



ELECTROLUX MAJOR APPLIANCES OF NORTH AMERICA

SERVICE MANUAL

AFFINITY

HORIZONTAL AXIS

WASHER

6000 & 7000

SERIES

Frigidaire

TAPPAN

W White-Westinghouse

Gibson

Kelvinator 

SAFE SERVICING PRACTICES - ALL APPLIANCES

To avoid personal injury and/or property damage, it is important that **Safe Servicing Practices** be observed. The 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 it in a safe and satisfactory manner.
2. Before servicing or moving an appliance:
 - Remove the power cord from the electrical outlet, trip the circuit breaker to the OFF position, or remove the fuse.
 - Turn off the gas supply.
 - Turn off the water supply.
3. Never interfere with the proper operation of any safety device.
4. **USE ONLY REPLACEMENT PARTS CATALOGED FOR THIS APPLIANCE. SUBSTITUTIONS MAY DEFEAT COMPLIANCE WITH SAFETY STANDARDS SET FOR HOME APPLIANCES.**
5. **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.
6. 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

ATTENTION!!!

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 cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this manual.

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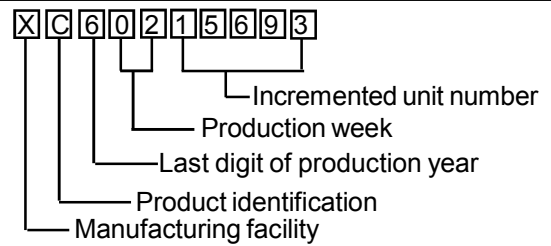
QUICK REFERENCE SHEET

1. Serial nameplate location:

On the inner liner of the loading door



2. Serial number breakdown.



3. Tech sheet location

On the left-hand bodyside behind the front panel.

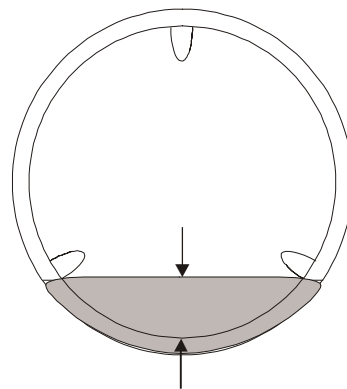


QUICK REFERENCE SHEET

Component resistance chart.

Electrical component		Resistance Ω @ 77° F (25°C)
Dispenser valve solenoids		800 $\pm$ 7%
Door lock solenoid		1325 $\pm$ 10%
Pump motor		12 $\pm$ 7%
NTC Thermistor dispenser		3K
NTC Thermistor heater		4.8K
Water heater		14 $\pm$ 10%
Motor	M1 TO M2	5.3 $\pm$ 7%
	M2 TO M3	5.3 $\pm$ 7%
	M1 TO M3	5.3 $\pm$ 7%
	M4 TO M5	118 $\pm$ 7%

Water fill height 3.5 $\pm$.5 "
No load, start position of permanent press cycle.



Electrical requirements.

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

Incoming water pressure.

30 and 120 pounds per square inch (maximum unbalance pressure, hot vs. cold, 10 psi.)

Drain requirements.

Drain capable of eliminating 17 gals (64.3 L) per minute.

A standpipe diameter of 1-1/4 in. (3.18 cm) minimum.

The standpipe height above the floor should be:

Minimum height: 24 in. (61 cm)

Maximum height: 96 in. (244 cm)

Motor.

No load agitate wattage - Max 150

No load spin wattage - Max 550

Water usages

Per fill

4.23 gallons

Per cycle

16.92 gallons

Based on 1 wash and 3 rinse fills

Operation speeds:

Agitate Speed - RPM (Deep Clean Sanitary, Heavy, Normal, Quick, and Prem Press) _____ 47

Agitate Speed - RPM (Hand Wash, Delicate, and Wool) _____ 32

Spin speeds Deep Clean Sanitary	6000 Series Models				7000 Series Models			
Heavy Duty, Normal & Quick	RPM	Sec.	RPM	Sec.	RPM	Sec.	RPM	Sec.
Spin Speed R.P.M.(Max)	1000	150	1050	240	1000	150	1100	240
Spin Speed R.P.M. (Fast)	1000	150	1050	210	1000	150	1100	210
Spin Speed R.P.M. (Medium)	1000	150	1020	180	1000	150	1100	180
Spin Speed R.P.M. (Slow)	1000	300			1000	300		
Perm Press								
Spin Speed R.P.M.(Max)	1000	90			1000	90		
Spin Speed R.P.M. (Fast)	1000	60			1000	60		
Spin Speed R.P.M. (Medium)	1000	45			1000	45		
Spin Speed R.P.M. (Slow)	1000	30			1000	30		
Delicate & Hand Wash								
Spin Speed R.P.M.(Max)	1000	40			1000	40		
Spin Speed R.P.M. (Fast)	1000	30			1000	30		
Spin Speed R.P.M. (Medium)	1000	15			1000	15		
Spin Speed R.P.M. (Slow)	1000	10			1000	10		
Spin Only								
Spin Speed R.P.M.(Max)	1000	150	1050	240	1000	150	1100	240
Spin Speed R.P.M. (Fast)	1000	150	1050	210	1000	150	1100	210
Spin Speed R.P.M. (Medium)	1000	150	1020	180	1000	150	1100	180
Spin Speed R.P.M. (Slow)	300				1000	300		

Tub Pulley to Motor Pulley Ratio _____ 16 TO 1

Tub Capacity _____ 3.5 cu. ft.

Automatic Temperature Control Specifications.

Auto Temp Sanitary Cycle _____ 152° ± 7° F

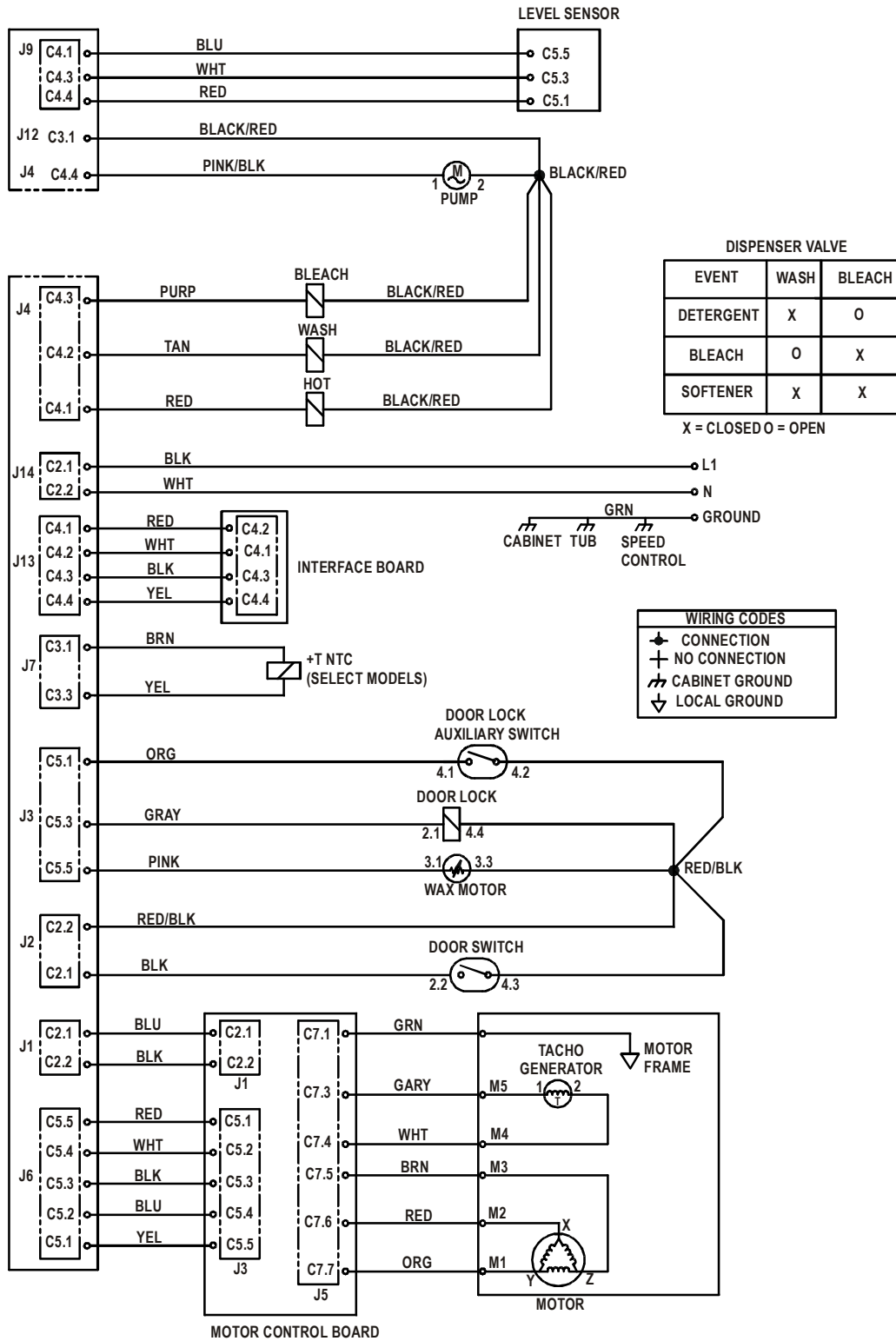
Auto Temp hot/cold settings _____ 120° ± 7° F

Auto Temp warm/warm and warm /cold settings _____ 90° ± 7° F

Auto Temp cold/cold settings _____ 65° ± 7° F

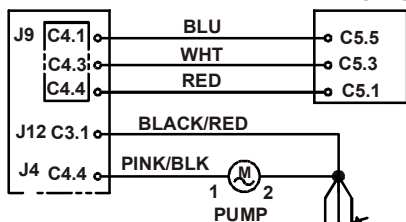
SAMPLE SCHEMATIC FOR 6000 SERIES

ALWAYS USE DIAGRAM WITH PRODUCT

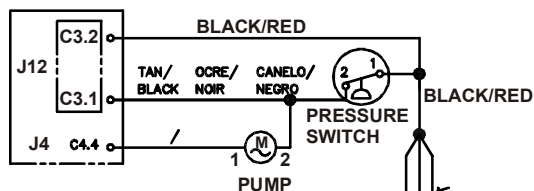


ON SELECT MODELS

LEVEL SENSOR

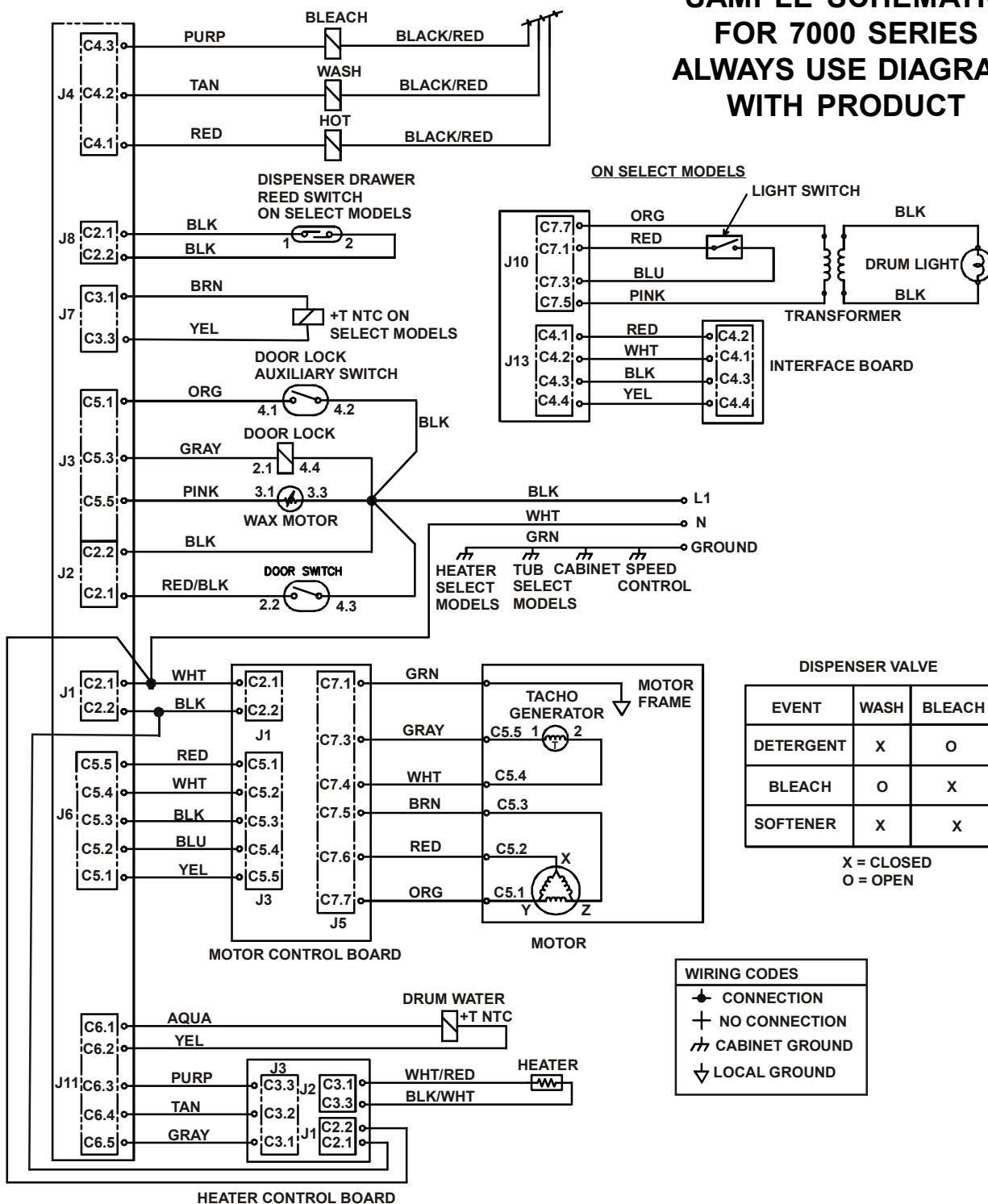


OPTION A



OPTION B

SAMPLE SCHEMATIC FOR 7000 SERIES ALWAYS USE DIAGRAM WITH PRODUCT



SECTION A - Installation Instructions

Full Size Tumble Action Washers

Before beginning installation, carefully read these instructions. This will simplify the installation and ensure the washer is installed correctly and safely. Leave these instructions near the washer after installation for future reference.

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.

⚠ WARNING

For your safety the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable vapors and liquid in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Clear the room, building or area of all occupants.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas suppliers instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

PRE-INSTALLATION REQUIREMENTS

Tools Required for Installation:

1. Phillips screwdriver
2. 10 mm socket with ratchet.
3. Channel-lock adjustable pliers.

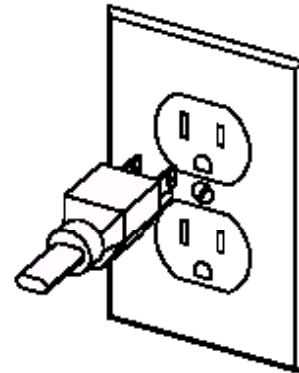
4. Carpenter's level.

ELECTRICAL 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 potential 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.

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.



NOTE: GFI (Ground Fault Interrupter) receptacle is not required.

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.

WATER SUPPLY REQUIREMENTS

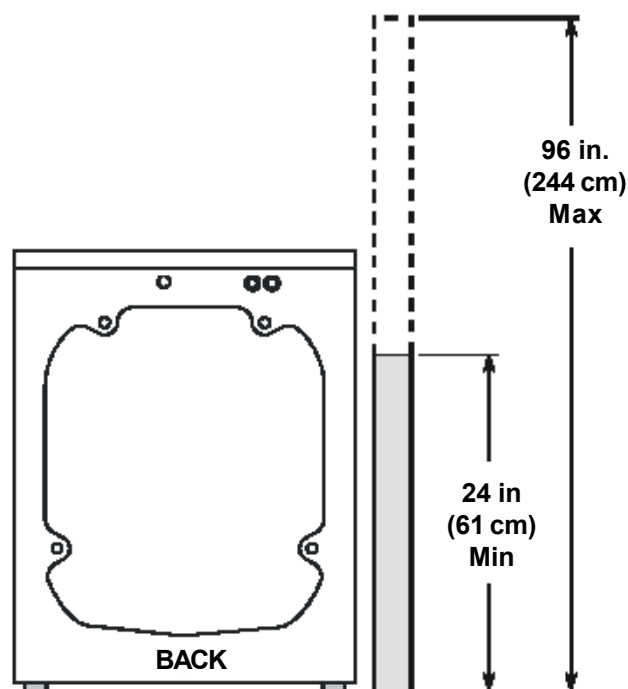
Hot and cold water faucets **MUST** be installed within 42 inches (107 cm) of your washer's water inlet. The faucets **MUST** be 3/4 inch (1.9 cm) garden hose type so inlet hoses can be connected. Water pressure **MUST** be between 30 and 120 pounds per square inch (maximum unbalance pressure, hot vs. cold, 10 psi.) Your water department can advise you of your water pressure. The hot water temperature should be about 140 degrees F (60 degrees C).

DRAIN 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)

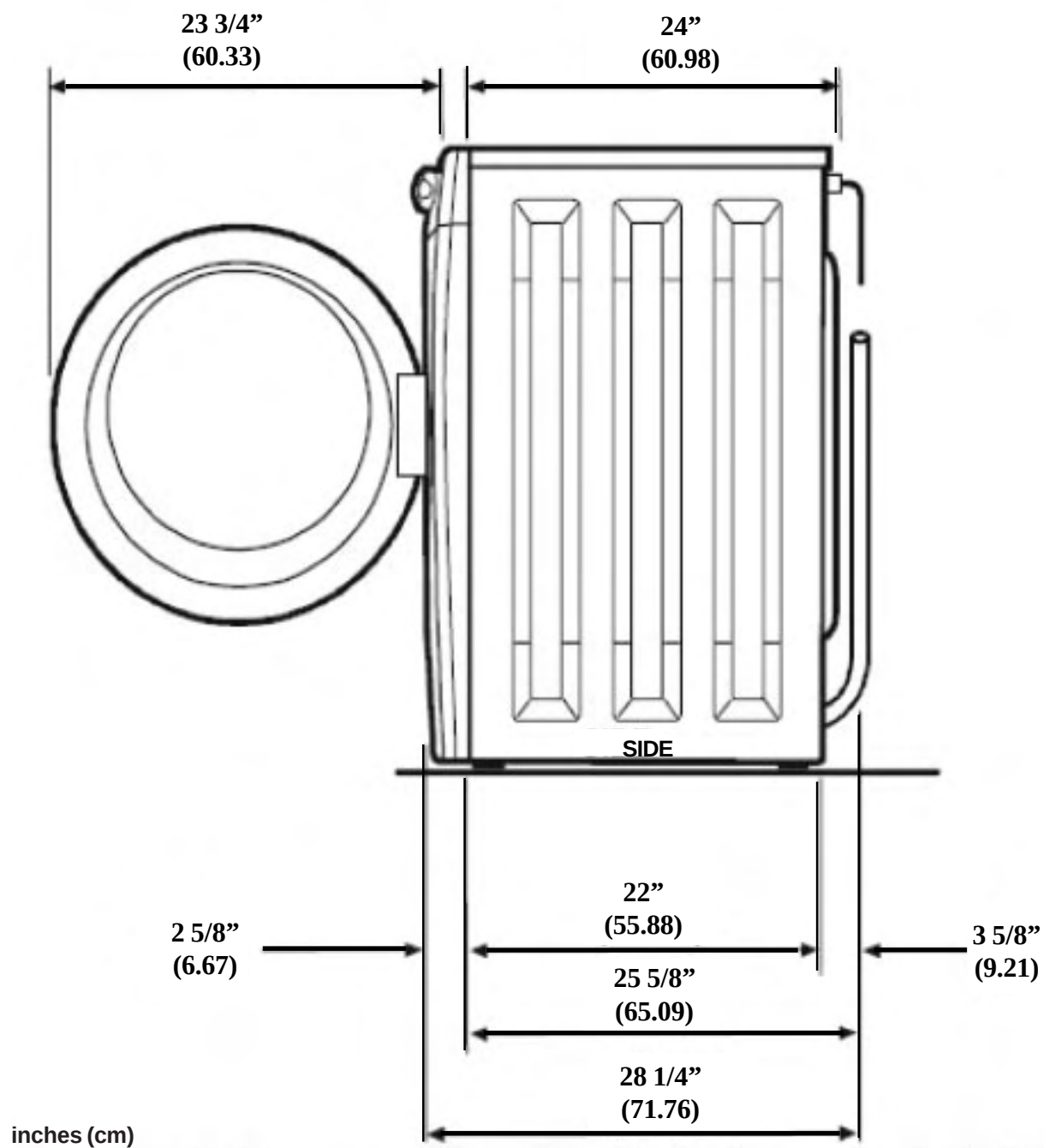
Maximum height: 96 in. (244 cm)



NOTE:

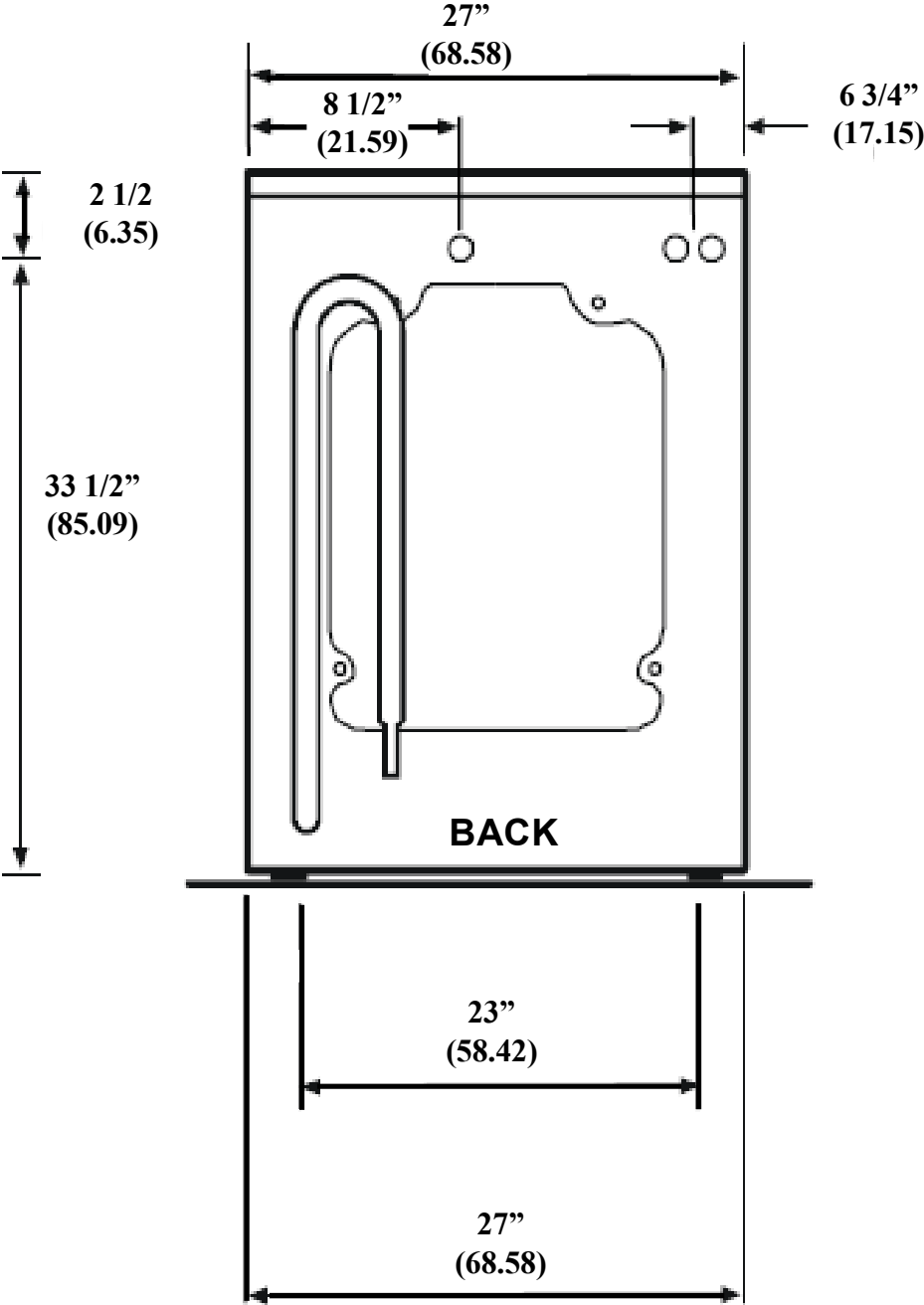
Drain hose attached to the washer can reach a 90 in. (229 cm) high standpipe. For higher standpipe, use hose P/N 134369410, available from an authorized parts distributor.

ROUGH-IN DIMENSIONS



NOTE: For pedestal installations, see additional installation instructions included with the pedestal.
 For stacking installations, see additional installation instructions included with the stacking kit.
 For under counter installations, no special top is required.

ROUGH-IN DIMENSIONS



inches (cm)

LOCATION OF YOUR WASHER

DO NOT INSTALL YOUR 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) for proper washer (detergent breakdown) operation.
2. In an area where it will come in contact with curtains or drapes.
3. In an area (garage or garage-type building) where gasoline or other flammables are kept or stored (including automobiles).
4. On carpet. Floor **MUST** be solid with a maximum slope of 1/2 in. per foot (1.27 cm per 30.5 cm). To ensure vibration or movement does not occur, reinforcement of the floor may be necessary.

IMPORTANT

MINIMUM INSTALLATION CLEARANCES

When installed in alcove or closet:

Sides, Rear = 0 in. (0 cm)
Top = 0 in. (0 cm)

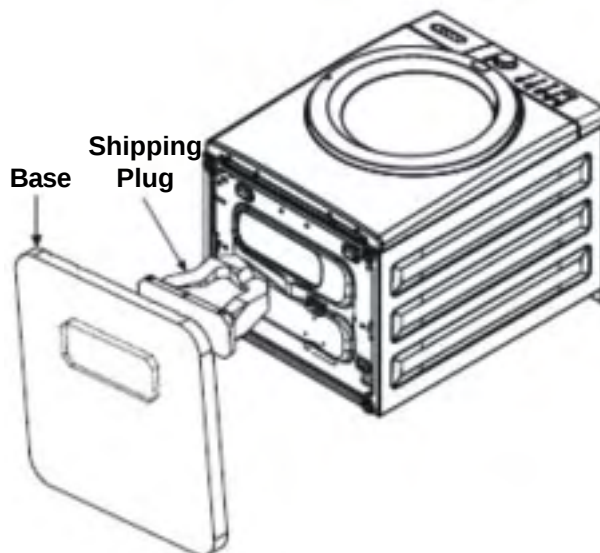
When installed in closet: Front = 1 in. (2.54 cm)

Closet door ventilation required: 2 louvered openings each 60 in. (387 cm), 3 in. (7.6 cm) from top and bottom of door.

UNPACKING

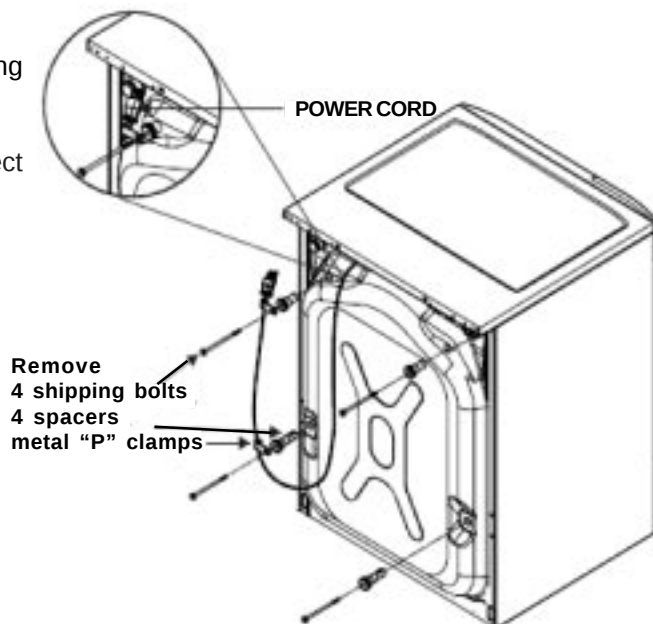
1. Cut the shipping carton along the dotted line along the bottom. Remove the carton.
2. Using a rug, blanket or piece of cardboard to protect the floor, lay the washer on it's back.

3. Remove and save the styrofoam base and shipping plug.



4. Carefully return the washer to an upright position.
5. Carefully move the washer to within 4 feet (122cm) of the final location.
6. Remove the following from the back panel of the washer:
 - 4 shipping bolts,
 - 4 spacers,
 - 2 metal "P" clamps,
7. Remove the 4 plugs from the literature pack located in the drum and install them in the holes vacated by the packing spacers

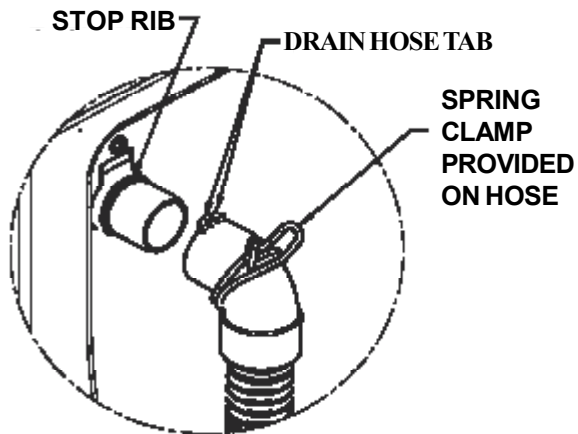
NOTE: If the washer is to be transported at a later date, the shipping support hardware must be reinstalled to prevent shipping damage.



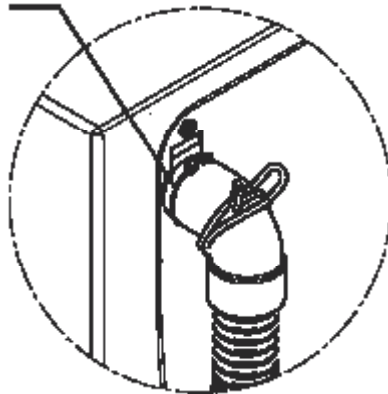
Drain Hose Installation

The drain hose is field installed to allow hose orientation to the left or right, up or down depending on location of the house drain. The hose is shipped in the washer tub with the spring clamp on the coupler elbow and drain hose hanger installed on the end of the hose.

1. Remove the drain hose from the tub of the washer.
2. Push the hose onto the drain coupler at the upper left of the washer back panel until the hose contacts the STOP RIB.

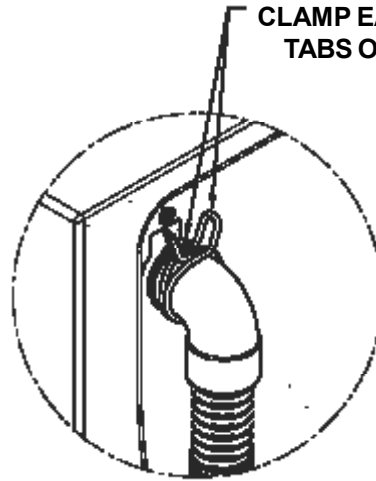


PUSH HOSE INTO COUPLER TO STOP

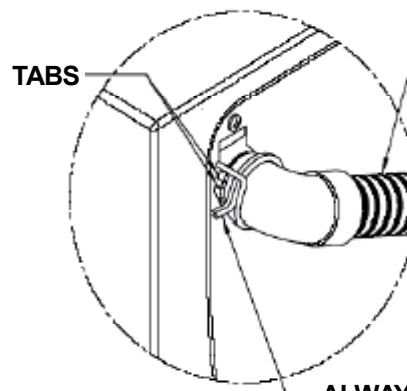


3. Using pliers, squeeze the ears of the spring clamp and position the clamp so the clamp ears align with and contact the tabs on the drain hose. This assures proper location of the clamp to prevent leaks.

ALIGN SPRING CLAMP EARS WITH TABS ON HOSE



ORIENT HOSE TO RIGHT, LEFT, UP OR DOWN AS NEEDED BEFORE PLACING CLAMP IN POSITION



ALWAYS ALIGN CLAMP EARS WITH TABS ON HOSE

INSTALLATION

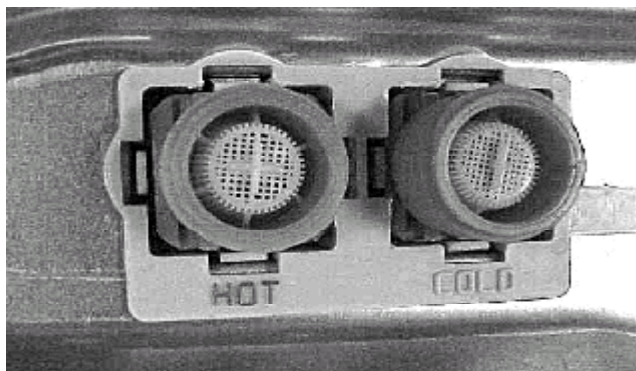
Leveling the Washer

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

1. For free standing installation and with the washer in it's final position, place a level on top of the washer. Adjust the leveling legs so the washer is level front-to-rear and side-to-side, and stable corner-to-corner. Press down on alternate corners and sides and feel for the slightest movement. Adjust the appropriate leg so the washer is **SOLID** on the floor on **ALL** four legs. Keep the leveling leg extension at a minimum for best performance of the washer.
2. For pedestal installations, See additional installation instructions included with the pedestal.

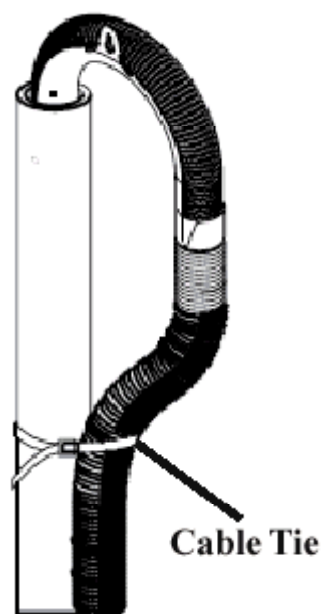
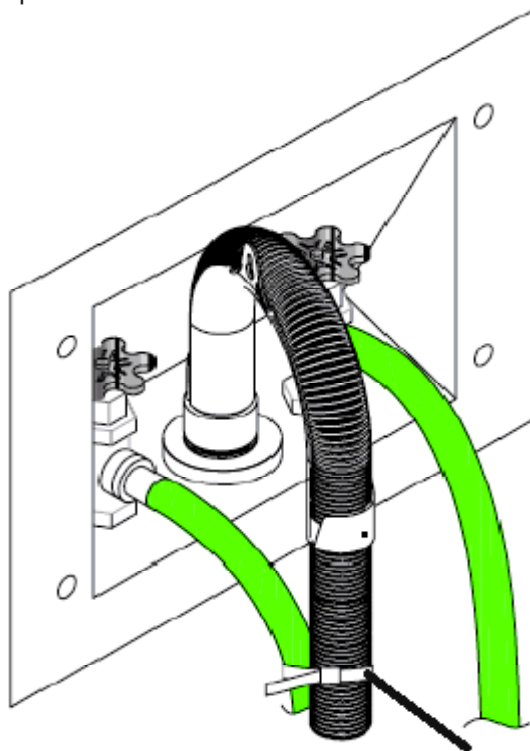
Washer Connections

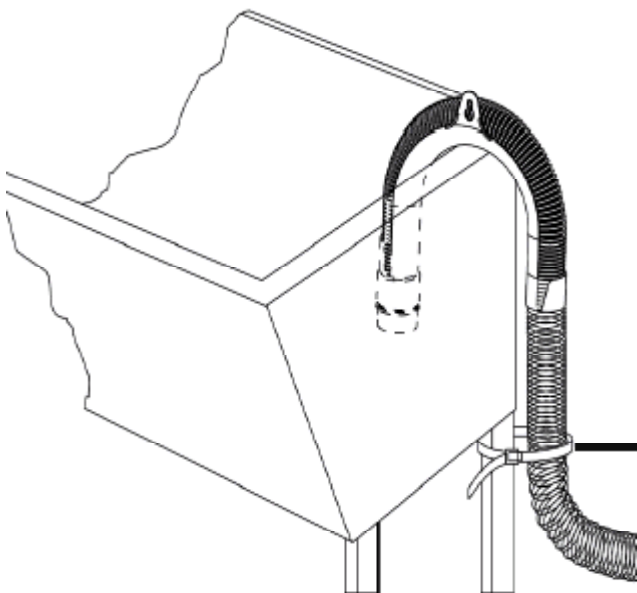
1. Run some water from the hot and cold faucets to flush the waterline and remove particles that might clog up the water valve screens.
2. Remove the inlet hoses and rubber washers from the plastic bag located in the drum of the washer and install the rubber washers in each end of the inlet hoses.
3. Carefully connect the inlet hose marked "HOT" to the outside "H" outlet of the water valve. Tighten by hand, then tighten another 2/3 turn with pliers. Carefully connect the other inlet hose to the inside "C" outlet of the water valve. Tighten by hand, then tighten another 2/3 turn with pliers. ***Do not cross thread or over-tighten these connections.***
4. Connect the inlet hose ends to the HOT and COLD water faucets tightly by hand, then tighten another 2/3 turn with pliers. Turn the water on and check for leaks.



NOTE: Use only new hoses.

5. 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.





REPLACEMENT PARTS

If replacement parts are needed for your washer, contact the source where you purchased your washer, call 1-800-944-9044, or visit our website, www.frigidaire.com, for the Frigidaire Company Authorized Parts Distributor nearest you.

⚠ WARNING Destroy the carton and plastic bags after the washer is unpacked. Children might use them for play. Cartons covered with rugs, bedspreads, or plastic sheets can become airtight chambers causing suffocation. Place all materials in a garbage container or make materials inaccessible to children.

⚠ WARNING The instructions in this manual and all other literature included with this washer are not meant to cover every possible condition and situation that may occur. Good safe practice and caution **MUST** be applied when installing, operating and maintaining any appliance.

6. Plug the power cord into a grounded outlet.

NOTE: Check to ensure the power is off at a circuit breaker/fuse box before plugging the power cord into an outlet.

7. Turn on the power at a circuit breaker/fuse box.
8. Read the Operating Instructions and Owner's Guide provided with the washer. They contain valuable and helpful information that will save you time and money.
9. Run the washer through a complete cycle. Check for water leaks and proper operation.
10. If your washer does not operate, please review the "Avoid Service Checklist" in your Owner's Guide before calling for service.
11. Place these instructions in a location near the washer for future reference.

NOTE: A wiring diagram and technical data sheet are located in an envelope attached to the left hand side panel on the inside of the washer.

Maximum benefits and enjoyment are achieved when all the Safety and Operating instructions are understood and practiced as a routine with your laundering tasks.

Pedestal

A pedestal accessory, Model No. APWD15W, specifically designed for this washer may be used when elevating the washer for ease of use. Failure to use accessories certified by the manufacturer could result in personal injury, property damage or damage to the washer.

SECTION B - Washer & Dryer 15" Drawer Pedestal Installation Instructions

IMPORTANT: Read and save these instructions.

NOTICE! This kit is intended to be installed by persons having electrical and mechanical training and a level of knowledge considered acceptable in the appliance repair trade.

Your safety and the safety of others are very important. Many important safety messages are provided in these instructions and on your appliance. Always read and obey all safety messages.



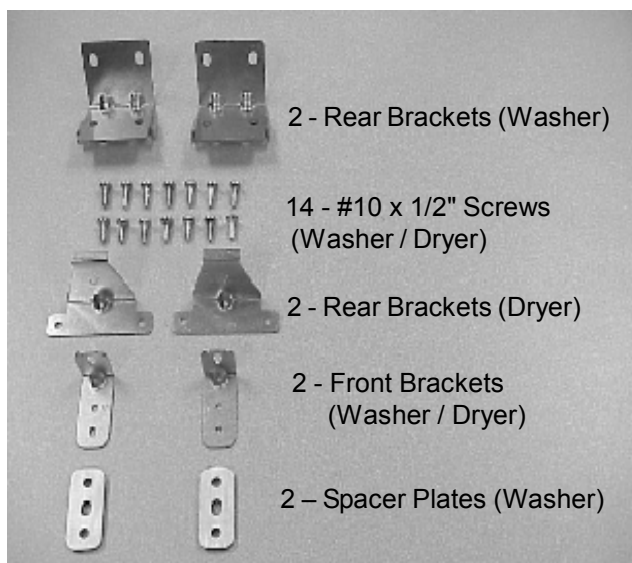
WARNING

EXCESSIVE WEIGHT HAZARD
Two or more people may be required to move and install the washer & dryer onto pedestals. Failure to comply may cause back or other injury.

Tools needed:

level
9/16" open end wrench
#2 Phillips screwdriver

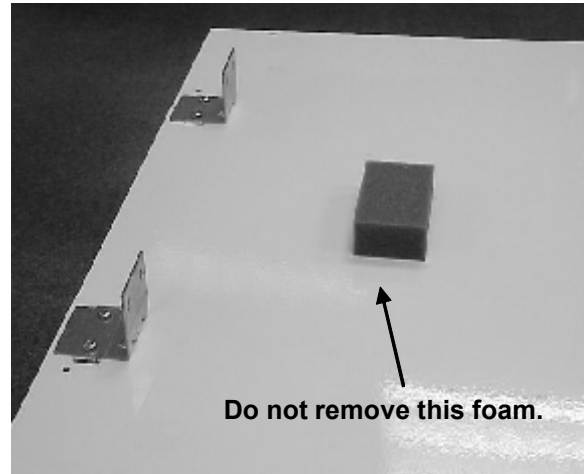
Washer/Dryer Installation Kit



Picture 1

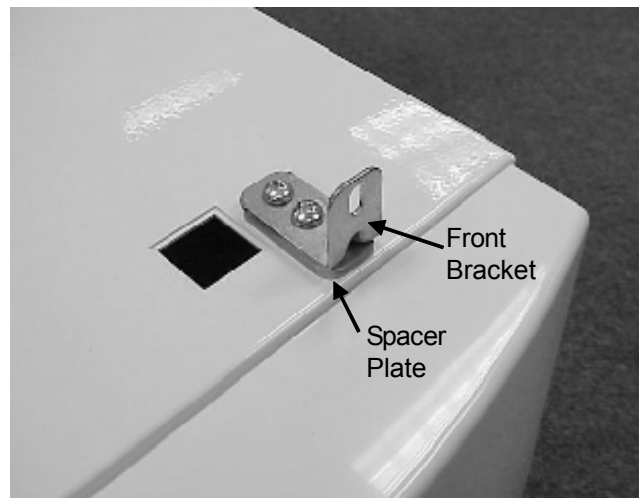
WASHER INSTALLATION

1. Remove the washer installation hardware from the plastic bag as shown in Picture 1.
2. Attach the rear brackets to the pedestal with four #10 screws (2 per bracket) as shown in Picture 2.



Picture 2

3. Attach the front brackets and spacer plates to the pedestal with four #10 screws (2 per bracket) as shown in Picture 3 and 4.



Picture 3



Picture 4

NOTE: If washer was previously installed, disconnect the power cord, remove the inlet hoses from the water faucets and tape the drain hose to the top of the washer to eliminate excess water on the floor.

4. Using two or more people, carefully lift the washer onto the pedestal, tilting the washer back slightly to align the holes in the rear of the washer with the slots of the rear brackets on the pedestals. See Pictures 5 and 6.

NOTE: If the mounting holes do not align, make sure the washer leveling legs are adjusted fully into the washing machine. Turn each leg tight to the base.



Picture 5



Picture 6

5. Set the washer down onto the pedestal making sure the washer base is behind the front brackets of the pedestal. See Picture 7.



Picture 7

6. Align the sides of the washer with the sides of the pedestal and attach the washer to the rear brackets using four #10 screws (2 per bracket) as shown in Picture 8.



Picture 8

7. With the pedestal drawer open for better access, install the two #10 screws through the front brackets in the pedestal into the washer base as shown in Picture 9.



Picture 9

8. After closing the pedestal drawer, carefully move the washer/pedestal assembly into position.

NOTE: Because of the increased weight caused by the addition of the pedestal, two or more people may be required.

9. **Excessive noise and vibration can be prevented by properly leveling the washer/pedestal assembly on a SOLID floor and tightening the leveling leg lock nuts.**

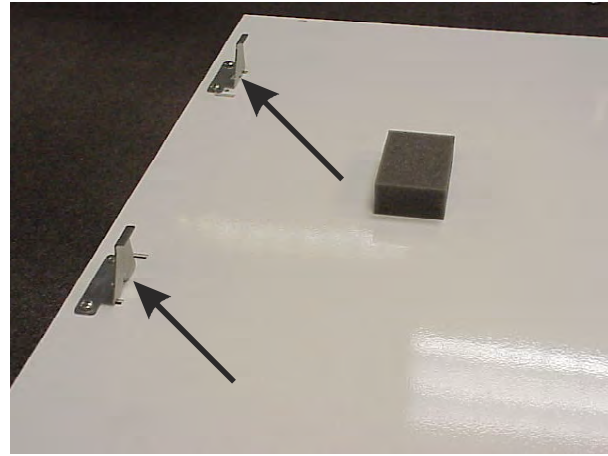
With the washer/pedestal assembly in its' final position, place a level on top of the washer. Adjust the pedestal leveling legs so the washer/pedestal assembly is level front-to-rear and side-to-side, and stable corner-to-corner.

Press down on alternate corners and sides and feel for the slightest movement. Adjust the appropriate leg so the washer/pedestal assembly is SOLID on the floor on ALL four pedestal legs.

After leveling the washer/pedestal assembly, adjust the lock nut on each pedestal leveling leg against the pedestal base and tighten with a wrench. Keep the leg extension at a minimum to prevent excessive vibration.

10. Refer to the Installation Instructions that came with the washer to properly complete electrical, water, and drain connections. If questions arise, please refer to the Owner's Guide that came with the washer for contact information.

1. Remove the dryer installation hardware from the plastic bag as shown in Picture 1.
2. Attach the rear brackets to the pedestal with four #10 screws (2 per bracket) as shown in Picture 10.



Picture 10

3. Attach the front brackets to the pedestal with four #10 screws (2 per bracket) as shown in Picture 11.

NOTE: The spacer plates shown in Pictures 1 and 3 are not required for the Dryer installation.



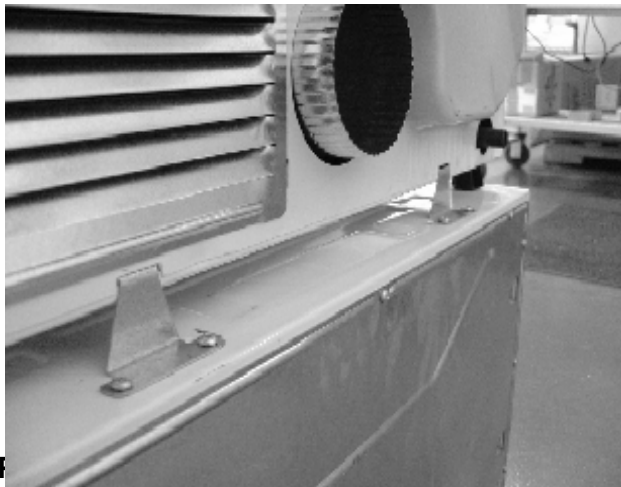
Picture 11

NOTE: If the dryer was previously installed, disconnect the power cord and the vent hose. Also make sure the leveling legs are adjusted fully into the dryer.

4. Using two or more people, carefully lift the dryer onto the pedestal, tilting the dryer back slightly to engage the slots in the rear of the dryer with the tabs of the rear brackets on the pedestal. See Pictures 12 and 13.



Picture 12



5. Set the dryer down onto the pedestal making sure the service panel bracket on the dryer is behind the front brackets of the pedestal. See Picture 14.



Picture 14

6. With the pedestal drawer open for better access, install two #10 screws through the front brackets in the pedestal into the service panel bracket of the dryer as shown in Picture 15.



Picture 15

7. After closing the pedestal drawer, carefully move the dryer/pedestal assembly in to position.

NOTE: Because of the increased weight caused by the addition of the pedestal, two or more people may be required.

9. **Excessive noise and vibration can be prevented by properly leveling the dryer/pedestal assembly on a SOLID floor and tightening the leveling leg lock nuts.**

With the dryer/pedestal assembly in its' final position, place a level on top of the dryer.

Adjust the pedestal leveling legs so the dryer/pedestal assembly is level front-to-rear and side-to side, and stable corner-to-corner.

Press down on alternate corners and sides and feel for the slightest movement. Adjust the appropriate leg so the dryer/pedestal assembly is SOLID on the floor on ALL four pedestal legs.

After leveling the dryer/pedestal assembly, adjust the lock nut on each pedestal leveling leg against the pedestal base and tighten with a wrench. Keep the leg extension at a minimum to prevent excessive vibration.

10. Refer to the Installation Instructions that came with the dryer to properly complete electrical and venting connections. If questions arise, please refer to the Owner's Guide that came with the dryer for contact information.

WARRANTY

Full One Year Warranty on Mechanical Parts

**Sample warranty - always check
warranty with product**

For one year from date of purchase, when this pedestal is installed with the listed washer or dryer (see owners manual for specific model) and operated according to the information in the Use and Care Guide, Operating Instructions and Installation Instructions, the supplier will replace any of its mechanical parts if they are defective in workmanship or material. Keep your bill of sale. The date of the bill establishes the warranty period should parts be required. This written warranty gives you specific rights. You may also have other rights which vary from state to state.

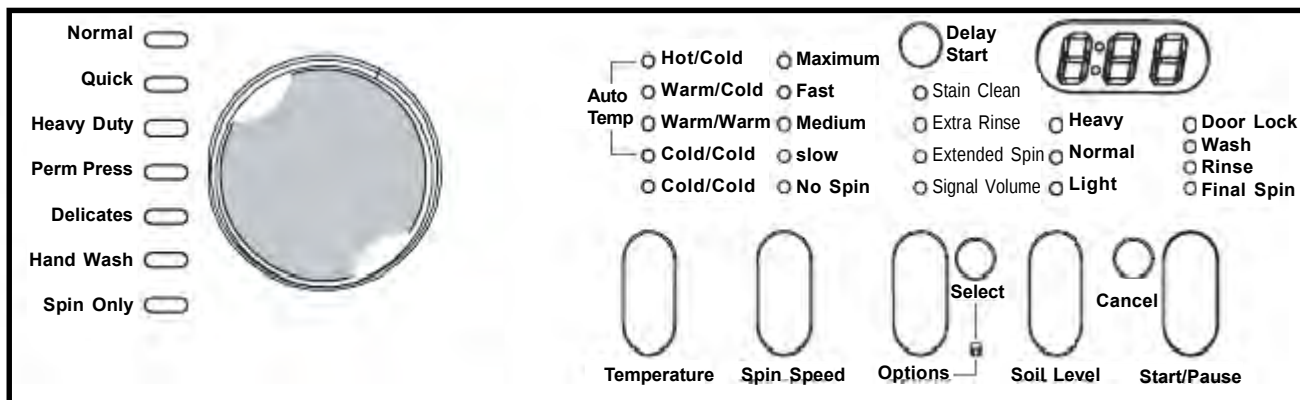
Warranty Restriction

If the pedestal is used for any other purpose than private family use or used with any product that requires modification for installation, the warranty is null and void.

Warranty Parts

Warranty parts are available by contacting the supplier where the pedestal was purchased or refer to the Use and Care Guide that came with the washer or dryer that is installed on the pedestal for contact information.

SECTION C - WASHER OPERATING INSTRUCTIONS 6000 SERIES



Before Operating Your Washer

Read your washer Owner's Guide. It has important safety and warranty information. It also has many suggestions for best washing results.



WARNING To reduce the risk of fire, electric shock or injury to persons, read the **IMPORTANT SAFETY INSTRUCTIONS** in your washer Owner's Guide before operating this appliance.

Operating Steps

Read and follow "Washing Procedures" in your Owner's Guide. It provides detailed information for preparing the wash load and choosing control settings to ensure best washing results.

1. Sort laundry into loads that can be washed together.
2. Prepare items for washing.
3. Pretreat stains and heavy soil.
4. Add laundry load to the wash drum.
5. Add laundry products to the dispenser.

- Detergent, bleach and fabric softener will be dispensed at the proper time in the cycle.
- Slide safety latch to the right to open the dispenser drawer.
- Add the recommended amount of a high efficiency detergent to the detergent compartment. 
- If desired, add liquid chlorine bleach and liquid fabric softener to the appropriate compartments.

- Slowly close dispenser drawer.
 - Any water remaining in the dispenser at the end of the cycle is a result of siphoning action and part of the normal operation.
6. Select the appropriate cycle and settings for the load.
 - Turn the Cycle Selector knob in either direction to select the cycle. The estimated cycle time will be displayed.
 - Suitable wash and rinse water temperatures, final spin speed, options and soil level for each cycle will automatically be displayed. See the Cycle Selection Chart for more details.
 - To change the settings, press the Temperature, Spin Speed and Soil Level buttons.
 - To select or delete an option, press Options, then, while the indicator is blinking, press Select. The indicator will light when the option has been selected. It will no longer be lighted when the option has been deleted.
 - To provide the best care for your laundry, not every setting or option is available with every cycle. If a setting or option is not available, its indicator will not light.
 - Adjustments to the cycle will be remembered each time that cycle is selected in the future. To return to the factory settings, press Start/Pause and Select at the same time and hold until a signal sounds.
 7. Select Delay Start to delay the beginning of the cycle for up to 14 hours, if desired.

8. Start the washer.

- Close the door and press Start/Pause. The washer will not operate with the door open. The status lights will blink, the signal will beep and “dr” will be displayed as a reminder to close the door.
- As a safety measure, the door will automatically lock during the entire wash cycle and the Door Lock indicator will be lighted.
- To add a forgotten item to the wash drum, press Start/Pause, open the door, add the item, close the door and press Start/Pause to resume the cycle. “PAU” will be displayed alternately with the estimated cycle time.
- If the cycle is interrupted during spin, it will take approximately 2-3 minutes for the door lock to release. DO NOT force open the door.
- To stop the washer, press Cancel.

9. A signal will sound when the Signal option is selected. Remove items from the washer when the cycle ends.

Cycle Selection

Turn the Cycle Selector knob to the desired cycle. For best results, follow the fabric care label instructions on items to be washed. To change the selection after the cycle has begun, press Cancel before making another choice. Just turning the knob to another selection will not change the cycle.

Heavy Duty

The Heavy Duty cycle provides 20 minutes of reversing tumble wash action for heavily soiled sturdy items. Hot water is recommended to remove heavy soil and most stains. Stain Clean, Extra Rinse and Extended Spin are available options.

Normal

The Normal cycle provides 15 minutes of reversing tumble wash action for normally soiled loads. Stain Clean, Extra Rinse and Extended Spin are available options.

Perm Press

The Perm Press cycle provides 10 minutes of reversing tumble wash action for cottons and blends with a no-iron finish. To minimize wrinkling, the Warm Rinse and Extended Spin option are not available with this cycle. The Stain Clean and Extra Rinse options can be selected.

Quick

The Quick Cycle provides 10 minutes of reversing tumble wash action for lightly soiled items that must be laundered quickly. To save time, the Extra Rinse and the Extended Spin option are not available with this cycle.

Delicates

This cycle provides 10 minutes of gentle reversing wash action for knits and delicates. To protect your delicate items, a hot water wash, Heavy Soil, and the Extended Spin option are not available. The Stain Clean and Extra Rinse options are available.

Hand Wash

Select the Hand Wash cycle for items labeled “Hand Washable”. Ten minutes of occasional tumbling are followed by 3 rinses and a slow final spin. To protect your hand washables, a hot water wash, Heavy Soil, the Clean Stain and Extended Spin options are not available. The Extra Rinse option is available.

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 a No Spin selection. Select the spin speed appropriate to the load. **To add a rinse prior to spin, select the Extra Rinse option.**

Cycle Settings

Appropriate wash and rinse water temperatures, final spin speed and soil level settings for each cycle will automatically be displayed when a cycle is selected. To change the preset selections, press Temperature, Spin Speed and Soil level to scroll to the desired setting. **If a setting is not appropriate for that cycle, the indicator will not light up.**

NOTE: Pressing any button during operation of the cycle will produce flashing indicator lights, beeping and “Err” will be displayed. To change a setting after the cycle starts, press Start/Pause before making the adjustment. Changes made to the cycle will automatically be remembered each time that cycle is selected in the future.

Wash / Rinse Water Temperatures

Select a wash water temperature according to fiber content, colorfastness and soil level. For best results, follow the care label instructions and use the hottest water safe for the fabric. A cold water rinse saves energy

and reduces wrinkling.

- **Hot/Cold** Heavily soiled white/colorfast cotton and perm press loads.
- **Warm/Cold** Normally soiled white/colorfast cotton and perm press loads.
- **Warm/Warm** Washable woolsens.
- **Cold/Cold** Lightly soiled non-colorfast items, knits, delicates and hand washables.

Auto Temp

Auto Temp improves washing performance. Water temperature can be affected by the water heater setting and its distance from the washer, water usage in other parts of the home and seasonally low ground water temperatures in some geographic areas. Because most detergents work best in wash water at a minimum of 65° F, select Auto Temp settings for regulated wash and final rinse water temperatures.

Auto Temp Hot	120° F (Only if water heater temperature is greater than 120° F.)
Auto Temp Warm	90° F
Auto Temp Cold	65° F
Cold	Temperature of cold tap water.

Spin Speed

Maximum, Fast, Medium and Slow speeds are available for each cycle. The final spin speed and duration vary from cycle to cycle.

- Increasing spin speed will extract more water and decrease drying time.
- Decreasing spin speed will reduce wrinkling.
- Select Slow spin speed to gently spin items that should be line dried.
- 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 Spin Only to remove excess water at a more convenient time.

Soil Level

Press Soil Level to increase or decrease the wash time.

Water Level

There is no need to select a water level. The washer automatically adjusts the water level to the type and size of wash load.

Cycle Options

To select or delete the Extra Rinse, Extended Spin or Signal Volume, press Options until the blinking light indicates the desired option. Then, while it is blinking, press Select. The indicator will light when the option has been selected. It will no longer be lighted when the option has been deleted. To provide the best care for your laundry items, not every option is available with every cycle.

Stain Clean

Use the Stain Clean option to add a 5-minute soak in the middle of the wash portion of any cycle except Quick and Hand Wash.

Extra Rinse

Use this option when additional rinsing is desired to remove excess dirt and detergent. It is recommended for heavily soiled loads or if household members have sensitive skin. Extra Rinse occurs **before** the final rinse when the liquid fabric softener is dispensed.

Extended Spin

Use this option to add several additional minutes to the final spin at the selected speed. This will improve water extraction and decrease drying time.

Signal Volume

A signal will sound at the end of the cycle this option is selected. The signal has an adjustable volume level or can be turned off.

Washer Features

Delay Start

Press Delay Start to select a wash time convenient to your schedule or during off peak energy hours. The start of the cycle can be delayed for up to 14 hours. The delay time selected will be displayed as 30, 60 or 90 minutes or 2 through 14 hrs.

Control Lock

To avoid having someone accidentally start or stop the washer, press Options and Select at the same time and hold for 10 seconds until **"LOC"** is displayed alternately with the estimated cycle time. To unlock the controls, press Options and Select at the same time and hold 10 seconds until **"LOC"** is no longer displayed.

Estimated Cycle Time

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.

Status Lights

The following will be displayed at the appropriate times during the cycle:

- Door Lock
- Wash
- Rinse
- Final Spin

Start/Pause

Press Start/pause to start, pause or restart a cycle. **"PAU"** will be displayed alternately with the estimated time remaining when the cycle is paused.

Cancel

Press Cancel to stop the cycle.

CYCLE SELECTION CHART

The following chart shows the temperatures, spin speeds, soil level options, and features available for each cycle.

	Normal	Quick	Heavy Duty	Permanent Press	Delicates	Handwash	Spin Only
Estimated Cycle Duration	45 minutes	33 minutes	48 minutes	36 minutes	35 minutes	35 minutes	12 minutes

Temperatures

Auto Temp Hot/Cold	X	X	X	X			
Auto Temp Warm/ Cold	* X	* X	* X	* X	X	X	
Auto Temp Warm/Warm	X	X	X	X	X	X	
Auto Temp Cold/ Cold	X	X	X	X	* X	* X	
TapCold/Cold	X	X	X	X	X	X	

Spin Speed

Maximum	* X	* X	* X	X	X	X	* X
Fast	X	X	X	* X	X	X	X
Medium	X	X	X	X	* X	X	X
Slow	X	X	X	X	X	* X	X
No Spin	X	X	X	X	X	X	X

Soil Level

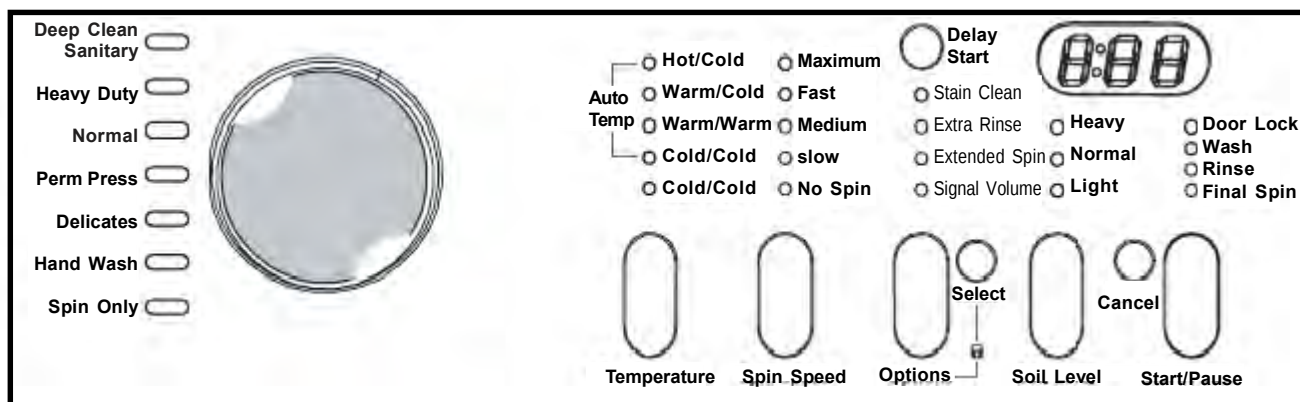
Heavy Soil	X	X		X			
Normal Soil	* X	* X	* X	* X	* X	* X	
Light Soil	X	X	X		X	X	

Options & Features

Stain Clean	X		X	X	X		
Extra Rinse	X		X	X	X	X	X
Extended Spin	X		X				
Signal	* X	* X	* X	* X	* X	* X	* X
Delay Start	X	X	X	X	X	X	X

*Factory Settings X Available Settings **estimated cycle duration is based on factory settings and does not include water fill time, out of balance, oversudsing condition or spin speed selected.

SECTION D - WASHER OPERATING INSTRUCTIONS 7000 SERIES



Before Operating Your Washer

Read your washer Owner's Guide. It has important safety and warranty information. It also has many suggestions for best washing results.

WARNING To reduce the risk of fire, electric shock or injury to persons, read the **IMPORTANT SAFETY INSTRUCTIONS** in your washer Owner's Guide before operating this appliance.

Operating Steps

Read and follow "Washing Procedures" in your Owner's Guide. It provides detailed information for preparing the wash load and choosing control settings to ensure best washing results.

1. Sort laundry into loads that can be washed together.
2. Prepare items for washing.
3. Pretreat stains and heavy soil.
4. Add laundry load to the wash drum.
5. Add laundry products to the dispenser.
 - Detergent, bleach and fabric softener will be dispensed at the proper time in the cycle.
 - Slide safety latch to the right to open the dispenser drawer.
 - Add the recommended amount of a high efficiency detergent to the detergent compartment. 
 - If desired, add liquid chlorine bleach and liquid fabric softener to the appropriate compartments.

- Slowly close dispenser drawer.
 - Any water remaining in the dispenser at the end of the cycle is a result of siphoning action and part of the normal operation.
6. Select the appropriate cycle and settings for the load.
 - Turn the Cycle Selector knob in either direction to select the cycle. The estimated cycle time will be displayed.
 - Suitable wash and rinse water temperatures, final spin speed, options and soil level for each cycle will automatically be displayed. See the Cycle Selection Chart for more details.
 - To change the settings, press the Temperature, Spin Speed and Soil Level buttons.
 - To select or delete an option, press Options, then, while the indicator is blinking, press Select. The indicator will light when the option has been selected. It will no longer be lighted when the option has been deleted.
 - To provide the best care for your laundry, not every setting or option is available with every cycle. If a setting or option is not available, its indicator will not light.
 - Adjustments to the cycle will be remembered each time that cycle is selected in the future. To return to the factory settings, press Start/Pause and Select at the same time and hold until a signal sounds.
 7. Select Delay Start to delay the beginning of the cycle for up to 14 hours, if desired.

8. Start the washer.

- Close the door and press Start/Pause. The washer will not operate with the door open. The status lights will blink, the signal will beep and “dr” will be displayed as a reminder to close the door.
- As a safety measure, the door will automatically lock during the entire wash cycle and the Door Lock indicator will be lighted.
- To add a forgotten item to the wash drum, press Start/Pause, open the door, add the item, close the door and press Start/Pause to resume the cycle. “PAU” will be displayed alternately with the estimated cycle time.
- If the cycle is interrupted during spin, it will take approximately 2-3 minutes for the door lock to release. DO NOT force open the door.
- To stop the washer, press Cancel.

9. A signal will sound when the Signal option is selected. Remove items from the washer when the cycle ends.

Cycle Selection

Turn the Cycle Selector knob to the desired cycle. For best results, follow the fabric care label instructions on items to be washed. To change the selection after the cycle has begun, press Cancel before making another choice. Just turning the knob to another selection will not change the cycle.

Deep Clean Sanitary

Use the Deep Clean cycle for heavily soiled colorfast items that should be washed in very hot water. Only the Hot/Cold Temperature setting is available. The household water heater should be set at a minimum of 120° F. If the setting is lower, the cycle time will be extended by 30 minutes or more.

The wash water is heated by an internal boost heater to a maximum of 152° F as the load tumbles for up to 90 minutes. “SAn” is displayed during the wash phase alternately with the estimated cycle time. Cold water is added to Cool Down the load prior to drain and spin. This cycle will eliminate 99.999% of 4 common infectious bacteria*. (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.)

As a precaution, the washer door is locked once the water temperature reaches 130° F. If the cycle is cancelled during the wash phase and if the water temperature is greater than 150° F, an automatic Cool Down and drain will occur before the door can be opened. “cd” will be displayed.

*Staphylococcus aureus, Enterococcus faecium, Klebsiella pneumoniae and Pseudomonas aeruginosa.

Heavy Duty

The Heavy Duty cycle provides 20 minutes of reversing tumble wash action for heavily soiled sturdy items. Hot water is recommended to remove heavy soil and most stains. Stain Clean, Extra Rinse and Extended Spin are available options.

Normal

The Normal cycle provides 15 minutes of reversing tumble wash action for normally soiled loads. Stain Clean, Extra Rinse and Extended Spin are available options.

Perm Press

The Perm Press cycle provides 10 minutes of reversing tumble wash action for cottons and blends with a no-iron finish. To minimize wrinkling, the Warm Rinse and Extended Spin option are not available with this cycle. The Stain Clean and Extra Rinse options can be selected.

Delicates

This cycle provides 10 minutes of gentle reversing wash action for knits and delicates. To protect your delicate items, a hot water wash, Heavy Soil, and the Extended Spin option are not available. The Stain Clean and Extra Rinse options are available.

Hand Wash

Select the Hand Wash cycle for items labeled “Hand Washable”. Ten minutes of occasional tumbling are followed by 3 rinses and a slow final spin. To protect your hand washables, a hot water wash, Heavy Soil, the Clean Stain and Extended Spin options are not available. The Extra Rinse option is available.

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 a No Spin selection. Select the spin speed appropriate to the load. To add a rinse prior to spin, select the Extra Rinse option.

Cycle Settings

Appropriate wash and rinse water temperatures, final spin speed and soil level settings for each cycle will automatically be displayed when a cycle is selected. To change the preset selections, press Temperature, Spin Speed and Soil level to scroll to the desired setting. If a setting is not appropriate for that cycle, the indicator will not light up.

NOTE: Pressing any button during operation of the cycle will produce flashing indicator lights, beeping and “Err” will be displayed.

To change a setting after the cycle starts, press Start/Pause before making the adjustment. Changes made to the cycle will automatically be remembered each time that cycle is selected in the future.

Wash / Rinse Water Temperatures

Select a wash water temperature according to fiber content, colorfastness and soil level. For best results, follow the care label instructions and use the hottest water safe for the fabric. A cold water rinse saves energy and reduces wrinkling.

- Hot/Cold Heavily soiled white/colorfast cotton and perm press loads.
- Warm/Cold Normally soiled white/colorfast cotton and perm press loads.
- Warm/Warm Washable woolens.
- Cold/Cold Lightly soiled non-colorfast items, knits, delicates and hand washables.

Auto Temp

Auto Temp improves washing performance. Water temperature can be affected by the water heater setting and its distance from the washer, water usage in other parts of the home and seasonally low ground water temperatures in some geographic areas. Because most detergents work best in wash water at a minimum of 65° F, select Auto Temp settings for regulated wash water temperatures.

Auto Temp Hot	120° F
Auto Temp Warm	90° F
Auto Temp Cold	65° F
Cold	Temperature of cold tap water.

NOTE: Final rinse water temperatures are not regulated.

Spin Speed

Maximum, Fast, Medium and Slow speeds are available for each cycle. The final spin speed and duration vary from cycle to cycle.

- Increasing spin speed will extract more water and decrease drying time.
- Decreasing spin speed will reduce wrinkling.
- Select Slow spin speed to gently spin items that should be line dried.
- 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 Spin Only to remove excess water at a more convenient time.

Soil Level

Press Soil Level to increase or decrease the wash time.

Water Level

There is no need to select a water level. The washer automatically adjusts the water level to the type and size of wash load.

Cycle Options

To select or delete the Extra Rinse, Extended Spin or Signal Volume, press Options until the blinking light indicates the desired option. Then, while it is blinking, press Select. The indicator will light when the option has been selected. It will no longer be lighted when the option has been deleted. To provide the best care for your laundry items, not every option is available with every cycle.

Stain Clean

Use the Stain Clean option to add a 5-minute soak in the middle of the wash portion of any cycle except Quick and Hand Wash.

Extra Rinse

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

Extended Spin

Use this option to add several additional minutes to the final spin at the selected speed. This will improve water extraction and decrease drying time.

Signal Volume

A signal will sound at the end of the cycle this option is selected. The signal has an adjustable volume level or can be turned off.

Start/Pause

Press Start/Pause to start, pause or restart a cycle. **"PAU"** will be displayed alternately with the estimated time remaining when the cycle is paused.

Cancel

Press Cancel to stop the cycle.

Washer Features

Delay Start

Press Delay Start to select a wash time convenient to your schedule or during off peak energy hours. The start of the cycle can be delayed for up to 14 hours. The delay time selected will be displayed as 30, 60 or 90 minutes or 2 through 14 hrs.

Control Lock

To avoid having someone accidentally start or stop the washer, press Options and Select at the same time and hold for 10 seconds until **"LOC"** is displayed alternately with the estimated cycle time. To unlock the controls, press Options and Select at the same time and hold 10 seconds until **"LOC"** is no longer displayed.

Estimated Cycle Time

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.

Status Lights

The following will be displayed at the appropriate times during the cycle:

- Door Lock
- Wash
- Rinse
- Final Spin

Drum Light

The drum light will turn on when the washer door is opened and remain lighted for 3 minutes or until the door is closed.

cycle selection chart

The following chart shows the temperatures, spin speeds, soil level options, and the features available for each cycle.

	Deep Clean Sanitary	Normal	Heavy Duty	Perm Press	Delegates	Handwash	Spin Only
Estimated Cycle Duration**	1hr. 50 min	45 minutes	48 minutes	36 minutes	35 minutes	33 minutes	12 minutes

Temperatures

Auto Temp Hot/Cold	*X	X	X	X			
Auto Temp Warm/Cold		*X	*X	*X	X	X	
Auto Temp Warm/Warm		X	X		X	X	
Auto Temp Cold/Cold		X	X	X	*X	*X	
Tap Cold/Cold		X	X	X	X	X	

Spin Speed

Maximum	*X	*X	*X	X	X	X	*X
Fast	X	X	X	*X	X	X	X
Medium	X	X	X	X	*X		X
Slow	X	X	X	X	X	*X	X
No Spin	X	X	X	X	X	X	X

Soil Level

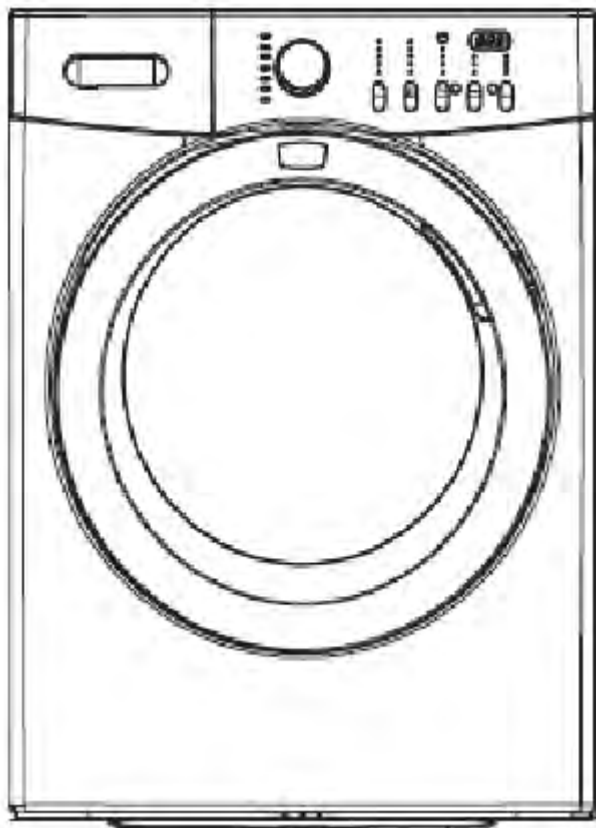
Heavy Soil	X	X	X	X			
Normal Soil	*X	*X	*X	*X	*X	*X	
Light Soil		X		X	X	X	

Options & Features

Stain Clean		X	X	X	X		
Extra Rinse	X	X	X	X	X	X	X
Extended Spin	X	X	X				
Signal	*X	*X	*X	*X	*X	*X	*X
Delay Start	X	X	X	X	X	X	X

*Factory Settings X Available settings **Estimated cycle duration is based on factory settings and does not include water fill times, out of balance, oversudsing condition or spin speed selected.

SECTION E - OWNER GUIDE



The symbol  on the product or on its packaging indicates that this product may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Read and Save These Instructions Record Your Model and Serial Numbers

The model and serial numbers of your washer are found on the washer serial plate located at the top, inside of the door opening. Record and retain these numbers.

Model No. _____

Serial No. _____

Date of Purchase _____

This Use and Care Guide provides general operating instructions for your washer. It also contains information about features for several other models. Your washer may not have every feature included here.

Use the washer only as instructed in this Use and Care Guide and the Operating Instructions included with your washer.

Your safety and the safety of others are very important.

We have provided many important safety messages in the Use and Care Guide, Operating Instructions, Installation Instructions and on your appliance. Always read and obey all safety messages.

 This is the safety alert symbol. This symbol alerts you to hazards that can kill or hurt you or others. All safety messages will be preceded by the safety alert symbol and the word “DANGER” or “WARNING”. These words mean:

 **WARNING** You will be killed or seriously injured if you don't follow instructions.

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

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

Pedestal

A pedestal accessory, Model No. APWD15W, specifically designed for this washer may be used when elevating the washer for ease of use. Failure to use accessories certified by the manufacturer could result in personal injury, property damage or damage to the washer.

Important Safety Instructions

Read all instructions before using this washer.

 **WARNING** To reduce the risk of fire, electrical shock, or injury to persons when using this washer, comply with the basic warnings listed.

 Failure to comply with these warnings could result in serious personal injuries.

Prevent Fire

⚠ WARNING 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.

⚠ WARNING Do not put oily or greasy rags or clothing on top of the washer. These substances give off vapors that could ignite the materials.

⚠ WARNING 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.

⚠ WARNING 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.

⚠ WARNING 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

⚠ WARNING 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.

⚠ WARNING 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.

⚠ WARNING Keep laundry products out of children's reach. To prevent personal injury, observe all warnings on product labels.

⚠ WARNING 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

⚠ WARNING 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.

⚠ WARNING 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 adaptor plug.**

⚠ WARNING 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.

⚠ WARNING 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 this Owner's 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.

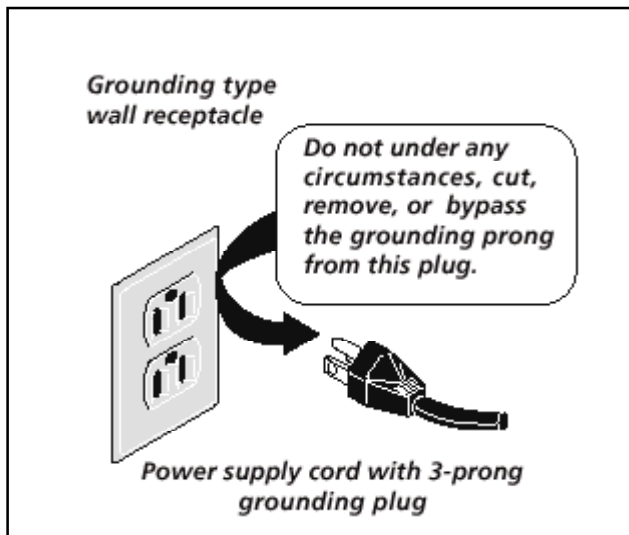
⚠ WARNING To reduce the risk of electric shock, disconnect this appliance from the power supply before attempting any user maintenance. Turning the controls to the OFF position does not disconnect this appliance from the power supply.

⚠ WARNING 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.

⚠ Failure to comply with these warnings could result in serious personal injuries.

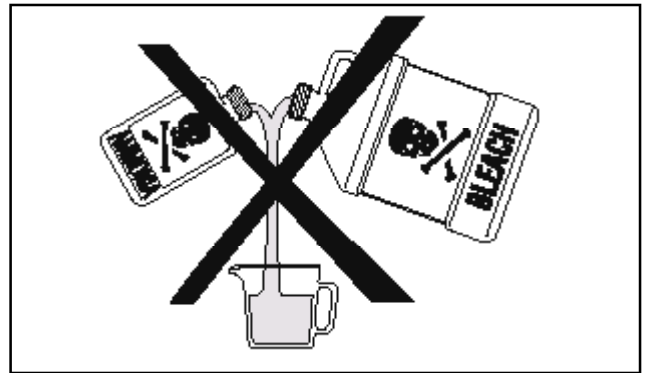
⚠ This washer is equipped with an electrical overload protector. The motor will stop if it becomes overheated. The washer will automatically restart after a cool down period of up to 30 minutes, if the washer has not been manually turned off during this time.

⚠ WARNING Avoid fire hazard or electrical shock. Do not use an adaptor plug or extension cord or remove grounding prong from electrical power cord. Failure to follow this warning can cause serious injury, fire or death.



CORRECT
Use this way ONLY

⚠ WARNING Do not use or mix liquid chlorine bleach with other household chemicals such as toilet cleaners, rust removers, acid or products containing ammonia. These mixtures can produce dangerous fumes which can cause serious injury or death.



Note: The instructions appearing in this Owner's Guide are not meant to cover every possible condition and situation that may occur. Common sense and caution must be practiced when installing, operating and maintaining any appliance.

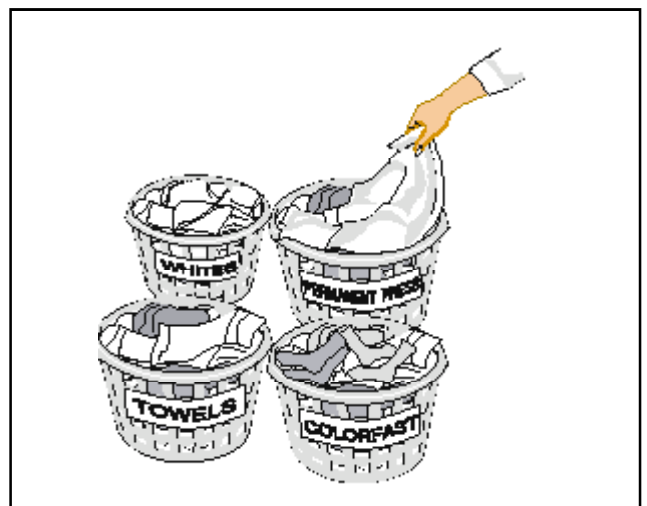
SAVE THESE INSTRUCTIONS

Washing Procedures

- Follow the guidelines below for preparing the wash load.
- Read the **Operating Instructions** card for operating your specific model.
- **Always read and follow fabric care and laundry product labels.**

⚠ WARNING To reduce the risk of fire, electrical shock, or injury to persons, read **Important Safety Instructions**, before operating this washer.

1. **Sort laundry into loads that can be washed together.**

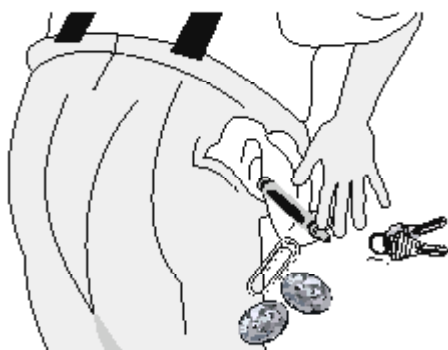


Sort items by recommended water temperatures and wash time.

- Separate white, light, and colorfast items from dark and noncolorfast items.
- Separate items which shed lint from items which attract lint. Permanent press, synthetic, knit and corduroy items will pick up lint from towels, rugs and chenille bedspreads.
- Separate heavily soiled items from lightly soiled items.
- Separate lacy, sheer and loosely knit items from sturdy items.
- Do not machine wash items containing fiberglass. Small particles of fiberglass left in the drum may stick to fabrics in other loads and cause skin irritation.

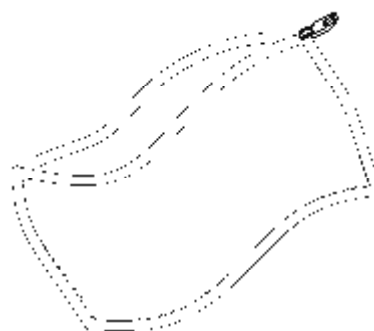
2. Prepare items for washing.

- Empty pockets.



- Brush off lint and dirt. Shake out rugs and beach towels.
- Close zippers, fasten hooks, tie strings and sashes, and remove nonwashable trims and ornaments.
- Remove pins, decorative buttons, belt buckles, and other objects which could be damaged. This also helps protect other items in the wash load.
- Mend rips and tears to prevent further damage during washing.
- Place delicate items such as bras, shoulder

pads, hosiery, and belts in a mesh bag to prevent tangling during the wash cycle.



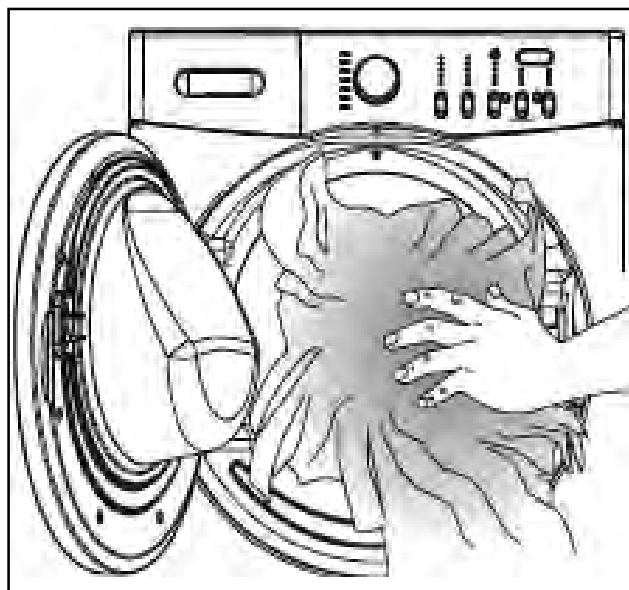
- Turn knit items inside out to prevent pilling.

3. Pretreat stains and heavy soil.

See **Stain Removal** for details.

4. Add laundry load to washer.

- Combine large and small items in a load. Load large items first. Large items should not be more than half the total wash load.

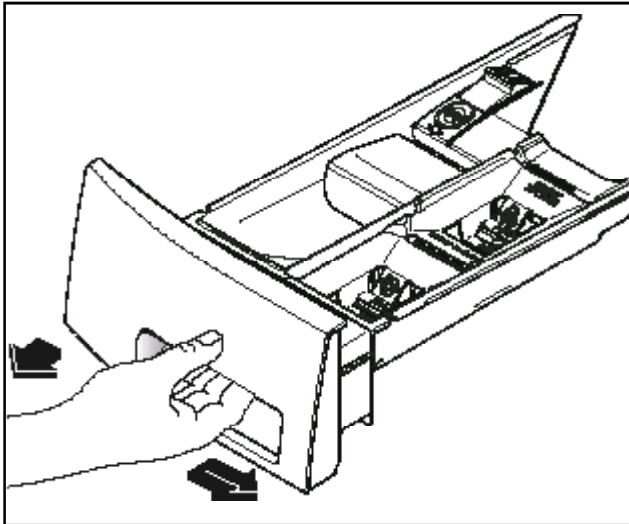


- Washing single items such as a sweater, towel or jeans may cause an out-of-balance load. Add 1 or 2 similar items to help balance the load.
- Single heavy items such as a bedspread can be washed separately.
- The washer can be fully loaded, but the items

should not be tightly packed. The door should close easily.

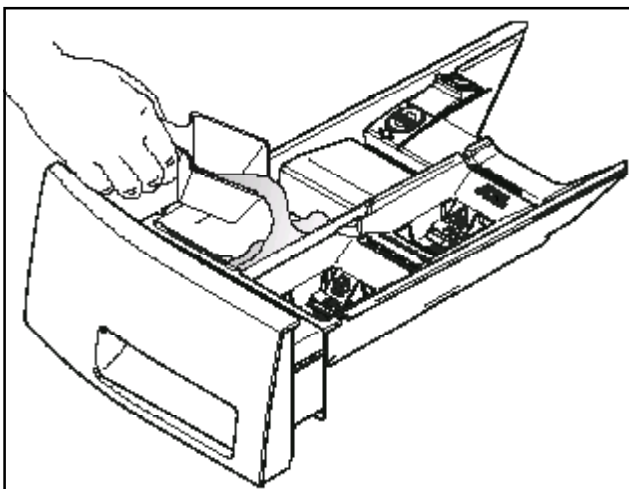
5. Add detergent, bleach and fabric softener to automatic dispenser following these steps:

A. OPENING AND CLOSING THE DISPENSER DRAWER



- Slowly open the dispenser drawer by first sliding the safety latch to the right, then pulling the drawer out until it stops.
- After adding laundry products, slowly close the dispenser drawer. Closing the drawer too quickly could result in early dispensing of the bleach and fabric softener.

B. DETERGENT



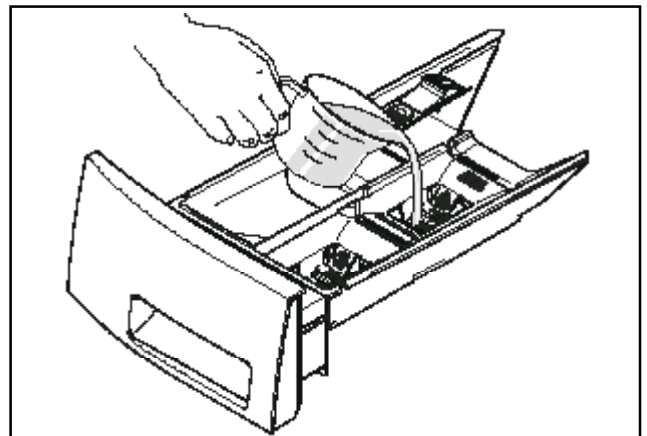
- Detergent is flushed from the dispenser at the

beginning of the cycle. Either powdered or liquid detergent can be used.

Note: Liquid detergent will drain into the washer drum as it is added.

- Add a low-sudsing, high-efficiency detergent made for front-loading washers to the dispenser chamber. Look for this symbol on the detergent label. Use the cap or scoop provided by the detergent manufacturer to measure the amount recommended. 
- Color-safe bleach, water conditioner, detergent booster and enzyme products may be added to the detergent compartment. Avoid mixing liquids and powders.
- Detergent usage may need to be adjusted for water temperature, water hardness, load size and soil level.
- For best results, avoid oversudsing.

C. LIQUID BLEACH

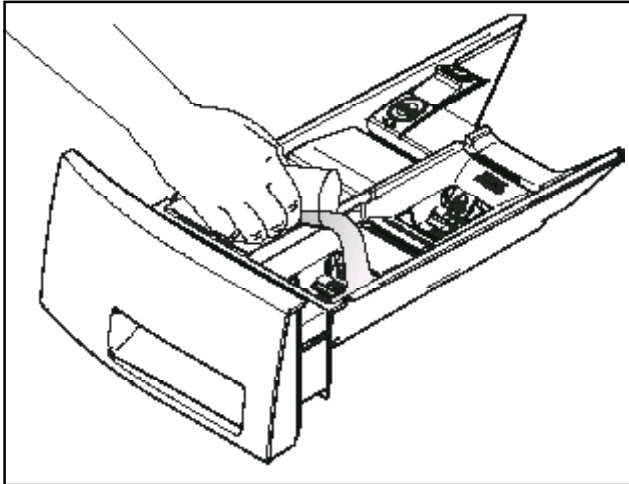


- If desired, measure out the recommended amount of liquid chlorine bleach (not to exceed 1/3 cup (80 mL)) and pour it into the center compartment labeled "Liquid Bleach" and marked with this symbol. 
- Fill to the minimum fill line (MIN.) for small loads. Fill to the maximum fill line (MAX.) for large loads. Do not exceed the maximum fill line. Overfilling can cause early dispensing of the bleach which could result in damaged clothes.
- Do not pour undiluted liquid chlorine bleach

directly onto the load or into the drum. Fabric damage can occur.

- **Add powder or liquid color-safe bleach to the detergent dispenser.**

D. FABRIC SOFTENER



- If desired, pour the recommended amount of fabric softener into the compartment labeled "Fabric Softener" and marked with this symbol. 
- Fill to the minimum fill line (MIN.) for small loads. Fill to the maximum fill line (MAX.) for large loads. Do not exceed the maximum fill line. Overfilling can cause early dispensing of the fabric softener which could result in stained clothes.
- ***Do not pour fabric softener directly on the wash load.***
- Use of a fabric softener dispensing ball is not recommended in tumble action washers.

6. Select the cycle, temperature, spin speed, options and features according to type, size, and soil level of each load. Start the washer.

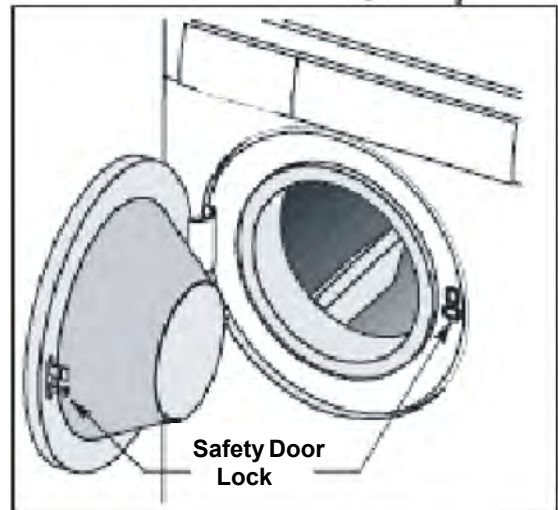
(See **Operating Instructions** for your specific model.)

7. Remove items when the cycle is completed.

Place washed items in automatic dryer, line dry, or dry flat as directed by fabric care label. Excess wrinkling, color transfer or odors may develop in items left in the washer after the cycle has ended.

8. General Precautions.

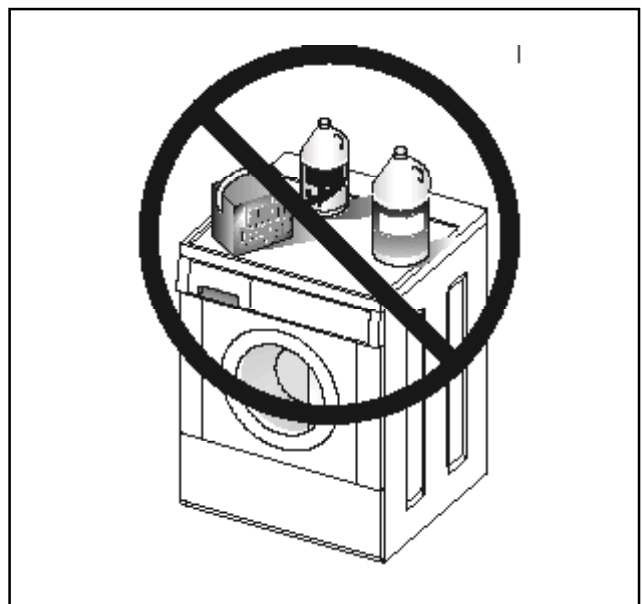
- **Do not slam the washer door closed or try to force the door open when DOOR LOCK light is on.** This could result in damage to the washer.



- **DO NOT leave the washer door open.** An open door could entice children to hang on the door or crawl inside the washer.

Note: If there are no small children present, leave the door ajar to prevent odor build up.

- To avoid damaging the washer and personal injury, **DO NOT** hang on or lean against the washer door.
- Do not place detergent, bleach or fabric softener containers on top of the washer. They can damage the finish or controls.



Note: From time to time you may see water in the bleach and fabric softener compartments. This is a result of the siphoning action and is part of the normal operation of the washer.



As an ENERGY STAR Partner, ® Electrolux Home Products has determined that this product meets the ENERGY STAR ® guidelines for energy efficiency.

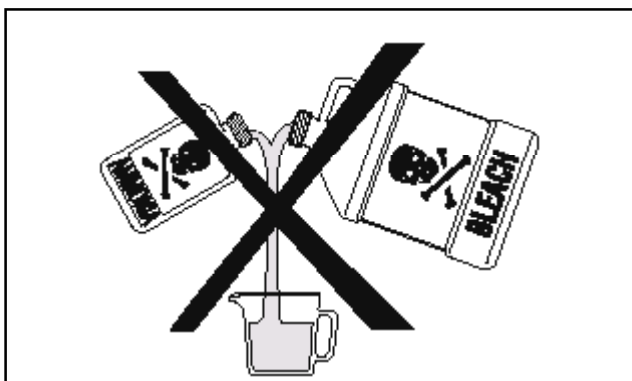
Stain Removal

⚠ WARNING Do not use or mix liquid chlorine bleach with other household chemicals such as toilet cleaners, rust removers, acid or products containing ammonia. These mixtures can produce dangerous fumes which can cause serious injury or death.

Safe Stain Removal Procedures

⚠ WARNING To reduce the risk of fire or serious injury to persons or property, comply with the basic warnings listed below:

- Read and comply with all instructions on stain removal products.
- Keep stain removal products in their original labeled containers and out of children's reach.
- Thoroughly wash any utensil used.
- Do not combine stain removal products, especially ammonia and chlorine bleach. Dangerous fumes may result.



- Never wash items which have been previously cleaned in, washed in, soaked in or spotted with gasoline, dry cleaning solvents or other flammable or explosive substances because they give off vapors that could ignite or explode.

- Never use highly flammable solvents, such as gasoline, inside the home. Vapors can explode on contact with flames or sparks.

For successful stain removal:

- Remove stains promptly.
- Determine the kind of stain, then follow the recommended treatment in the stain removal chart below.
- To pretreat stains, use a prewash product, liquid detergent, or a paste made from granular detergent and water.
- Use cold water on unknown stains because hot water can set stains.
- Check care label instructions for treatments to avoid on specific fabrics.
- Check for colorfastness by testing stain remover on an inside seam.
- Rinse and wash items after stain removal.



Follow fabric care label instructions.

For successful stain removal:

- Remove stains promptly.
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- Check for colorfastness by testing stain remover on an inside seam.
- Rinse and wash items after stain removal.

STAIN REMOVAL	
Stain	Treatment
Adhesive tape, chewing gum, rubber cement	Apply ice. Scrape off excess. Place stain face down on paper towels. Saturate with prewash stain remover or nonflammable dry cleaning fluid.
Baby formula, dairy products, egg	Use product containing enzymes to pretreat or soak stains. Soak for 30 minutes or more. Wash.
Beverages (coffee, tea, soda, juice, alcoholic beverages)	Pretreat stain. Wash using cold water and bleach safe for fabric.
Blood	Rinse with cold water. Rub with bar soap. Or, pretreat or soak with product containing enzymes. Wash using bleach safe for fabric.
Candle wax, crayon	Scrape off surface wax. Place stain face down between paper towels. Press with warm iron until wax is absorbed. Replace paper towels frequently. Treat remaining stain with prewash stain remover or nonflammable dry cleaning fluid. Hand wash to remove solvent. Wash using bleach safe for fabric.
Chocolate	Pretreat or soak in warm water using product containing enzymes. Wash using bleach safe for fabric.
Collar or cuff soil, cosmetics	Pretreat with prewash stain remover or rub with bar soap.
Dye transfer on white fabric	Use packaged color remover. Wash using bleach safe for fabric.
Grass	Pretreat or soak in warm water using product containing enzymes. Wash using bleach safe for fabric.
Grease, oil, tar (butter, fats, salad dressing, cooking oils, car grease, motor oils)	Scrape residue from fabric. Pretreat. Wash using hottest water safe for fabric. For heavy stains and tar, apply nonflammable dry cleaning fluid to back of stain. Replace towels under stain frequently. Rinse thoroughly. Wash using hottest water safe for fabric.
Ink	Some inks may be impossible to remove. Washing may set some inks. Use prewash stain remover, denatured alcohol or nonflammable dry cleaning fluid.
Mildew, scorch	Wash with chlorine bleach if safe for fabric. Or, soak in oxygen bleach and hot water before washing. Badly mildewed fabrics may be permanently damaged.
Mud	Brush off dry mud. Pretreat or soak with product containing enzymes.
Mustard, tomato	Pretreat with prewash stain remover. Wash using bleach safe for fabric.
Nail polish	May be impossible to remove. Place stain face down on paper towels. Apply nail polish remover to back of stain. Repeat, replacing paper towels frequently. Do not use on acetate fabrics.
Paint, varnish	WATER BASED: Rinse fabric in cool water while stain is wet. Wash. Once paint is dry, it cannot be removed. OIL BASED AND VARNISH: Use solvent recommended on can label. Rinse thoroughly before washing.
Perspiration	Use prewash stain remover or rub with bar soap. Rinse. Wash using nonchlorine bleach in hottest water safe for fabric.
Rust, brown or yellow discoloration	For spots, use rust remover safe for fabric. For discoloration of an entire load, use phosphate detergent and nonchlorine bleach. Do not use chlorine bleach because it may intensify discoloration.
Shoe polish	LIQUID: Pretreat with a paste of granular detergent and water. PASTE: Scrape residue from fabric. Pretreat with prewash stain remover or nonflammable dry cleaning fluid. Rinse. Rub detergent into dampened area. Wash using bleach safe for fabric.
Urine, vomit, mucus, feces	Pretreat or soak in product containing enzymes. Wash using bleach safe for fabric.

COMMON WASHING PROBLEMS

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.

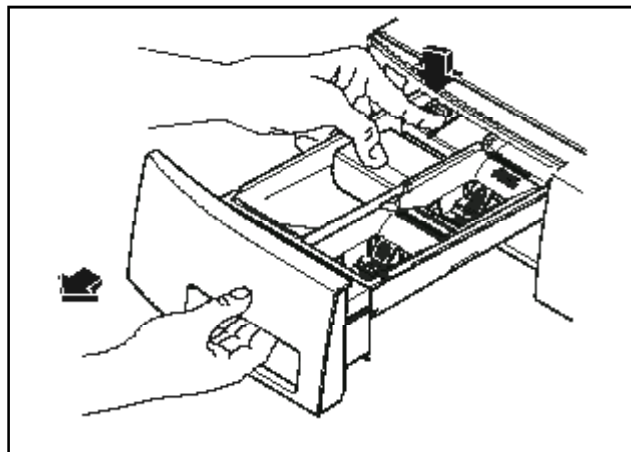
PROBLEM	POSSIBLE CAUSES	SOLUTIONS	PREVENTIVE MEASURES
Blue stains	• Undiluted liquid detergent or fabric softener dispensed directly onto fabric.	• If caused by detergent, mix 1 cup (240 ml) white vinegar with 1 quart (.95 L) water in plastic container. Soak item 1 hour. Rinse. • If caused by fabric softener, rub stains with bar soap. Wash.	• Avoid overfilling detergent and fabric softener compartments of dispenser.
Discoloration, graying	• Not enough detergent. • Wash temperature too low. • Incorrect sorting.	• Rewash with correct amount of detergent and hottest water safe for fabric. Add bleach safe for fabric.	• Sort items by soil level and color. • Use correct amount of detergent, hottest water and bleach safe for fabric.
Greasy, oily stains	• Not enough detergent. • Undiluted liquid fabric softener poured directly on fabric.	• Treat with prewash stain remover or liquid detergent. • Increase detergent and water temperature. Rewash. • Rub fabric softener stains with bar soap.	• Use correct amount of detergent and hottest water safe for fabric. • Do not pour liquid fabric softener directly on fabric. See Washing Procedures on adding softener.
Holes, tears, or snags	• Incorrect use of chlorine bleach. • Unfastened zippers, hooks, buckles. • Rips, tears and broken threads. • Overloading the washer. • Degradation of fabric.	• May be irreversible if rips, tears and seams cannot be mended.	• Never pour chlorine bleach directly on fabric. • Check condition of items before washing. See Washing Procedures for preparing, loading and adding chlorine bleach.
Lint	• Incorrect sorting. • Tissues left in pocket. • Overloading the washer. • Not enough detergent. • Undissolved detergent has left a residue resembling lint. • Static cling is attracting lint. • Load washed too long.	• Reduce load size. Rewash using correct water temperature, water level, and amount of detergent. • Add nonprecipitating water conditioner to wash water to remove detergent residue. • Add liquid fabric softener to final rinse. • Dry load in dryer. • Remove lint with lint brush or roller.	• See Washing Procedures for sorting and preparing the wash load. • Do not overload washer. • Use correct temperature and amount of detergent, water and wash time.
Pilling (Fibers break off, ball up and cling to fabric.)	• Pilling is normal with synthetic and permanent press fabrics. This is due to abrasion from normal wear.	• Use a lint brush or shaver to remove pills.	• Use fabric softener in the washer to lubricate fibers. • When ironing, use spray starch or fabric finish on collars/cuffs. • Turn items inside out to reduce abrasion.
Residue or powder on dark items; stiff, harsh fabrics.	• Undissolved detergent. • Some nonphosphate granular detergents can combine with hard water minerals to form a residue. • Overloading the washer.	• Rewash load.	• Increase water temperature using hottest water safe for fabric. • Do not overload washer. • Use liquid detergent or use nonprecipitating water conditioner with nonphosphate granular detergent.
Wrinkling	• Overloading the washer. • Incorrect wash cycle for wash load.	• Reduce load size. • Rinse in cold water with liquid fabric softener using the Perm Press or Delicate cycle.	• Do not overload washer. • Remove items from washer as soon as cycle is completed. • Use liquid fabric softener.
Yellow buildup of body soil on synthetic fabrics	• Agitation time too short. • Wash water temperature too low. • Not enough detergent.	• Soak in detergent booster or product containing enzymes. • Wash in hot water (120°F/49°C) using full permanent press cycle. Increase detergent. Add bleach or treat with color remover.	• Select correct wash cycle. • Use correct amount of detergent. • Wash synthetics frequently using hot or warm water.
Yellow or brown rust stains	• Iron or manganese in water supply, water pipes, or water heater.	• To restore discolored load of whites, use rust remover safe for fabric. • Do not use chlorine bleach to remove rust stains. It may intensify discoloration.	• Use nonprecipitating water softener. • Before washing, run hot water for a few minutes to clear lines. • Drain water heater occasional • For an ongoing problem, install an iron filter in your water supply system.

Care and Cleaning

Outside

- When washing is completed, wipe top and sides of washer with a damp cloth. Turn water faucets off to prevent pressure build-up in the hoses.
- As needed, clean the cabinet with mild soap and water. **Never use harsh, gritty or abrasive cleansers.** If door or console becomes stained, clean with diluted chlorine bleach [1/2 cup (120 ml) in 1 quart (.95 L) water]. Rinse several times with clear water.
- Remove glue residue from tape or labels with a mixture of warm water and mild detergent. Or, touch residue with the sticky side of the tape or label.
- **Before moving the washer,** place a strip of cardboard or thin fiberboard under the front leveling legs to prevent floor damage.

- Reach back into the left rear corner of the drawer cavity and press down firmly on the lock tab (left rear portion of the drawer). Pull out the drawer.

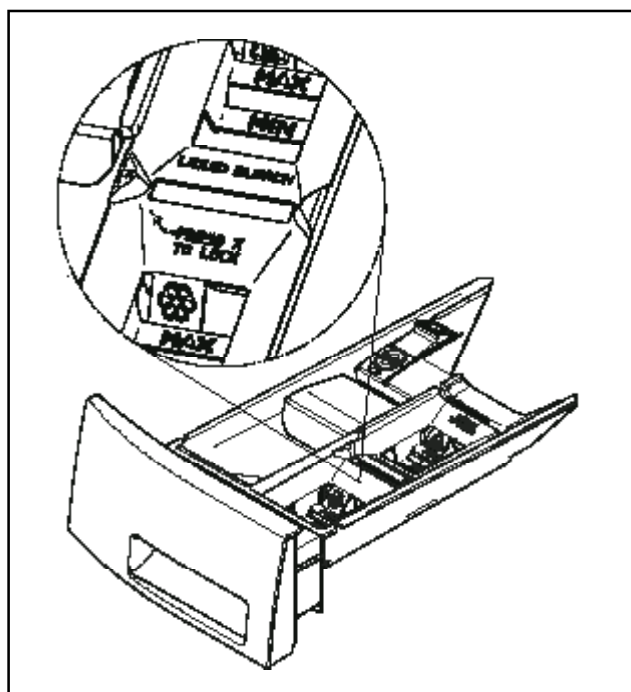
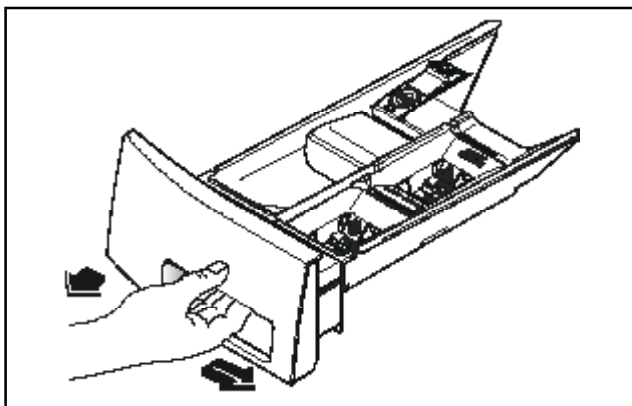


- Remove the insert from the bleach and fabric softener compartments.

Cleaning the Dispenser Drawer Area

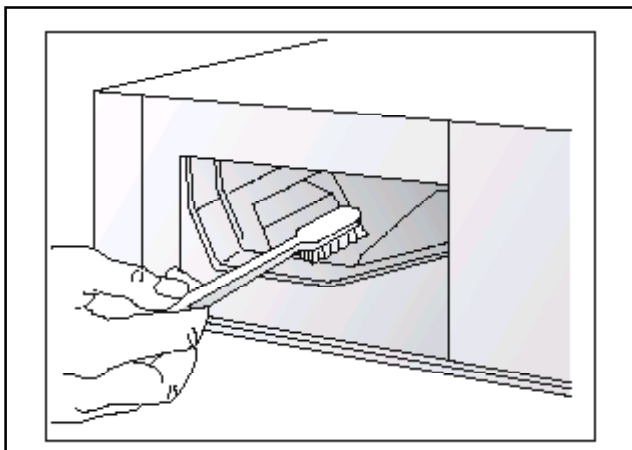
Detergent and fabric softener may build up in the dispenser drawer. Residue should be removed once or twice a month.

- Remove the drawer by first sliding the safety latch to the right, then pulling the drawer out until it stops.



- Rinse the drawer and inserts with hot tap water to remove traces of accumulated powders and liquids. Large amounts of fabric softener residue may indicate improper dilution or more frequent cleaning is required.

- To clean the drawer opening, use a small brush to clean the recess. Remove all residue from the upper and lower parts of the recess.



- Replace the insert pressing the "X" to lock it in place. Return the dispenser drawer.

3. Plug electrical cord into a properly grounded electrical outlet.
4. Add 1 gallon (3.8 L) nontoxic recreational vehicle (RV) antifreeze to empty wash drum. Close door.
5. Select the Drain/Spin cycle. Press START and let the washer drain for 1 minute to drain out all the water. Not all of the RV antifreeze will be expelled.
6. Press Pause/Cancel twice, unplug electrical power cord, dry off drum interior and close door.
7. Remove dispenser drawer. Drain any water in compartments and dry compartments. Replace drawer.
8. Store washer in an upright position.
9. To remove antifreeze from washer after storage, run empty washer through a complete cycle using detergent. **Do not add wash load.**

Winterizing Instructions

If the washer is stored in an area where freezing can occur or moved in freezing temperatures, follow these winterizing instructions to prevent damage to the washer:



1. Turn off water supply faucets.
2. Disconnect hoses from water supply and drain water from hoses.

Avoid Service Checklist

Before calling for service, review this list. It may save both time and expense. The list includes common concerns that are not the result of defective workmanship or materials in this washer.

OCCURRENCE

POSSIBLE CAUSE / SOLUTION

NOISE

High pitch "jet engine" noise.

- A certain amount of motor whine is normal during the spin cycle.

Rattling and clanking noise.

- Foreign objects such as coins or safety pins may be in drum or pump. Stop washer and check drum. If noise continues after washer is restarted, objects may be in pump. Call your authorized servicer.
- Belt buckles and metal fasteners are hitting wash drum. To prevent unnecessary noise and damage to drum, fasten fasteners and turn items inside out.

Squealing sound or hot rubber odor.

- Washer is overloaded. Do not overload washer. Stop washer and reduce load.

Thumping sound.

- Heavy wash loads may produce a thumping sound. This is usually normal. If sound continues, washer is probably out of balance. Stop washer and redistribute wash load.

Vibrating noise.

- Washer is not resting firmly on floor. Move washer so it rests firmly on floor. Adjust leveling legs. See INSTALLATION INSTRUCTIONS for details.
- Shipping bolts and foam blocks have not been removed during installation. See INSTALLATION INSTRUCTIONS for removing shipping bolts and foam blocks.
- Wash load unevenly distributed in drum. Stop washer and rearrange wash load.

OPERATING

Washer does not start.

- Electrical power cord may not be plugged in or connection may be loose. Make sure plug fits tightly in wall outlet.
- House fuse blown, circuit breaker tripped, or a power outage has occurred. 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.
- Water supply faucets are not turned on. Turn on water supply faucets.
- Motor is overheated. Washer motor will stop if it becomes over heated. It will automatically restart after a cool down period of up to 30 minutes (if washer has not been manually turned off).
- Dispenser drawer is not completely closed. Close dispenser drawer.

Washer won't spin.

- Washer door is not completely closed. Close door completely.
- Dispenser drawer is not completely closed. Close dispenser drawer.
- Load is too small. Add 1 or 2 similar items to help balance the load.

OCCURRENCE

POSSIBLE CAUSE / SOLUTION

Residue left in drum.

- Heavily soiled items. Wipe drum with a nonabrasive household cleanser, then rinse. Shake or brush excess dirt and sand from items before washing.

WATER

Water collects in bleach and fabric softener compartments.

- This is a result of the siphoning action and is part of the normal operation of the washer. Water may be removed by removing the dispenser drawer and draining water into the empty drum or sink.

Wash load too wet after spin.

- Washer is overloaded. Do not overload washer. See Washing Procedures.
- Load is too small. Add 1 or 2 similar items to help balance the load.
- Load is out of balance. Rearrange load to allow proper spinning.
- Drain hose is kinked. Straighten drain hose.

Water does not enter washer or it enters slowly.

- Water supply is not adequate in area. Check another faucet in the house. Wait until water supply and pressure increase.
- Water supply faucets are not completely open. Fully open hot and cold faucets.
- Water is being used elsewhere in the house. Water pressure must be at least 30 psi (260 kPa). Avoid running water elsewhere while washer is filling.
- Water inlet hoses are kinked. Straighten hoses.
- Water inlet screens plugged. Clean screens.

Warm or hot water is not hot enough.

- Hot water heater is set too low or is a distance from washer. 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.
- Hot water is being used elsewhere in the house. Avoid using hot water elsewhere before or during washer use. There may not be enough hot water available for proper cleaning. If problem persists, your hot water system may be unable to support more than 1 use at a time.

Water in washer does not drain or drains slowly.

- Drain hose is kinked or clogged. Clean and straighten the drain hose.
- Maximum standpipe height is 8' (2.4 m).

Water leaks.

- Fill hose connection is loose at faucet or washer. Check and tighten hose connections. Install rubber sealing washers provided.
- House drain pipes are clogged. Unclog drain pipes. Contact plumber if necessary.

Oversudsing.

- Wrong detergent. Run rinse cycle. Use a low-sudsing, high efficiency detergent.
- Too much detergent. Run rinse cycle. Use less detergent in future loads

OCCURRENCE

POSSIBLE CAUSE / SOLUTION

Incorrect wash and rinse temperatures.

- Hot and cold water hoses are connected to wrong supply faucets. 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.

- Drain hose standpipe is incorrect height. Standpipe must be a minimum of 23.6" (60 cm) high to prevent siphoning. See INSTALLATION INSTRUCTIONS.
-

Major Appliance Warranty Information

Sample warranty information always refer to warranty with product

Your appliance is covered by a one year limited warranty. For one year from your original date of purchase, Electrolux will pay all costs for repairing or replacing any parts of this appliance that prove to be defective in materials or workmanship when such appliance is installed, used and maintained in accordance with the provided instructions.

Exclusions This warranty does not cover the following:

1. Products with original serial numbers that have been removed, altered or cannot be readily determined.
2. Product that has been transferred from its original owner to another party or removed outside the USA or Canada.
3. Rust on the interior or exterior of the unit.
4. Products purchased "as-is" are not covered by this warranty.
5. Food loss due to any refrigerator or freezer failures.
6. Products used in a commercial setting.
7. Service calls which do not involve malfunction or defects in materials or workmanship, or for appliances not in ordinary household use or used other than in accordance with the provided instructions.
8. Service calls to correct the installation of your appliance or to instruct you how to use your appliance.
9. Expenses for making the appliance accessible for servicing, such as removal of trim, cup boards, shelves, etc., which are not a part of the appliance when it is shipped from the factory.
10. Service calls to repair or replace appliance light bulbs, air filters, water filters, other consumables, or knobs, handles, or other cosmetic parts.
11. Surcharges including, but not limited to, any after hour, weekend, or holiday service calls, tolls, ferry trip charges, or mileage expense for service calls to remote areas, including the state of Alaska.
12. Damages to the finish of appliance or home incurred during installation, including but not limited to floors, cabinets, walls, etc.
13. Damages caused by: services performed by unauthorized service companies; use of parts other than genuine Electrolux parts or parts obtained from persons other than authorized service companies; or external causes such as abuse, misuse, inadequate power supply, accidents, fires, or acts of God.

DISCLAIMER OF IMPLIED WARRANTIES; LIMITATION OF REMEDIES

CUSTOMER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR OR REPLACEMENT AS PROVIDED HEREIN. CLAIMS BASED ON IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR OR THE SHORTEST PERIOD ALLOWED BY LAW, BUT NOT LESS THAN ONE YEAR. ELECTROLUX SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES SUCH AS PROPERTY DAMAGE AND INCIDENTAL EXPENSES RESULTING FROM ANY BREACH OF THIS WRITTEN LIMITED WARRANTY OR ANY IMPLIED WARRANTY. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES, SO THESE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WRITTEN WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

Keep your receipt, delivery slip, or some other appropriate payment record to establish the warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. Service under this warranty must be obtained by contacting Electrolux at the addresses or phone numbers below.

**If You
need
service**

This warranty only applies in the USA and Canada. In the USA, your appliance is warranted by Electrolux Major Appliances North America, a division of Electrolux Home Products, Inc. In Canada, your appliance is warranted by Electrolux Canada Corp. Electrolux authorizes no person to change or add to any obligations under this warranty. Obligations for service and parts under this warranty must be performed by Electrolux or an authorized service company. Product features or specifications as described or illustrated are subject to change without notice.

USA
1.800.944.9044
Electrolux Major Appliances
North America
P.O. Box 212378
Augusta, GA 30907



Electrolux

Canada
1.800.668.4606
Electrolux Canada Corp.
5855 Terry Fox Way
Mississauga, Ontario, Canada
L5V 3E4

SECTION F - OPERATION

Control

The control is mounted to the back of the console. The control:

1. Provides power to the dispenser solenoids, wax motor, door lock solenoid, drain pump and speed control board.
2. Sends signals to the speed control board to tell it what program to run and the heater control board to control the heater.
3. Checks the status of the door switches, door light switch, incoming water sensor and the drum water sensor.

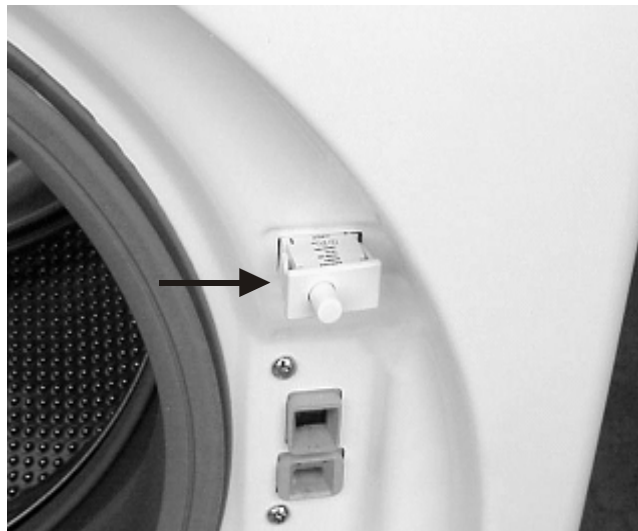


Drum Light Assembly (On select models)

The drum light assembly is made up of a 12 volt AC, 5 watt light that is embedded in the bellows,



a pushbutton switch that is closed when the door is open,



a stepdown transformer that reduces the voltage from 120 Volts to 12 Volts.

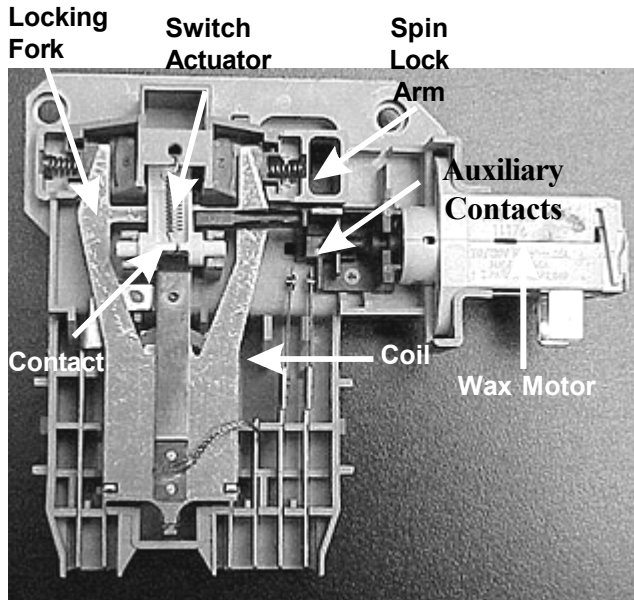


A circuit in the electronic control turns the light off when the door is left open for more than three minutes.

Door Switch Assembly

The door switch assembly, located behind the front panel, is a safety feature that prevents the washer from operating when the door is open and locks the door in the spin cycle.

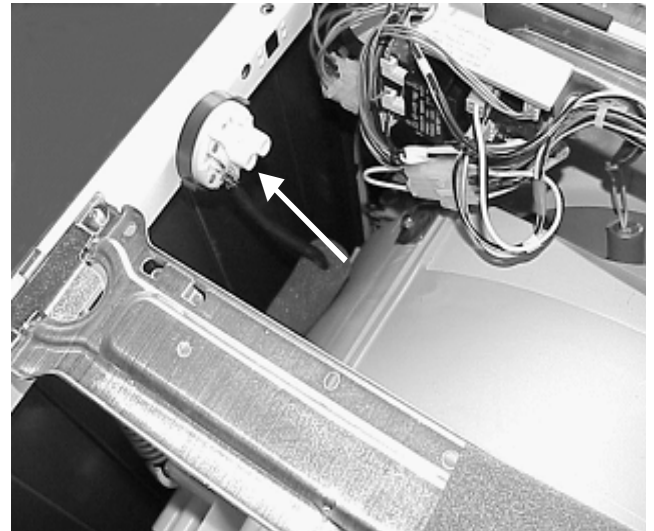
The door lock assembly is made up of a coil, door switch, switch actuator, locking fork, wax motor, auxiliary switch and spin lock arm.



When a cycle is selected and the start pad is touched, the control board applies power to the coil. The magnet field of the coil pulls the locking fork down and tries to pull the contacts of the door lock switch closed. If the washer door is open, a tab on the switch actuator prevents the contacts from closing and the locking fork will not allow the door to be closed until the stop pad is touched, removing current from the coil. When the washer door is closed, the door strike pivots the switch actuator out of the way allowing the magnetic field of the coil to close the contacts of the door lock switch and the locking fork locks the door. The wax motor and spin lock arm are used to prevent the door from being opened while the spin basket is still spinning. Power is applied to the wax motor when the washer is in spin. When power is applied to the wax motor, it expands its piston within 30 to 40 seconds driving the spin lock arm between the locking fork and the switch actuator holding the locking fork down. At the same time, the piston closes the door lock auxiliary switch allowing the washer to go into spin. When power is removed from the wax motor, it takes about 90 seconds for the wax motor to cool down and retract the piston, pulling the spin lock arm back away from the locking fork and auxiliary switch. This provides enough time for the spin basket to slow its rotation down to the wash speed before the door could possibly be opened.

Pressure Switch (Select models)

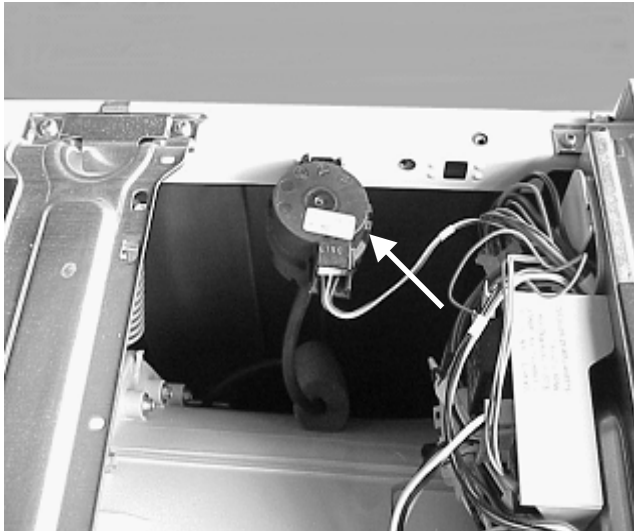
The pressure switch is mounted to the right side panel under the top of the washer and controls the water level in the washer.



The pressure switch is made up of a single pole double throw switch, but only contacts 1 and 2 are used. The contacts are controlled by a bellows 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. L 1 is applied to the pressure switch, by the control. If the water level is below 1/2 inch from the bottom of the spin basket, contacts 1 to 2 of the pressure switch close applying power to one side of the (3) solenoids of the water valve assembly. The other side of the solenoids is connected to neutral by a relay contacts on the control board. When the cycle calls for water, depending on the water temperature selected and the increment of the cycle, the control board connects one or two of three the solenoid coils to neutral activating the water valve solenoids. When the corrected water level is reached contacts 1 and 2 open, signaling the control to remove neutral from the solenoids.

Electronic Water Level Sensor:

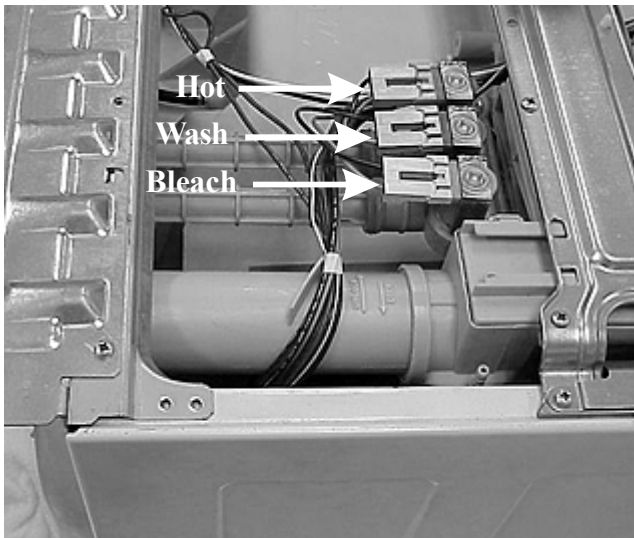
The electronic water level sensor is mounted to the right side panel under the top of the washer and controls the water level in the washer.



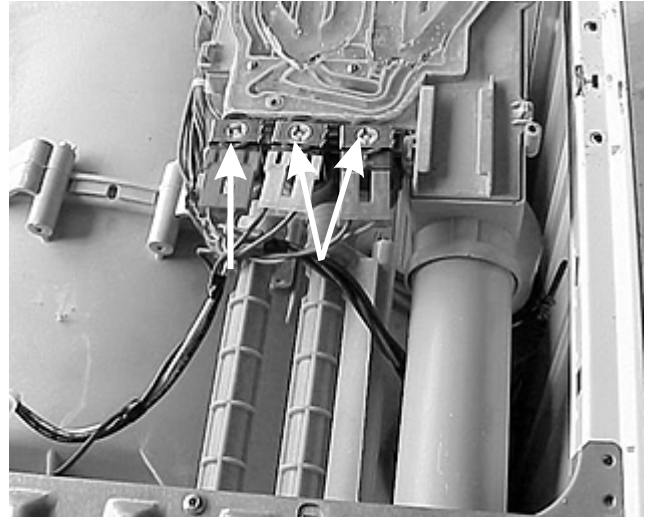
The electronic water level sensor is made up of an electronic board and a bellow inside a sealed chamber. The chamber is connected by a hose to the air bell located at the bottom of the washer attached to the drain boot. The electronic board reads the pressure in the bellow and converts it into an electronic 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.

Water Inlet Valve Assembly:

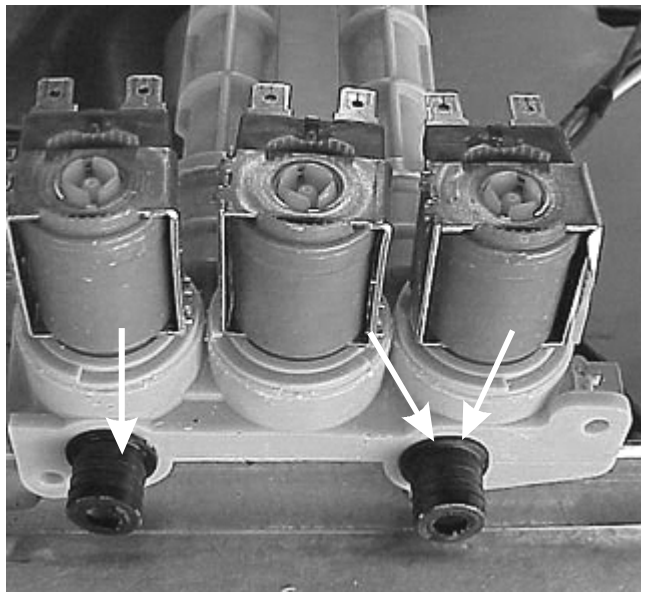
The water inlet valve assembly is made up of a plastic housing, 2 tubes, which the inlet water hoses are connected to, 3 solenoids and a positive thermal sensor.



The hot solenoid is connected to the incoming hot water. The wash and bleach solenoids share a common input cavity that is connected to the cold water supply.



The hot and wash solenoids share a common output cavity, with the bleach solenoid having a separate output cavity.



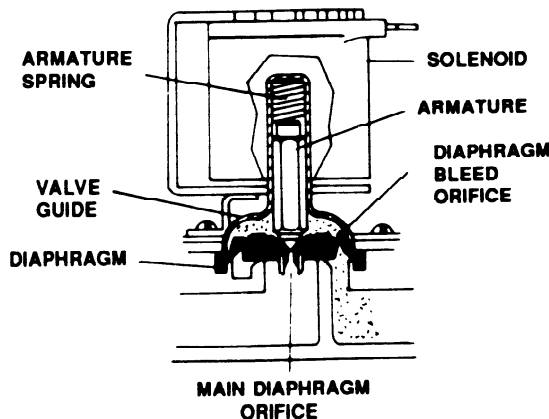
Valve Operation:

The (3) inlet solenoid valves are identical in construction and operation. The valve body provides an air passage with a large orifice and seat where the water can be stopped. The outlet of the valve body empties into a chamber. A moveable rubber diaphragm operates against the valve seat to start and stop the flow of water. The diaphragm is operated by water pressure. It has a small bleed orifice outside the seat contact area, and a large main orifice at its center. The armature of the solenoid serves to open and close the main orifice. The

armature operates within a closed metal tube (valve guide) which is sealed by the outer edge of the diaphragm to the valve body. A coil spring holds the armature down against the diaphragm main orifice when the solenoid is not energized.

The following line drawings and text explains basic valve operation.

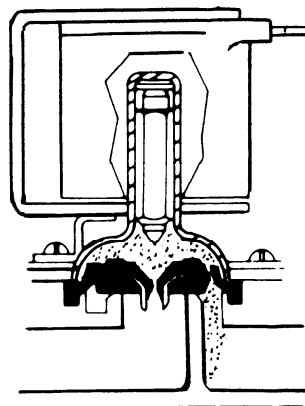
When the valve is in a closed position, the solenoid is not energized. Water has bled through the diaphragm bleed orifice placing incoming line pressure on top of the diaphragm. The bottom of the diaphragm is essentially at atmospheric pressure (open to the outlet) and the pressure differential holds the valve shut.



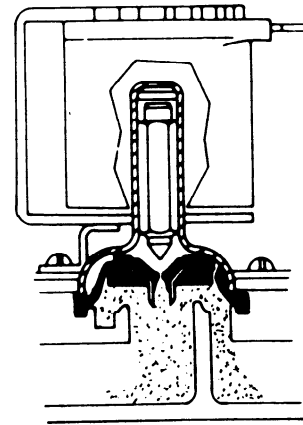
Water Valve Closed

When the solenoid is energized, the resulting magnetic field pulls the armature up into the valve guide. The armature spring is compressed by this action. When the armature moves up, it allows the water on the top of the diaphragm to drain through the main orifice.

The diaphragm bleed orifice is much smaller than the main orifice and will not admit enough water to maintain pressure on the top side of the diaphragm. Thus, as the pressure on the top of the diaphragm is reduced to almost zero, the pressure on the bottom lifts the diaphragm off the valve seat, allowing a full flow of water.

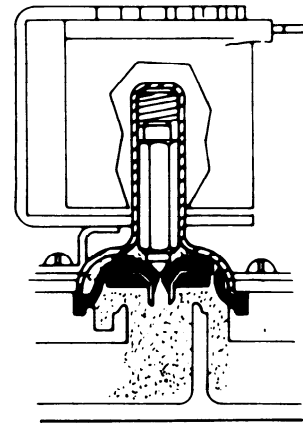


Solenoid Activated



Water Valve Open and Diaphragm Up

When the solenoid is de-energized, the armature drops down, closing the diaphragm main orifice. Water continues to flow through the diaphragm bleed orifice, equalizing the pressure and allowing the spring to push the diaphragm down against the valve seat.



Water Valve Closing

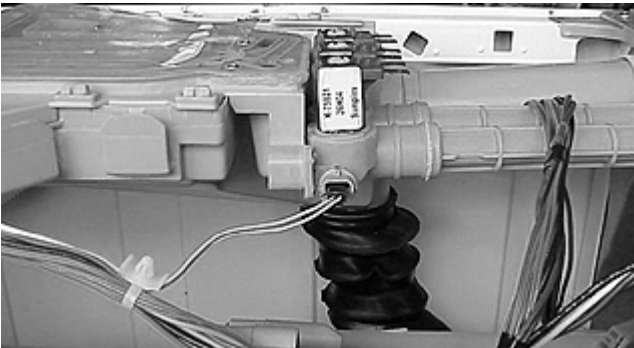
Water Temperature:

When the **AUTO TEMP** switch is set to **Hot/Cold**, in the wash cycle the hot solenoid is activated and the Bleach solenoid is activated, for all except the last fill, in rinse. For the last rinse fill the wash and bleach solenoids are activated. When the **AUTO TEMP** switch is set to **Warm/Cold**, in the wash cycle the hot and wash solenoids are activated and the Bleach solenoid is activated, for all except the last fill, in rinse. For the last rinse fill, the wash and bleach solenoids are activated. When the **AUTO TEMP** switch is set to **Warm/WARM**, in the wash cycle the hot and wash solenoids are activated and the Bleach solenoid is activated, for all except the last fill, in rinse. For the last rinse fill, the hot and bleach solenoids

are activated. When the **AUTO TEMP** switch is set to **COLD/COLD**, the wash solenoid is activated and the hot solenoid cycles to warm the water to 65°. For the last rinse fill, the wash and bleach solenoids are activated. When the **TEMP** switch is set to **Cold/Cold**, in the wash cycle the wash solenoid is activated and the bleach solenoid is activated, for all except the last fill, in rinse. For the last rinse fill, the wash and bleach solenoids are activated.

Auto Temp System:

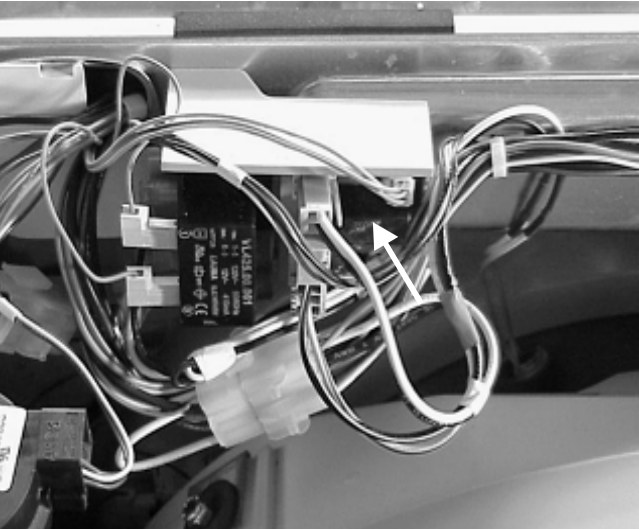
The auto temp system controls the minimum temperature of the cold water setting (approximately 65° F.) and temperature of the warm and hot water setting (approximately 90° F. and 120° F.). On select models with a sanitary wash cycle, when the control is set to sanitary wash, the water temperature is raised to 152° F in the wash cycle. Auto temp system is made up of the control board and a positive thermal sensor mounted in the water inlet valve assembly.



On select models, a positive thermal sensor (drum sensor),



a heater control board,

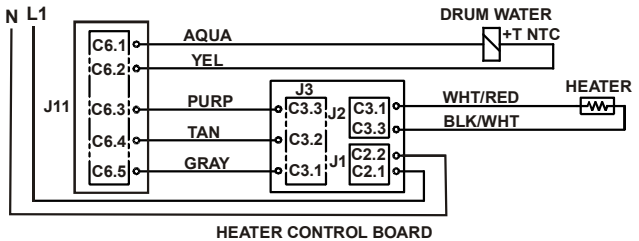


and a 1000 watt heating element located in the bottom rear of the drum are added to auto temp system.



If the hot water supply in the house is below the auto temp setting, the drum heater heats the water in the wash cycle.

When a warm or hot temperature is selected in the wash cycle, the control board connects the hot water solenoid to neutral and cycles the center cold water solenoid off and on to regulate the temperature. When a cold temperature is selected, the control board connects the center cold water solenoid to neutral and cycles the hot water solenoid off and on to regulate the temperature. When a warm rinse is selected for the final rinse, the control connects the outside cold solenoid to neutral and cycles the hot solenoid.

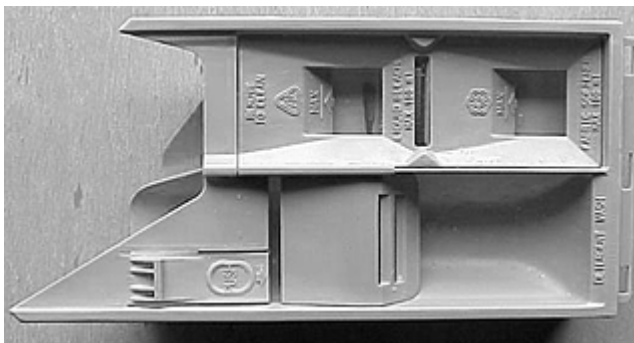


Automatic Dispenser:

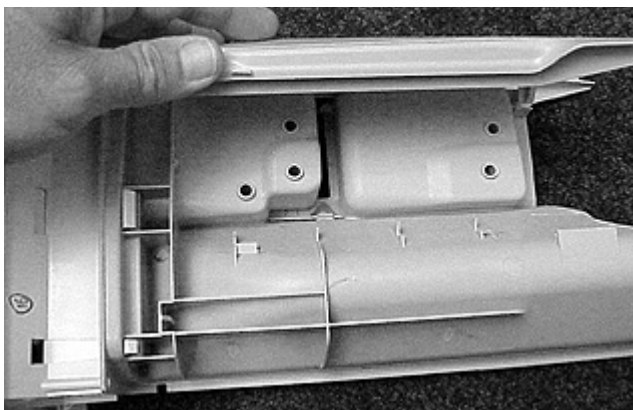
The automatic dispenser for detergent, liquid bleach and fabric softener system is made up of the dispenser cavity,



and a removable drawer with three cavities: one for detergent, one for bleach and one for fabric softener.

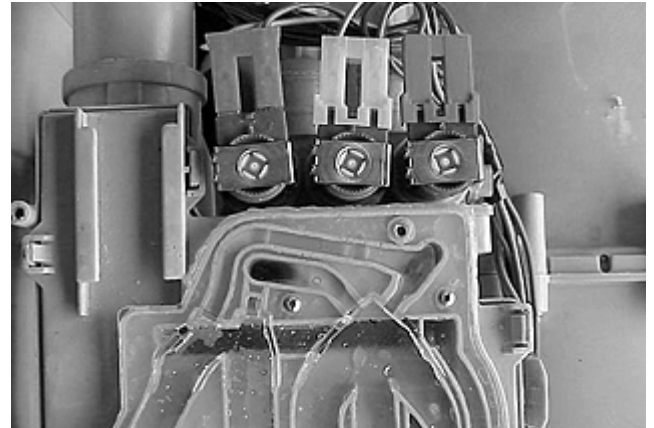


A plastic conveyer is snapped to the bottom of the drawer to direct the outputs from the bleach and softener chambers to the dispenser housing outlet channel. This prevents the mixtures from coming out the front of the drawer.



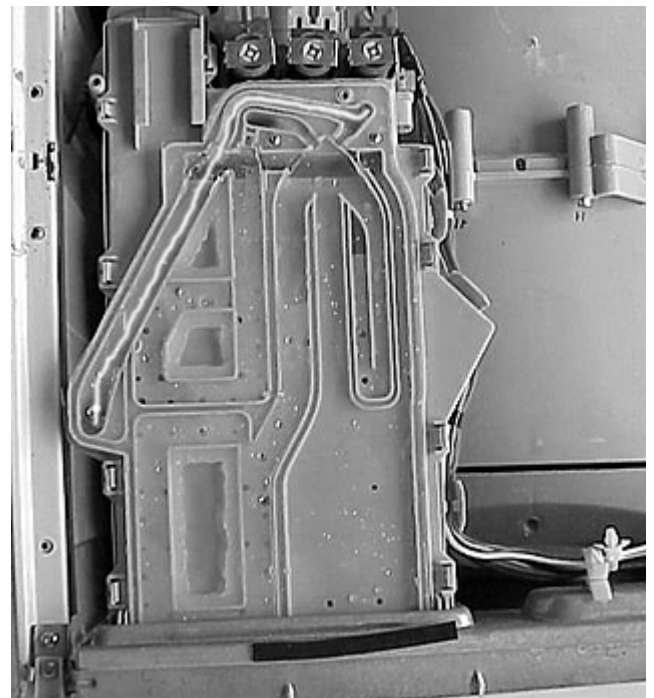
The 2 outlets of the water inlet valve assembly are inserted into the rear of the automatic dispenser. During the fill cycles, water is directed into the top of the cavity through 2 inlets. The inlet on the right, as viewed from the front of the washer, is connected to the combination output of the hot water solenoid and the center cold water solenoid.

The inlet on the left, as viewed from the front of the washer, is 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 4 channels: the dispenser bypass channel, 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.

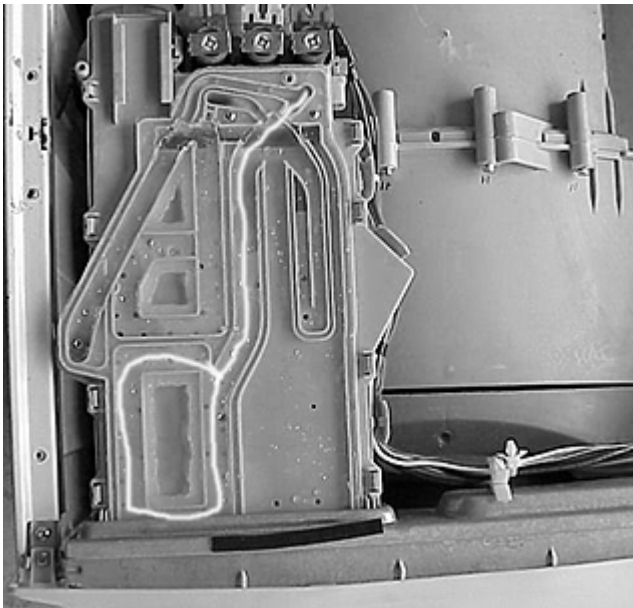
The dispenser advanced rinsing technology channel receives water whenever the inlet on the right, as viewed from the front of the washer, is activated.



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.



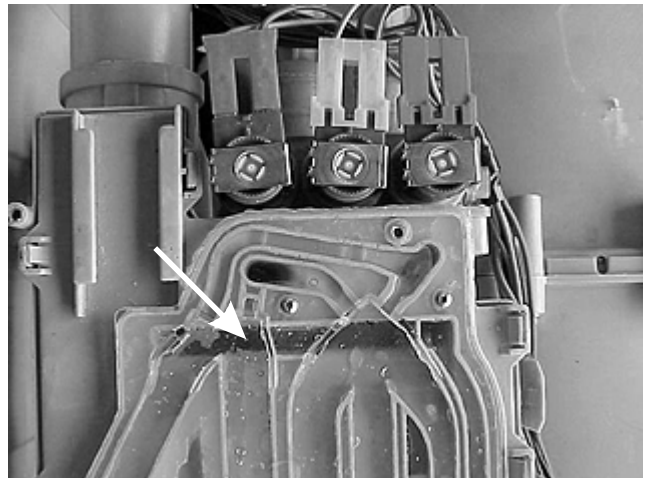
The detergent dispenser channel receives water from the right-hand input, as viewed from the front of the washer. The detergent channel forms a loop that allows the water to pass over the detergent section of the drawer.



As the water pass over the detergent section, holes in the cavity allows some of the water to enter and flush the detergent cavity.



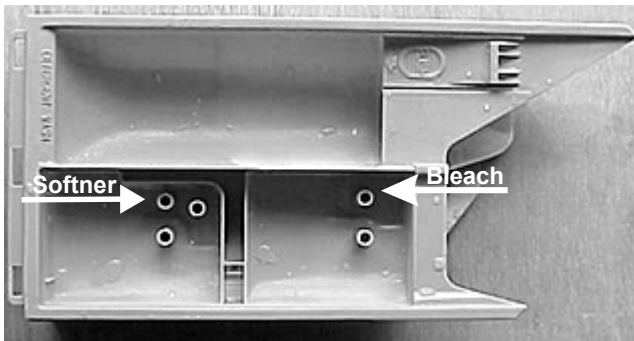
Since the flow of the incoming water is more than the holes can dispense, the excess water backs up into a channel across the rear of the dispenser.



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.

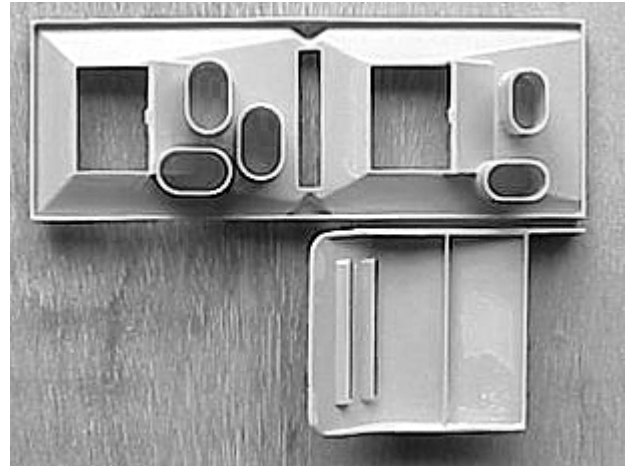


Detergent is dispensed at the start of the cycle, but bleach and fabric softener are not dispensed until later in the cycle. The bleach and softener cavities in the drawer have tubes molded into the bottom of them.

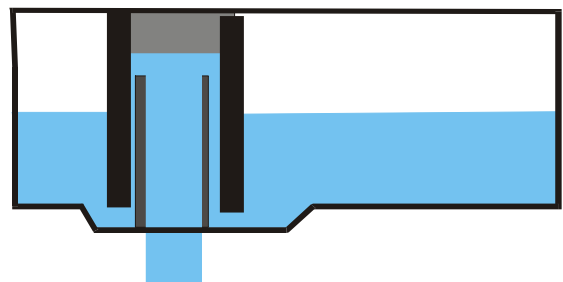


These tubes allow bleach or fabric softener to be added to their cavity without being dispensed as long as the liquid is below the top of the tubes. At the proper time in the cycle when bleach or fabric softener is to be dispensed, water is added to the cavity. This raises the mixture above the top of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

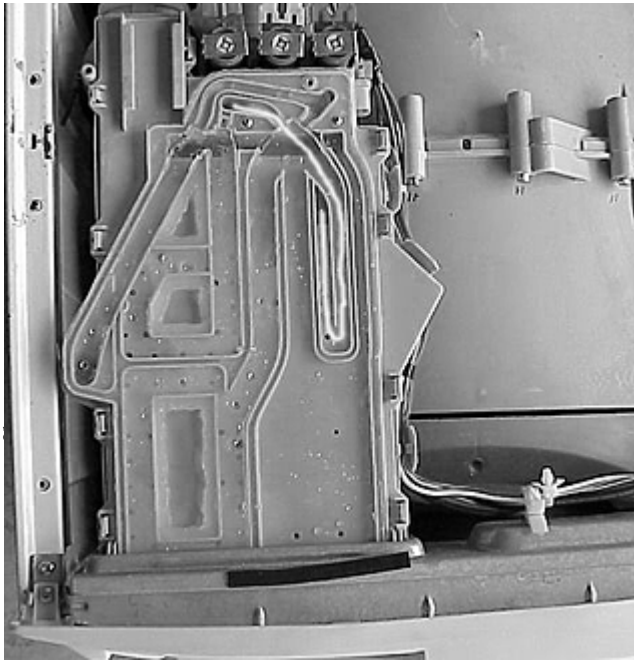


These tubes are larger than the tubes in the cavity and are designed to fit over the tubes, but not touch the bottom of the cavity when the cover is installed. When water is added to either the bleach or fabric softener liquid, the mixture level rises between the tubes above the tubes in the cavity and 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 left-hand 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.



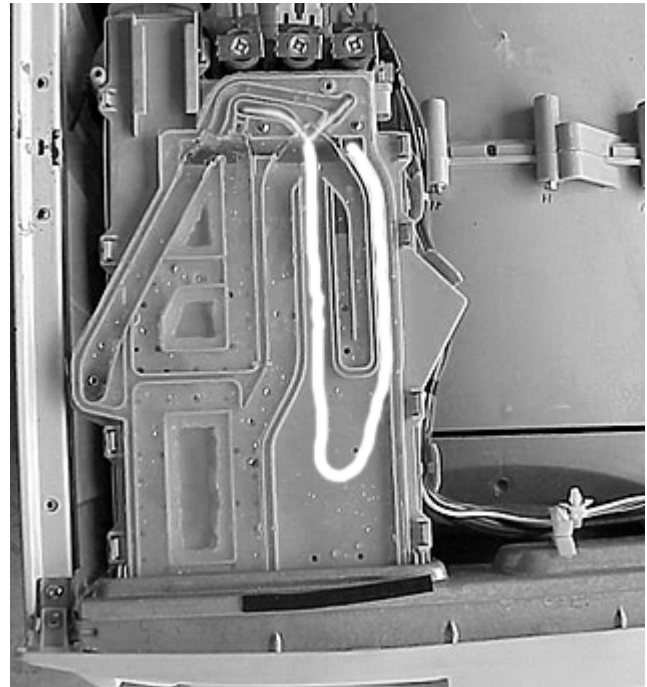
As the water passes over the bleach section, holes in the cavity allow some of the water to enter and mix with the bleach.



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 backup into the channel across the rear of the dispenser and flow into the tub. For water to enter the fabric softener channel, both the left and right inlets must be activated. As the water from the left inlet pass 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.

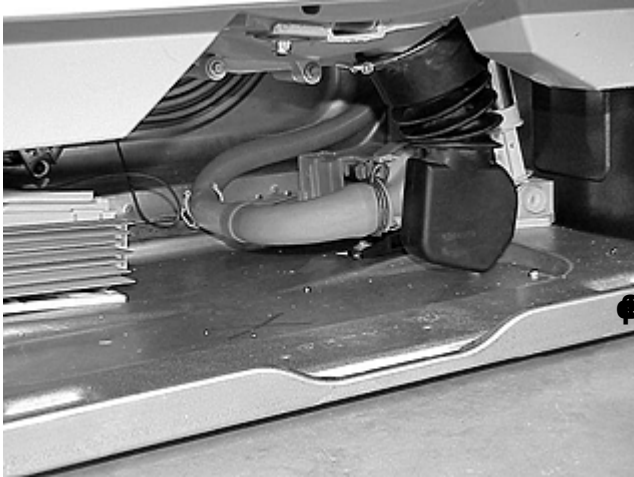


This raises the mixture level above the tubes in the drawer fabric softener cavity allowing the mixture to flow into the tub. Like the detergent channel, the flow of the incoming water is more than the holes can dispense allowing the

the excess water to backup into the channel across the rear of the dispenser and flow into the tub.

Drain Pump:

The drain pump is mounted to the bottom plate of the washer behind the access panel. It operates on 120 VAC and is controlled by the control board and pressure switch. The pump out specifications of the drain pump vary from 12 G.P.M with a 3 foot standpipe height to 5 G.P.M. with a 8 foot standpipe height.



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:



Note: The control board is the board that is mounted in the console and the speed control board is the board that is in the left rear corner of the washer.

1. The speed of the drive motor 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 during the spin cycle by converting the sine wave from the tachogenerator to square waves and comparing the distance between the square waves.

Motor:

The motor is mounted to the bottom of the outer tub.



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.

SECTION G - CONSTRUCTION

The front loading, tumble action clothes washer consists of a perforated, cylindrical spin basket suspended horizontally on its axis within a larger solid cylindrical tub. This assembly is suspended by springs within a four piece steel cabinet. A see through door and a flexible bellows (seal) provides access for loading and unloading clothes.

Cabinet

The cabinet is made of heavy steel in a four piece design. The sides and rear are Tog-I-locked at the rear corners and base. The rear of the cabinet is galvanized steel with an access panel.

Front Panel and Door Assembly

The front panel is attached with screws to the console mounting brace and base plate.

Bellows

The bellows is a rubber sleeve that seals the suspended outer tub to the stationary cabinet front at the tub opening. Its purpose is to provide a water tight opening into the tub that can be sealed by the cabinet door, yet allow flexibility for the oscillation of the tub during the wash and spin cycles.

Outer Tub Assembly

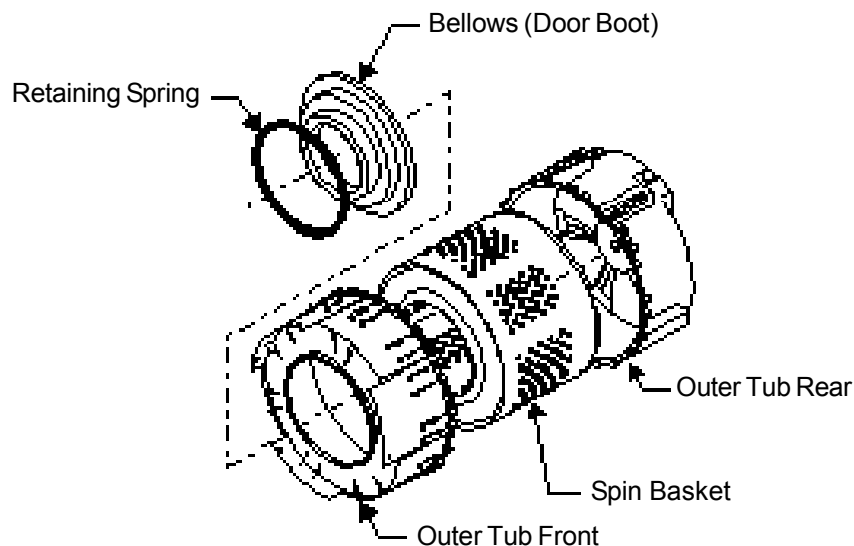
The outer tub assembly is supported by two suspension springs and stabilized by two air shock assemblies. A cement counter weight mounted to the front of the outer tub. Another weight is molded into the rear half of the outer tub. These counter weights prevent excessive oscillation of the entire suspended assembly during an unbalanced spin cycle.

Spin Basket Assembly

The spin basket is constructed of stainless steel. The circumference of the basket is perforated to allow water to flow through it as it revolves. A heavy steel shaft is pressed into the spin basket support which is then bolted to the basket. The spin basket assembly is entirely supported by two ball bearing assemblies pressed into the rear of the outer tub.

A large drive pulley is mounted to the free end of the shaft that extends through the rear of the outer tub.

There are three plastic vanes mounted to the spin basket to aid in the washing action during the wash cycle. The rotation of the spin basket provides both the washing action during the wash cycle and water extraction during the spin cycle.



SECTION H - TROUBLESHOOTING

The electronic control has self diagnostics error codes built in that cover most products failures.

READING ERROR CODES:

1. Wake the washer by pressing any button.
2. Wait 5 seconds.
3. Press and **HOLD** the **Start/Pause** and **Cancel** buttons simultaneously. As long as the buttons are held, the failure code will appear in the display as an **E** followed by two numbers, a number and a letter or two letters. The control will beep and the **Door Lock**, **Wash**, **Rinse**, and **Final Spin** indicator lights will flash.

Quick Check

If there is no error displayed and the washer momentarily starts then turns back off:

1. Listen for a relay closure inside the motor control shortly after the **Start/Pause** key is pressed. If this happens, the motor control has power.
2. Check the 5 pin connector wiring between the console control and the motor control.

NOTE: During normal operation, the display may show:

"**SAn**" - deep clean (Sanitary Cycle)
"**cd**" - cool down (Sanitary cycle)
"**do**" or "**dr**" - door problem.
"**Err**" - an error has been detected.
"**LOC**" - control lock is activated.
"**PAU**" - cycle has been interrupted.

To clear latest stored error code:

- Turn the **Program Knob** to the start position, **Spin Only**.
- Press **Start/Pause** to start the cycle and save it.
- Press **Cancel** to stop the cycle and turn off the LEDs.
- Press **Cancel** again to turn on the LEDs.
- Within 5 seconds, press and hold the **Option** and **Start/Pause** buttons until LEDs start sequentially chasing, then release buttons.

- Turn the program knob clockwise 7 clicks from the Start Position. The control will signal the last error code.
- Press and hold the **Options** and **Start/Pause** buttons for 3 seconds. The code will be cleared.
- Exit Diagnostic Mode 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 or 3 clicks after the Start Position. Press **Options** and **Start/Pause** buttons together for a few seconds until wash cycle LEDs appear.

Troubleshooting the Drum Light Circuit

To troubleshoot the drum light circuit, remove the top of the washer to gain access to the terminals of the step-down transformer.

With the washer door open, measure the voltage drop between the input terminals of the transformer.

If the meter reads zero, remove the door switch and check it with an Ohm meter. If the contacts are open with the plunger out, replace the door switch. If the contacts are closed, replace the control board.

If the meter reads line to neutral voltage, measure the voltage drop between the two output terminals. If the meter read zero the transformer is defective. If the meter reads 12 volts, the light is defective.

Note: Since it is recommended that the loading door be left open when the washer not in use, the electronic control board limits the amount of time the drum light is on. With the loading door open, the electronic control board allows power to the light for a maximum of (3) minutes.

If the drum light remains on for more than (3) minutes with the loading door opened, replace the electronic control board. If the drum light remains on with the loading door closed, replace the light switch.

Diagnostic Test

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

TO START THE TEST:

- Turn the **Program Knob** to the start position, **Spin Only**.
 - Press **Start/Pause** to start the cycle and save it.
 - Press **Cancel** to stop the cycle and turn off the LEDs.
 - Press **Cancel** again to turn on the LEDs.
 - Within 5 seconds, press and hold the **Options** and **Start/Pause** buttons until LEDs start sequentially chasing, then release buttons.
1. All the LEDs will sequentially light. Pressing a button below a light cluster will light all the LEDs in that cluster at one time to confirm functionality.
 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 door lock solenoid will deactivate and the loading door can be opened. When the door is opened, the drum light should turn on.
 6. Turn the program knob (5) clicks from the start position. The washer will fill and tumble. Once tumbling has started, the Boost Heater (if so equipped) will turn on.
 7. Turn the program knob (6) clicks from the start position. The drain pump & door lock solenoid will activate and the washer will operate in high spin.

SAFETY WARNING: If power is removed during this test, the door can be opened. To prevent injury, DO NOT put your hands inside when the tub is rotating.

8. Turn the program knob (7) clicks from the start position. The control will signal the last error code.

Exiting Diagnostic Mode

There are two options for exiting the Diagnostic Test mode and returning 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 or 3 clicks after the start position. Press **Options** and **Start/Pause** buttons together for a few seconds until wash cycle LEDs appear.

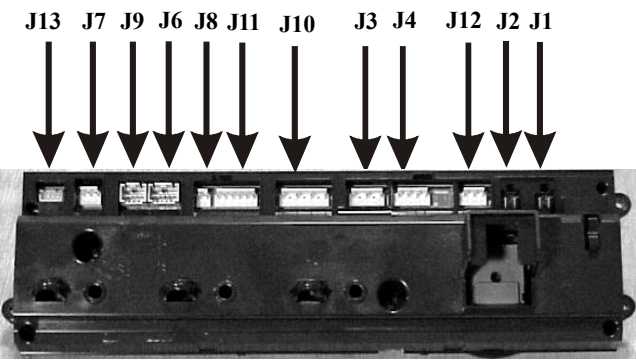
If a situation arises where you cannot exit the Diagnostic mode as described above and the bank of 5 LED's on the right end remain ON regardless of Program Knob position, a combination of pushed buttons may have caused the control to enter a special factory test mode. Disconnect power to reset the control to return washer to normal operation if this occurs.

Failure code chart		
Failure 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).
E23	Drain pump relay on control board failed.	Replace control board or wire.
E24	Drain pump relay on control board failed.	Replace control board or wire.
E31	Pressure sensor not communicating with control board.	Refer to test (4).
E35	Pressure sensor indicates water overflow.	Refer to test (5).
E36	Control board problem.	Replace the control board.
E41	Control board thinks the door switch is open.	Refer to test (7).
E43	Board communications problem.	Replace the control board.
E44	Board communications problem.	Replace the control board.
E45	Board communications problem.	Replace the control board.
E46	Board communications problem.	Replace the control board.
E47	Board thinks the door PTC circuit is open in spin.	Refer to test (7)
E48	Board thinks the door PTC circuit is closed.	Refer to test (7)
E52	Bad signal from tachometer generator.	Refer to test (8)
E56	High motor current.	Refer to test (9)
E57	High current on inverter.	Refer to test (9)
E58	High current on motor phase.	Refer to test (9)
E59	No tachometer signal for 3 seconds.	Refer to test (10)
E5A	High temperature on heat sink.	Test first if bad replace speed control board.
E5B	High temperature on heat sink.	Replace the speed control board.
E5C	High temperature on heat sink.	Replace the speed control board.
E5D	Communication problem.	Refer to test (11).
E5E	Communication problem.	Refer to test (11).
E5F	Communication problem.	Refer to test (11).
E66	Heating element relay failure.	Refer to test (14).
E67	Input voltage on microprocessor incorrect.	Refer to test (15).
E68	Current leakage to ground on heater or fuse opened.	Refer to test (14).
E74	Wash temperature does not increase.	Place NTC in correct position.
E75	Water temperature sensor circuit.	Refer to test (12)
E76	NTC temperature for the cold water valve over the limits.	Hot and cold water hoses switched.
E82	Console control problem	Replace the control board.
E83	Console control problem	Replace the control board.
E91	Selector LEDs do not light up	Refer to test (16)
E93	Console control problem	Replace the control board.
E94	Console control problem	Replace the control board.
E95	Communication error.	Replace the control board.

Failure code	Fault condition	Check
E97	Console control problem	Replace the control board.
E98	Console control problem	Replace the control board.
EB1	Incoming power frequency out of limits.	Refer to test (15)
EB2	Incoming line voltage above 130 VAC.	Check voltage at the outlet. If below 130 VAC replace the control board.
EB3	Incoming line voltage below 90 VAC.	Check voltage at the outlet. If above 90 VAC replace the control board.
EF1	Clogged drain pump.	Unclog the drain pump.
EF2	To much soap.	Advise customer to reduce the amount of soap they are using.
EBE	Console control problem	Replace the control board.
EBF	Console control problem	Replace the control board.
EF5	NTC temperature for the hot water valve over the limits.	Hot and cold water hoses switched.

Jacks and plugs

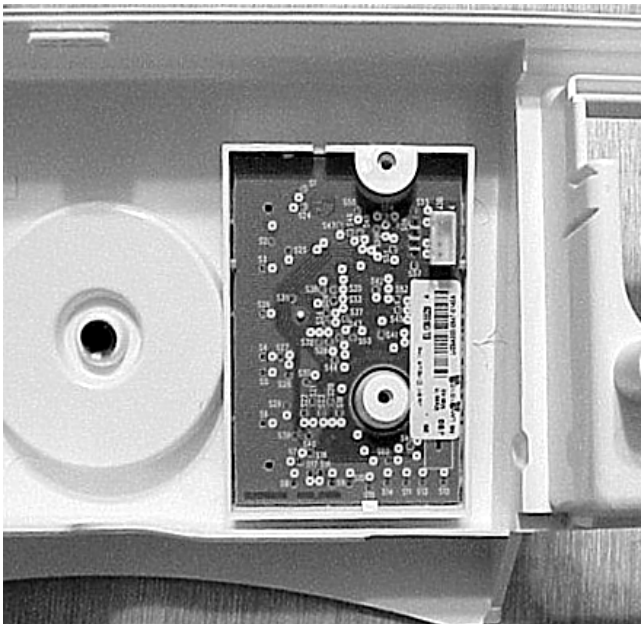
Control panel



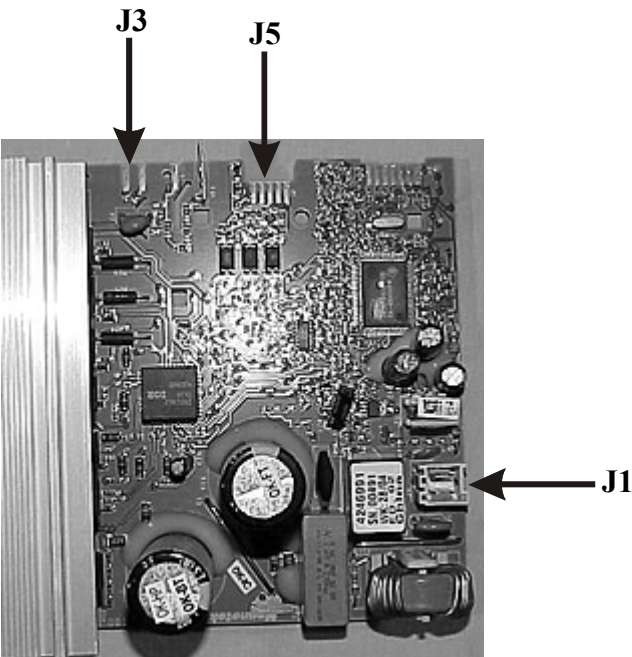
Control board circuits:

- J1 Power to the speed control board.
- J2 & J3 Door switch assembly circuits.
- J4, J9 & J12 Water inlet and drain pump circuits.
- J6 Codes to the speed control board.
- J7 Thermal sensor circuit. (Some models)
- J10 Drum light circuit.
- J13 Interface board.

Interface board



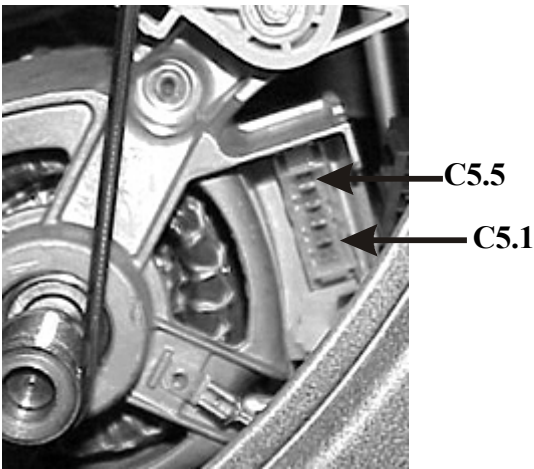
Speed control board



Speed control board circuits:

- J1 Line to neutral voltage from control board.
- J3 Code inputs from control board.
- J5 Outputs to the motor windings and tacho generator.

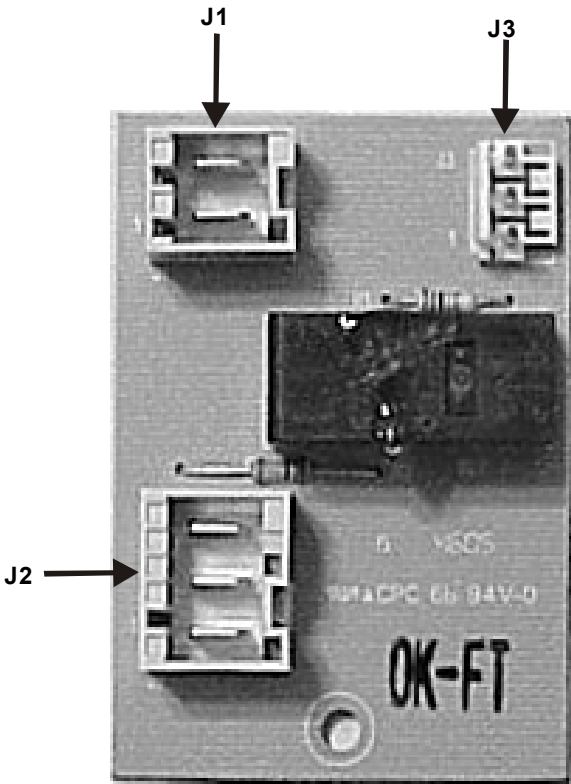
Motor plug



Motor connections:

- C5.1, C5.2& C5.3 Motor winding connections.
- C5.4 & C5.5 Tacho generator connections.

Heater control board



Test		
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 (30) 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 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.
	6. Check the electronic pressure sensor.	Pressure sensor checks good. Go to step (7). Pressure sensor checks bad. Replace pressure sensor.
	7. Replace the 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. Check the electronic pressure sensor.	Defective. Replace the pressure sensor. Good. Go to step (4)
	4. Replace the 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. Replace the control board. 120 VAC. Remove the pump and check it for blockage. If blocked, remove the restriction, if not replace the pump.
Test 4:	1. Inspect the wiring between the pressure sensor and the control board.	Defective wiring. Correct wiring. Good wiring. Replace the pressure sensor. If this does not correct the problem replace the 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. Replace the control board.
	3. Remove power from washer. Does the water stop coming in?	No. Replace water valve assembly. Yes. Check wiring to valve assembly for shorts. If wiring is good, replace the control board.
	4. Replace the pressure sensor switch. Did this correct the problem?	Yes. Problem solved. No. Replace the control board.

Test		
Test	Check	Correction
Test 6:	1. Is the loading door closed?	No. Close the door. Yes. Go the step (2).
	2. Disconnect the plug from J2 on the control board and check for continuity between the pins in the plug.	Open. Check the door strike. If good, replace the door switch assembly. Closed. Replace the control board.
Test 7:	1. Remove the door lock assembly and measure the resistance of the PTC.	Shorted or open. Defective door lock assembly. Around 1500 Ohms. Defective control board.
Test 8:	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 speed control board. If the meter reads not than between 105 & 130 Ohms, replace the motor.
Test 9:	1. Remove the belt from the motor and spin the motor pulley. Does the motor spin free?	No. Replace the motor. Yes. Go to step (3)
	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 motor and measure the resistance of the windings. (pin 1 to pin 2, pin 1 to pin 3, pin 2 to pin 3) All reading should be between 4 and 6 Ohms.	If the readings are correct, replace the speed control board. If the readings are incorrect, replace the motor.
Test 10:	1. Remove the belt from the motor and spin the motor pulley. Does the motor spin free?	No. Replace the motor. Yes. Go to step (3)
	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 the resistance pins 4 & 5 in the motor.	If the meter reads not other than between 105 & 130 Ohms, replace the motor. If the reading is between 105 & 130 Ohms, go to step (4).
	4. Disconnect the plug from the motor and measure the resistance of the windings (pin 1 to 2, pin 1 to 3, pin 2 to 3). All readings should be between 4 and 6 Ohms.	If the readings are correct, replace the speed control board. If the readings are incorrect, replace the motor.
Test 11:	1. Communication problem. Check the wiring between the control board and the speed control board.	Wiring bad. Correct wiring problem. Wiring good. Replace the control board. If the problem is not corrected replace the speed control board.
Test 12:	1. Check the resistance of the NTC. Is it around 50K ohms?	No. Replace the water inlet valve assembly Yes Replace the control board.
Test 13:	1. Have the power company check the frequency of the incoming power. If correct replace the control board.	
Test 14:	1. Check the resistance of the heating element. It should be approximately 14 ohms.	If if the readings are incorrect, replaced the heating element.
	2. Check the resistance between the ground and both heater terminals. It should be open when the heater terminals are disconnected.	
Test 15:	1. Check the resistance of the tub in NTC. If Is it around 4.8 K Ohms?	No, replace the heater assembly. Yes, check the wiring.
Test 16:	1. Check the wiring harness between the control board & the interface board.	If defective, correct wiring problem. If the harness is good and none of the LEDs light, replace the interface board. If this does not correct the problem, replace the control board. Note: If only one of the LEDs will not light, replace the interface board

SECTION I - TEARDOWN

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

⚠ WARNING Always remove electrical power from the washer when working in an area where electrical power is present.

Note: Not all components are in all models.

Removing the detergent drawer:

1. Pull the drawer out until it hits the stop.

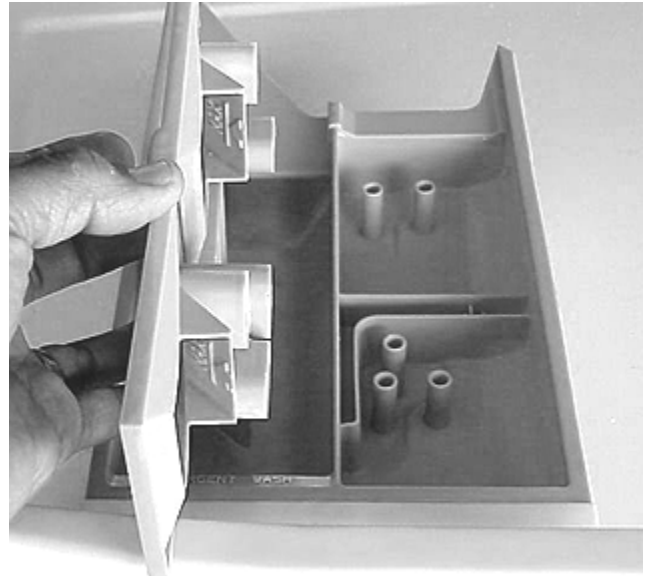


2. Push down on the release tab and pull the drawer out.

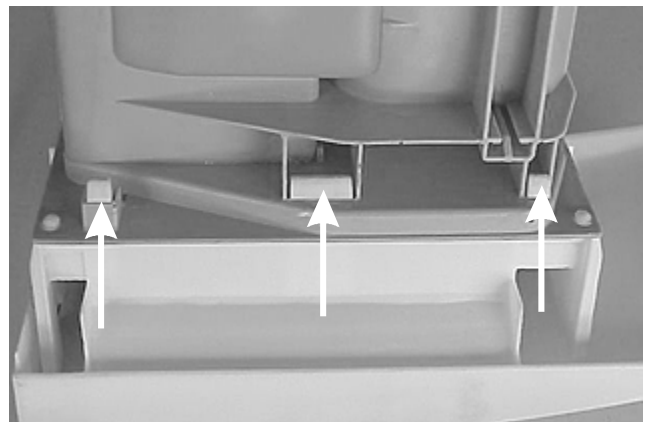


Detergent drawer disassembly:

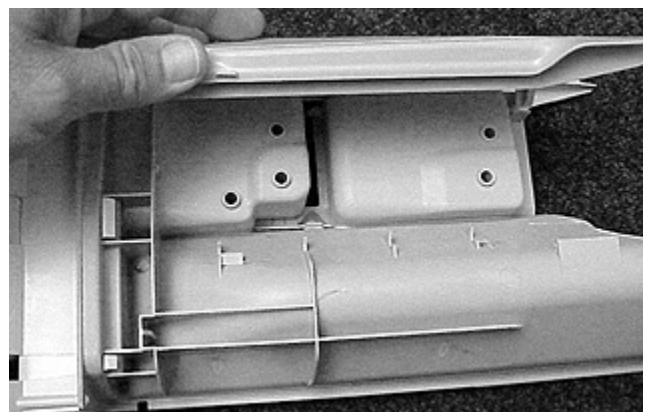
1. Remove the drawer from the washer.
2. The detergent, liquid bleach and fabric softener insert lifts off. When reinstalling, be sure to seat it properly.



3. To remove the drawer front, release the three tabs and pull the drawer front away from the body.



4. To remove the conveyor, release the conveyor from the tabs and lift it off.

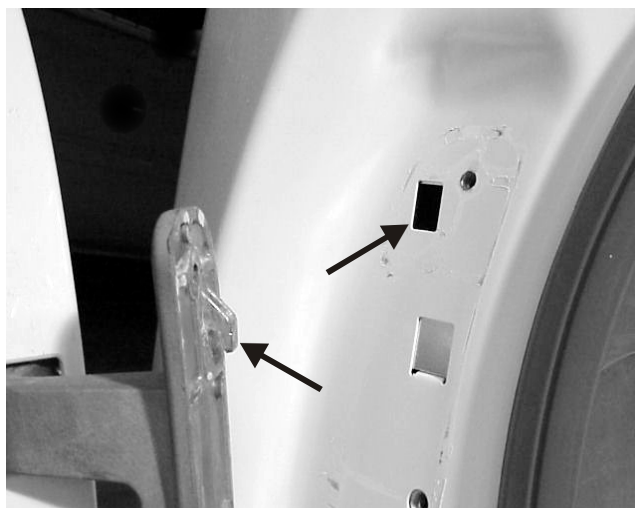


To remove door strike:

1. Open the loading door and remove the (2) screws holding the strike to the inner door liner.



2. Lift up and out on the door to disengage the hook on the hinge from the slot in the front panel.



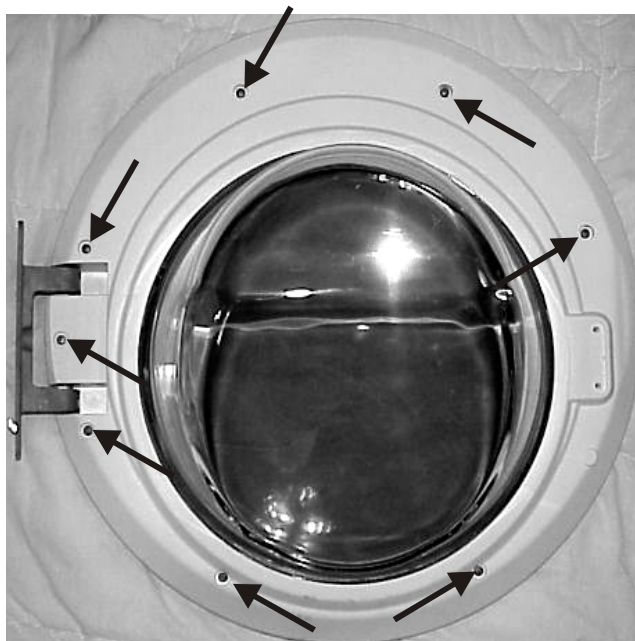
To remove loading door:

1. Remove the three screws securing the door hinge to the front panel.

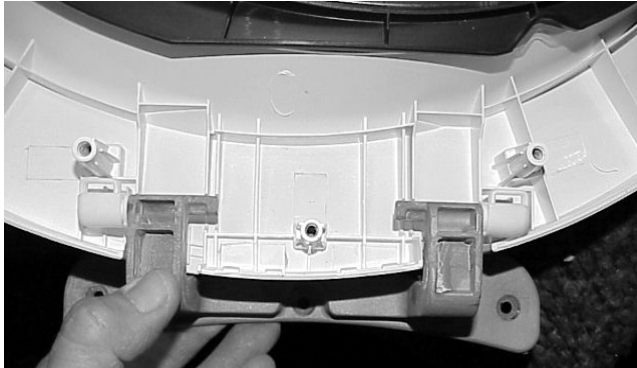


Disassembling the door:

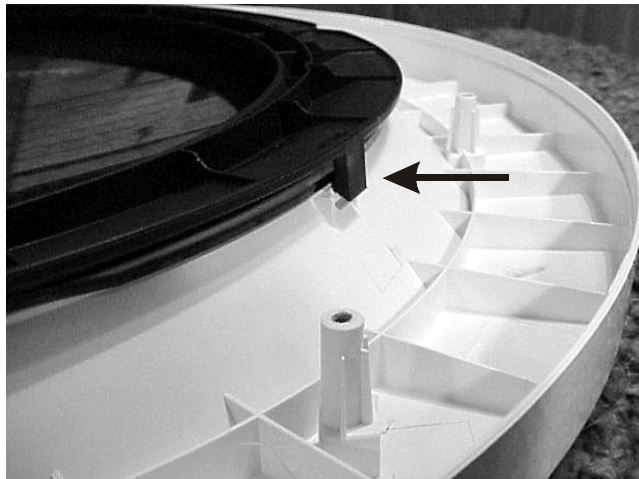
1. Remove the loading door from the washer and place it on a soft flat surface.
2. Remove the door strike and the (8) screws holding the inner liner to the outer liner and lift the inner liner off.



3. With the inner liner removed, the door hinge lifts out.



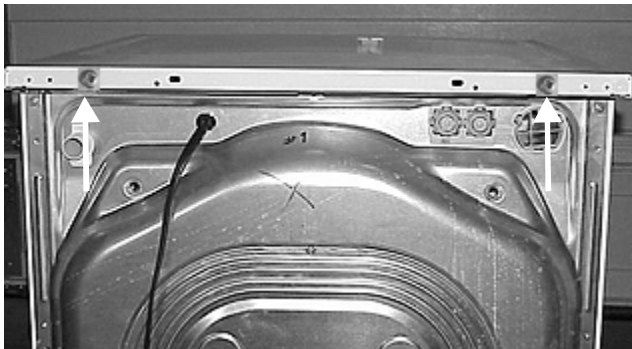
4. With the inner liner removed, the inner glass lifts off.
5. The frame holding the outer lens to the outer liner is held in place by three tabs. Release the tabs and the frame will lift off.



6. With the frame removed, the inner lens will lift off.

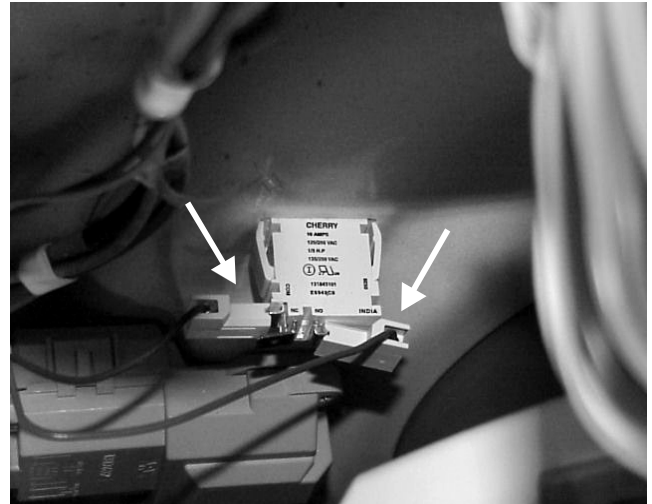
Removing the top panel:

1. Disconnect the washer from the electrical supply.
2. Remove the (2) screws from the rear of the top, slide the top back and lift it off.



To remove light switch: (Select models)

1. Disconnect the washer from electrical supply, remove the top panel and open the loading door.
2. Disconnect the two wires from the light switch.

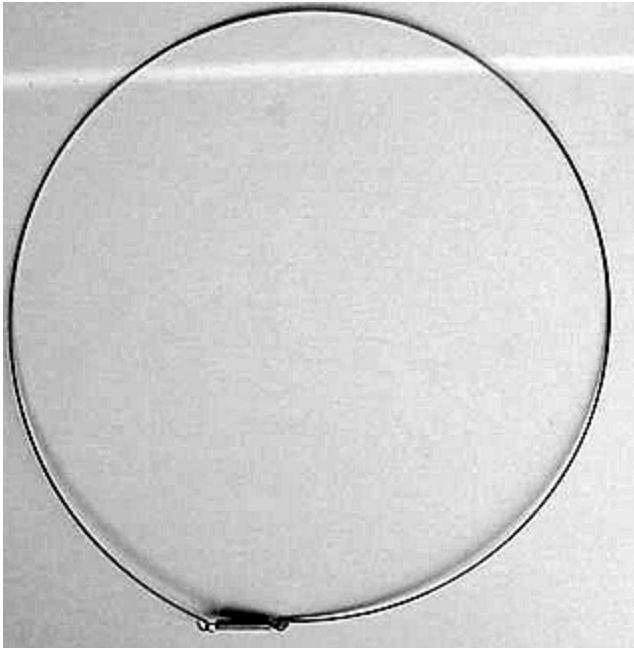


3. Squeeze the tabs on the sides of the switch and push the switch out the front of the washer.



Releasing the bellows (door boot) from the front panel:

The front of the bellows is installed over the lip of the door opening in the front panel and held in place by a spring loaded wire loop.



1. Open the loading door.
2. Using needle nose pliers, start where the spring and wire are connected at the bottom of the bellows and pull the wire out of the groove of the bellows.

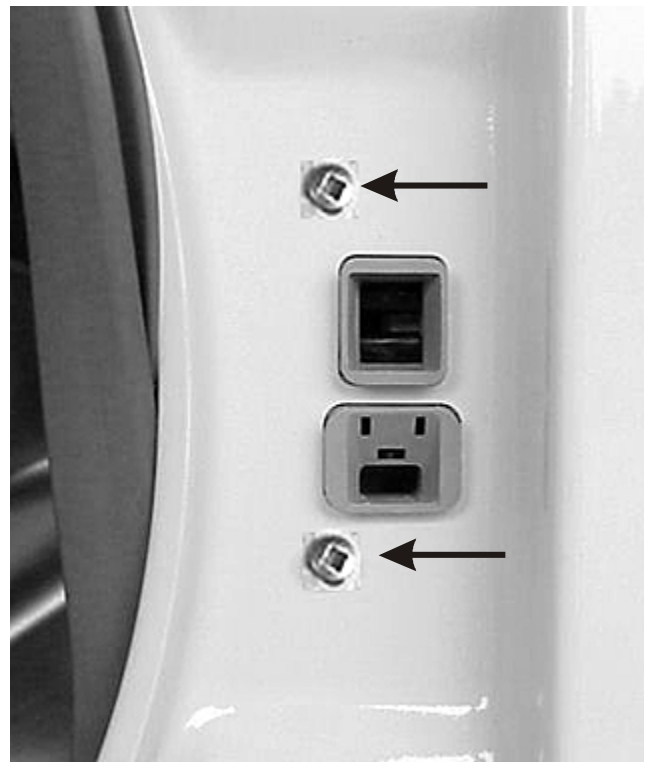


3. Pull the bellows off of the lip of the front panel.

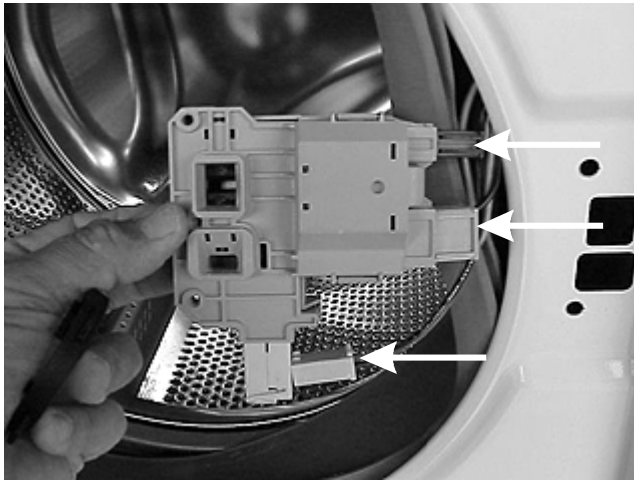


Removing the door safety switch:

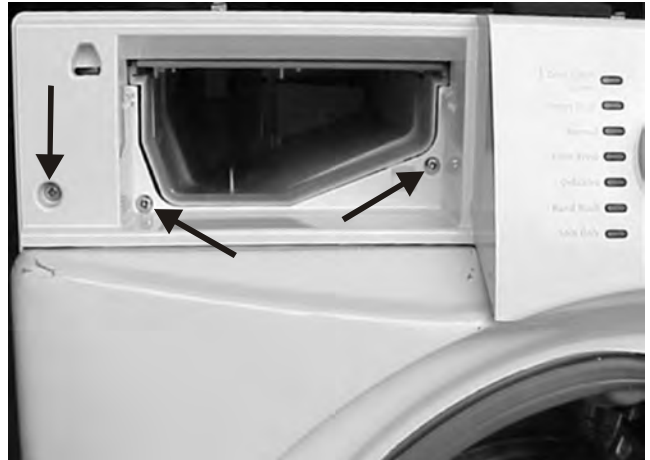
1. Disconnect the washer from the electrical supply.
2. Release the bellows from the front panel.
3. Remove the (2) screws securing the switch assembly to the front panel.



4. Pull the switch assembly into the door opening and unplug the electrical connectors.



3. Remove the (3) screws behind the detergent drawer panel.



Releasing the console:

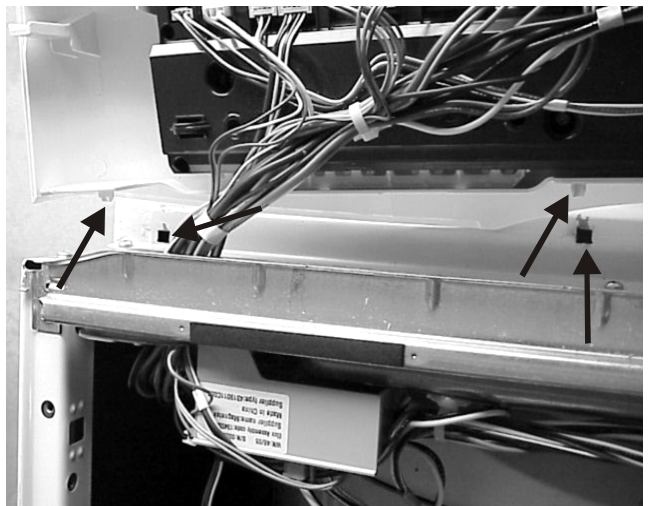
1. Disconnect the washer from the electrical supply, remove the top panel and detergent drawer.
2. Remove the (2) screws, one on each end, holding the console to the top of the side panels.



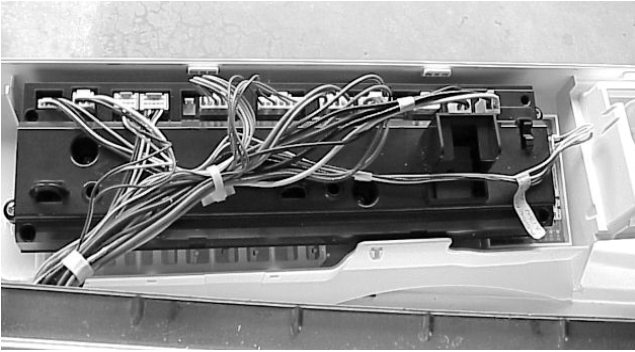
4. Lift the (3) tabs to release the top of console from the mounting plate.



5. Roll the console forward, while lifting up to release the bottom tabs from the front panel.

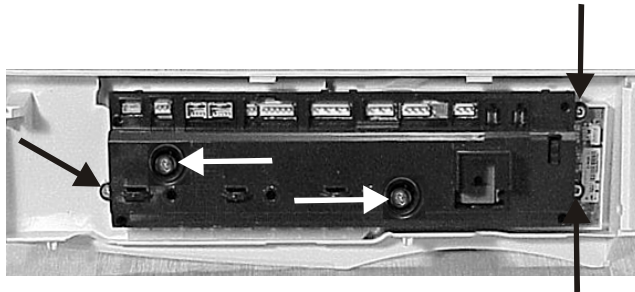


6. Unplug the wiring harness from the control panel and lift the panel off.



Removing the electronic control:

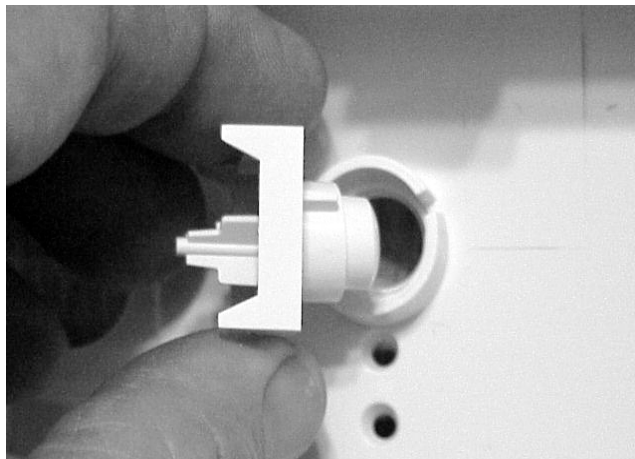
1. Disconnect the washer from the electrical supply and remove the console.
2. Lay the console on a soft flat surface, remove the (5) screws holding the control to the console.



3. Lift the control out of the console.

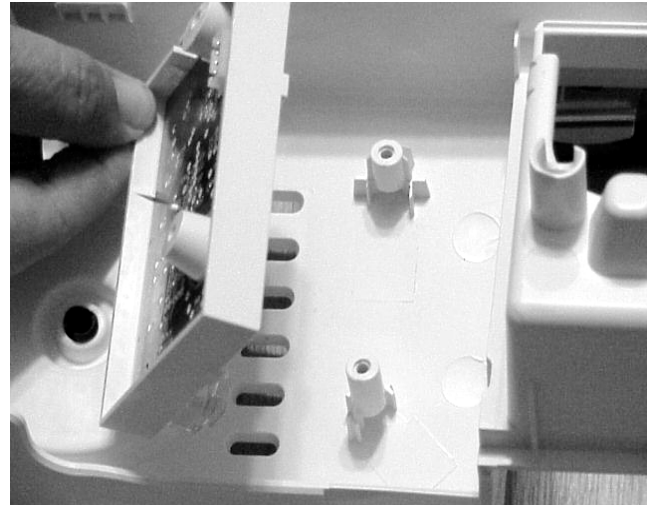
Removing the delay start button:

1. Disconnect the washer from the electrical supply and remove the electronic control.
2. With the electronic control removed the delay start button will lift out.



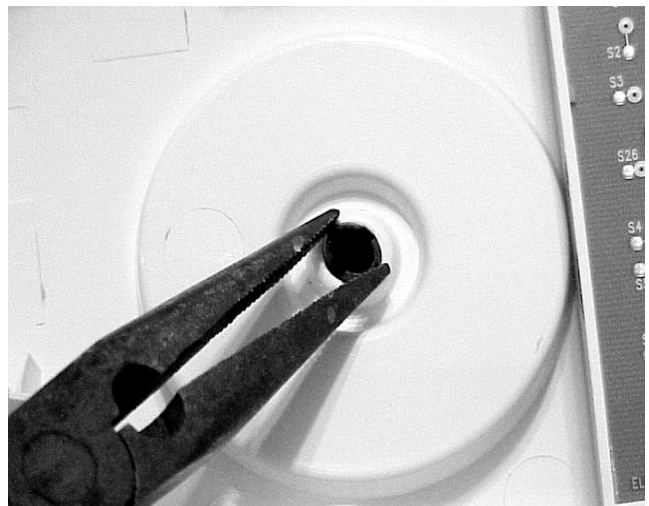
Removing the interface board:

1. Disconnect the washer from the electrical supply and remove the electronic control.
2. With the electronic control removed the interface board will lift out.



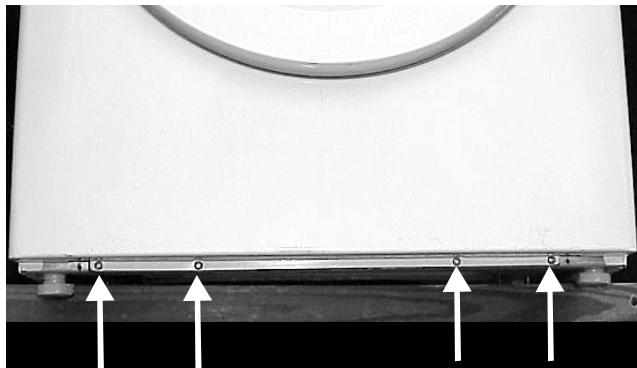
Removing the selector knob:

1. Disconnect the washer from the electrical supply and remove the electronic control.
2. Using a pair of pliers squeeze the knob shaft and pull the knob out the front of the control panel.



Removing the front panel:

1. Disconnect the washer from the electrical supply and release the console.
2. Release the bellows from the front panel and remove the (2) screws holding the door safety switch assembly to the front panel.
3. On select models, disconnect the wires from the light switch.
4. Raise the front of the washer and remove the (4) screws securing the front panel to the washer base.



5. Remove the (4) screws securing the top of the panel.



6. Lift up and out on the front panel to disengage it from the (4) nylon pins, two in the front of each side panel, and lift the front panel off.

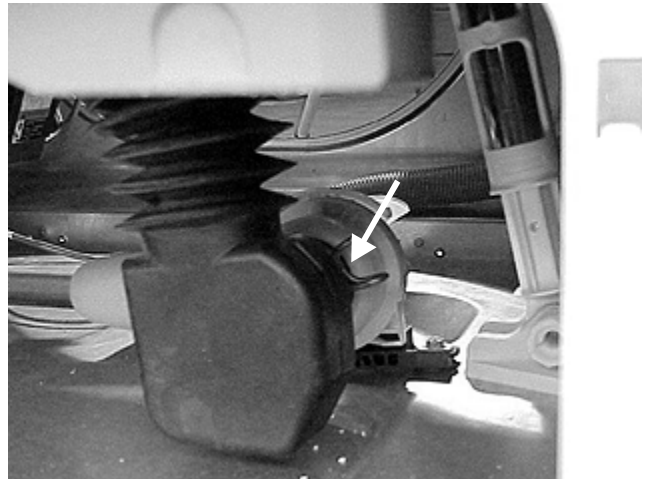


Removing the drain pump assembly:

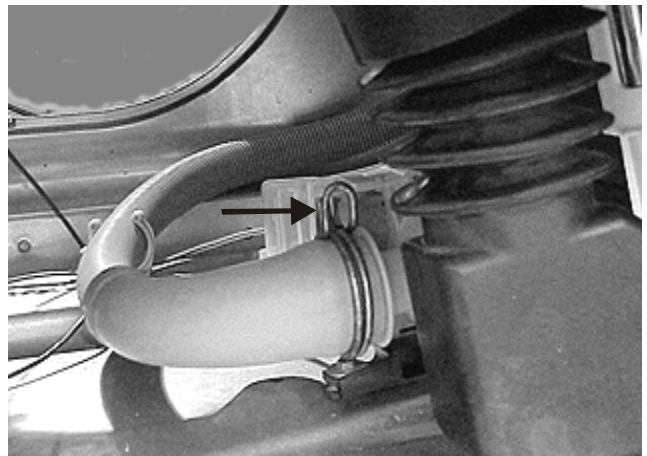
1. Disconnect the washer from the electrical supply and remove the front panel.

Note: Some water will be left in the hoses and pump.

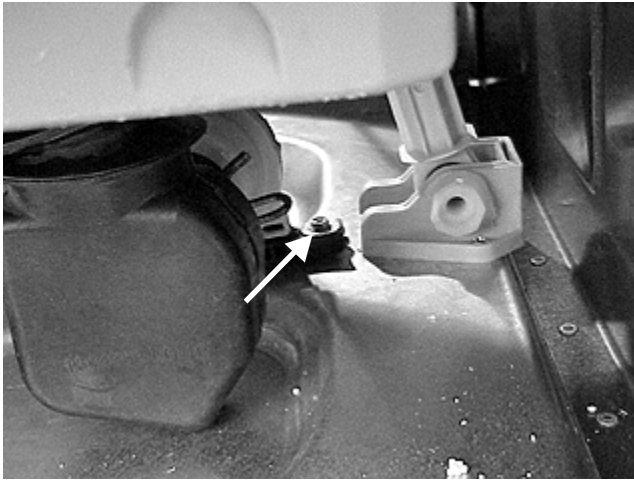
2. Disconnect the inlet sump from the pump.



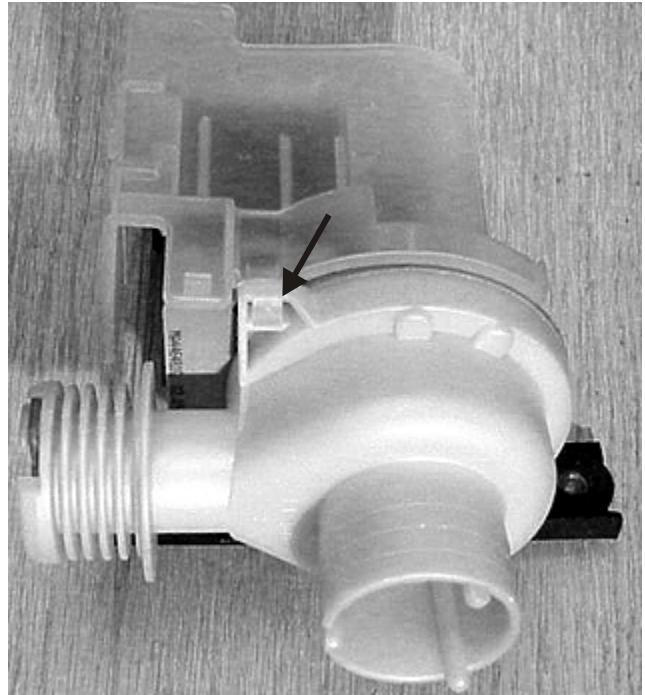
3. Disconnect the outlet hose from the pump.



4. Remove the (2) screws, one on each side, holding the pump housing to the washer base.



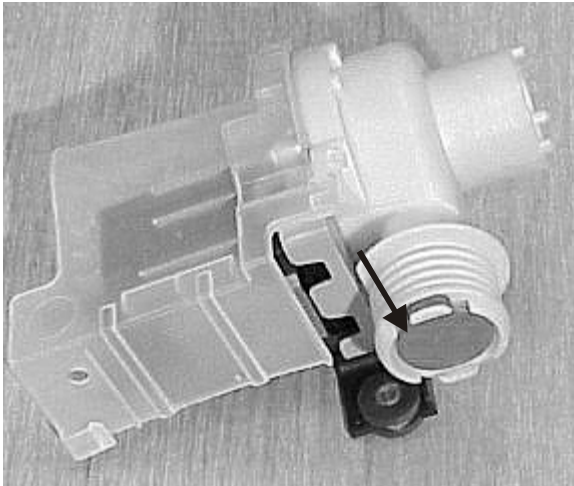
2. Remove the shield by releasing the tab and pulling back on the shield.



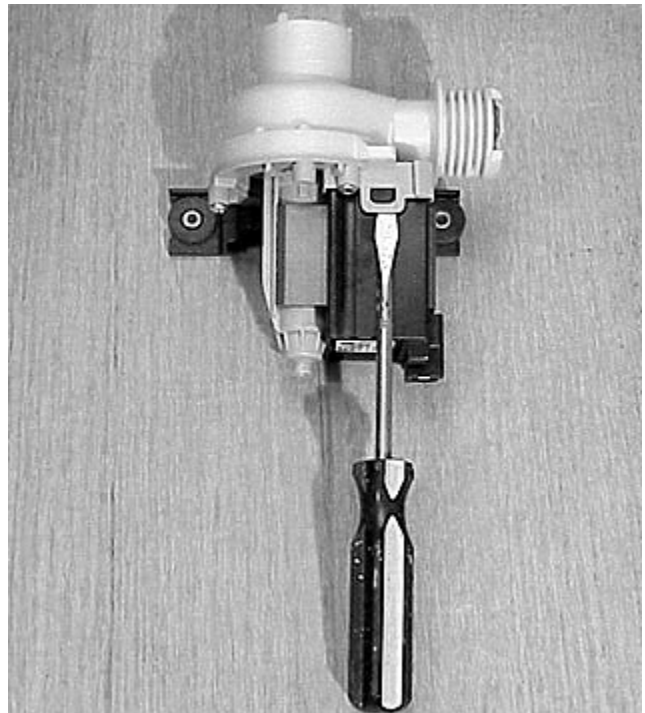
4. Unplug the wires from the pump motor and lift the pump assembly out.

Disassembling the drain pump:

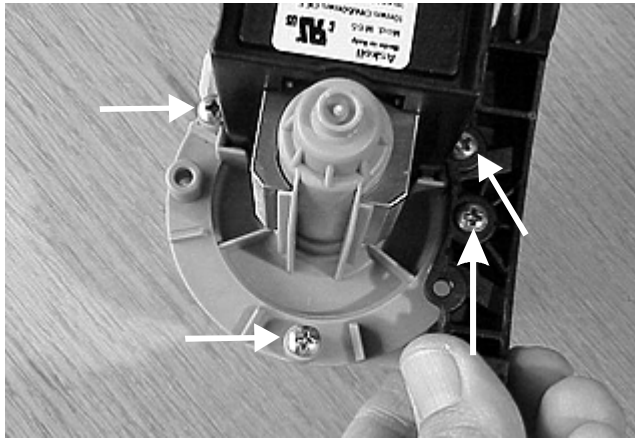
1. The drain pump check valve is located in the outlet of the pump.



3. Release the tab on each side of the motor and pull back to remove the armature.

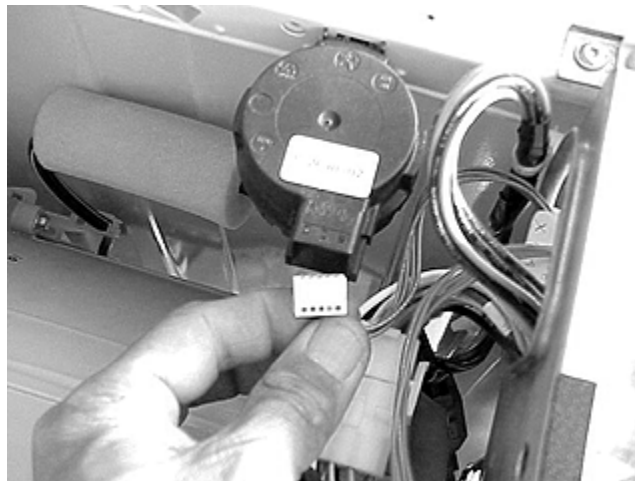


4. Remove (4) screws to release the housing from the pump.



Removing electronic water level sensor:

1. Disconnect the washer from the electrical supply and remove the top panel.
2. Unplug the wire harness from the sensor.



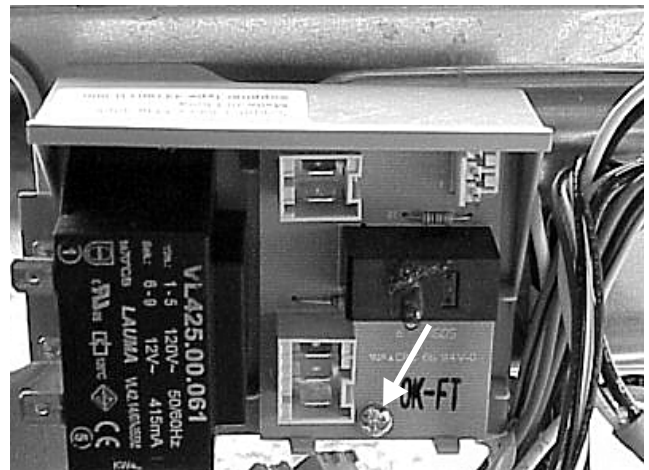
3. Turn the sensor one quarter turn to release it from the side panel and pull out on the pressure switch.



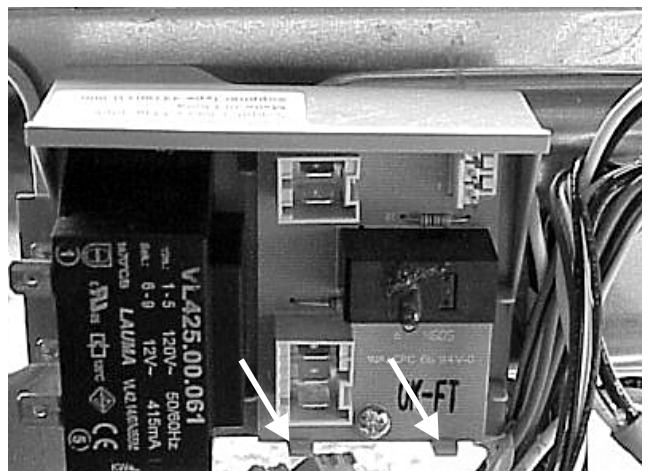
4. Disconnect the hose from the sensor.

Removing the heater control board: (Select models)

1. Disconnect the washer from the electrical supply and remove the top panel.
2. Unplug the wire harness from the heater control board.
3. Remove the screw holding the heater control board to its mounting bracket.

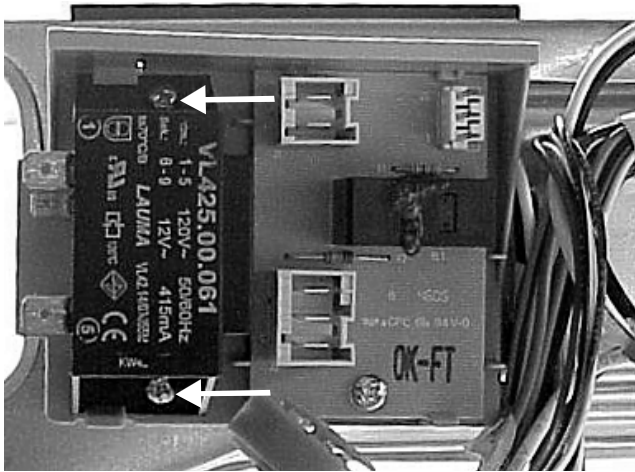


4. Release the (2) tabs at the bottom of the board and lift the board out.



Removing the light transformer: (Select models)

1. Disconnect the washer from the electrical supply and remove the top panel.
2. Unplug the wires from the transformer.
3. Remove the (2) screws holding the transformer to its mounting bracket and lift the transformer out.



Removing the light socket: (Select models)

1. Disconnect the washer from the electrical supply and remove the top panel.
2. Disconnect the (2) wires from output side of the transformer.
3. Release the bellows from the front panel.
4. Push the light socket holder out of the rear of the bellows.



Note: When reinstalling, make sure the socket is completely seated into the bellows.

Removing the transformer and heater control board mounting bracket:

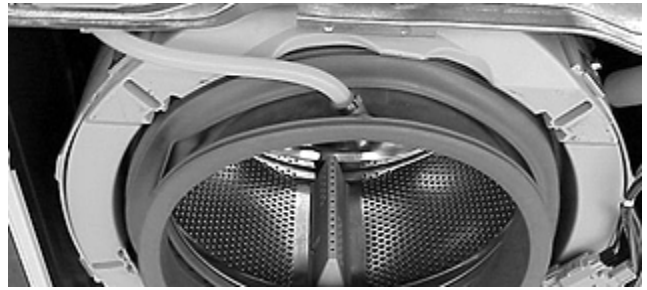
1. Disconnect the washer from the electrical supply, remove the top panel and release the console.
2. Remove the light transformer and the heater control board.
3. Using needle nose pliers, release the mounting bracket from the control mounting brace.



Removing the console mounting bracket:

1. Disconnect the washer from the electrical supply, remove the console and front panel.

2. Release the wiring harness from the back of the brace and remove the transformer and heater control board mounting bracket. Remove the (6) screws, one at the top and two in the front on each side, holding the brace to the side panels.



3. On select models, remove light socket.



3. Release the (2) tabs on the dispenser drawer housing, one on each side housing and pull the bracket forward.



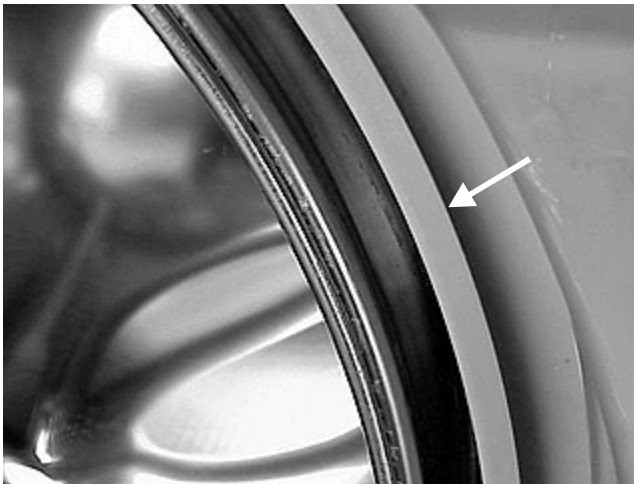
4. A groove in the rear of the bellows



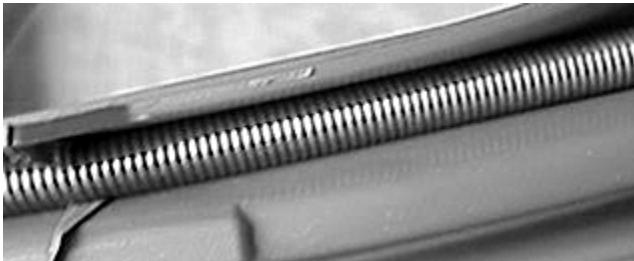
Removing the bellows (door boot):

1. Disconnect the washer from the electrical supply and remove the front panel.
2. Release the hose clamp and remove the advanced rinsing technology (A.R.T.) hose from the top of the bellows.

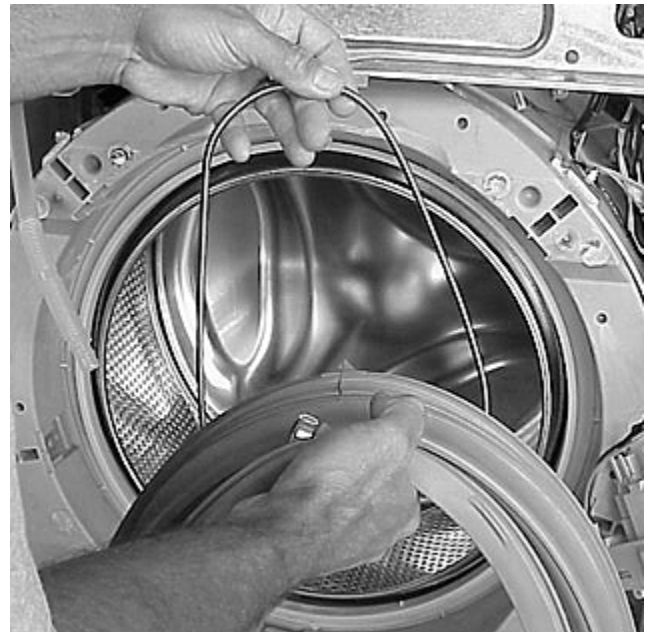
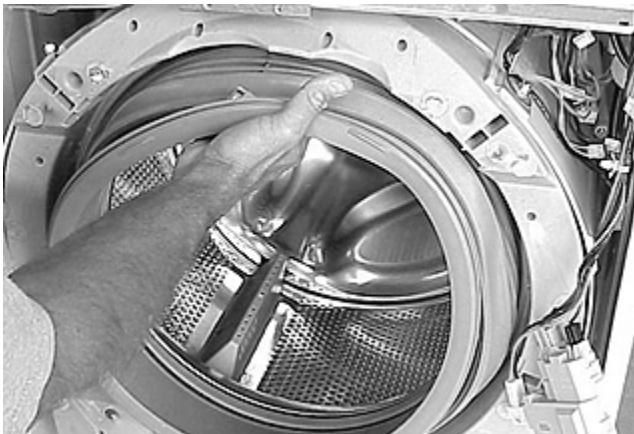
is placed over the lip of the outer tub



and held in place by a spring loop.

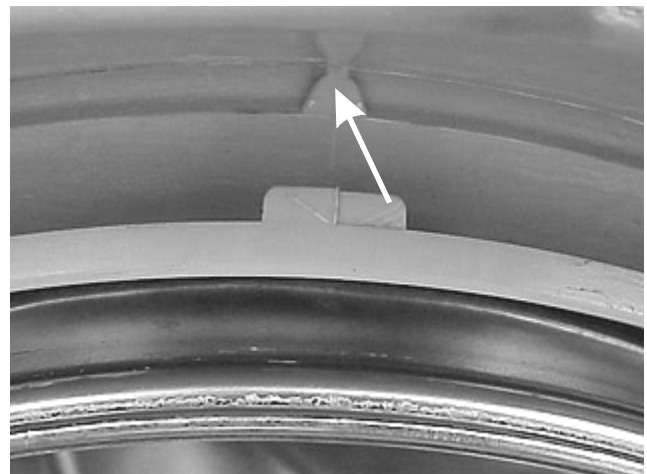


4. Remove the bellows by placing your hand under the bellows at the top of the opening and lift up while pulling out.

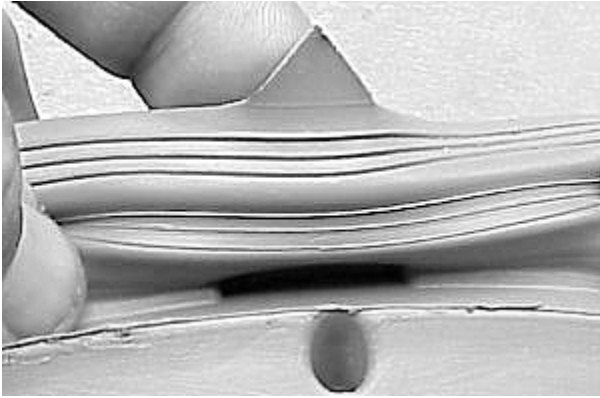


Reinstalling or replacing the bellows:

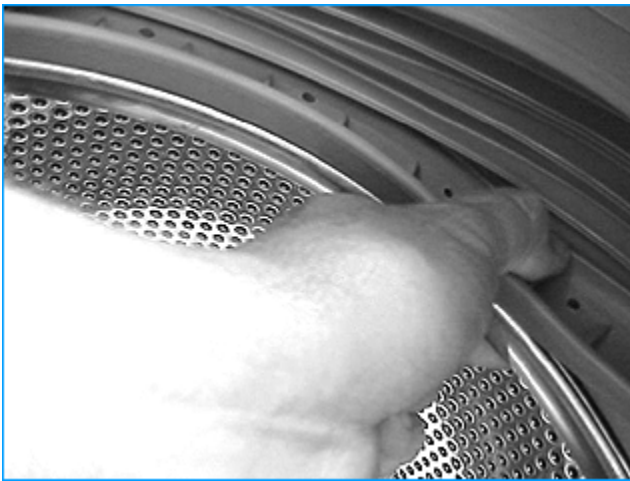
1. Using liquid dishwasher soap to lubricate the groove on the bellows will make it easier to slip the groove on the bellows onto the lip of the tub.
2. There is a tab and an arrow on the top of the tub lip



and a slot in the groove and an arrow at the top of the bellows.



3. 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.



4. 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.

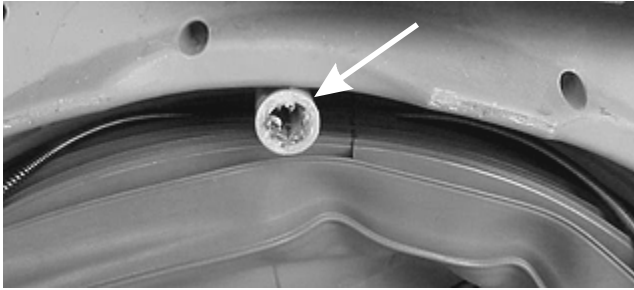


5. Using your thumb, start on the other side of the top tab and force the bellows on in the other direction. Again about one third of the way around stop and seat the bellows onto the tub lip. Force the remaining bellows on with your thumb and seat it.

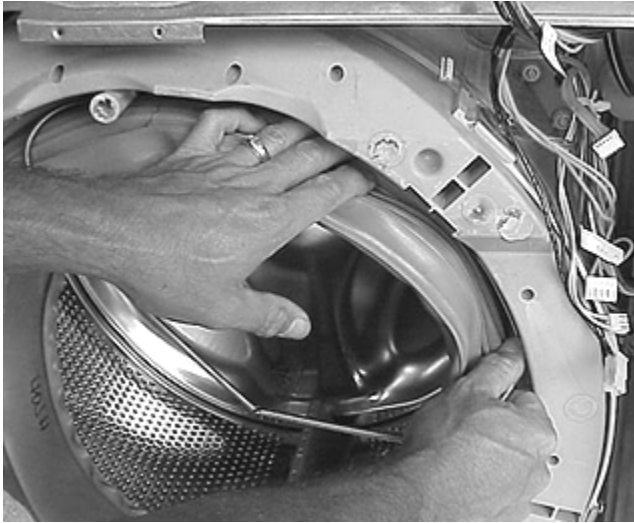
6. To install the spring, fold the front of the bellows back into the tub.



7. 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.



8. Pull the spring with one hand while working it into the groove with the other.

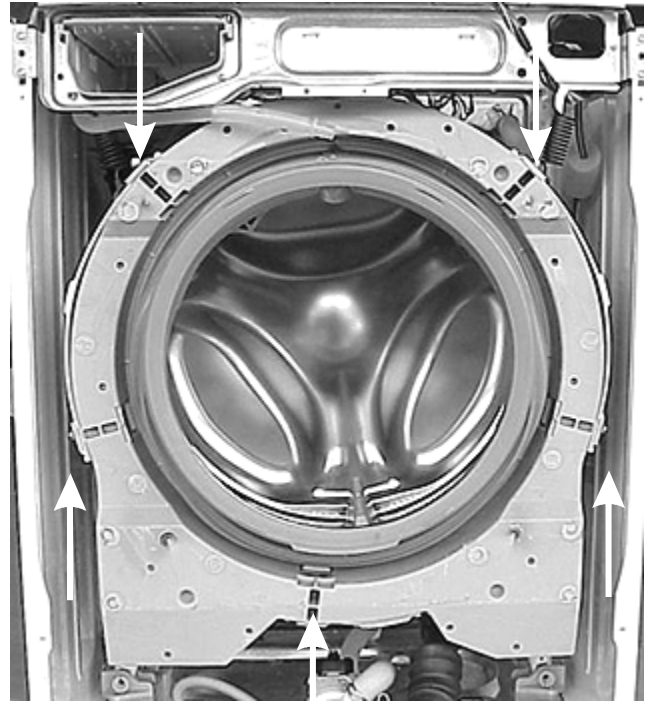


9. Remove the wedge, unfold the bellows, and insert the advance rinsing technology hose and light socket on select models.

Removing the weight ring:

1. Disconnect the washer from the electrical supply, remove the front panel and disconnect the advance rinsing technology hose and light socket (on select models) from the bellows.

2. Using a 7/16" socket, remove the (5) bolts holding the weight ring to the outer tub and slide the weight ring off the outer tub front.



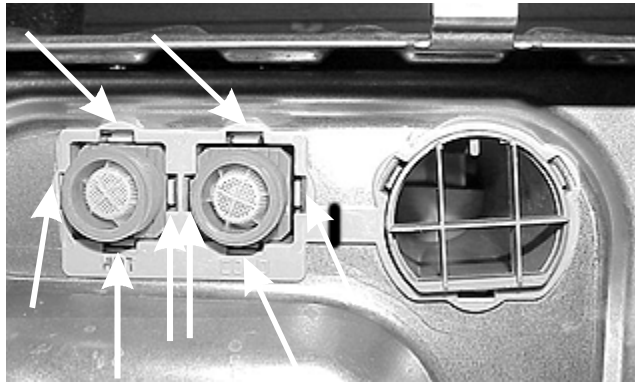
The water inlet and overflow/vent tube grommet:

Note: The water inlet and overflow/vent tube grommets, connected for ease of installation during manufacturing, can be separated by cutting the thin wall joint section for removal in the field.

Removing the water inlet grommet:

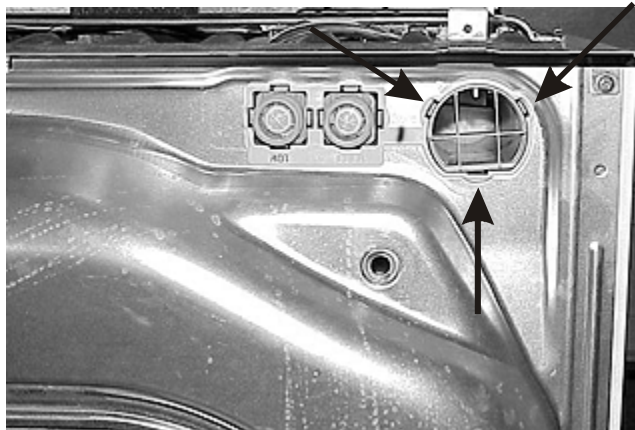
1. Disconnect the washer from the electrical supply, remove the top panel and cut the thin wall joint section between the water inlet and the overflow/vent tube grommet .

2. Using a small common screw driver, release the (8) locking tabs around the water inlet tubes while pushing on the grommet rim from inside the washer.



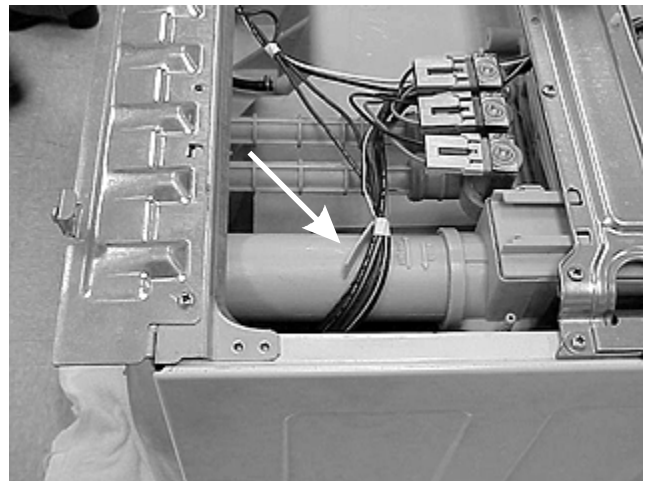
Removing the overflow/vent tube grommet:

1. Disconnect the washer from the electrical supply, remove the top panel and cut the thin wall joint section between the water inlet and the overflow/vent tube grommet.
2. Using a small common screw driver, release the (3) locking tabs around the overflow/vent tube while pushing on the grommet rim from inside the washer.

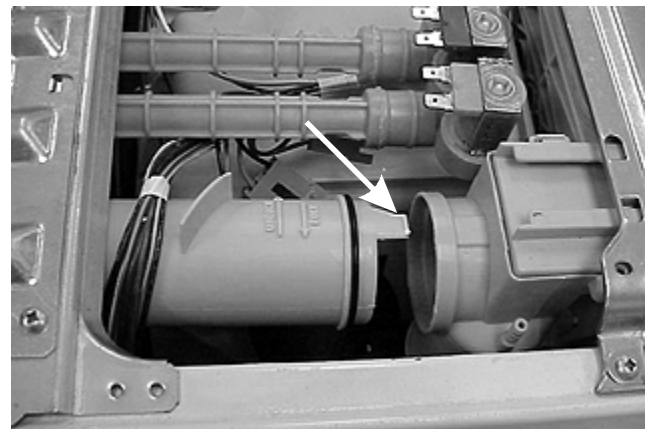


Removing the overflow/vent tube:

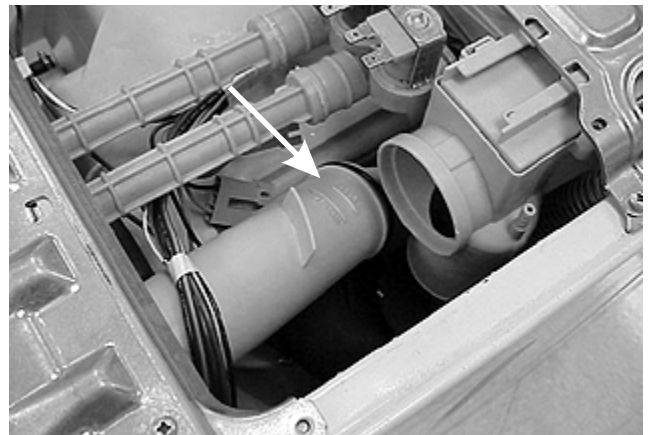
1. Disconnect the washer from the electrical supply remove the top panel and the overflow/vent grommet.



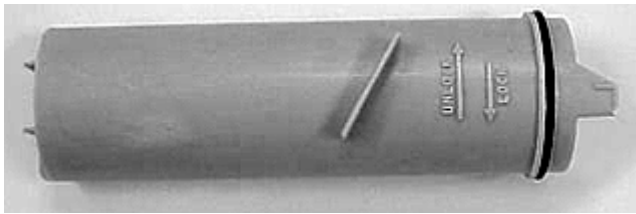
2. Turn the tube counter clockwise about a 1/16 of a turn to unlock the tube. Then pull the tube back to disengage it from the detergent dispenser housing.



3. Push the front of the tube down and forward toward the water inlet valve assembly until the tube clears the rear panel.



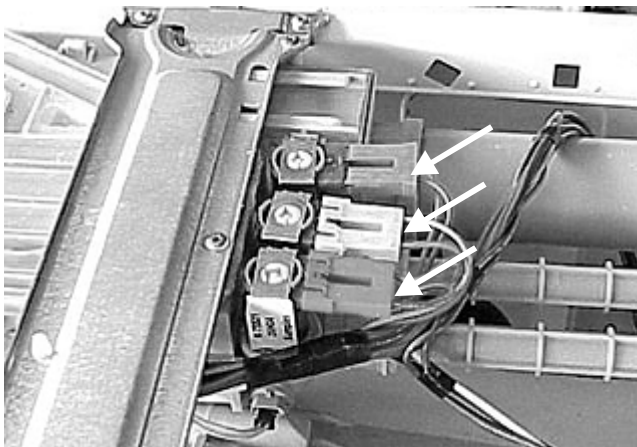
4. Drop the rear of the tube down, slide the tube back and lift the tube out.



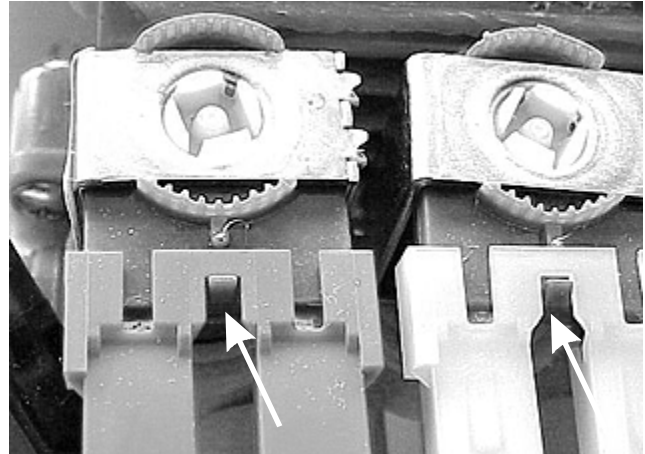
Removing the water inlet valve assembly:

Note: The water valves and water valve harness connectors are color coded; red, green and blue. When reconnecting, match the color on the harness connector to the color of the valve.

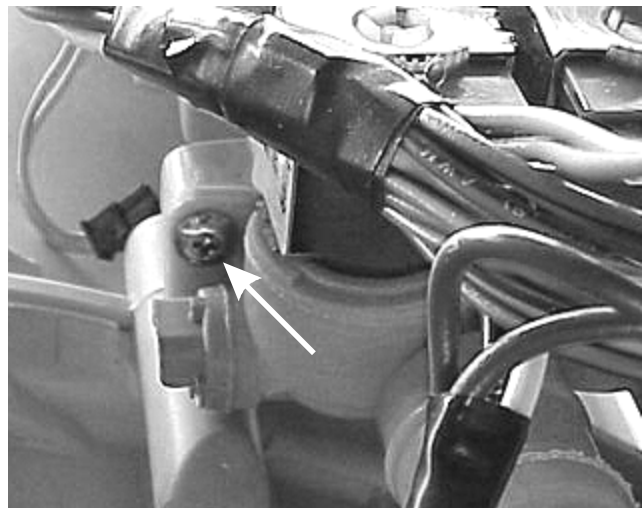
1. Disconnect the washer from the electrical supply and the hot and cold water hoses.
2. Remove the top panel, water valve and overflow/vent grommet and the overflow/vent tube.
3. Unplug the wiring harness from the valves and the temperature sensor.



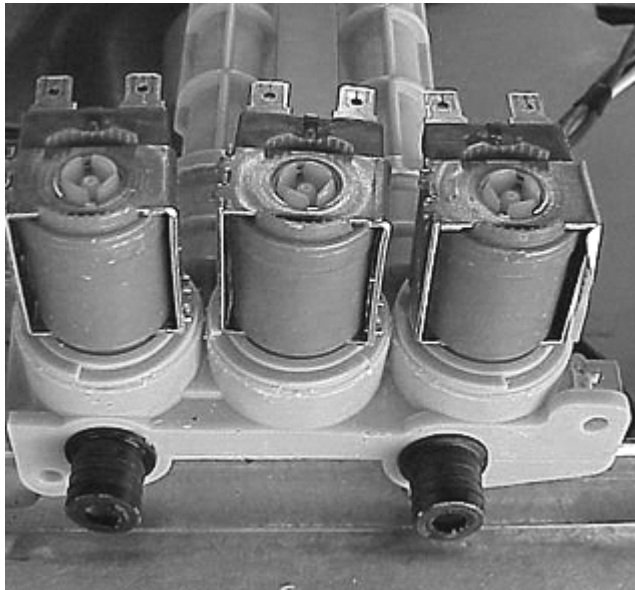
Note: The water valve harness has locking plugs.



4. Remove the (2) screws, one on each side, holding the water inlet valve assembly to the detergent dispenser housing.



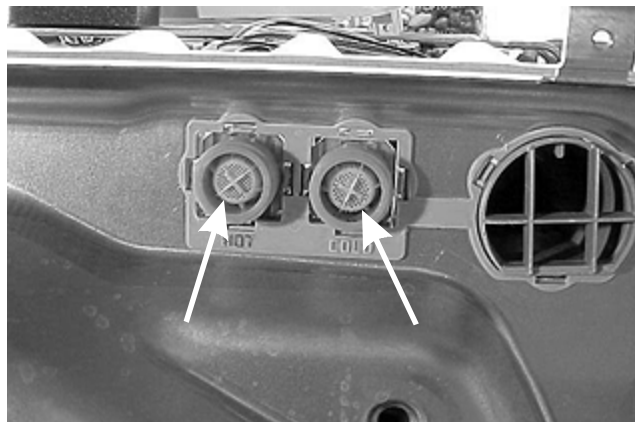
5. Pull back on the valve assembly to disengage it from the detergent dispenser housing and lift out.



Removing the water inlet screens:

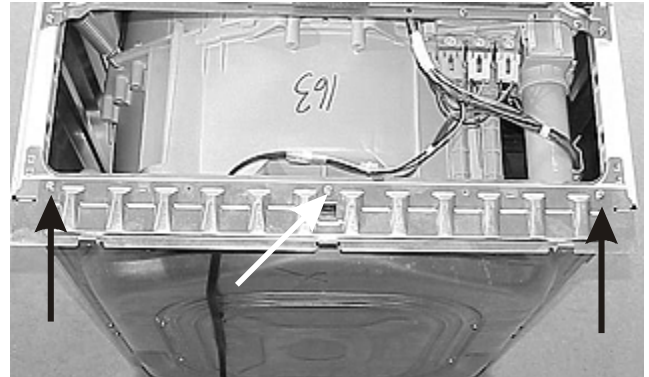
Water inlet screens are located in the ends of the water inlet tubs to filter the incoming water. These screen can be removed for cleaning.

1. Disconnect the incoming water hoses.
2. The each screen have an **X** molded it. Using pliers grab one of the legs of the **X** and pull the screen out.



Removing the top rear brace:

1. Disconnect the washer from the electrical supply and remove the top panel.
2. Remove the (3) screws from the top of the brace.



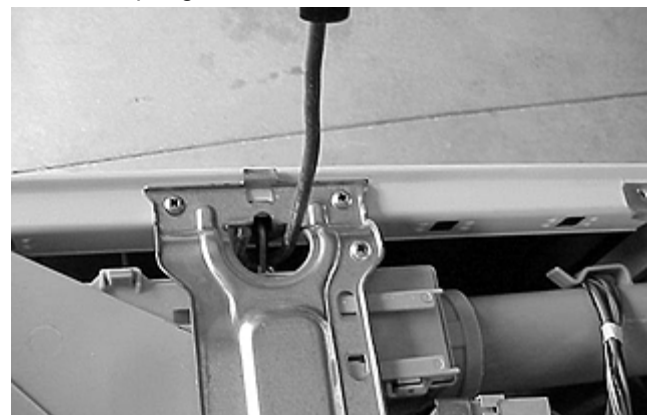
3. Remove the (2) screws from the rear of the brace.



4. Pull back to disengage the (2) tabs and lift the brace off.

Removing the suspension springs:

1. Disconnect the washer from the electrical supply and remove the top panel.
2. It is necessary to hook the top of the spring, 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.



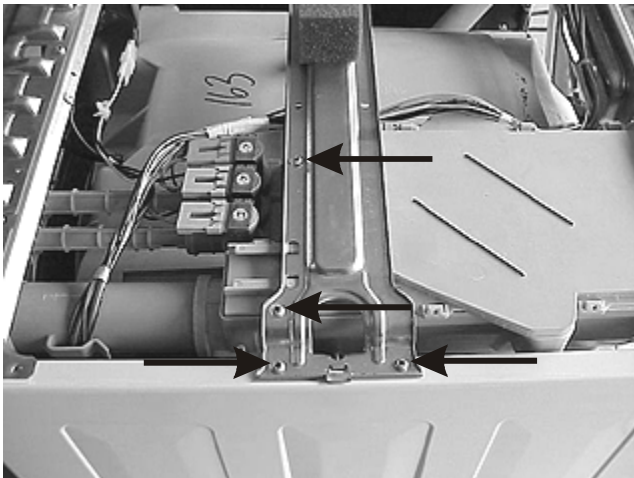
To do this a strong rod at least 8" long with a hook on one end and a handle on the other is needed, such as the one shown here made from a paint roller.



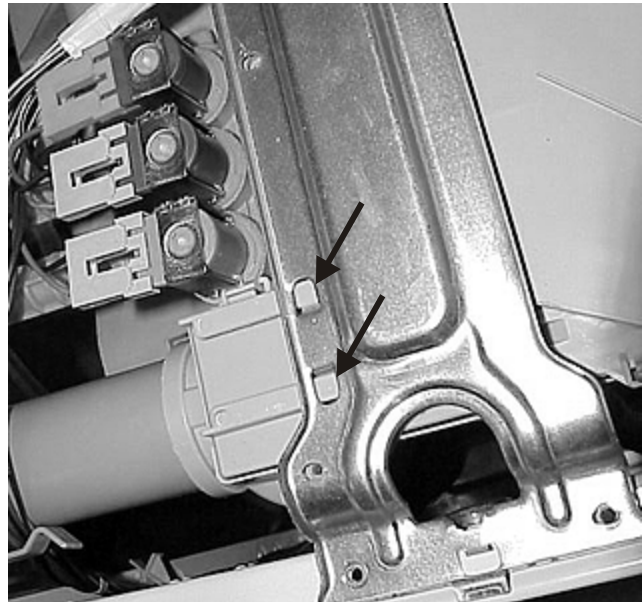
Note: When removing the spring on the side with the detergent dispenser the overflow/vent tube must be removed.

Removing the top center brace:

1. Disconnect the washer from the electrical supply and remove the top panel.
2. Release the tub springs and slide the water valve assembly back.
3. Remove the (4) screws, two on each end, and the (2) screws holding the detergent dispenser housing to the brace



4. Raise the brace to disengage the tabs on the brace from the side panels and slide the brace backward to release the tabs on the brace from the slot in the detergent dispenser housing.

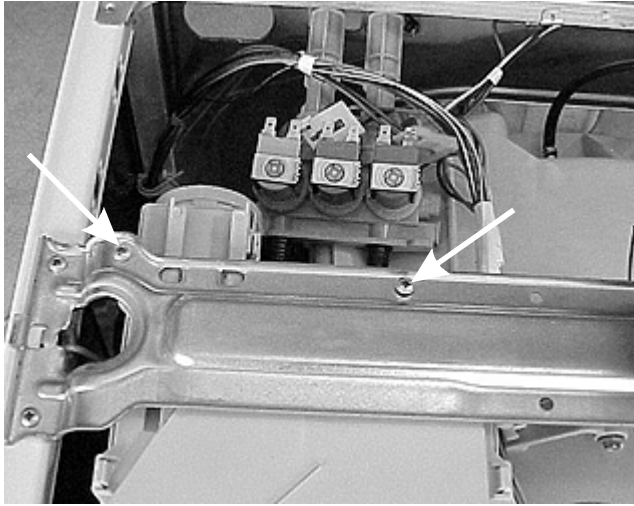


Removing the detergent cavity assembly:

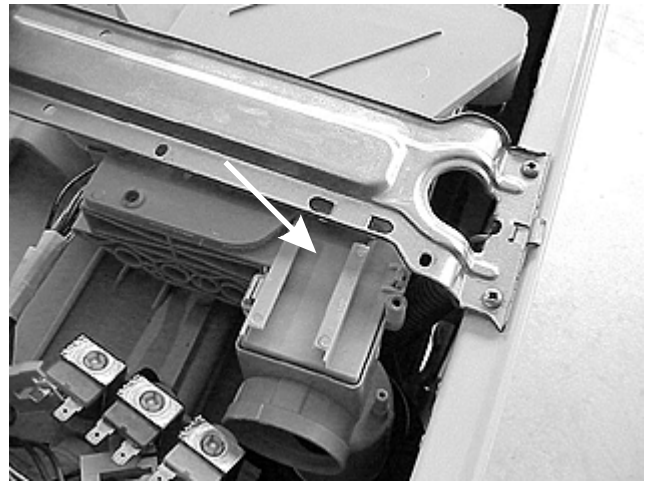
1. Disconnect the washer from the electrical supply, remove the drawer and the top panel.
2. Disconnect the water valve assembly and the overflow/vent tube and slide them back.
3. Release the wiring harness from the side of the housing.
4. Disconnect the detergent dispenser outlet hose.



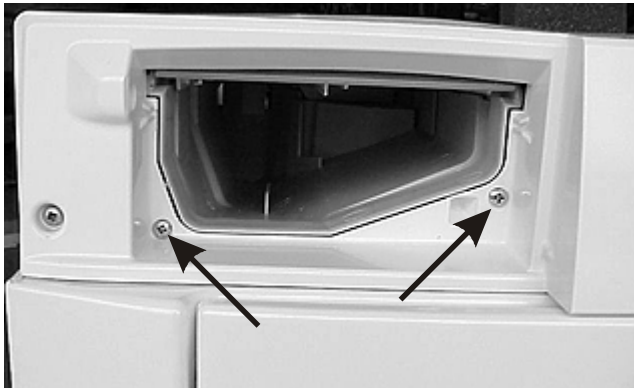
5. Remove the (2) screws holding the housing to the center brace.



8. Slide the housing back until the tabs of the center cross bar release and the housing drops down.



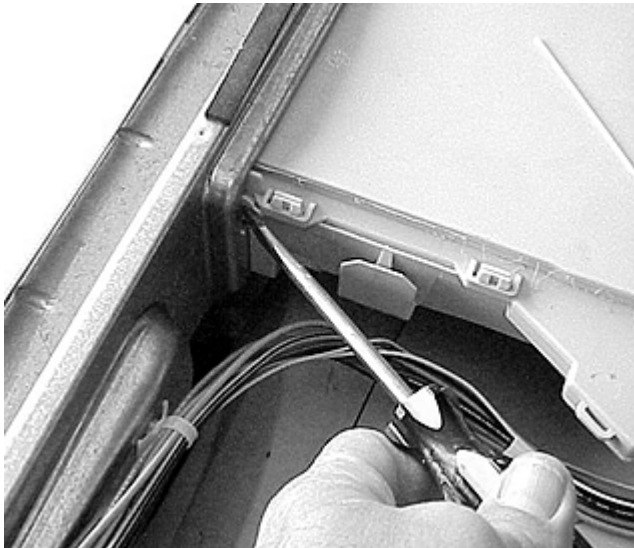
6. Remove the (2) screws holding the housing to the console panel.



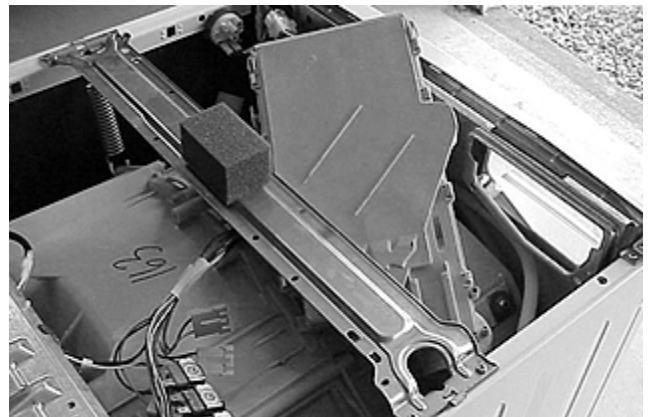
9. Disconnect the advanced rinsing technology hose.



7. Release the (2) tabs, one on each side, locking the housing to the console mounting panel.

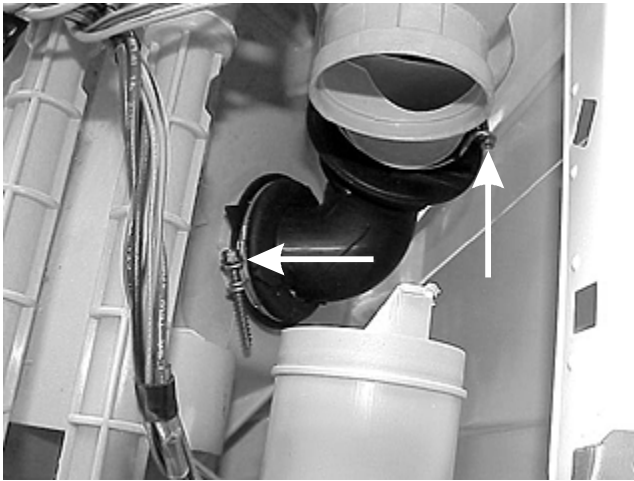


10. Push down on the tub and swing the front of the housing toward the center of the washer. Work the housing out from under the center brace and lift the housing out.

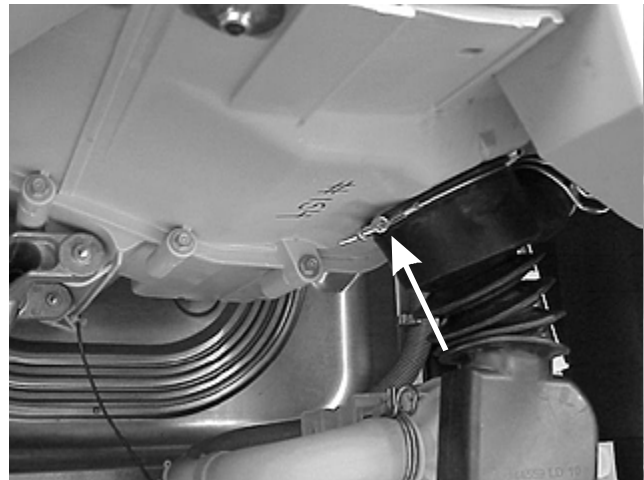


Removing the detergent dispenser outlet hose:

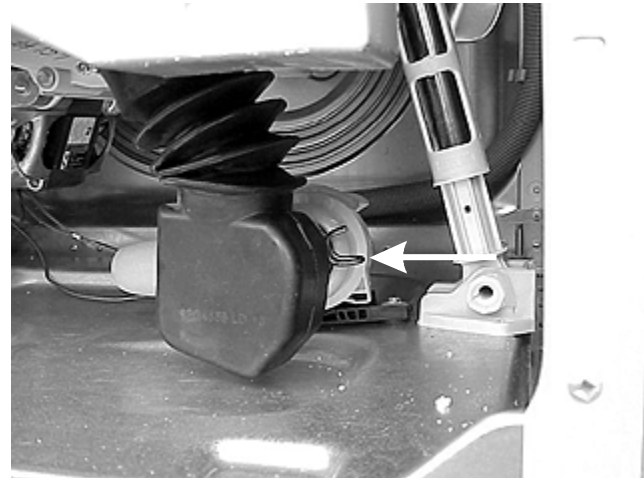
1. Disconnect the washer from the electrical supply and remove the top panel.
2. Release the overflow/vent tube and slide it back.
3. Loosen the (2) clamps, one on each end, and slide the hose off.



2. Loosen the clamp at the tub.



3. Release the clamp at the pump.



Removing the siphon break hose:

1. Disconnect the washer from the electrical supply and remove the top panel.
2. Release the (2) clamps, one on each end, and slide the hose off.



4. Slide the hose off the tub and pump to remove the sump.

Removing the hose between the drain pump and the drain hose coupler:

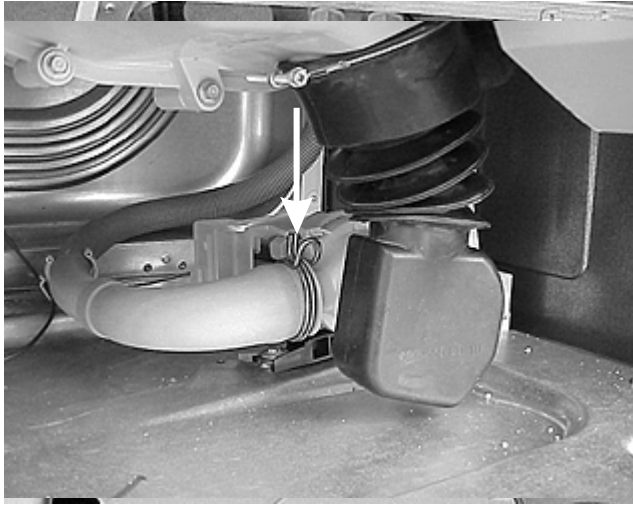
1. Disconnect the washer from the electrical supply, remove the top panel and the front panel.

Note: There will be water in the pump and hose.

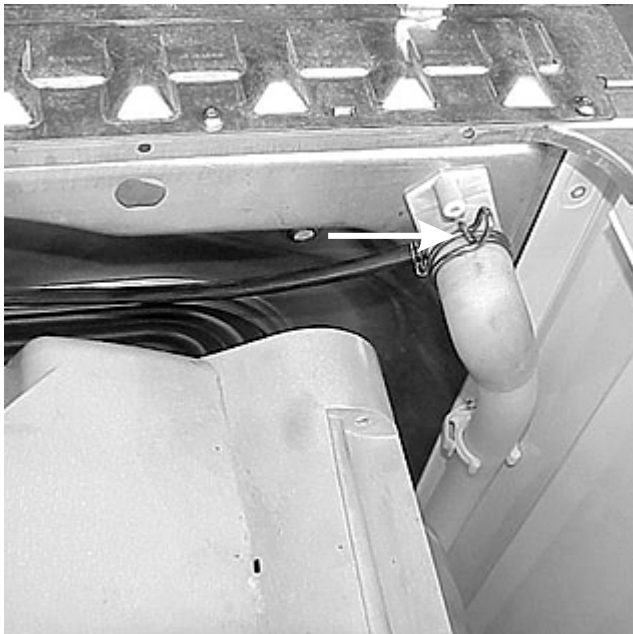
Removing the drain sump:

1. Disconnect the washer from the electrical supply and remove the front panel.

2. Release the clamp and slide the hose off of the drain pump.



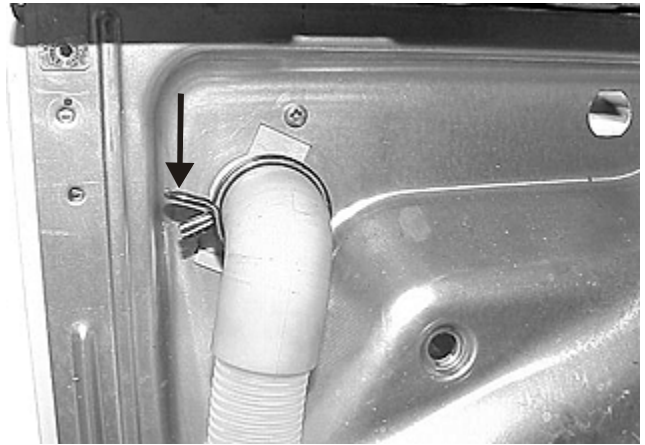
3. Release the clamp and slide the hose off the drain hose coupler.



5. Release the hose from it's guides and pull the hose out.

Removing the external drain hose:

1. Release the clamp and pull the hose off the coupler.



Removing the drain hose coupler:

1. Disconnect the washer from the electrical supply and remove the top panel.
2. Disconnect the (2) drain hoses and the siphon break hose.
3. Remove the screw holding the coupler to the rear panel and pull the coupler out the back.



Removing the rear access panel:

1. Disconnect the washer from the electrical supply.

2. Remove the (6) screws holding the rear access panel to the washer's rear panel and lift the access panel off.



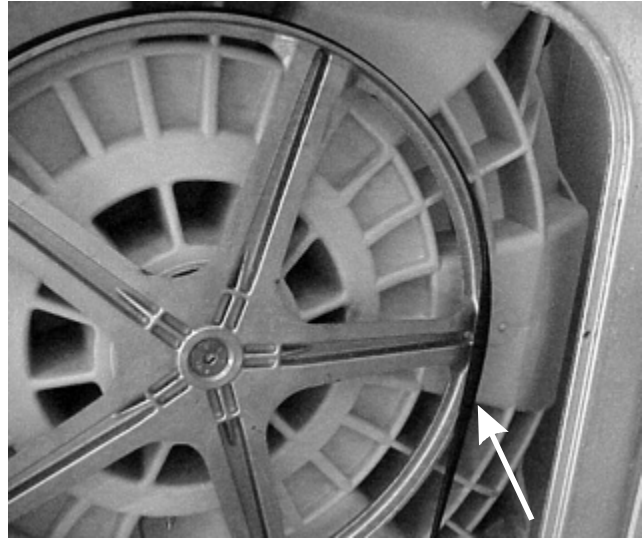
Drive belt:

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.

Removing or replace the drive belt:

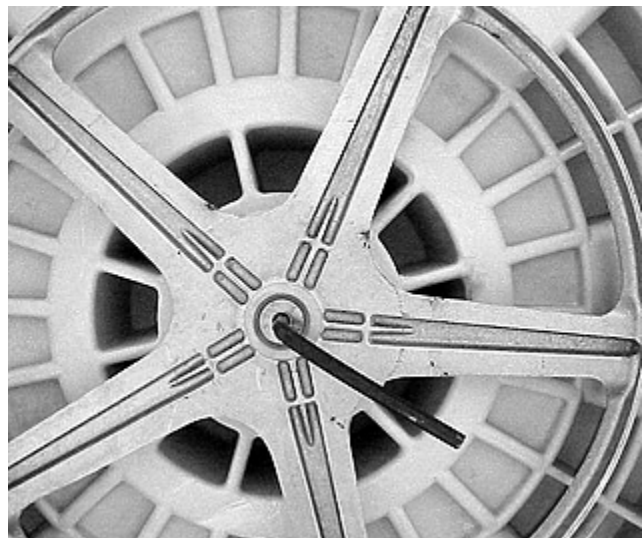
1. Disconnect the washer from the electrical supply and remove the rear access panel.

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.



Removing the large pulley:

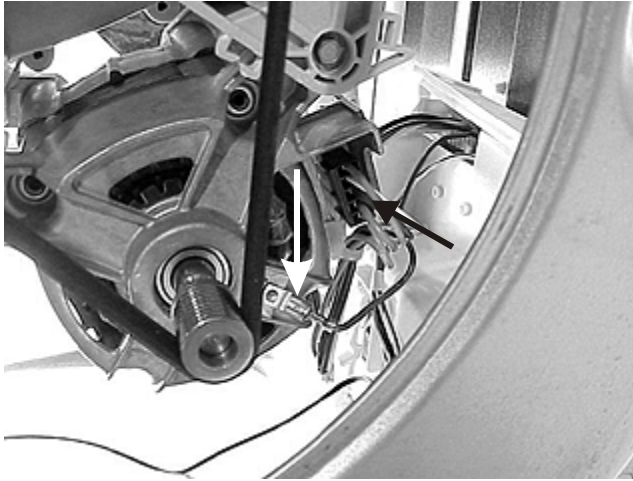
1. Disconnect the washer from the electrical supply.
2. Remove the rear access panel and the belt.
3. Using a #6 mm allen wrench remove the bolt in the center of the pulley by holding the pulley and turning the bolt counter clockwise.



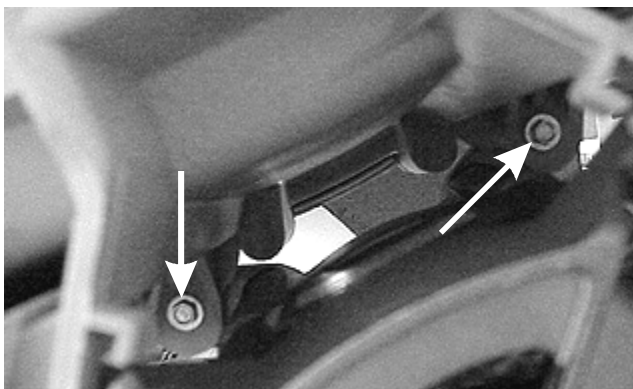
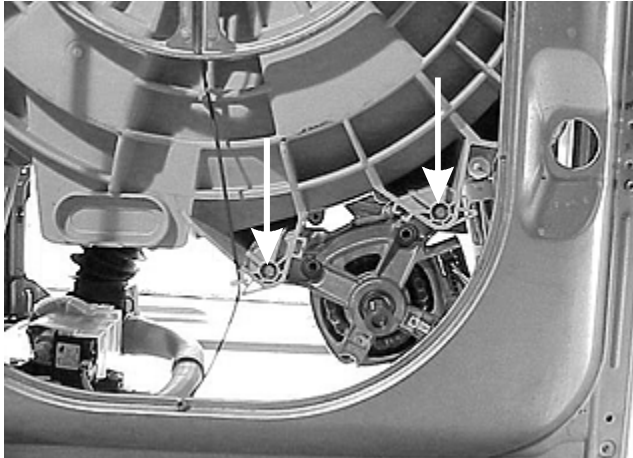
4. Work the pulley back and forth to remove it from the shaft.

Removing the drive motor:

1. Disconnect the washer from the electrical supply and remove the rear access panel and the belt.
2. Disconnect the electrical plug and the ground wire from the motor.



3. Using a 5/16" socket remove the (4) bolts, two in the front and two in the rear, that hold the motor to the outer tub.



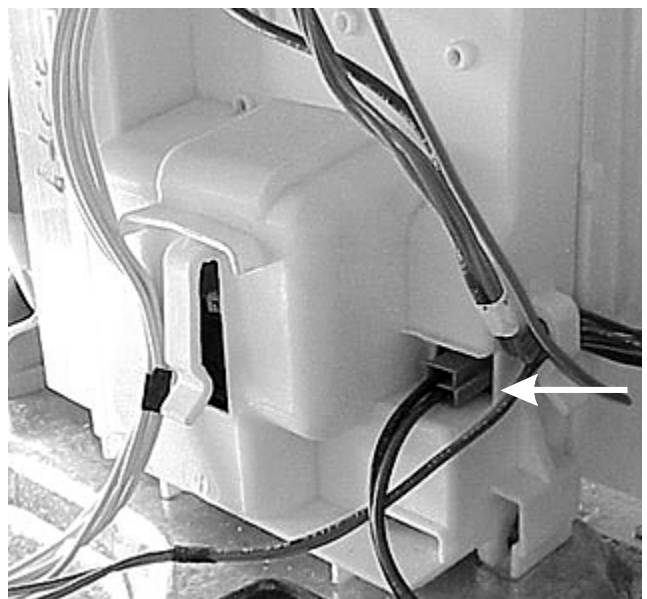
4. Slide motor forward while supporting to remove.



5. 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.

Removing the speed control board assembly:

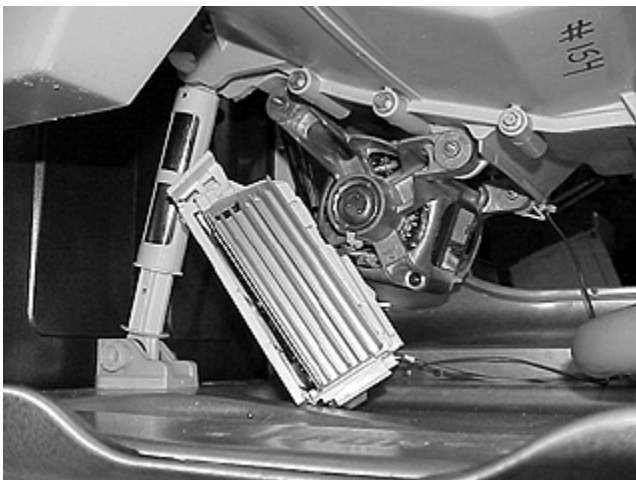
1. Disconnect the washer from the electrical supply and remove the front panel and rear access panel.
2. Disconnect the terminal plug from the lower front.



3. Disconnect the wire harness and remove the screw securing the tab on the side of the control board to the base. Lift the side of the housing up, slide the assembly to the rear to disengage the front tab and lift the assembly away from the washer base.



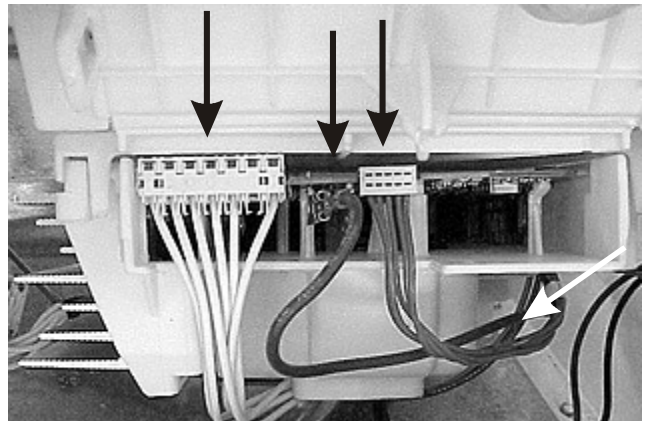
4. From the front of the washer tip the bottom of the assembly toward the motor and slide the assembly out between the shock absorber and the motor.



5. Release the latch on each end of the speed control housing and raise the top flap.

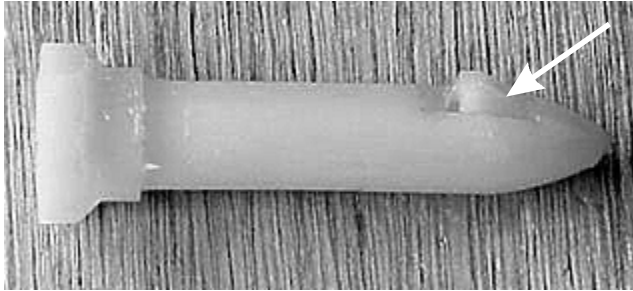


6. Disconnect the (2) plugs & the ground wire and remove the speed control assembly from the washer.



Removing the right hand air shock absorber:

1. Disconnect the washer from electrical supply.
2. Remove the front panel and the rear access panel.
3. Remove air shock securement pins by depressing locking tab while pulling pin to remove.



This procedure is much easier if a deep 1/2", 6 point socket (or 13 millimeter, 6 point) is used 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.

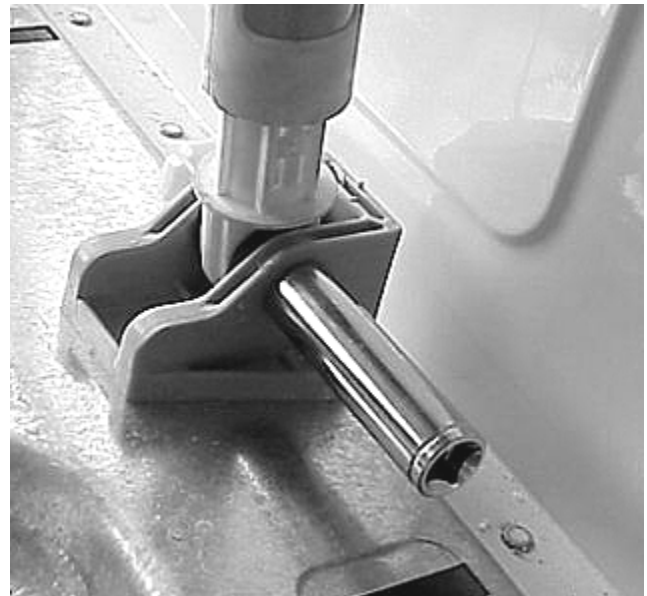


4. Use pliers to grasp head of pin and pull to remove. As the pin is removed the socket will drop free.
5. When replacing the air shock make sure to position it with the bell end facing downward.
6. Lubricate the securement pins with Sil-Glide® before installing.

Removing the left hand air shock absorber:

1. Disconnect the washer from electrical supply.
2. Remove the front panel and rear access panel.
3. Remove the speed control board assembly.
4. Remove air shock securement pins by depressing locking tab while pulling pin to remove.

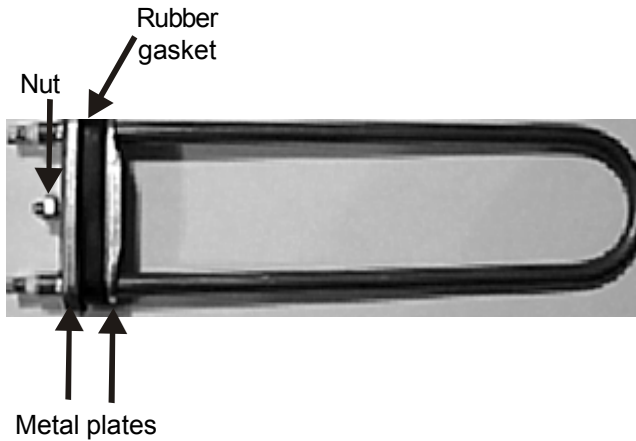
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6. When replacing the air shock make sure to position it with the bell end facing downward.
7. Lubricate the securement pins with Sil-Glide® before installing.

Removing the heating element:

Note: 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.



1. Disconnect the washer from electrical supply and remove the rear access panel.
2. Disconnect the wires from the heating element and the drum water NTC.
3. Loosen the compression nut and pull the heater assembly out of the drum.



Removing the drum water NTC:

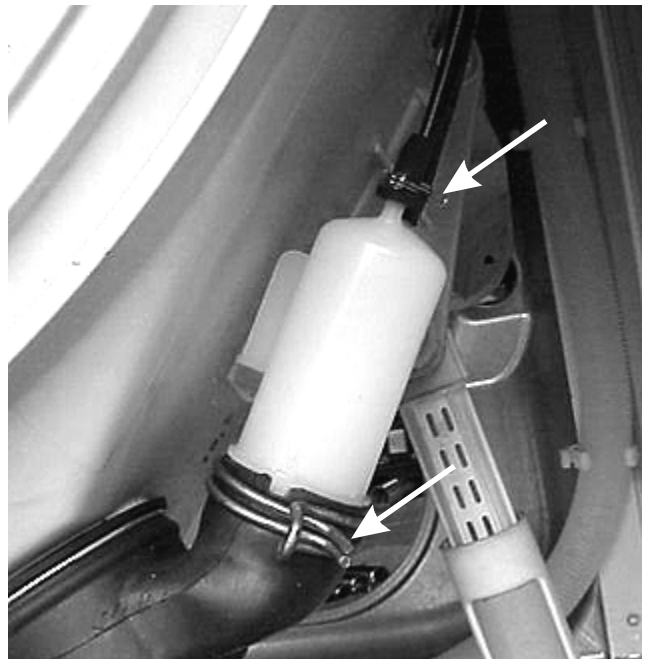
1. Disconnect the washer from electrical supply and remove the rear access panel.
2. Disconnect the wires from the drum water NTC.

3. Loosen the compression nut and pull the drum water NTC out of the heater assembly.

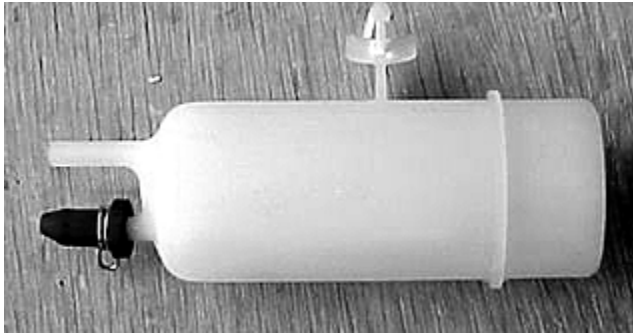


Removing the air bell:

1. Disconnect the washer from the electrical supply and remove the front panel.
2. Remove the (2) hoses, one from each end.



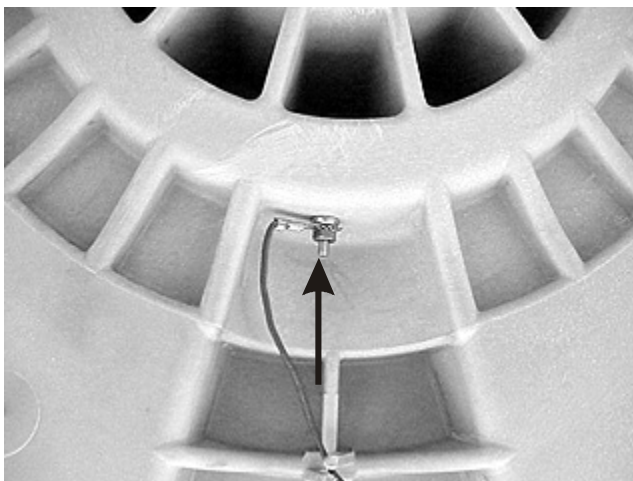
3. Release the rivet holding the air bell to the outer tub.



NOTE: Seal air connecting tube to air bell and air bell to sump hose using waterproof glue. DO NOT plug air connecting tube opening.

Removing the tub assembly:

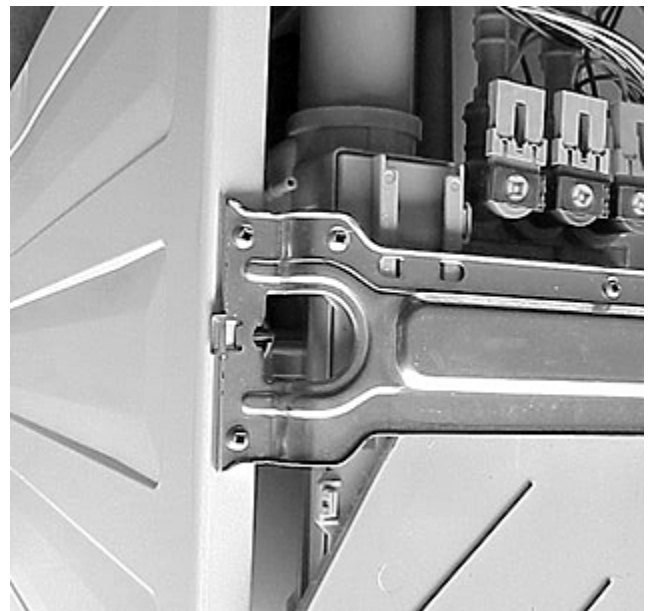
1. Disconnect the washer from the electrical supply and the hot and cold water hoses.
2. Remove the top panel, console, rear access panel and the front panel.
3. Disconnect the advance rinsing technology hose from the bellows, the detergent outlet and siphon break hoses from the outer tub.
4. Remove the drain pump and disconnect the drain sump from the tub.
5. If you are going to replace 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. Disconnect the bearing ground wire.



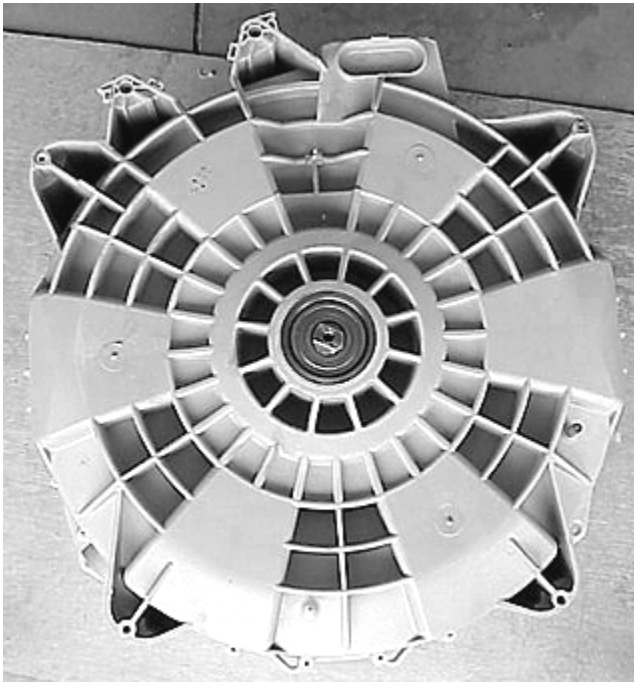
9. Remove the top pins from shock absorbers and push the shock absorbers against the cabinet.



10. Place something down to protect the floor, carefully turn the washer on it's face and release the springs.



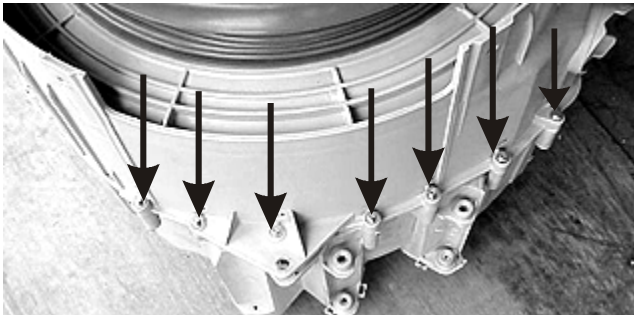
11. Lift the cabinet off the tub.



13. Lift off the front half of the tub.

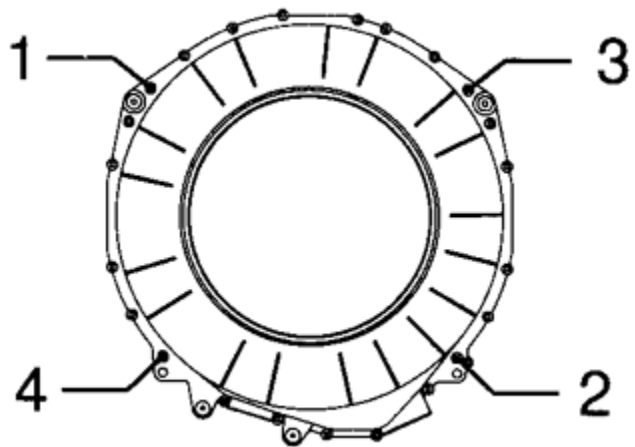


12. Turn the tub over and remove the (23) screws holding the two halves of the tub together.



CAUTION: Use caution in handling the spin basket. The outer surface is very sharp!

14. Reverse procedure to reassemble using illustration below to show outer tub screw tightening sequence.



15. The seal between the (2) tub halves is placed in the groove of the rear half and can be lifted out.



16. To remove the spin basket, set the back half of the outer tub on it's side, reinstall the screw that holds the large pulley on and tap the inner tub out with a rubber hammer.

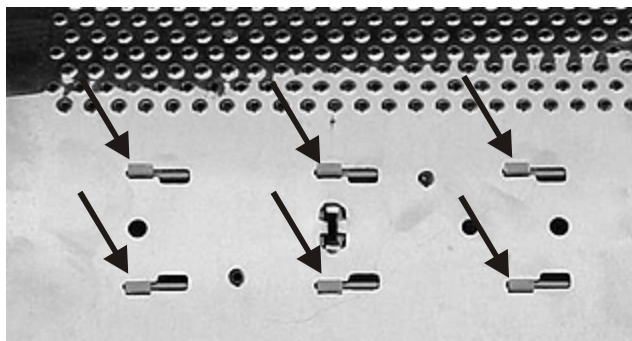


Note: The bearings, water seal and seal between the two tubs come as part of the rear half of the outer tub. If the water seal or bearings fail, inspect and if necessary dress the shaft of the spin basket with a file. With some failures, it may be necessary to replace the spin basket.

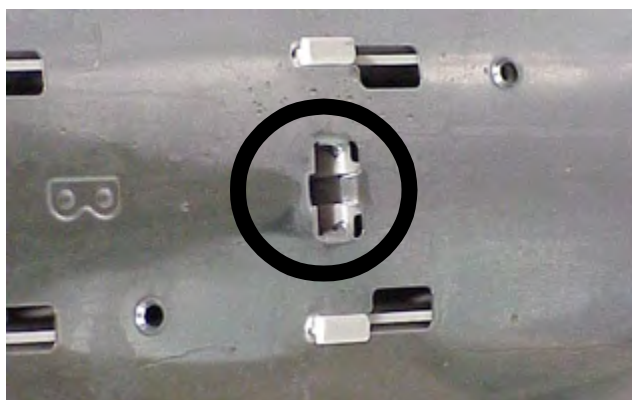


Spin basket vanes:

There are three plastic vanes mounted to the spin basket to aid in the washing action during the wash cycle. The vanes are held to the spin basket by (6) tabs that are slipped into slots in the spin basket and locked in



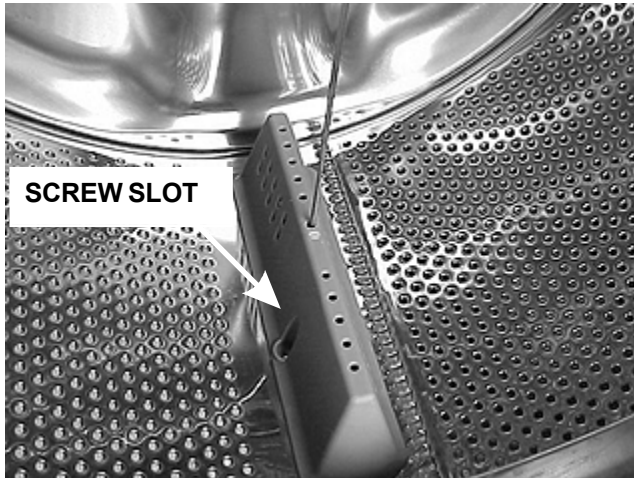
place by (4) tabs pressed out of the spin basket.



Removing the spin basket vanes:

1. Open the washer's loading door.

2. Insert a small shaft common screwdriver into the hole in top of the vane behind the divided space and push the (4) locking tabs open.



3. Slide the vane towards the door opening to release the (6) tabs and push on the side of the vane to remove.
4. When replacing or reinstalling, secure the vane with a stainless steel screw through the slot in the side of the vane.

NOTES

[illegible]

