome screen can be bypassed by turning the selector knob.

3. Turn the program knob counter clockwise 9 turns (clicks) from the Start Position. The control will signal the last 5 error codes with E00 meaning no error experienced.
4. Press and hold the far left key under the display and “CANCEL” buttons simultaneously for 3 seconds. The code(s) will be cleared.
5. To return the washer to normal operation.
 - a) Unplug the power cord, wait 5-8 seconds, then reconnect the power cord OR
 - b) Turn the program knob clockwise 2 turns (clicks) back to the Start Position (LEDs are flashing). Press the “CANCEL” and far left button under the display until the LEDs stop flashing.

Diagnostic Test

The diagnostic test is used to check individual component function only.

To Start the Diagnostic Test

1. Press the “CANCEL” button to enter standby mode and enable diagnostic entry.
2. Within 10 seconds after pressing “CANCEL”, press any button to wake up the control.
3. Within 5 seconds of wake up, turn the selector knob to the far left cycle and press and hold the “CANCEL” and the far left button under the display simultaneously for 3 seconds to enter the Diagnostic Mode.

NOTE: To save time at wake up, the welcome screen can be bypassed by turning the selector knob).

1. Upon entering Diagnostic Mode, all lights should flash for IQ Touch™ models and all lights on for the Wave Touch™ models.
2. Turn the program knob (1) click clockwise from the start position. The hot water solenoid will activate and hot water should enter through the detergent compartment.
3. Turn the program knob (2) clicks from the start position. The bleach water solenoid will activate and cold water should enter through the bleach compartment.
4. Turn the program knob (3) clicks from the start position. The bleach and the wash water solenoids will activate and cold water should enter through the softener compartment.
5. Turn the program knob (4) clicks from the start position. The prewash solenoid will activate and cold water should enter through the prewash compartment.
6. Turn the program knob (5) clicks from the start position. The door lock solenoid will deactivate and the loading door can be opened. When the door is opened, the drum light should turn on.
7. Turn the program knob (6) clicks from the start position. The door lock will activate and the washer will fill then tumble. Once tumbling has started, the Boost Heater will turn on.
8. Turn the program knob (7) clicks from the start position. The drain pump will activate draining out any water in the tub and the washer will operate in high spin.
9. Turn the program knob (8) clicks from the start position. This is a free position.
10. Turn the program knob (9) clicks from the start position. The control will signal the last 5 error codes with E00 being no error.
11. Turn the program knob (10) clicks from the start position. Latest software version will be shown.
12. If applicable, turn the program knob (11) clicks from the start position. This is a free position.

Exiting Diagnostic Mode

To return the washer to normal operation:

1. Unplug the power cord, wait 5-8 seconds, then reconnect the power cord OR
2. Turn the program knob clockwise back to the Start Position. Press the “CANCEL” and far left button under the display until the LEDs stop flashing.

Error Code Chart

Error Code	Fault Condition	Check
E11	Fill time too long.	Refer to test (1).
E13	Water leak in tub or air leak in air bell.	Refer to test (2).
E21	Water not pumping out fast enough.	Refer to test (3).
E31	Electronic pressure switch failure.	Refer to test (4).
E32	Pressure sensor calibration problem.	Refer to test (4).
E35	Pressure sensor indicates water overflow.	Refer to test (5).
E38	Air trap clogged.	Refer to test (5).
E41	Control board thinks the door switch is open.	Refer to test (6).
E42	Door lock device failure	Refer to test (6).
E44	Door closed sensing failure.	Refer to test (6).
E45	Line door sensing failure.	Refer to test (6).
E46	Door command sense.	Refer to test (6).
E49	Door incongruence between door line and door sense.	Refer to test (6).
E52	Bad signal from tachogenerator.	Refer to test (7).
E53	Low Voltage to Motor Control Board.	Refer to test (15).
E54	Over speed.	Refer to test (9).
E55	Under speed.	Refer to test (9).
E57	High current on inverter.	Refer to test (8).
E58	High current on motor phase.	Refer to test (8).
E59	No tachogenerator signal for 3 seconds.	Refer to test (9).
E5A	High temperature on heat sink caused by overloading.	Refer to test (8).
E5C	High Voltage experienced by MC.	Refer to test (12).
E5D	Communication problem.	Refer to test (10).
E5E	Communication problem.	Refer to test (10).
E5F	MC is continuously resetting.	Refer to test (10).
E67	Heater sensing relay failure.	Refer to test (13).
E68	Current leakage to ground on heater or fuse opened.	Refer to test (13).
E69	Heating element relay failure.	Refer to test (13).
E71	Drum water NTC failure. (Tub heater)	Refer to test (14).
E74	Wash temperature does not increase.	Refer to test (14).
E91	Communication error between UI board and main control board.	Refer to test (11).
E92	User Interface to Main Board communications error	Refer to test (11).
E93	Console or Main Board control problem.	Refer to test (11).
E94	Main Board control problem.	Refer to test (11).
E95	Communication problem between microprocessor and external EEPROM.	Refer to test (11).
E97	Console or Main Board control problem.	Refer to test (11).
E98	Console control problem.	Refer to test (10).
E9F	Communication protocol	Refer to test (10)
EA1	Power supply frequency out of limits	Refer to test (12).
EA2	Power supply voltage too high	Refer to test (12).
EA3	Power supply voltage too low	Refer to test (12).
EA5	Main Voltage sensing failure	Refer to test (12).
EAE	Line safe relay sensing failure	Refer to test (12).
EF1	Clogged drain pump.	Unclog the drain pump.
EF2	Too much soap.	Advise customer to reduce amount of soap being used.
EF5	Incorrect water temperature.	Refer to test (16)
EF8	Key Stuck	Check all buttons

Error Code Test Chart

Test	Check	Correction
Test 1	1. Is the incoming water flow normal?	Yes. Go to step (4). No. Go to step (2)
	2. Are the incoming water faucets turned on?	No. Turn water faucets on. Yes. Go to step (3).
	3. Is the incoming water pressure above (20) psi.	No. Have customer correct pressure problem. Yes. Check for kinked or blocked incoming water hoses, clean the incoming water screens. If problem still remains, replace the water inlet valve assembly.
	4. Does the fill water continue to enter the washer?	Yes. Go to step (5). No. Go to step (6)
	5. Remove power from the washer. Did the water fill stop?	Yes. Go to step (6) No. Replace the inlet valve assembly. Pressure switch checks good. Go to step (7). Pressure switch checks bad. Replace the pressure switch.
	6. Replace the pressure sensor.	If this did not correct the problem, go to step 7.
	7. Replace the main control board.	
Test 2	1. Is the washer leaking water?	Yes. Correct water leak. No. Go to step (2)
	2. Is there an air leak in the air bell system?	Yes. Correct the air leak problem. No. Go to step (3)
	3. Replace the pressure sensor.	If this did not correct the problem, Go to step (4)
	4. Replace the main control board.	
Test 3	1. Check the drain hose for restrictions.	Restriction. Correct problem. No restriction. Go to step (2).
	2. Start the washer and check for 120 VAC at the drain pump.	Zero. Check the wiring. If wiring good, replace the main control board. 120 VAC. Remove the pump and check for blockage. If blocked, remove the restriction, if not, replace the pump.
Test 4	Inspect the wiring between the pressure sensor and the main control board.	Defective wiring. Correct wiring. Good wiring. Replace the pressure sensor. If this does not correct the problem, replace the main control board.
Test 5	1. Is the water level above 4.5 inches ?	Yes. Go to step (2). No. Go to step (4).
	2. Does water enter the washer continuously?	Yes. Go to step (3). No. Check Air Trap for clog, if not replace the main control board.
	3. Remove power from washer. Does the water stop coming in?	No. Replace the water valve assembly. Yes. Check wiring to valve assembly for shorts. If wiring is good, replace the main control board.
	4. Replace the pressure sensor switch. Did this correct the problem?	Yes. Problem solved. No. Replace the main control board.
Test 6	1. Is the loading door closed?	No. Close the door. Yes. Go the step (2).
	2. Can you hear the lock attempt to close?	Yes. Check the door strike. If good, replace the door switch. No. Go the step (3)
	3. Check wire connection between door lock and main control board	If good, replace the door lock. If problem is not corrected, replace the main control board.
Test 7	1. Disconnect the plug from the drive motor and measure the resistance pins 4 & 5 in the motor.	If the reading is between 105 & 130 Ohms, replace the motor control board. If the meter reads other than between 105 & 130 Ohms, replace the motor.

Error Code Test Chart

Test	Check	Correction
Test 8:	1. Find out if unit was overloaded. If not, remove belt from the motor and spin the motor pulley. Does the motor spin free?	No. Replace the motor. Yes. Go to step (2)
	2. Spin the tub pulley. Does the tub spin free?	No. Check the tub bearings. Yes. Go to step (3)
	3. Disconnect plug from the motor and measure resistance of the windings (pin 1 to pin 2, pin 1 to pin 3, pin 2 to pin 3). All readings should be between 3 and 6 Ohms.	If readings are correct, check wiring from motor to motor control board, If good, replace motor control board. If the readings are incorrect, replace motor.
Test 9:	1. Remove belt from the motor and spin the motor pulley. Does the motor spin free?	No. Replace the motor. Yes. Go to step (2)
	2. Spin the tub pulley. Does the tub spin free?	No. Check the tub bearings. Yes. Go to step (3)
	3. Disconnect the plug from the drive motor and measure resistance between pins 4 & 5 in the motor.	If meter reads other than between 105 & 130 Ohms, replace the motor. If reading is between 105 & 130 Ohms, Go to step (4)
	4. Disconnect plug from the motor and measure the resistance of the windings (pin 1 to pin 2, pin 1 to pin 3, pin 2 to pin 3). All readings should be between 3 and 6 Ohms.	If the readings are correct, replace motor control board. If the readings are incorrect, replace motor.
Test 10:	1. Communication problem. Check the wiring between the main control board and the motor control board.	Wiring bad, correct wiring problem. Wiring good, replace main control board. If problem is not corrected, replace the motor control board.
Test 11:	1. Communication problem. Check wiring between the main control board and user interface board.	Wiring bad, Correct wiring problem. Wiring good, Replace the user interface board. If problem is not corrected, replace the main control board.
Test 12:	1. Have power company check the frequency and voltage of the incoming power.	If correct, for error code E5C, replace motor control board. If correct, for error codes EA1, EA2, EA3, EAE or EA5, replace main control board
Test 13:	1. Check the resistance of the heating element. It should be approximately 14 ohms.	If readings are incorrect, replace heating element.
	2. Check the resistance between ground and both heater terminals. It should be open when heater terminals are disconnected.	If readings are incorrect, replace the heating element. If problem is not corrected, replace main control board.
Test 14:	1. Check the resistance of the drum water NTC. Is it around 4.8K ohms?	No, replace the heating element. Yes, check the wiring.
Test 15:	1. Check wiring between the main control board and motor control board.	If good , replace the motor control board.
Test 16:	1. Are the hot and cold water hoses switched?	Yes. Switch the hoses to correct position No. go to step 2
	2. Is HOT water about the same temperature as the cold?	Yes. Fix the HOT water in the house supply.

Section 4

Component Teardown

COMPONENT TEARDOWN

This section explains how to access and remove components from an Electrolux IQ-Touch™ and Wave-Touch™ Washer, and has been arranged in such a way as to simulate which components would need to be removed first in order to gain access to other components. When following a component removal procedure, it may be necessary to reference another component removal procedure listed earlier in this section.

IMPORTANT NOTE: Before continuing, please take note of the **WARNINGS** and **CAUTIONS** below.

WARNING

- IF IT IS NECESSARY TO REMOVE AN ELECTROLUX WASHER UNIT FROM ITS INSTALLATION, USE PROPER LIFTING TECHNIQUES AS UNITS ARE HEAVY AND COULD FALL RESULTING IN SERIOUS INJURY OR DEATH. PULLING A UNIT FROM ITS INSTALLATION SHOULD ONLY BE PERFORMED BY A TRAINED AUTHORIZED SERVICE TECHNICIAN OR INSTALLER.
- TO AVOID ELECTRIC SHOCK, POWER TO A WASHER UNIT MUST BE DISCONNECTED WHENEVER ACCESSING AND/OR REMOVING COMPONENTS POWERED BY ELECTRICITY OR COMPONENTS NEAR OTHER ELECTRICAL COMPONENTS.
- AFTER SERVICE IS COMPLETED, BE SURE ALL SAFETY-GROUNDING CIRCUITS ARE COMPLETE, ALL ELECTRICAL CONNECTIONS ARE SECURE, AND ALL ACCESS PANELS ARE IN PLACE.
- IF UNIT WAS USED PRIOR TO SERVICE, THE HEATER ASSEMBLY WILL BE HOT. WEAR PROTECTIVE GLOVES AND THE APPROPRIATE SAFETY GEAR WHEN WORKING WITH HEATING ASSEMBLIES.
- IF REMOVING A DOOR FROM A UNIT, REMEMBER THAT DOORS ARE HEAVY. IF THEY WERE TO FALL, THEY COULD CAUSE SERIOUS PERSONAL INJURY.

CAUTION

- Metal edges may be sharp. Use caution and wear appropriate safety equipment when servicing washers to avoid personal injury.
- If working in the sump area, remember that the heater element and tubing may be hot if used prior to service.

This section will describe how to remove serviceable components from the washer. Unless stated, the procedure will be the same on all models. Unless stated, reverse the procedure to reinstall the component.

Door Components

Door Trim Ring Removal

The door is secured to a hinge assembly mounted to the unit frame. The trim ring must be removed to access and remove the hinge assembly.

To remove the door trim ring:

1. Open the door to a 90 degree angle.
2. Using a #2 square bit screwdriver, extract and save the trim plug and long course thread, panhead screw. (See Figure 4-1)
3. Close the door.
4. Rotate the door trim approximately $\frac{3}{4}$ " counter-clockwise and pull it away from the front of the door. (See Figure 4-2)

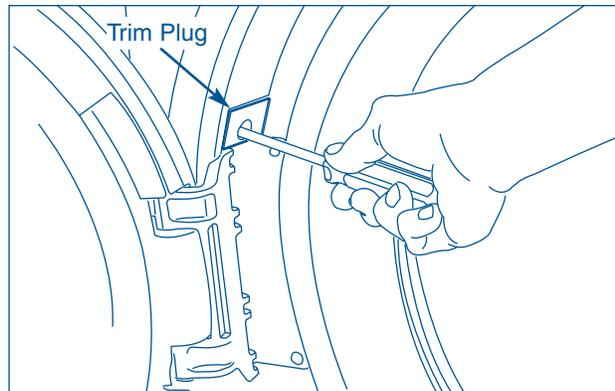


Figure 4-1.

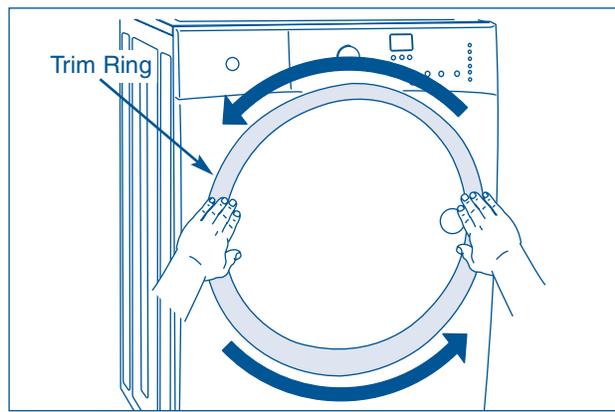


Figure 4-2.

Door Assembly Removal

The door assembly is secured with 4 screws to the hinge assembly. It is not necessary to remove the trim ring to access the hinge screws of the door assembly.

To remove the door assembly:

1. Open the door to a 90 degree angle.
2. Using a #2 square bit screwdriver, extract the 4 long, course thread, countersunk hinge screws from door. (See Figure 4-3)
3. While supporting the weight of the door with both hands, separate the door from the hinge. (See Figure 4-4)
4. Gently place the door face down on a flat, covered work surface.

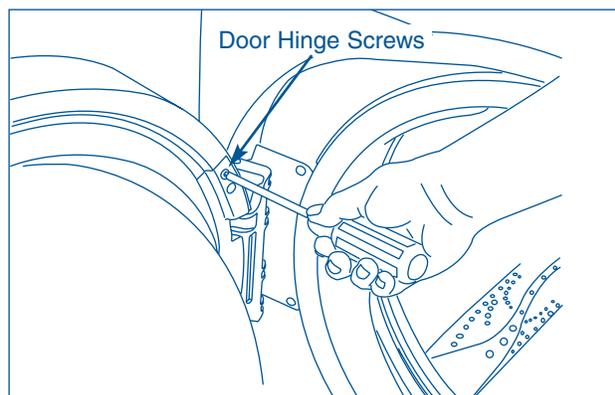


Figure 4-3.

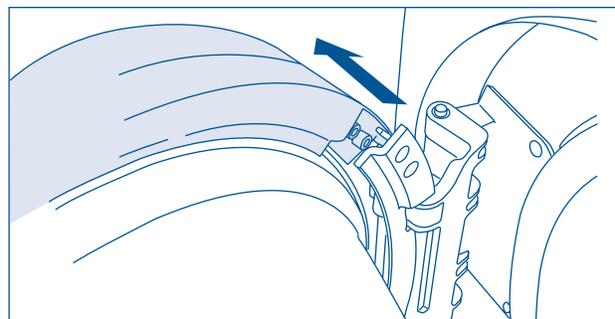


Figure 4-4.

Striker Plate Removal

The striker plate is secured with two long coarse thread screws to the inner face of the door assembly. The striker assembly is secured to the striker plate with two shorter countersunk screws. The striker assembly may be removed without removing the striker plate.

To remove the striker plate:

1. Using a #2 square bit screwdriver, remove the two long, coarse thread, countersunk screws. (See Figure 4-5)
2. Tilt and pull forward to remove.
3. Using a #2 square bit screwdriver, remove the two countersunk screws securing the striker assembly to the striker plate. (See Figure 4-5)

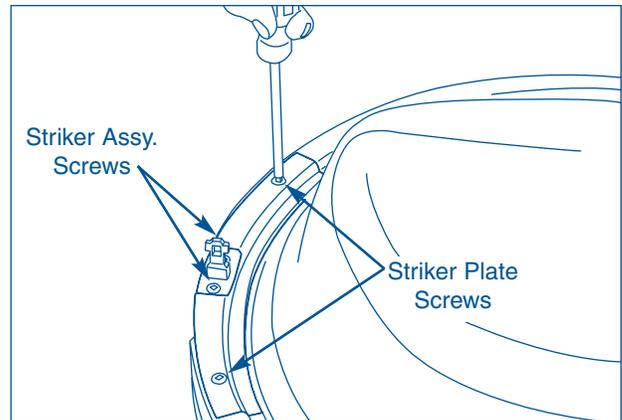


Figure 4-5.

Inner Door Glass Removal

The inner door glass is secured with screws that pass through two retaining covers that are mounted to the inner door assembly.

To remove the inner door glass:

1. Remove door assembly from unit.
2. Remove the striker plate.
3. Using a #2 square bit screwdriver, extract the screws from the two retaining covers and pull from door assembly. (See Figure 4-6)
4. Lift the inner door glass from door assembly.

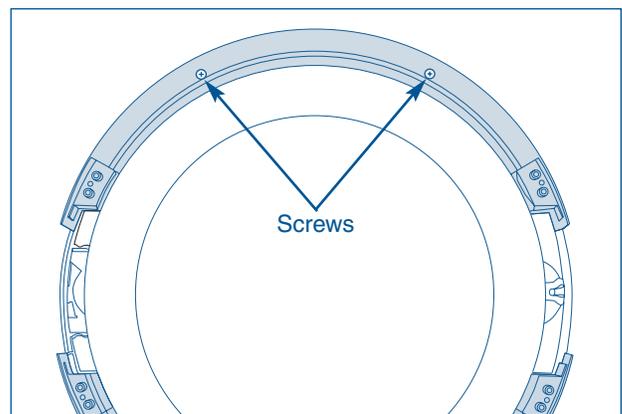


Figure 4-6.

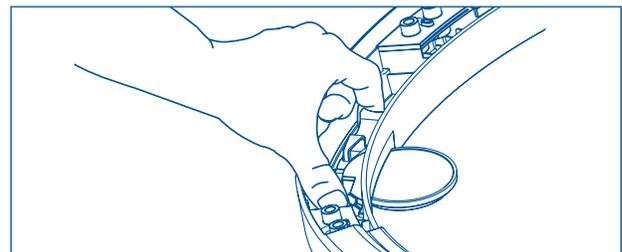


Figure 4-7.

Latch Indicator Removal

The latch indicator is secured by retaining latches to the interior of the door assembly.

To remove the latch indicator:

1. Remove door assembly from unit.
2. Remove the striker plate.
3. Grasp the indicator on the latch side between finger and thumb and rock it upward, pivoting away from the center of the glass. (See Figure 4-7)
4. Gently push the indicator toward the center of the lens to release the tab. (See Figure 4-8)
5. Rock the tab upward. (See Figure 4-8)
6. Pull the indicator out and remove from unit.. (See Figure 4-8)

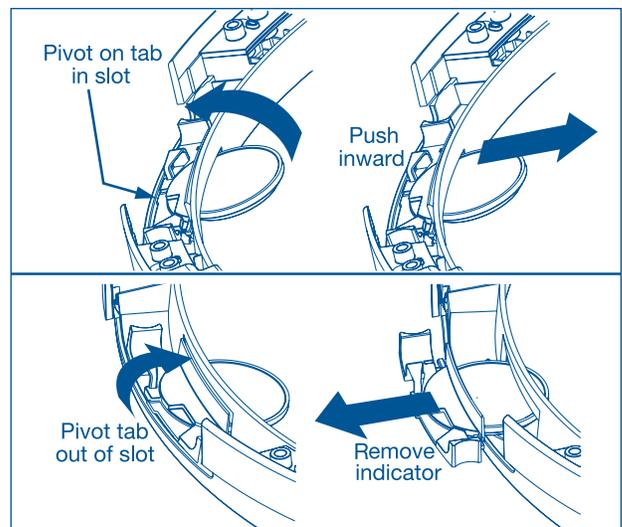


Figure 4-8.

Outer Door Glass Removal

The outer door glass is secured with retaining latches to the door assembly.

To remove the outer door glass:

1. Remove door assembly from unit.
2. Remove the striker plate.
3. Remove retaining covers.
4. Release the retaining latches around the door assembly that secure the outer door glass to the door assembly. (See Figure 4-9)

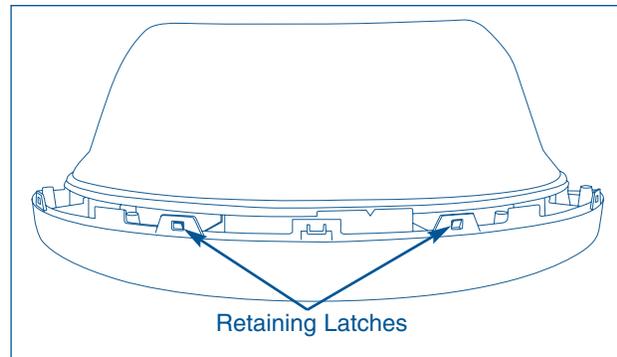


Figure 4-9.

Door Hinge Removal

The door hinge is secured with screws to the unit frame.

To remove the door hinge:

1. Remove door assembly from unit.
2. Using a #2 square bit screwdriver, with the hinge in open position, extract two short, coarse thread, panhead screws on hinge plate. (See Figure 4-10)
3. Using a #2 square bit screwdriver, extract 3 short, fine thread, countersunk screws in hinge side. (See Figure 4-11)
3. Slide the hinge toward the center of the front panel, and then pivot the hinge inward while slowly pulling it away from the front panel to expose the attached harness.
4. Lift up on the tab and the release harness from the retainer, allowing the harness to lay outside the front panel. (See Figure 4-12)

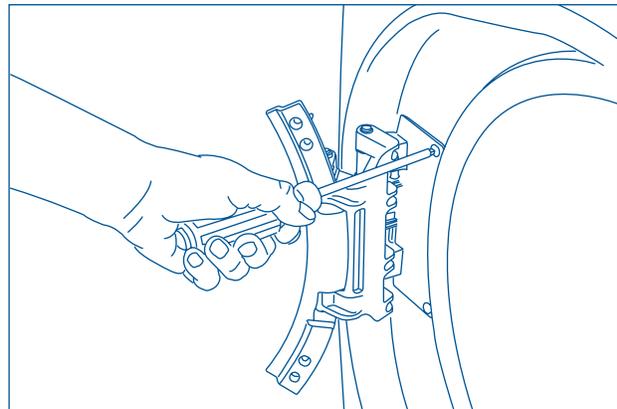


Figure 4-10.

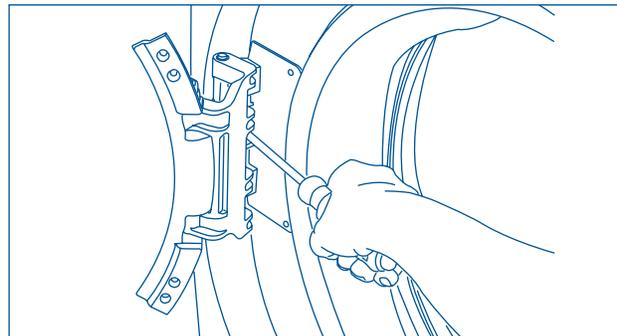


Figure 4-11.

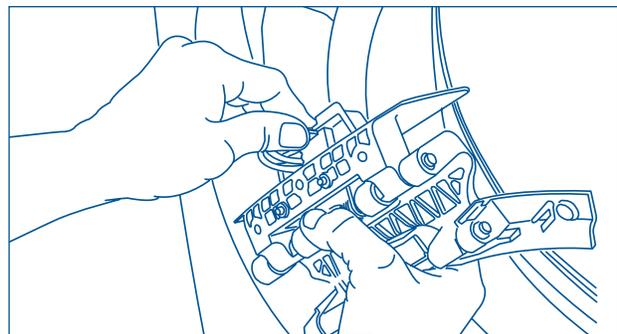


Figure 4-12.

Door Lock Assembly Removal

The door lock assembly is secured with two screws to the front of the unit frame. The wire harness is attached to backside of the door lock assembly.

To remove the door lock assembly:

1. Using a #2 square bit screwdriver, remove 2 short course-thread, panhead screws from the door lock. (See Figure 4-13)
2. Slide the lock toward the outer edge of the front panel. Pivot the lock slightly outward while slowly pulling it through opening to expose the attached harness. (See Figure 4-14)
3. Release the harness from the terminal with the small lever on back of the lock. Separate the harness from the lock, allowing the harness to lay outside the front panel. (See Figure 4-15)

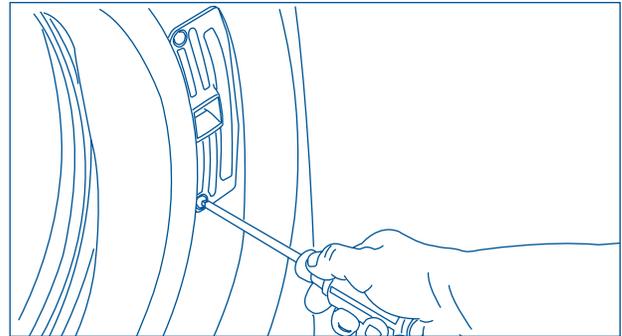


Figure 4-13.

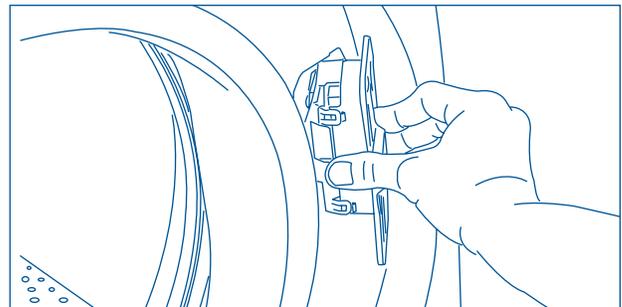


Figure 4-14.

Bellows Removal

The bellows or boot gasket provides a seal for the washing compartment and a mounting cavity for the interior light and the Advanced Rinse Technology (ART) hose. A spring loop retains the bellows to the front panel of the washer and to the inner wash tub. The bellows must be released from the front panel before removing the front panel to access the spring loop on the wash tub.

To remove the bellows:

1. Remove the door.
2. Pull back the top section of the bellows at the top of the wash compartment opening.
3. Extract the LED light assembly from the bellows.
4. Using a pliers, remove the ART hose from the left underside of the detergent dispenser.
5. Using a needlenose pliers, pull the spring loop out from the retaining lip of the bellows. (See Figure 4-16)
6. Pull the front of the bellows off the lip of the front panel to release it.
7. Remove the bellows by placing your hand under the bellows at the top of the opening and lift up while pulling out. A second spring loop secures the bellows to the wash tub.

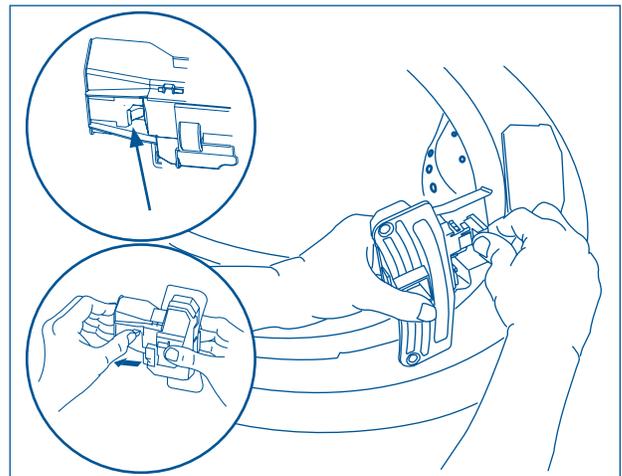


Figure 4-15.

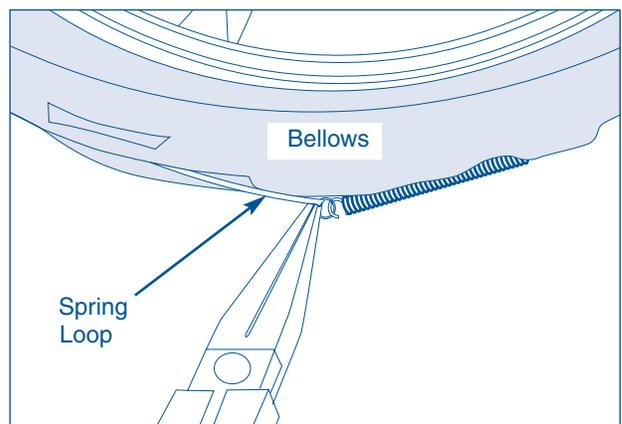


Figure 4-16.

Reinstalling or Replacing the Bellows:

Using liquid dishwasher soap to lubricate the groove on the bellows will make it easier to slip the groove on the bellows onto the lip of the tub.

1. There is a tab and an arrow on the top of the tub lip, a slot in the groove and an arrow at the top of the bellows. (See Figure 4-17)
2. Place the slot over the tab and while holding the bellows in place with one hand, place the other hand inside the bellows and force the groove of the bellows over the lip of the tub with your thumb.
3. Work your way about one third way around the tub, then pull in on the inside flap of the bellows to seat the bellows into the lip of the tub.
4. Using your thumb, start on the other side of the top tab and force the bellows on in the other direction. Again about one third of the way around stop and seat the bellows onto the tub lip. Force the remaining bellows on with your thumb and seat it. (See Figure 4-18)
5. To install the spring, fold the front of the bellows back into the tub.
6. Place the spring in the groove at the top of the bellows and wedge a round object, about 3/4 " in diameter between the weight ring and the bellows to hold the spring in the groove. (See Figure 4-19)
7. Pull the spring with one hand while working it into the groove with the other.
8. Remove the wedge, unfold the bellows, and insert the advance rinsing technology hose and light socket.

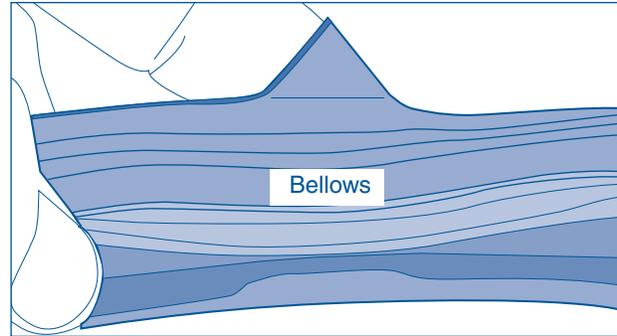


Figure 4-17.

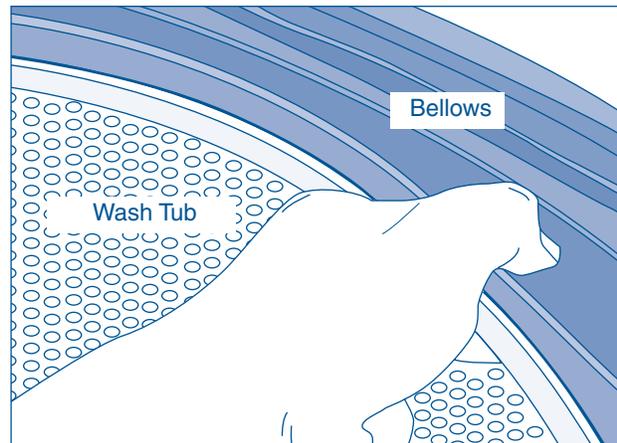


Figure 4-18.

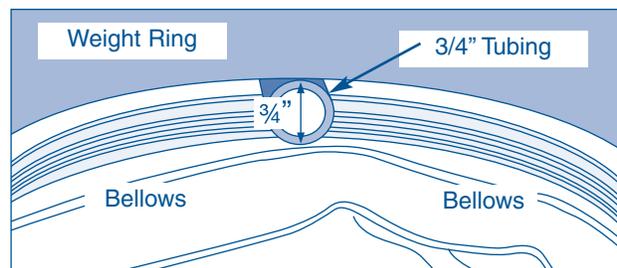


Figure 4-19.

Interior Light Removal

The interior light is an LED assembly that presses into a hole in the top of the bellows. The wire harness connection is located near the controller assembly.

To remove the LED assembly:

1. Remove the door trim ring, the door and release the bellows from the front panel.
2. Remove the console and front panel.
3. Pull the bellows down to access the LED assembly and extract from the bellows. (See Figure 4-20)
4. Disconnect the wire harness from the LED assembly wire leads.

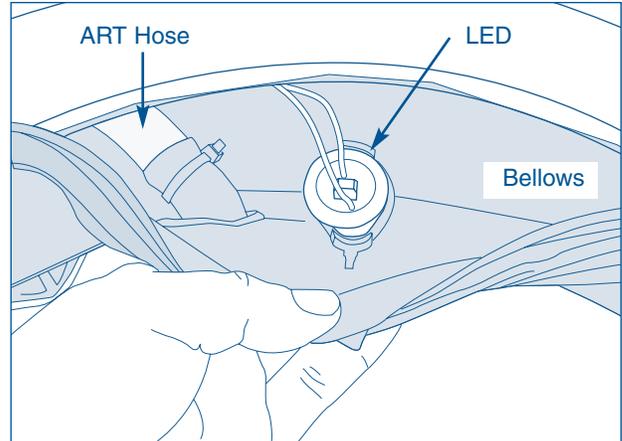


Figure 4-20.

Top Panel Removal

The top panel is secured with a metal tab at each front corner and two screws at the rear of the unit.

To remove the top panel:

1. Pull unit from its installation position to access the rear of the unit.
2. Using a #2 square bit screwdriver, extract the two screws securing the top panel to the unit frame. (See Figure 4-21)
3. From the front of the unit, push the top panel towards the rear until free of the metal tabs, then lift top panel off of unit.

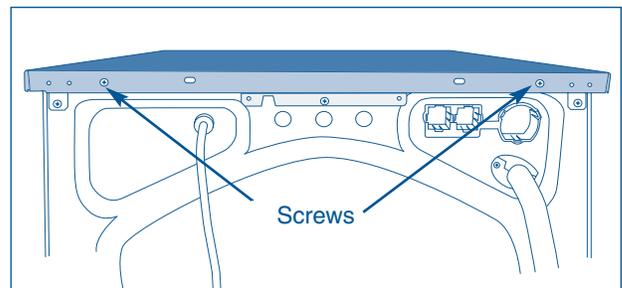


Figure 4-21.

Vibration Dampener Removal

The vibration dampener is located directly behind the top brace and is secured with screws to the unit frame.

To remove the vibration dampener:

1. Using a #2 square bit screwdriver, extract the four screws securing the vibration dampener to the unit frame. (See Figure 4-22)
2. Lift the vibration dampener from the unit.

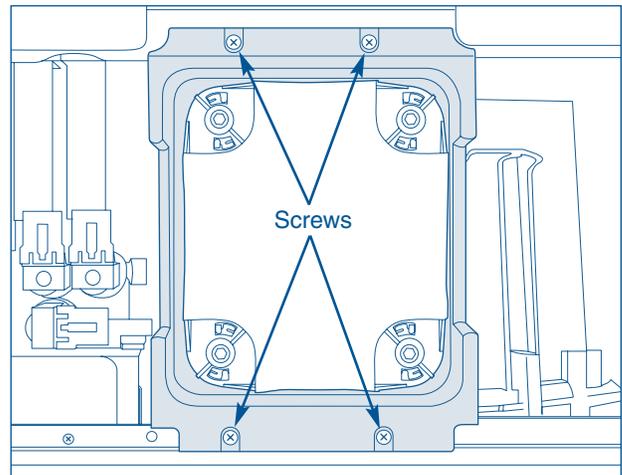


Figure 4-22.

Detergent Drawer Removal and Breakdown

To open, press the button on the front of the detergent drawer. Pull drawer open, then push down on the release tab and pull the drawer out of the unit. (See Figure 4-23)

To breakdown the dispenser drawer:

1. Remove the drawer from the washer.
2. The detergent, liquid bleach and fabric softener insert lifts off the drawer assembly. When reinstalling, be sure to seat it properly.
3. To separate the drawer front, release the three tabs and pull the drawer front away from the body.
4. To remove the conveyer, release the conveyer from the tabs and lift it off.

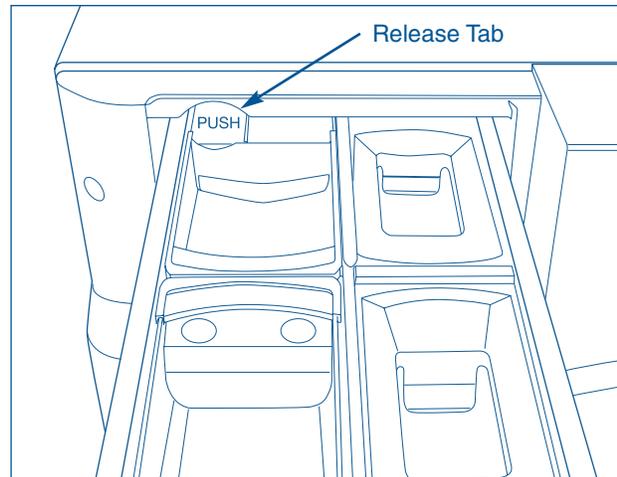


Figure 4-23.

Console Panel Removal

The console panel provides a cover for the detergent dispenser drawer and a mounting surface for the user interface and LCD screen. Screws secure the console panel to the unit frame. The wire harness connects to the control assembly at the far right hand side behind the console panel.

To remove the console panel:

1. Remove the detergent drawer and top panel.
2. Using a #2 square bit screwdriver, extract the three screws from the detergent drawer area (See Figure 4-24)
3. From the top front of the washer, extract the two screws, one on each end, securing the console to the top of the side panels. (See Figure 4-25)
4. Pull the bottom of the console forward, while lifting up to release the bottom tabs from the front panel. Use care not to strain the wire harness connections to the control assembly.
5. Rotate the console until the electrical connection is visible. Disconnect the electrical connection from the control assembly.

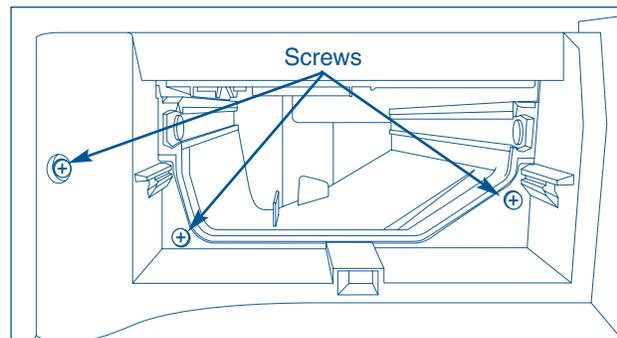


Figure 4-24.

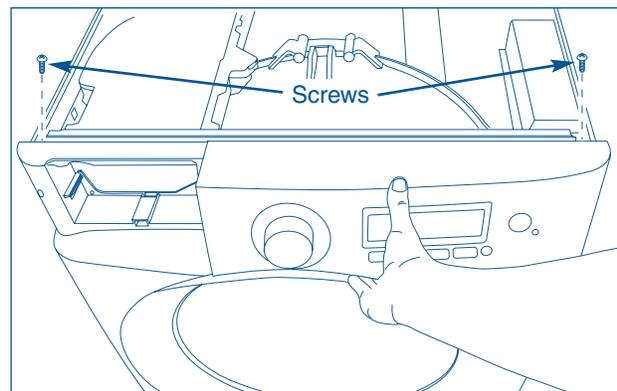


Figure 4-25.

Control Assembly Removal and Breakdown

NOTE: IQ-Touch™ and Wave-Touch™ Washer control assemblies have the same mounting configuration. The only differences are the button locations and the circuit board.

The control assembly is secured with screws to the back of the console panel.

To remove the control assembly:

1. Remove console panel.
2. Using a #2 square bit screwdriver, extract the six screws securing the control assembly to the console panel. Carefully lift the control assembly from the console panel. (See Figure 4-26)
3. Separate the button carrier from the control assembly by releasing the two retaining latches on the end with the Start /Pause button. Lift slightly and pull tab out of the slot closest to the cycle selector knob.
4. Separate the cycle control knob housing from the control assembly by releasing the three retaining latches on the outer edge of the control assembly. Carefully lift up housing until control knob is free of shaft, then lift housing off of the control assembly.

NOTE: When removing the control board, release the circuit board at the base of the cycle control knob first by pushing back the retaining latches and lifting the circuit board out from under the latches. Then continue with the removal of the main circuit board.

6. The control board and display is removed by pushing back the retaining latches securing the control board to the control assembly, then lifting it out of the control assembly.

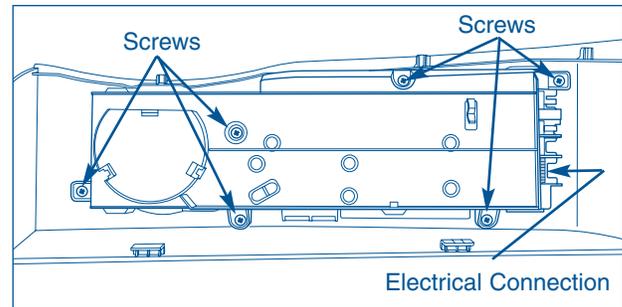


Figure 4-26.

Front Panel Removal

The front panel is secured to the unit frame with screws along the front bottom edge and top left and right corners. Two plastic retainers along each side of the front panel prevent the panels from vibrating and creating noise.

To remove the front panel:

1. Remove the top panel and control console.
2. Remove the loop spring and release the bellows from the front panel.
3. Disconnect the Molex connector leading to the wire harness of the door latch at the upper right hand corner next to the controller assembly.
4. Using a #2 square bit screwdriver, extract the four screws along the bottom front edge. (See Figure 4-27)
5. Extract the six screws along the top front edge. (See Figure 4-27)
6. Lift up then pull the front panel off of the plastic retainers and remove from unit.

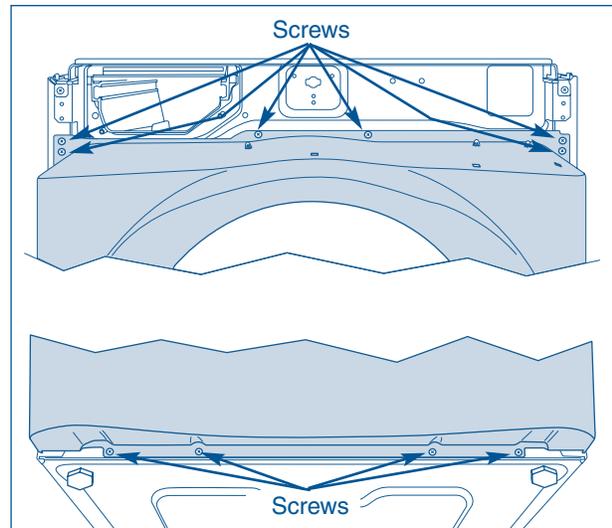


Figure 4-27.

Controller Assembly Removal

The controller assembly is secured with a screw to unit frame along the top right front edge. The wire harness connects to the controller board with three Molex connectors through the controller box and four Molex connectors under the controller box lid.

To remove the controller assembly:

1. Remove the top panel and control console.
2. Disconnect the Molex connector leading to the wire harness of the door latch at the upper right hand corner next to the controller assembly.
3. Disconnect Molex connectors from outside controller box
4. Release retaining latches of controller box and open lid.
5. From inside controller box, push back on the connector retainers and disconnect Molex connections from controller board.
6. Using a #2 square bit screwdriver, extract the screw securing the controller box to the unit frame and remove from unit. (See Figure 4-28)
7. To remove the circuit board from the controller box, release the four retaining latches securing the controller box together and pull apart.
8. Push back the retainers securing the circuit board and pull carefully from controller box.

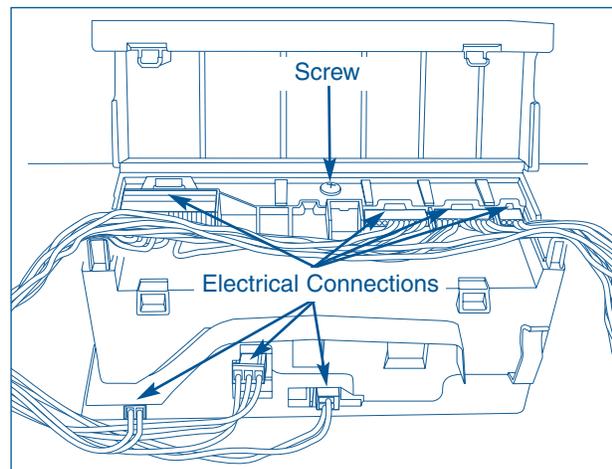


Figure 4-28.

Weight Ring Removal

The weight ring is secured to the front of the outer wash tub assembly with six carriage bolts. The bellows does not have to be completely removed to access and remove the weight ring.

To remove the weight ring:

1. Remove the top panel.
2. Remove control console.
3. Remove the front panel.
4. Disconnect ART tube from bellows.
5. Remove light assembly from bellows.
6. Using a 7/16" socket or wrench, remove the nuts from the carriage bolts securing the weight ring to the outer wash tub assembly. Remove the carriage bolts and washers from the unit. (See Figure 4-29)
7. Carefully slide weight ring off of wash tub.

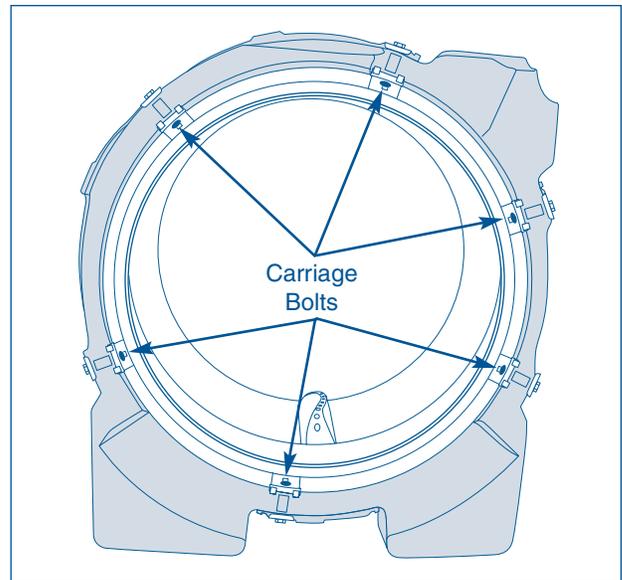


Figure 4-29.

Water Inlet / Overflow Vent Tube Grommet

The water inlet/ overflow vent tube grommet supports the hot and cold water inlet fittings and the overflow tube. The overflow tube must be removed prior to removing the grommet.

To remove the water inlet/ overflow vent tube grommet:

1. Disconnect the washer from the hot and cold water hoses. (See Figure 4-30)
2. Using a small flat bladed screwdriver, release the eight locking tabs around the water inlet tubes while pushing on the grommet rim from inside the washer.
3. Using a small flat bladed screwdriver, release the three locking tabs around the overflow/vent tube while pushing on the grommet rim from inside the washer.

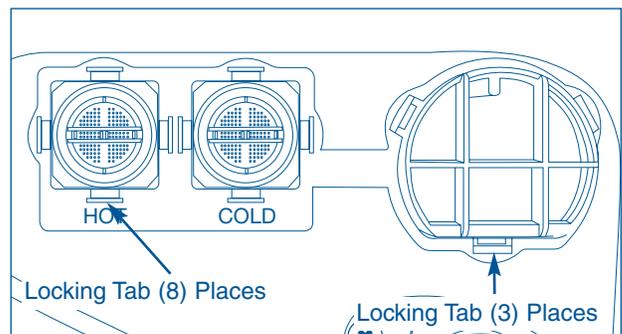


Figure 4-30.

Overflow /Vent Tube Removal

The overflow/vent tube connects to the rear of the detergent dispenser housing and to the overflow/vent tube grommet at the rear of the unit.

To remove the overflow/vent tube:

1. Remove the top panel.
2. Remove overflow/vent tube grommet.
3. Turn the tube counter clockwise about a 1/16 of a turn to unlock the tube. Then pull the tube back to disengage it from the detergent dispenser housing. (See Figure 4-31)
4. Push the front of the tube down and forward toward the water inlet valve assembly until the tube clears the rear panel and remove from unit.

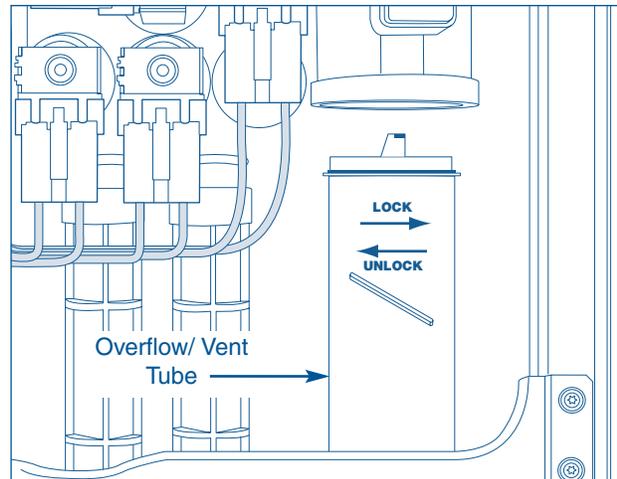


Figure 4-31.

Water Inlet Valve Assembly

The water inlet valve assembly is mounted with three screws to the back of the detergent dispenser. The inlets are color coded as well as the valves and connectors for the wire harness.

To remove the water inlet valve assembly:

1. Disconnect the washer from the hot and cold water hoses.
2. Remove the top panel, water valve and overflow/vent tube grommet and the overflow/vent tube.
3. Disconnect the wiring harness from the valves and the temperature sensor. (See Figure 4-32)
4. Using a #2 square bit screwdriver, extract the three screws, one on each side and one underneath the water inlet valve assembly, securing the water inlet valve assembly to the detergent dispenser housing. (See Figure 4-33)
5. Pull back on the valve assembly to disengage it from the detergent dispenser housing and lift out of unit.

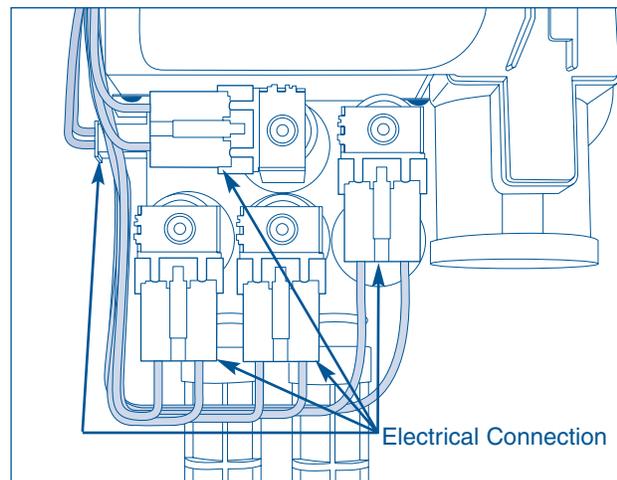


Figure 4-32.

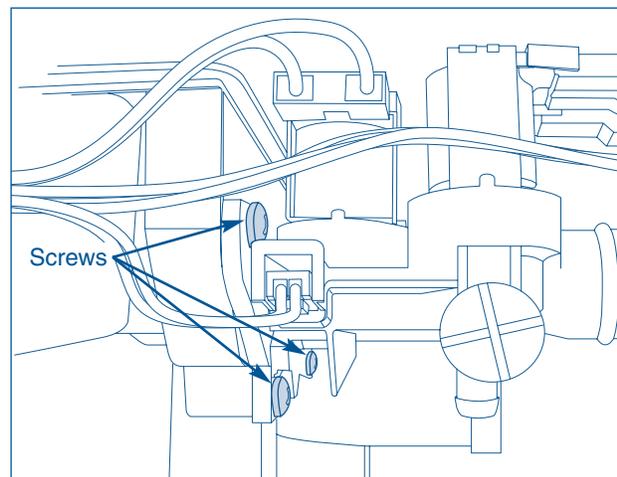


Figure 4-33.

Water Inlet Screen Removal

Water inlet screens are located in the ends of the water inlet tubs to filter the incoming water. These screens can be removed for cleaning.

To remove the water inlet screens:

1. Disconnect the incoming water hoses.
2. Each screen has a reinforced bar across the face. Using a pliers, grab one of the legs of the bar and pull the screen out. (See Figure 4-34)

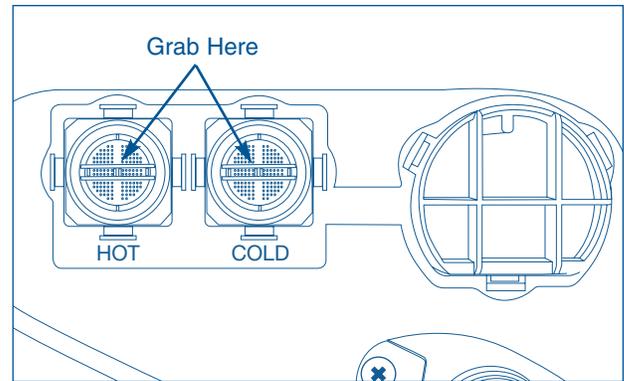


Figure 4-34.

Top Rear Brace Removal

To remove the top rear brace:

1. Remove the top panel.
2. Using a #2 square bit screwdriver, extract the three screws from the rear of the top rear brace. (See Figure 4-35)
5. Extract the two screws from the top of the rear brace and remove from unit.

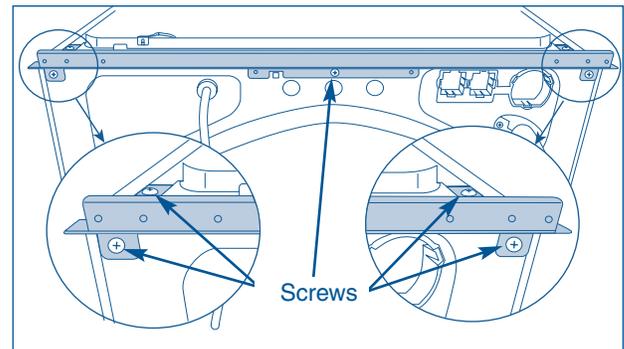


Figure 4-35.

External Drain Hose Removal

The external drain hose connects to the drain pump outlet, runs to a split grommet in the rear upper left hand corner where it passes through the rear panel en route to the house drain. Retaining straps secure the drain hose to the base and sidewall of the unit.

To remove the external drain hose:

1. Remove the front and top panel.
2. Using a pliers, compress the hose clamp from the outlet hose of the drain pump and disconnect. (See Figure 4-36)
3. From the back of the unit, use a #2 square bit screwdriver and extract the screw securing the hose grommet to the rear panel and pull the coupler out the back. (See Figure 4-37)
4. Pull the screw side of the grommet out until the tab on the opposite side is free from the rear panel. Separate the grommet and remove from drain hose.
5. Release the drain hose retainers along the sidewall and from base of the unit. Remove the drain hose from the unit.

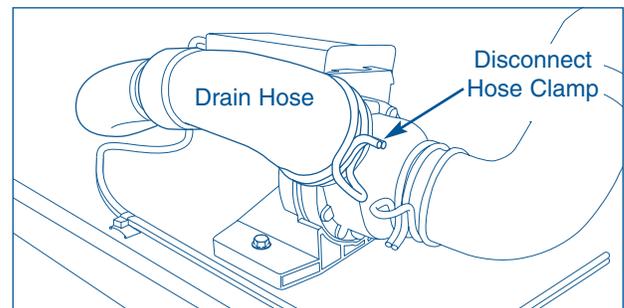


Figure 4-36.

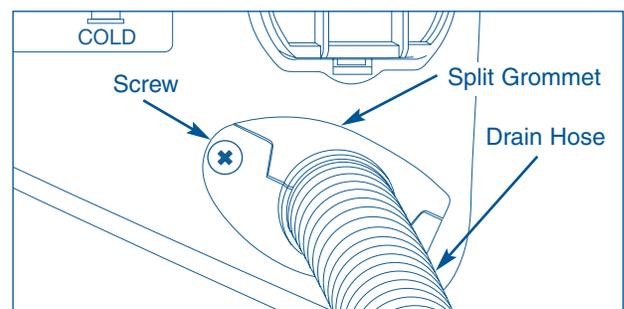


Figure 4-37.

Detergent Cavity Assembly Removal

The detergent cavity assembly is secured to the top brace with two screws and is supported by a tab that slides under a lip formed on the assembly. The assembly is also secured to the control console with two screws behind the detergent drawer.

To remove the detergent cavity dispenser:

1. Remove detergent drawer.
2. Using a #2 square bit screwdriver, extract the two screws securing the detergent cavity dispenser to the console. (See Figure 4-38)
3. Remove top panel.
4. Remove water inlet valve assembly and over flow/vent tube.
5. Using a #2 square bit screwdriver, disconnect detergent dispenser outlet hose. (See Figure 4-41)
6. Extract the two screws securing the detergent cavity dispenser to the center brace. (See Figure 4-39)
7. Release the (2) retaining latches, one on each side, locking the housing to the console mounting panel. (See Figure 4-39)
8. Slide the housing back until the tab of the top center brace release and the housing drops down. (See Figure 4-39)
9. Using a pliers, disconnect the advanced rinsing technology hose. (See Figure 4-40)
10. Push down on the tub and swing the front of the housing toward the center of the washer. Work the housing out from under the center brace and lift the housing out.

Detergent Dispenser Outlet Hose Removal

The detergent dispenser outlet hose is secured to the bottom of the detergent dispenser and to the side of the wash tub with hose clamps.

To remove the detergent dispenser outlet hose:

1. Remove the top panel.
2. Release the overflow/vent tube and slide it back.
3. Using a #2 square bit screwdriver, loosen the (2) clamps, one on each end, and slide the hose off. (See Figure 4-41)

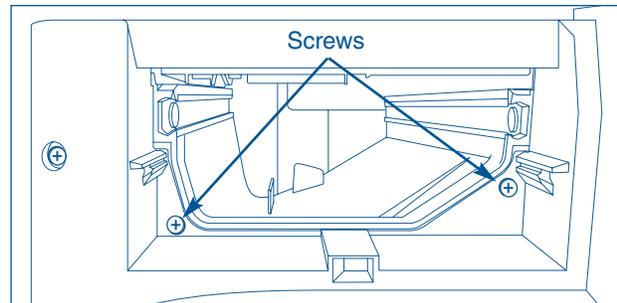


Figure 4-38.

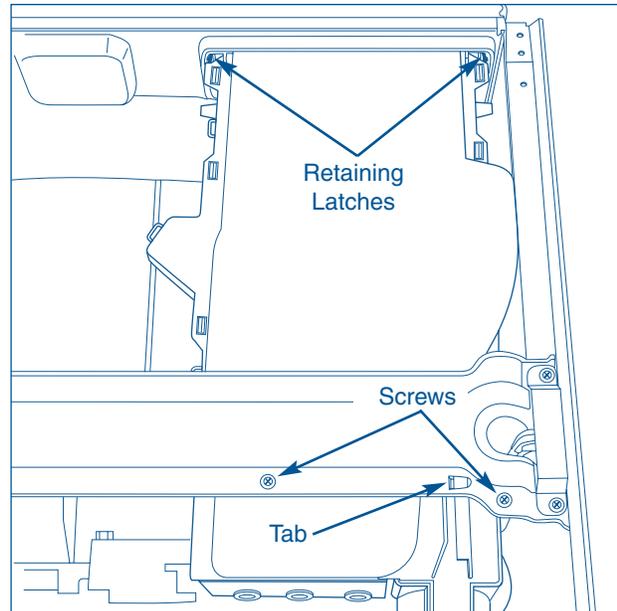


Figure 4-39.

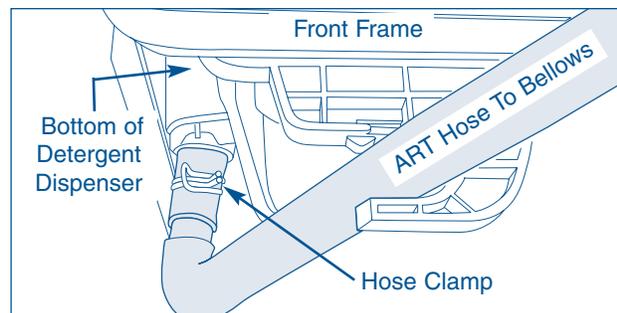


Figure 4-40.

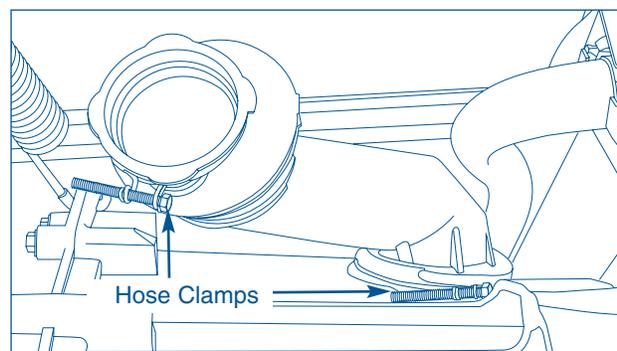


Figure 4-41.

Power Cord Removal

The power cord is secured to the rear panel with a strain relief.

To remove the power cord:

1. Remove the top panel.
2. Remove the ground clip from the upper rear frame. (See Figure 4-42)
3. Disconnect the power cord from wire harness at the Molex connector. (See Figure 4-42)
4. Using a pliers, compress the strain relief from inside the unit compartment while pushing the strain relief through the hole in the rear panel. Pull power cord from unit. (See Figure 4-42)

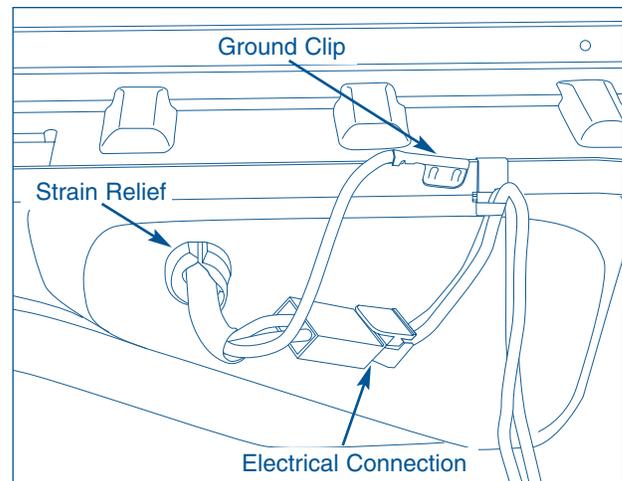


Figure 4-42.

Rear Access Cover Removal

The rear access cover mounts to the rear panel and is secured with screws.

To remove the rear access cover:

1. Pull unit from its installation position.
2. Using a #2 square bit screwdriver, extract the six screws securing rear access cover to the rear panel. (See Figure 4-43)

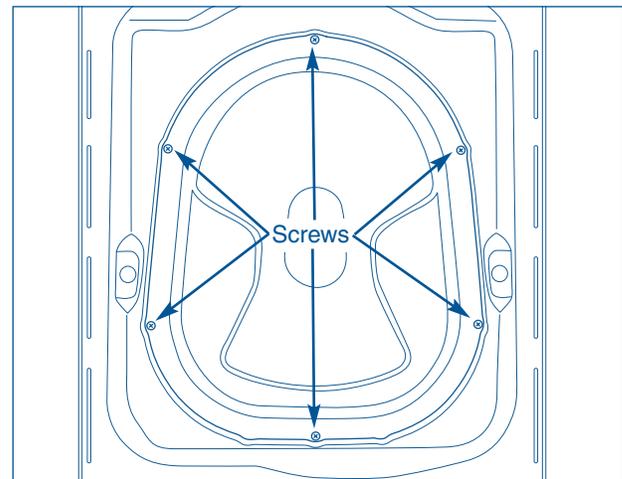


Figure 4-43.

Suspension Spring Removal

The suspension springs are located under a cover bracket mounted on the top center brace.

To remove the suspension springs:

1. Remove the top panel.
2. Remove the overflow/vent tube.
3. Using a #2 square bit screwdriver, extract the two screws from each cover bracket. (See Figure 4-44)
4. Hook the top of the spring, and raise it about 1" to release the top hook from the center brace flange, then allow it to drop about 6" to relieve the spring pressure and then unhook the other end of the spring from the tub.

NOTE: A strong rod at least 8" long with a hook on one end and a handle on the other is needed.

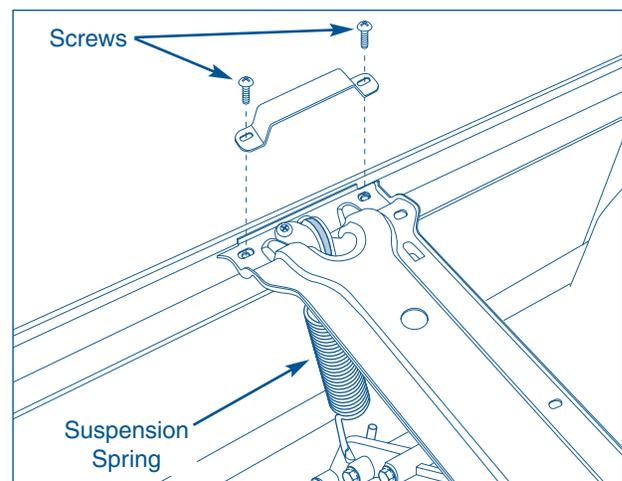


Figure 4-44.

Top Center Brace Removal

To remove the top center brace:

1. Remove top panel and dampener assembly.
2. Release the suspension springs.
3. Using a #2 square bit screwdriver, extract the two screws securing the detergent dispenser to the top center brace.
4. Extract the two screws, one on each end securing the suspension spring mount to the top center brace. (See Figure 4-45)
5. Use a pliers to release the wire retainers from the top center brace.
6. Raise the top center brace to disengage the tabs on the brace from the side panels and slide the brace backward to release the tab on the top center brace from the slot in the detergent dispenser housing.

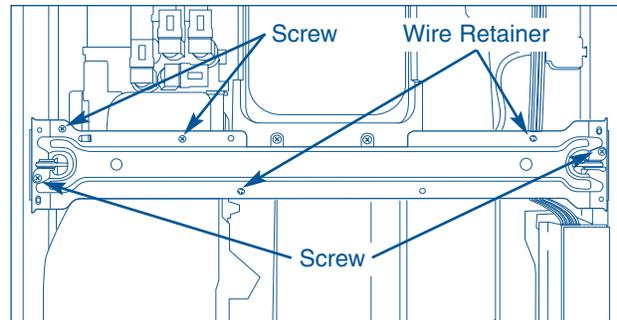


Figure 4-45.

Electric Water Level Sensor Removal

The electric water level sensor is mounted to the upper right side of the unit frame. A hose connects to the sensor to the sump area.

To remove the electric water level sensor:

1. Remove the top panel.
2. Disconnect the wire harness from the sensor. (See Figure 4-46)
3. Turn the sensor one quarter turn to release it from the side panel and pull out on the pressure switch.
4. Using a pliers, compress the hose clamp and remove hose from sensor.

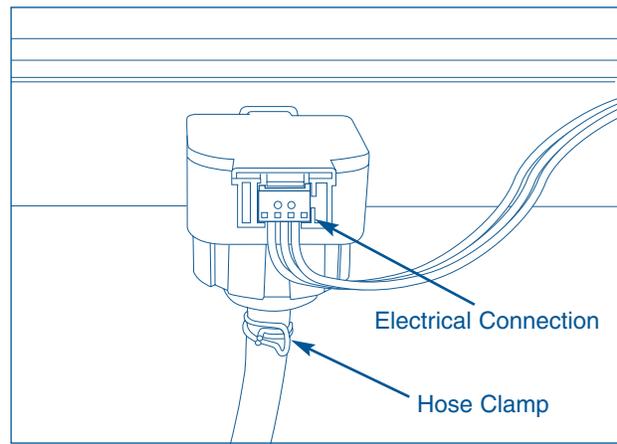


Figure 4-46.

NOTE: The pressure tube from the air bell to the pressure switch must always slope upwards and be free of kinks to prevent condensation from collecting in the tube, also check to assure there is adequate length to allow the tube to sag normally without the danger of disconnecting the tube while the tub is moving.

Drain Pump Removal

The drain pump is mounted to the front base of the unit and is secured with a retaining tab and screw.

To remove the drain pump:

1. Remove control console and front panel.
2. Disconnect the wire harness from the left side of the drain pump. (See Figure 4-47)
3. Using a pliers, compress the hose clamps from the inlet and outlet hoses and disconnect from drain pump.
4. Using a #2 square bit screwdriver, extract screw securing the drain pump to unit base.
5. Rotate the drain pump towards the rear to release the screw tab from the base, then pull forward to release the locating tab.

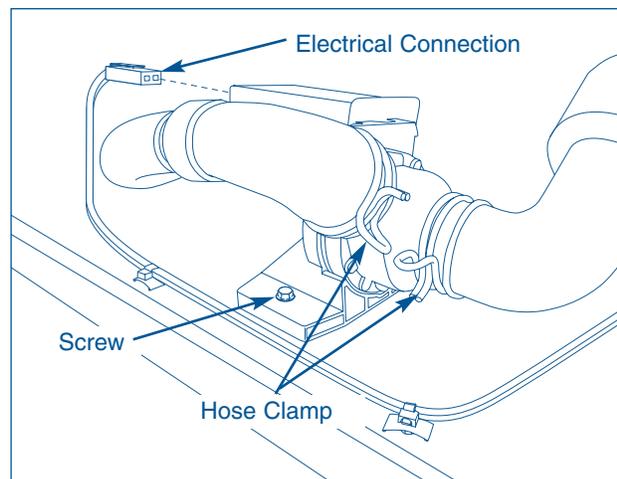


Figure 4-47.

Drive Belt Removal

The drive belt (6 rib flat Poly-V) is used to transmit power from the motor pulley to the tub. The belt is constructed of a material that stretches, which makes belt tension adjustments unnecessary.

To remove the drive belt:

1. Remove rear access panel.
2. Remove the belt by turning tub drive pulley and rolling belt off pulley. The belt is elastic and is designed to "give" enough to remove and install in this manner. (See Figure 4-48)

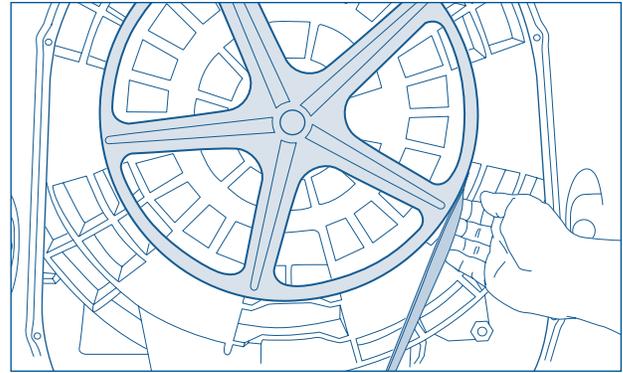


Figure 4-48.

Large Pulley Removal

To remove the large pulley:

1. Remove the rear access panel and drive belt.
2. Using a #6 mm allen wrench remove the bolt in the center of the pulley by holding the pulley and turning the bolt counter clockwise. (See Figure 4-49)

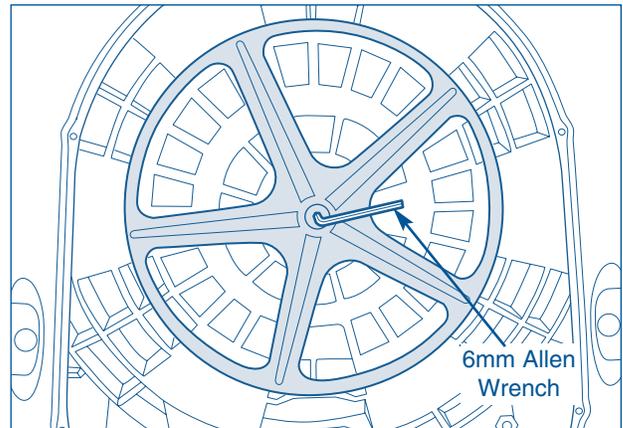


Figure 4-49.

Drive Motor Removal

The drive motor is secured with four bolts to the bottom of the wash tub assembly. The ground wire connects to a terminal to the front of the drive motor that can be accessed from the rear access panel.

To remove the drive motor:

1. Remove rear access panel.
2. Remove the drive belt.
3. Disconnect the electrical plug and the ground wire from the drive motor. (See Figure 4-51)
4. Using a 5/16" socket remove the four bolts, two in the front and two in the rear, that secure the motor to the outer tub. (See Figure 4-50)
5. Support the drive motor while pulling forward and remove from unit.
6. Reverse procedure to reinstall, making sure the belt tracks in the center of the large pulley. Adjust by moving belt on motor pulley if required.

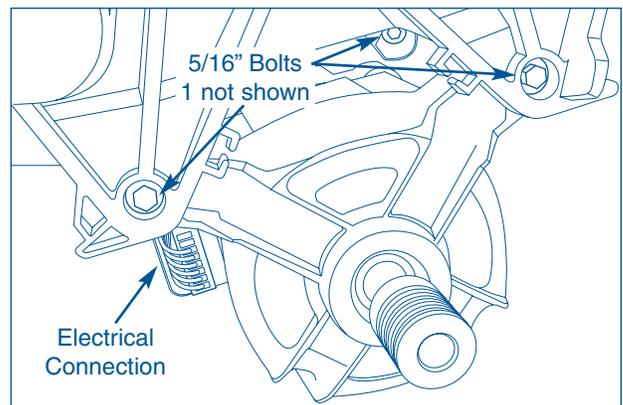


Figure 4-50.

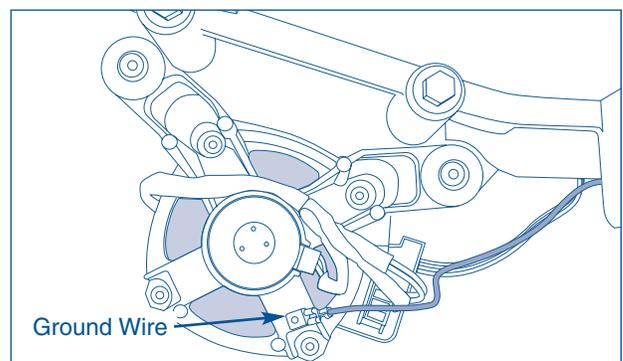


Figure 4-51.

Speed Control Board Assembly Removal

The speed control board assembly is located in the right rear corner of the unit. Two screws secure the speed control to the unit frame, one screw fastens to the unit base the other passes through the rear panel and fastens into speed control assembly.

To remove the speed control board assembly:

1. Remove rear access panel.
2. Disconnect the terminal plug from the lower front of speed control assembly.
3. Using a #2 square bit screwdriver, extract the screw securing the ground wire to the unit base. (See Figure 4-52)
4. From inside the washer, extract the screw securing the speed control assembly to the unit base. (See Figure 4-52)
5. From outside the unit, extract the screw from the rear panel that secures the speed control assembly to the rear panel. (See Figure 4-52)
6. Carefully pull drive control assembly towards rear access panel hole to access the wire harness connections. Cut wire retainers securing the wire harness to the drive control assembly.
7. Release the retaining latches securing the cover to the speed control assembly.
8. Disconnect all wire harness connections from the speed control assembly. (See Figure 4-53)

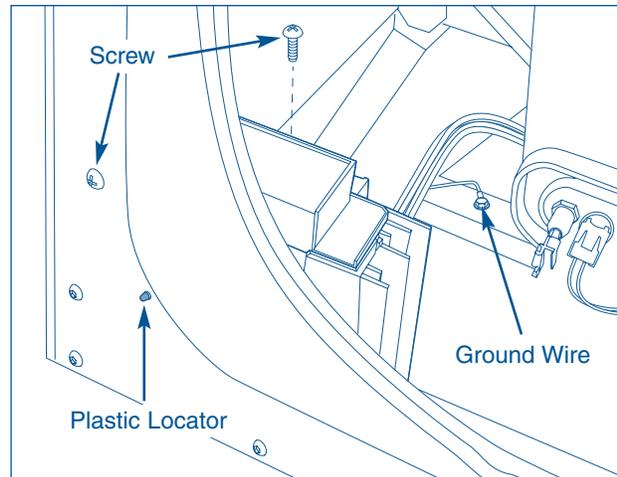


Figure 4-52.

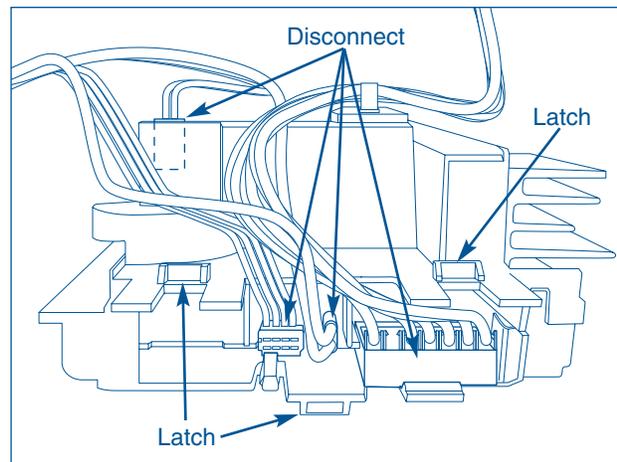


Figure 4-53.

Air Bell Removal

the air bell is mounted on the right side of the wash tub and mounts to a hose connected to the sump. A hose leads from the air bell and connects to the water level sensor.

To remove the air bell:

1. Remove the front panel.
2. Using a pliers, compress the hose clamps from the inlet and outlet hoses and disconnect from air bell. (See Figure 4-54)
3. Release the rivet holding the air bell to the outer tub. and remove from unit.

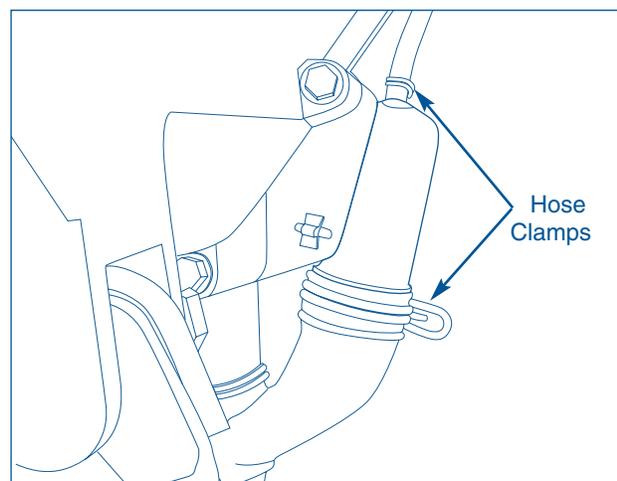


Figure 4-54.

NOTE: When installing an air bell, seal the air connecting tube to air bell and air bell to sump hose using waterproof glue. DO NOT plug air connecting tube opening.

Heating Element Assembly Removal

NOTE: The drum water NTC (Negative Thermal Coefficient) is part of the heating element assembly.

The heating element is held and sealed to the tub by compressing the rubber gasket between the two metal mounting plates of the element. When the nut in the center of the element mounting plate is tightened, the two metal plates are drawn together compressing the rubber gasket.

To test the heating element and control:

With line voltage set at 120VAC, start the Sanitary cycle with no load in the drum. Let the unit fill and run for 5 minutes, then take a wattage measurement of the unit when the motor is not running. The reading should be between 900 and 1100 watts.

The heater should not turn on with a water height less than 1.55" (39.4 mm) measured from the bottom of the drum with the vanes outside of the water. To measure the water height at which the heater turns on:

1. Connect the washer to a Watt meter.
2. Place the washer into Diagnostics (Line Test) mode.
3. Allow water to enter the tub.
4. Once the watt meter reads above 900 watts stop the water and measure the water height.

To remove the heating element:

1. Remove the rear access panel.
2. Disconnect the wires from the heating element, drum water NTC (Negative Thermal Coefficient) and ground wire. (See Figure 4-55)
3. Using a 10mm extended socket, loosen the compression nut and pull the heater assembly out of the drum.

Air Shock Absorber Removal

Four shock absorbers, one mounted to each corner of the wash tub assembly, stabilize the wash tub during operation. The securement pins have locking tabs that must be compressed to remove from the installation position.

Use a deep 1/2", 6 point socket (or 13 millimeter, 6 point) to compress the locking tab of the plastic pin. Push the socket onto the tapered end of the pin as far as it will go to compress the locking tab.

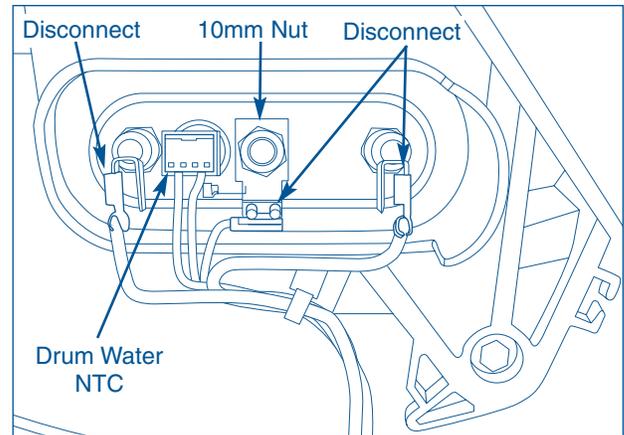


Figure 4-55.

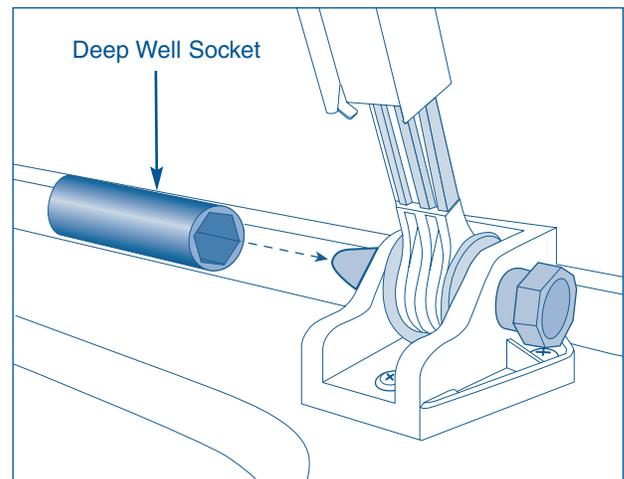


Figure 4-56.

To remove the air shock absorbers:

1. Remove the front panel and rear access panel.

NOTE: When removing the rear right air shock absorber, the speed control assembly will need to be removed.

2. Remove air shock securement pins by depressing locking tab with the socket as described above, while pulling pin to remove. (See Figure 4-56)
3. Use pliers to grasp head of pin and pull to remove. As the pin is removed the socket will drop free.
4. Lubricate the securement pins before installing.
5. When replacing the air shock, make sure to position it with the bell end facing downward.

Tub Assembly Removal

When removing the tub assembly, be sure to have a protective material on hand to protect the flooring of the home, such as Masonite, plywood, 1/8" pressed fiberboard or cardboard or some other suitable material.

To remove the tub assembly:

1. Disconnect the washer from the electrical supply and the hot and cold water hoses.
2. Remove the top panel, console, rear access panel and the front panel.
3. Disconnect and remove the advance rinsing technology hose and light from the bellows, and the detergent outlet and siphon break hoses from the outer tub.
4. Remove the drain pump and disconnect the drain sump from the tub.
5. If replacing the front half of the outer tub remove the bellows and the weight ring.
6. Remove the small hose from the air bell.
7. Remove the large pulley, drive motor and speed control board assembly.
8. Remove the top pins from shock absorbers and push the shock absorbers against the cabinet.
9. Place protective material on floor, then carefully turn the washer on its face and release the suspension springs.
10. Lift the cabinet off the tub. The rear of the wash tub will face upwards. (See Figure 4-57)
11. Turn the tub over and remove the (23) bolts securing the two halves of the tub together. (See Figure 4-58)
12. Lift off the front half of the tub.
13. Reverse procedure to reassemble using illustration below to show outer tub screw tightening sequence. (See Figure 4-59)

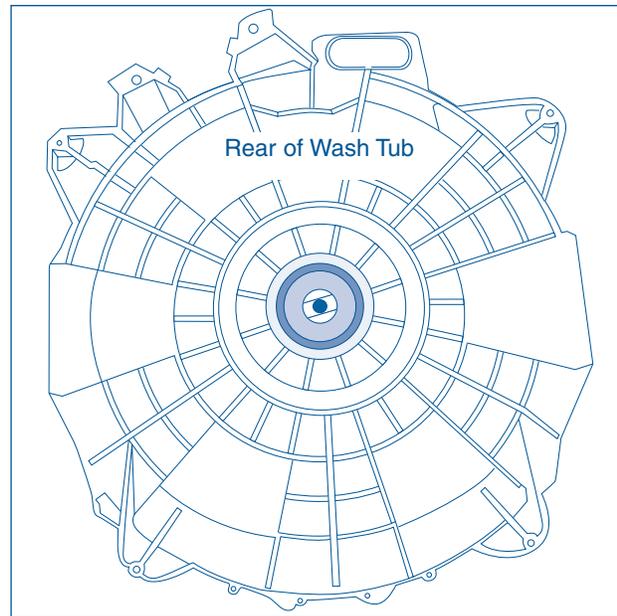


Figure 4-57.

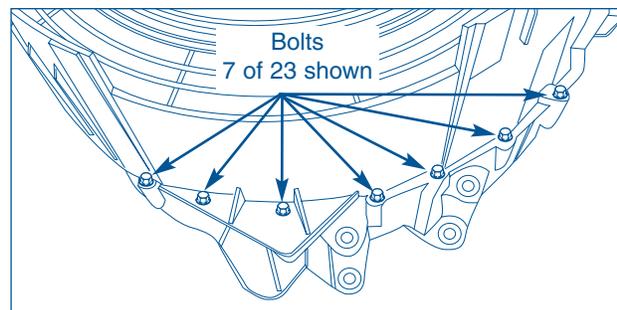


Figure 4-58.

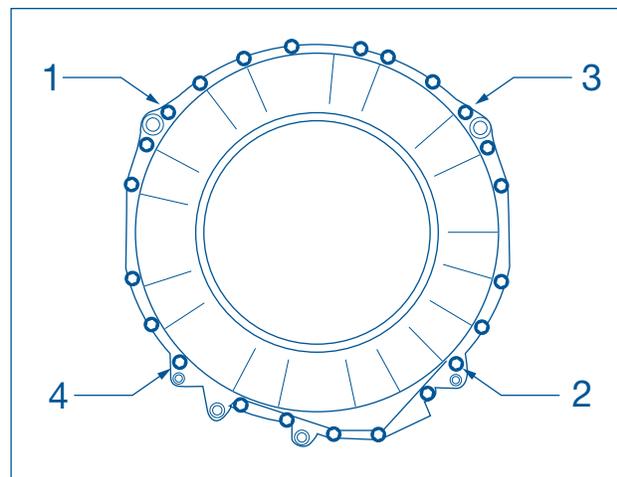


Figure 4-59.

Tub Assembly Removal (continued)

14. The seal between the (2) tub halves is placed in the groove of the rear half and can be lifted out with a flat bladed screwdriver. (See Figure 4-60)
15. To remove the spin basket, set the back half of the outer tub on its side, reinstall the screw that holds the large pulley on and tap the inner tub out with a rubber hammer. (See Figure 4-61)

NOTE: The bearings, water seal and seal between the two tubs come as part of the rear half of the outer tub. If the water seal or bearings fail, inspect and if necessary dress the shaft of the spin basket with a file. With some failures, it may be necessary to replace the spin basket.

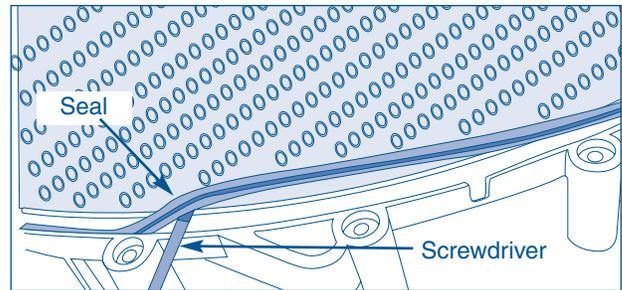


Figure 4-60.

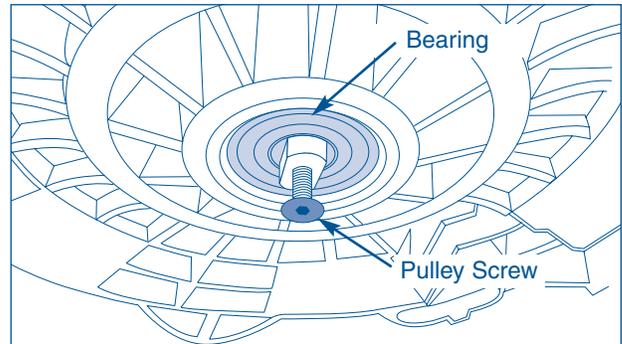


Figure 4-61.

Section 5

Troubleshooting

The following troubleshooting chart involves problems arising from improper washing techniques and are not valid service issues. Many washing problems involve poor soil and stain removal, residues of lint and scum, and fabric damage. For satisfactory washing results, follow these suggestions provided by The Soap and Detergent Association.

For Troubleshooting the electronic control and error codes, See Section Three Electronic Control.

Problem	Cause	Correction
Blue stains	<ol style="list-style-type: none"> 1. Undiluted liquid detergent or fabric softener dispensed directly onto fabric. 	<ol style="list-style-type: none"> 1. If caused by detergent, mix 1 cup (240 ml) white vinegar with 1 quart (.95 L) water in plastic container. Soak item 1 hour. Rinse. 2. If caused by fabric softener, rub stains with bar soap. Wash. 3. Avoid overfilling detergent and fabric softener compartments of dispenser.
Discoloration, graying	<ol style="list-style-type: none"> 1. Not enough detergent. 2. Wash temperature too low. 3. Incorrect sorting. 	<ol style="list-style-type: none"> 1. Rewash with correct amount of detergent and hottest water safe for fabric. Add bleach safe for fabric. 2. Sort items by soil level and color.
Greasy, oily stains	<ol style="list-style-type: none"> 1. Not enough detergent. 2. Undiluted liquid fabric softener poured directly on fabric. 	<ol style="list-style-type: none"> 1. Treat with prewash stain remover or liquid detergent. 2. Increase detergent and water temperature. Rewash. 3. Rub fabric softener stains with bar soap.
Holes, tears, or snags	<ol style="list-style-type: none"> 1. Incorrect use of chlorine bleach. 2. Unfastened zippers, hooks, buckles. 3. Rips, tears and broken threads. 4. Overloading the washer. 5. Degradation of fabric. 	<ol style="list-style-type: none"> 1. Never pour chlorine bleach directly on fabric. 2. Check condition of items before washing. See Washing Procedures in the Use and Care Guide for preparing, loading and adding chlorine bleach.
Lint	<ol style="list-style-type: none"> 1. Incorrect sorting. 2. Tissues left in pocket. 3. Overloading the washer. 4. Not enough detergent. 5. Undissolved detergent has left a residue resembling lint. 6. Static cling is attracting lint. 7. Load washed too long. 	<ol style="list-style-type: none"> 1. Reduce load size. Rewash using correct water temperature, water level, and amount of detergent. 2. Add nonprecipitating water conditioner to wash water to remove detergent residue. 3. Add liquid fabric softener to final rinse. 4. Dry load in dryer. 5. Remove lint with lint brush or roller.
Pilling (Fibers break off, ball up and cling to fabric.)	<ol style="list-style-type: none"> 1. Pilling is normal with synthetic and permanent press fabrics. This is due to abrasion from normal wear. 	<ol style="list-style-type: none"> 1. Use a lint brush or shaver to remove pills. 2. Use fabric softener in the washer to lubricate fibers. 3. When ironing, use spray starch or fabric finish on collars/cuffs. 4. Turn items inside out to reduce abrasion.

Problem	Cause	Correction
Residue or powder on dark items; stiff, harsh fabrics.	<ol style="list-style-type: none"> 1. Undissolved detergent. 2. Some nonphosphate granular detergents can combine with hard water minerals to form a residue. 3. Overloading the washer. 	<ol style="list-style-type: none"> 1. Increase water temperature using hottest water safe for fabric. 2. Do not overload washer. 3. Use liquid detergent or use nonprecipitating water conditioner with nonphosphate granular detergent.
Wrinkling	<ol style="list-style-type: none"> 1. Overloading the washer. 2. Incorrect wash cycle for wash load. 	<ol style="list-style-type: none"> 1. Reduce load size. 2. Rinse in cold water with liquid fabric softener using the Perm Press or Delicate cycle. 3. Remove items from washer as soon as cycle is completed.
Yellow buildup of body soil on synthetic fabrics	<ol style="list-style-type: none"> 1. Agitation time too short. 2. Wash water temperature too low. 3. Not enough detergent. 	<ol style="list-style-type: none"> 1. Soak in detergent booster or product containing enzymes. 2. Wash in hot water (120°F/49°C) using full permanent press cycle. Increase detergent. Add bleach or treat with color remover.
Yellow or brown rust stains.	<ol style="list-style-type: none"> 1. Iron or manganese in water supply, water pipes, or water heater. 	<ol style="list-style-type: none"> 1. To restore discolored load of whites, use rust remover safe for fabric. 2. Do not use chlorine bleach to remove rust stains. It may intensify discoloration. 3. Use nonprecipitating water softener. 4. Before washing, run hot water for a few minutes to clear lines. 5. Drain water heater occasionally. 6. For an ongoing problem, install an iron filter in the water supply system.

The following troubleshooting chart involves common concerns that are not the result of defective workmanship or materials in this washer. Some problems below involve improper installation and issues arising from the users household water supply. See the Use and Care guide for the unit in question and the Installation Section in this manual.

Problem	Cause	Correction
High pitch "jet engine" noise.	1. A certain amount of motor whine is normal during the spin cycle.	1. This is normal operation of the unit.
Rattling and clanking noise.	1. Foreign objects such as coins or safety pins maybe in drum or pump. 2. Belt buckles and metal fasteners are hitting wash drum.	1. Stop washer and check drum. If noise continues after washer is restarted, objects may be in pump 2. To prevent unnecessary noise and damage to drum, fasten fasteners and turn items inside out.
Squealing sound or hot rubber odor.	1. Washer is overloaded.	1. Stop washer and reduce load.
Thumping sound.	1. Heavy wash loads may produce a thumping sound. 2. Washer is out of balance.	1. This is usually normal. 2. Stop washer and redistribute wash load.
Vibrating noise.	1. Washer is not resting firmly on floor. 2. Shipping bolts and foam blocks have not been removed during installation. 3. Wash load unevenly distributed in drum.	1. Adjust leveling legs. See Installation Section 2. See Installation Section for removing shipping bolts and foam blocks. 3. Stop washer and redistribute wash load.
Washer does not start.	1. Electrical power cord may not be plugged in or connection may be loose. 2. House fuse blown, circuit breaker tripped, or a power outage has occurred. 3. Water supply faucets are not turned on. 4. Motor is overheated. 5. Dispenser drawer is not completely closed.	1. Make sure plug fits tightly in wall outlet. 2. Reset circuit breaker or replace fuse. Do not increase fuse capacity. If problem is a circuit overload, have it corrected by a qualified electrician. If problem is a power outage, call local electric company. 3. Turn on water supply faucets. 4. Washer motor will stop if it becomes over heated. It will automatically restart after a cool down period of up to 30minutes (if washer has not been manually turned off). 5. Close dispenser drawer.
Washer won't spin.	1. Washer door is not completely closed. 2. Dispenser drawer is not completely closed. 3. Load is too small.	1. Close door completely. 2. Close dispenser drawer. 3. Add 1 or 2 similar items to help balance the load.

Problem	Cause	Correction
Residue left in drum.	1. Heavily soiled items.	1. Heavily soiled items. Wipe drum with a nonabrasive household cleanser, then rinse. Shake or brush excess dirt and sand from items before washing.
Water collects in bleach and fabric softener compartments.	1. This is a result of the siphoning action and is part of the normal operation of the washer.	2. Water may be removed by removing the dispenser drawer and draining water into the empty drum or sink.
Wash load too wet after spin.	1. Washer is overloaded. 2. Load is too small. 3. Load is out of balance. 4. Drain hose is kinked.	1. Do not overload washer. 2. Add 1 or 2 similar items to help balance the load. 3. Rearrange load to allow proper spinning. 4. Straighten drain hose.
Water does not enter washer or it enters slowly.	1. Water supply is not adequate in area. 2. Water supply faucets are not completely open. 3. Water is being used elsewhere in the house. 4. Water inlet hoses are kinked. 5. Water inlet screens plugged.	1. Check another faucet in the house. Wait until water supply and pressure increase. 2. Fully open hot and cold faucets. 3. Water pressure must be at least 30 psi (260 kPa). Avoid running water elsewhere while washer is filling. 4. Straighten hoses. 5. Clean screens.
Warm or hot water is not hot enough.	1. Hot water heater is set too low or is a distance from washer. 2. Hot water is being used elsewhere in the house.	1. Measure hot water temperature at nearby faucet with candy or meat thermometer. Water temperature should be at least 120°F (49°C). Adjust water heater as necessary. 2. Avoid using hot water elsewhere before or during washer use. There may not be enough hot water available for proper cleaning. If problem persists, the hot water system may be unable to support more than 1 use at a time.
Water in washer does not drain or drains slowly.	1. Drain hose is kinked or clogged.	1. Clean and straighten the drain hose. 2. Maximum standpipe height is 8' (2.4 m).
Water leaks.	1. Fill hose connection is loose at faucet or washer. 2. House drain pipes are clogged.	1. Check and tighten hose connections. Install rubber sealing washers provided. 2. Unclog drain pipes. Contact plumber if necessary.
Oversudsing.	1. Wrong detergent. 2. Too much detergent.	1. Run rinse cycle. Use a low-sudsing, high efficiency detergent. 2. Run rinse cycle. Use less detergent in future loads

Problem	Cause	Correction
Incorrect wash and rinse temperatures.	1. Hot and cold water hoses are connected to wrong supply faucets.	1. Connect hot water hose to hot water faucet and cold water hose to cold water faucet.
Water is entering washer but tub does not fill.	1. Drain hose standpipe is incorrect height.	1. Standpipe must be a minimum of 24" (61 cm) high to prevent siphoning. See Installation Section.
LCD displays DEMO MODE.	1. Washer has been programmed to temporarily perform a repeating demo cycle.	1. Turn the cycle selector knob to SPIN ONLY cycle, press the START button then the CANCEL button. 2. Activate the controls by turning the cycle selector knob and turn to SPIN ONLY cycle. 3a. Press and hold CANCEL button and CTRL LOCK button for 3 seconds. (IQ Touch) 3b. Press and hold CANCEL button and SOIL LEVEL (Third button from the left) for 3 seconds. (Wave Touch)

Component Resistance Chart

Electrical Component	Resistance @ 77F (25C)
Dispenser Valve Solenoids	800 ± 7%
Door Lock Solenoid	46.8 ± 10%
Pump Motor	12 ± 7%
NTC Thermistor Dispenser	3K
NTC Thermistor Heater	4.8K
Water Heater	14 ± 10%
Motor - M1 to M2	5.3 ± 7%
Motor - M2 to M3	5.3 ± 7%
Motor - M1 to M3	5.3 ± 7%
Motor - M4 to M5	118 ± 7%

Section 6

Wiring Diagrams

Model EWFLW65H & EIFLW55H

