New GE Profile Front Load Washer

WPDH8800J

mabe

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Pub # 08-MAN-AW-04

IMPORTANT SAFETY NOTICE

Warning: This information is intended for use by individuals possessing adequate backgrounds of electrical, electronic and mechanical experience.

Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

CAUTION

To avoid personal injury while servicing this unit, disconnect power before servicing. If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

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GE Profile Washer Warranty

For The Period Of:

One Year Any part *From the date of original purchase*.

Any part of the washer which fails due to a defect in materials or workmanship. During this ***limited one-year warranty,*** GE will also provide, ***free of charge,*** all labor and related service costs to replace the defective part.

Second through Fifth Year *From the date of the original purchase*

The suspension strut assembly, motor and motor controller if any of these parts should fail due to a defect in materials or workmanship. GE will also replace the ***washer top panel, front panel or service panel*** if they should rust under operating conditions. During this ***additional three-year limited warranty,*** you will be responsible for any labor or related service costs.

Second through Tenth Year *From the date of the original purchase*

The outer tub and driven pulley if any of these parts should fail due to a defect in materials or workmanship. During this ***additional eight-year limited warranty,*** you will be responsible for any labor or related service costs.

Lifetime of Product *From the date of the original purchase*

The washer basket if it should fail due to a defect in materials or workmanship. During this ***product lifetime limited warranty,*** you will be responsible for any labor or related service costs.

GE Profile Washer – New Features

Improved Dispenser:

Communication with Dryer:
Internal harness and connector for sending cycle information to Dryer

New Front Panels & Door:
New panels and door assembly to mount on Magellan cabinet chassis

Higher Spin Speed:
Minimum 1300 RPM

Bulk Dispense Ready:
All units with built in tubing and wiring connection located on rear of unit, ready for future Bulk Dispenser Module program

Modern Control Interface:
GE designed controls with VFD, Radial Knob, and Keypad

Increased Basket Capacity:
Minimum 3.35 DOE [3.9 IEC]

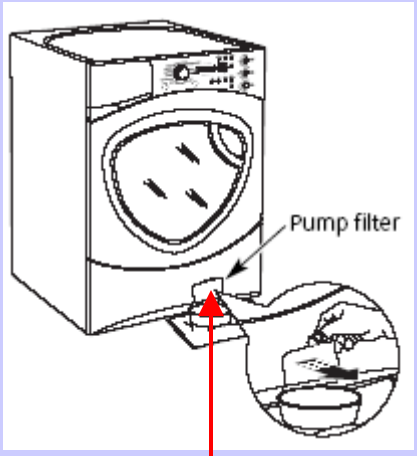
Quiet Pack:
Sound insulation added for lower noise

Tall Pedestal Option:
14" Tall Pedestal with Drawer for more storage space

Clean Pump Filter

Due to the nature of the front-load washer, it is sometimes possible for small articles to pass to the pump. The washer has a filter to capture lost items so they are not dumped to the drain.

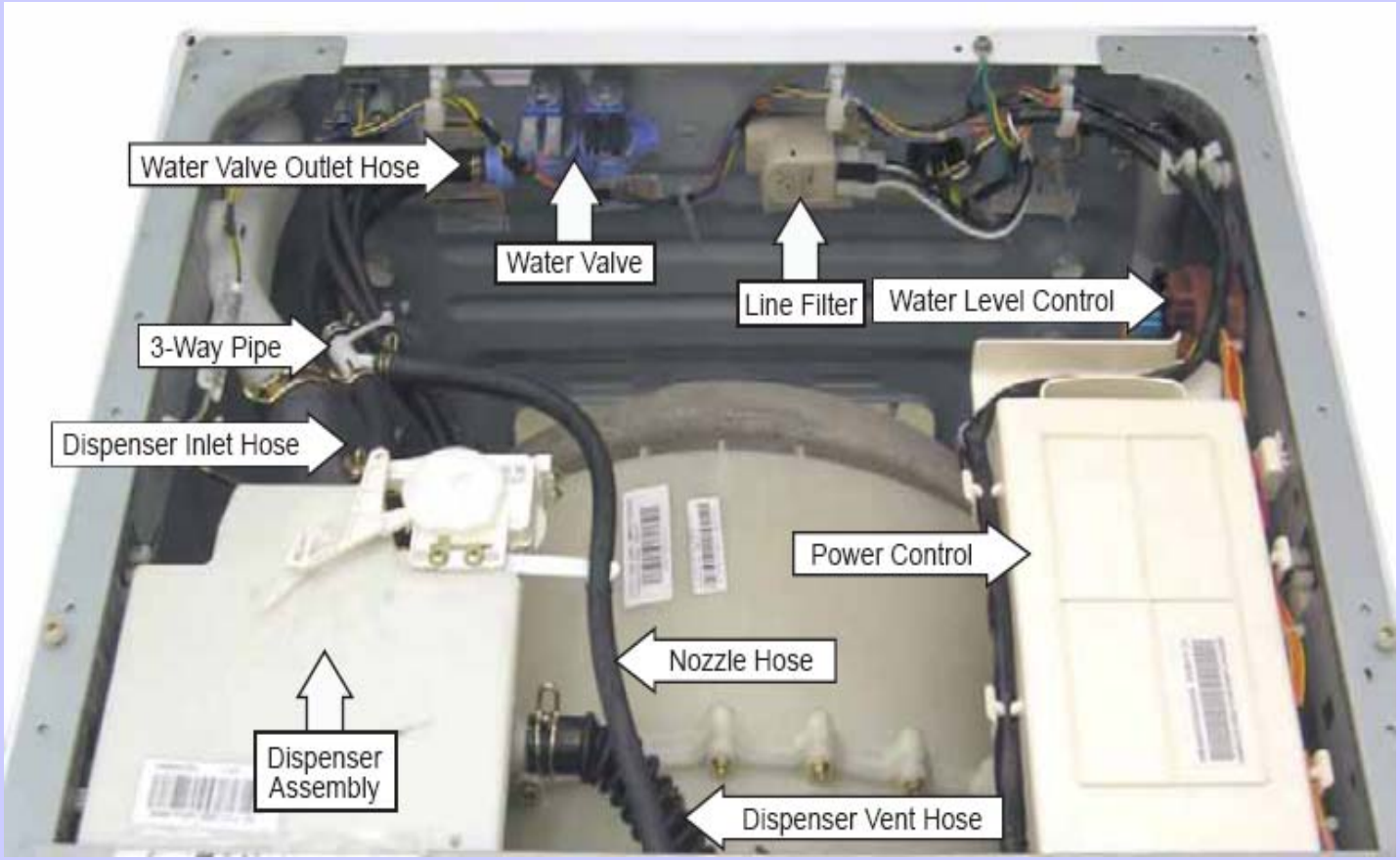
To retrieve lost items, clean out the pump filter.



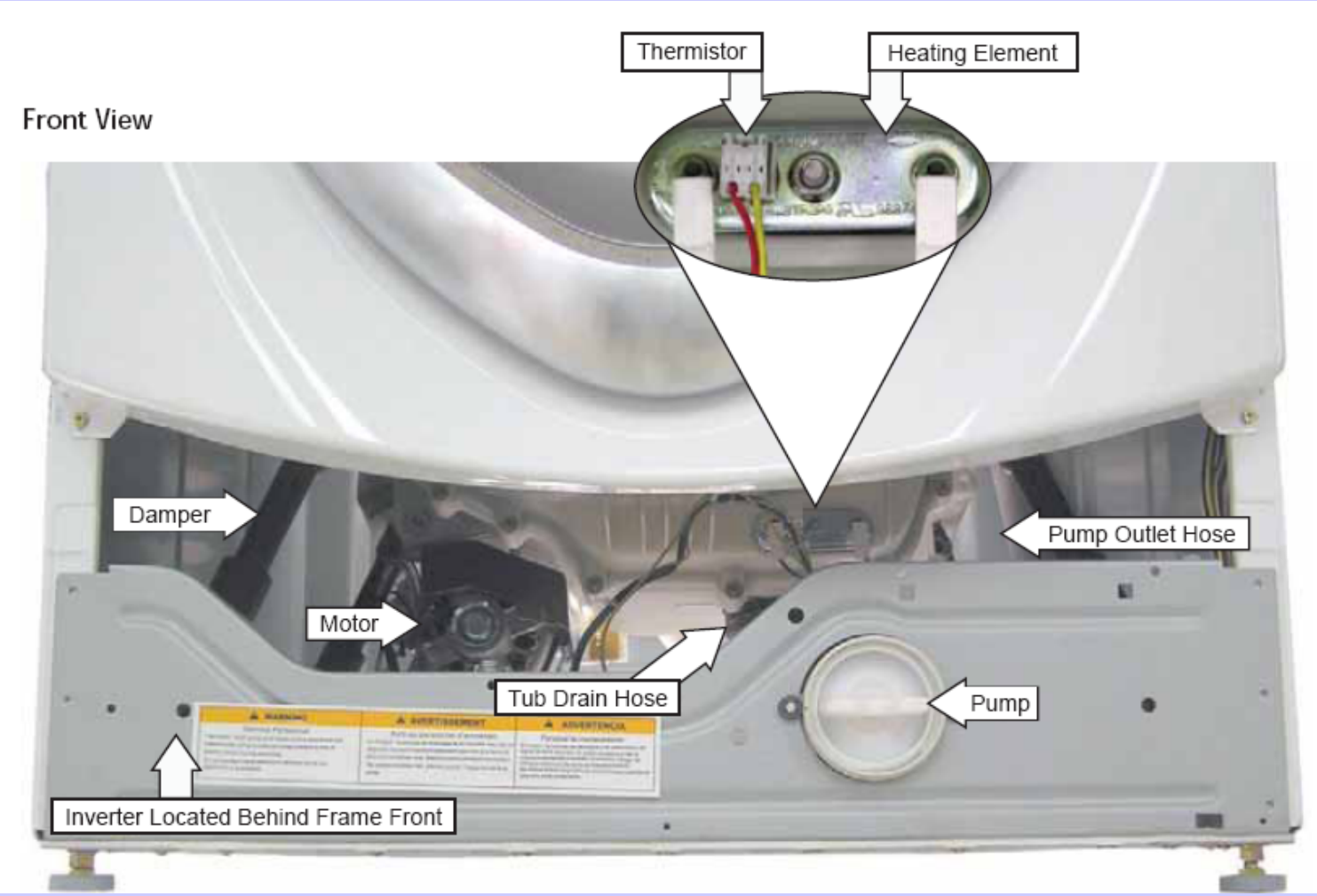
1) Using a coin in the notch on the door, open the access door.
2) Place a shallow pan or dish under the pump access door and towels on the floor in front of the washer to protect the floor. It is normal to catch about a cup of water when the filter is removed.
3) Turn the pump filter counterclockwise and remove the filter.
4) Clean the debris from the filter.
5) Replace the filter and turn clockwise to the marked position.
6) Close the access door.

Component Locator Views

Top View

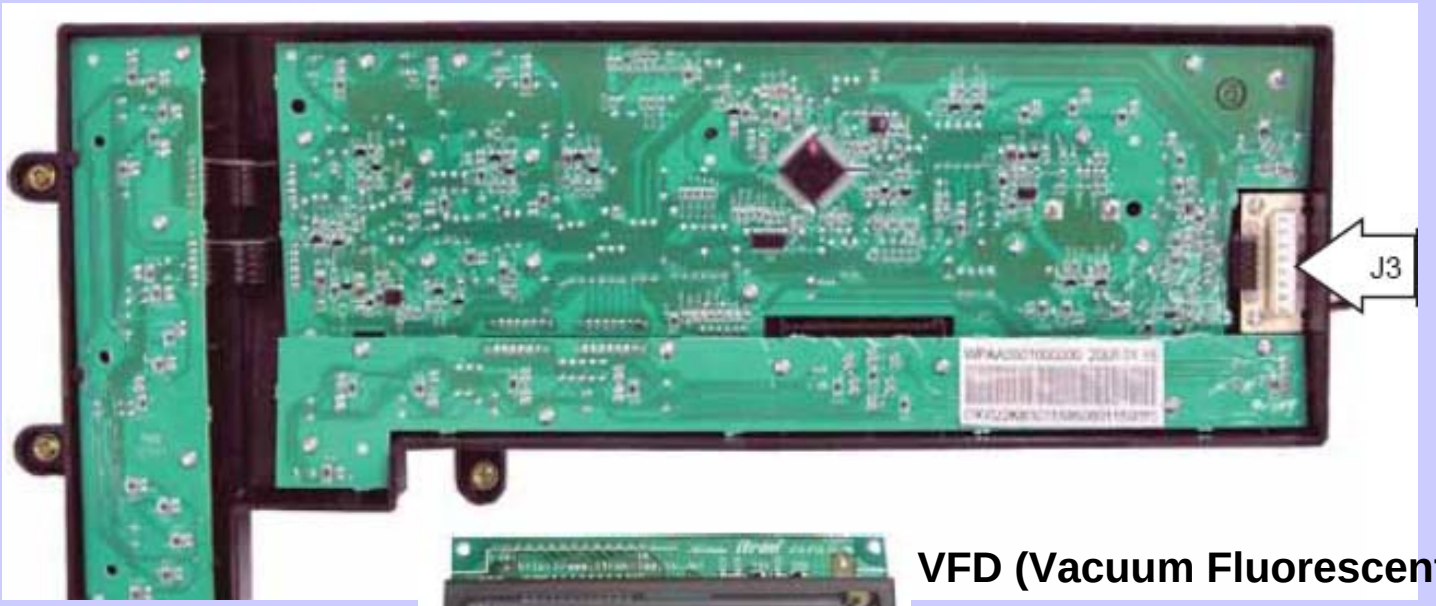


Front View


Front View
Thermistor
Heating Element
Damper
Pump Outlet Hose
Motor
Tub Drain Hose
Pump
Inverter Located Behind Frame Front

Circuit Board Connections

Control Board

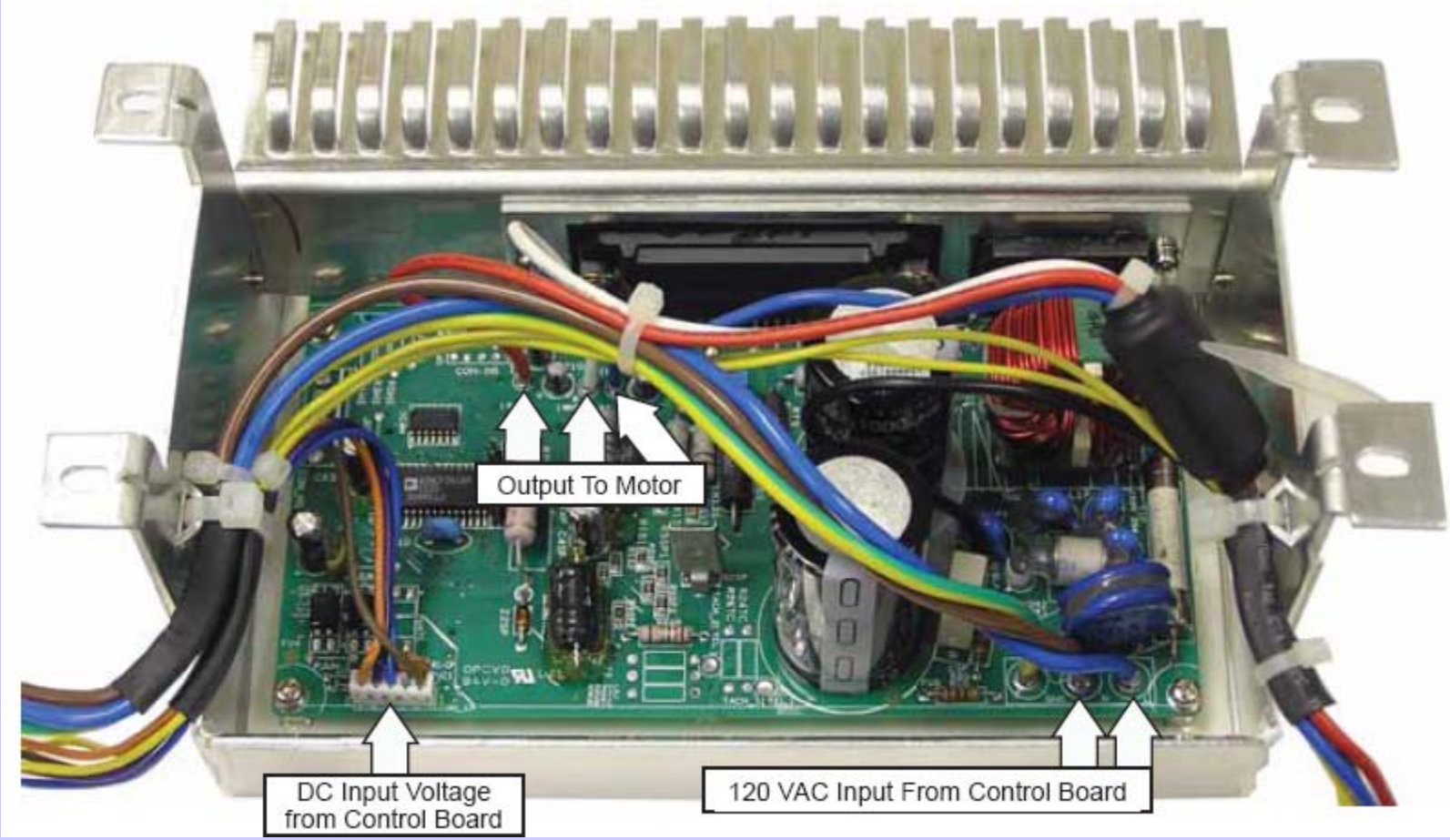


VFD (Vacuum Fluorescent Display)

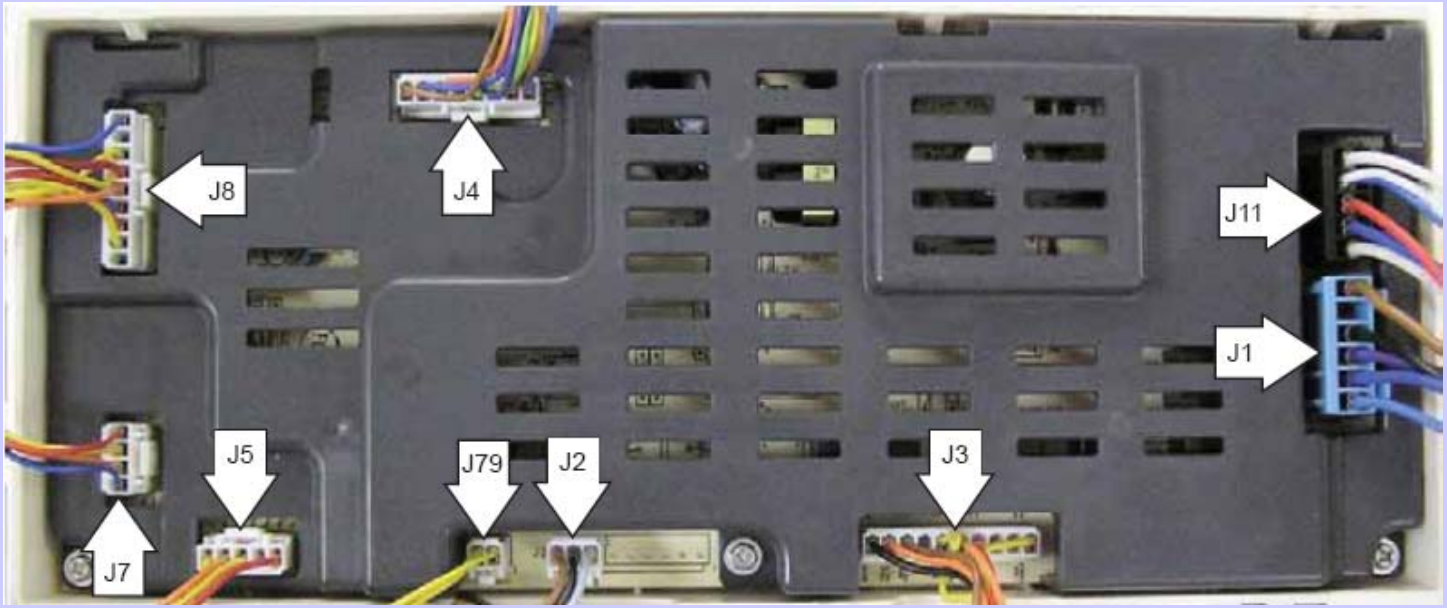
CN3

Output to Control Board

Inverter Board

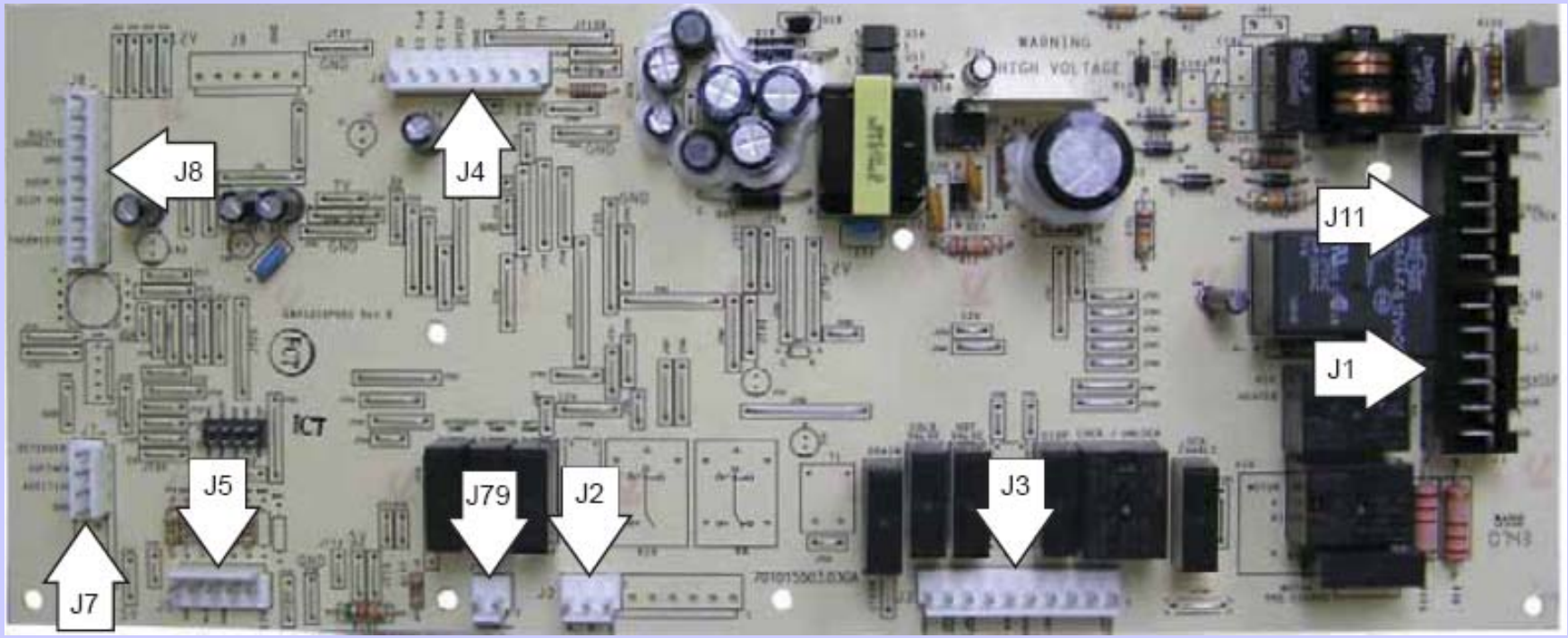


Power Supply Board (rear cover on)



J1	L1 output to inverter, door lock switch, heater, and power filter
J2	Softener pump, detergent pump motors
J3	Door lock and unlock solenoids, dispenser motor, hot and cold water valves, water pump
J4	7V and 12V to UI, LIN bus, ground to UI and inverter, Ezlink tx, tx, and 5V to inverter
J5	Pressure switch: foam, main, and overflow switches
J7	Detergent and softener level sensors
J6	Bulk dispenser switch, dispense position switch, heater temperature thermistor, door lock switch
J11	L1 door lock switch, heater, N to inverter, N to bulk dispenser board, N to power filter
J79	Motor tachometer

Power Supply Board (rear cover off)



Control Panel

The control panel is held in place with 5 Phillips head screws and 1 tab.

To remove the control panel assembly:

1. Remove the top panel.

2. Pull the dispenser out to the stop position. Press down on the lock tab. Pull the dispenser out.

3. Remove the 2 Phillips-head screws from the control panel dispenser recess.

4. Remove the 3 (7-mm) hex-head screws that attach the top of the control panel to the control panel brace.

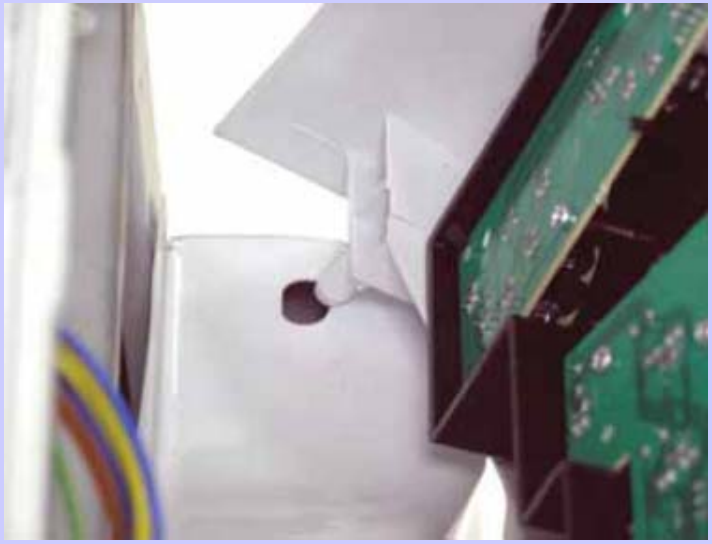
Control Panel (cont.)

5. Lift the top edge of the panel to disengage the tab that holds the top of the panel in place.

6. Lift the panel from the cabinet.

7. Disconnect the wire harness from the control panel.

Note: When installing the control panel, place the panel pin in the locator hole in the top right-side of the front panel before engaging the tab.



Control Board

The control board is mounted in a housing that is attached to the inside of the control panel. The control board and housing are replaced as an assembly. The control board assembly is held in place by 4 (6-mm) hex-head screws. The control board is programmed to recognize 6 modes of operation.

Mode Name	Description
Idle	No cycle is selected. All LEDs, VFD on front panel, load selections, and options are off. The door is unlocked. The control board is ready to take input from user.
Standby	A cycle is selected with the appropriate load selections and options. LEDs and VFD on the front panel are on. The door is unlocked. The control board is ready to take user input to either modify cycle selections or start a selected cycle.
Run	The control board is executing the currently selected cycle. The door is locked.
Pause	The control is stopped by the user during the execution of a cycle. LEDs and VFD on the front panel stay on. All loads are turned off. The door is unlocked. The control board is ready to take user input to either modify, resume, or cancel the cycle.
End of Cycle	A cycle is completed. LEDs and VFD on the front panel stay on, all loads are turned off. The door is unlocked. The control board remains in this mode until the door is opened or after 2 hours have passed.
Fault	The control board detected a critical failure condition. Certain functions of the washer will not operate. The VFD will show the fault code in the service test mode. The fault code can only be removed in the service test mode. (See ***Service Test Mode***.)

Operation of the control board can be checked by using the service test mode. (See ***Service Test Mode***.)Specific failures associated with the control board can initiate error codes E1, E2, E10, and E26. (See ***Service Test Mode***.)

Remove the control board assembly:

1. Remove the control panel. (See 1. ***Control Panel***.)

Note: In the following step, the knob is held in place by 4 plastic clips and may require some effort to remove.

2. Remove the knob by pulling it straight out.

3. Remove the 4 (6-mm) hex-head screws that hold the control board assembly to the control panel.

4. Remove the control board assembly from the control panel.

5. Remove the cycle selection buttons.

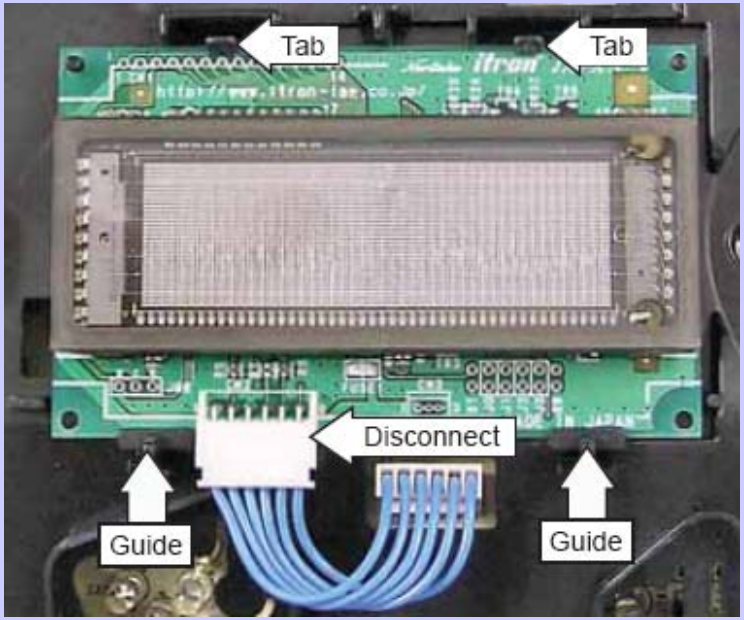
VFD (Vacuum Fluorescent Display)

To remove the VFD:

1. Remove the control panel. (See 1. ***Control Panel***.)

2. Disconnect the wire harness from the VFD.

3. Press the 2 tabs that hold the VFD to the control panel, lift the VFD and remove it from the 2 guides at the bottom.



Line Filter

The line filter helps to smooth out any fluctuations in voltage, protecting the control board and providing more reliable operation. The line filter is installed on the interior side of the rear panel, and is located left of the water valve.

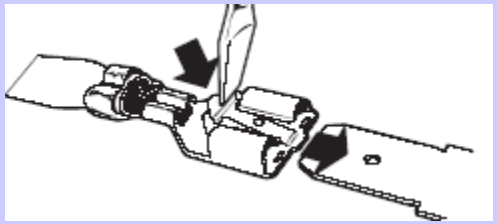
To check the line filter, look for the outer surface to be burnt by heat or a power surge. The filter resistance should be approximately 0 Ω between the black (top) wire terminals and 0 Ω between the white (bottom) wire terminals.

To remove the line filter:

1. Remove the single black (top) and single white (bottom) wires.

2. Disconnect the wire harness by pressing the tab and pulling outward.

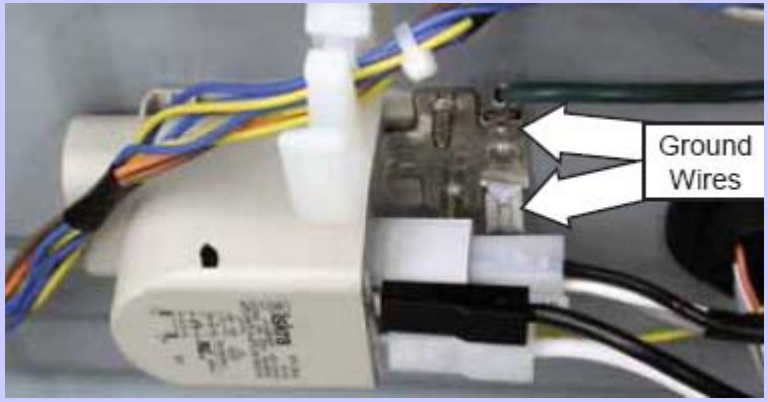
Note: The ground wires attached to the line filter use releasing locking tabs.



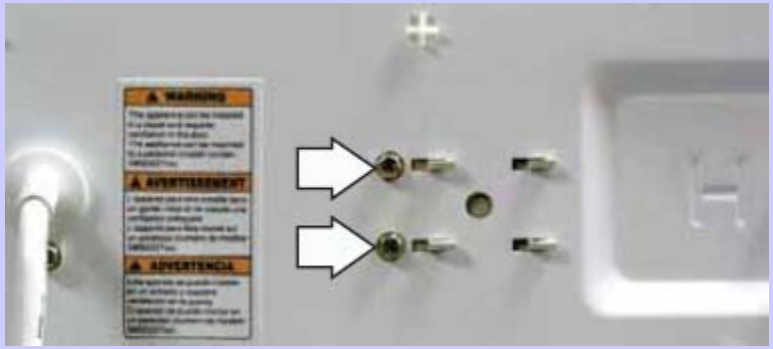
ELECTRICAL TERMINAL RELEASE/LOCKING TAB

Line Filter (cont.)

3. Press the locking tab on each terminal and remove the 2 ground wires.



4. Remove the 2 (7-mm) hex-head screws that hold the filter to the frame.



5. Move the filter to the right.

Door Lock

The door lock contains a door switch and solenoid operated locking and unlocking mechanism.

The door locks when a cycle is entered (wake-up routine) and during every cycle. The door unlocks at the completion of a cycle. The door will not open when:

- ❖ The foam switch is open
- ❖ Water temperature is above 130°F (54°C)
- ❖ Wash basket is rotating

Specific failures associated with the door lock can initiate error codes E11 thru E13, and E28. (See ***Service Test Mode***.)

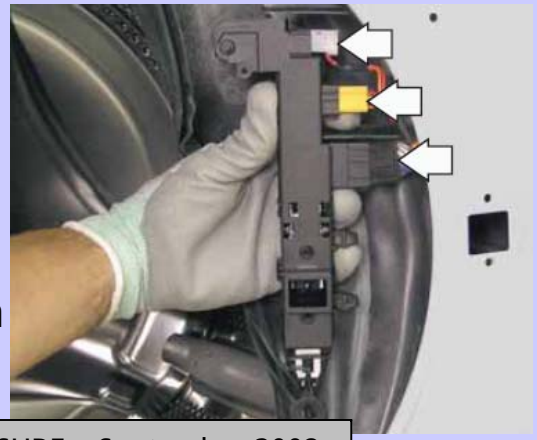
The door lock is held to the front panel with 3 Phillips-head screws. The door lock is accessed from the front of the washer when the right side of the gasket is partially pulled back.

Remove the door lock

1. Open the door and remove the 3 Phillips-head screws that hold the door lock to the front panel.

2. Use a long-nose pliers to grasp the wire loop at the spring location and expand it to clear the gasket.

3. Remove the spring and wire from the gasket.
4. Pull the right side of the gasket away from the front panel.
5. Pull the door lock to the opening and remove the 3 wire harnesses.



Note: The door latch is solenoid-activated. It can remain locked after power is removed.

Front Panel

The front panel is hung on 2 hooks attached to the cabinet and held in place with four 1/4-in. hex-head and 2 Phillips-head screws. A gasket provides a watertight seal between the front panel and outer tub. The front of the gasket is secured to the front panel flange by a spring and wire located in the fold of the gasket. The door lock and wiring is attached to the front panel.

To remove the front panel:

1. Remove the control panel. (See ***Control Panel***.)
2. Remove the service panel. (See ***Service Panel.***)
3. Open the door. Remove the 3 Phillips-head screws that hold the door lock to the front panel. (See ***Door Lock***.)
4. Remove the spring and wire from the gasket. (See ***Door Lock***.)
5. Position the gasket behind the front panel door opening. Close the door.
6. Remove the four 7-mm hex-head and 2 Phillips-head screws that attach the front panel to the cabinet.

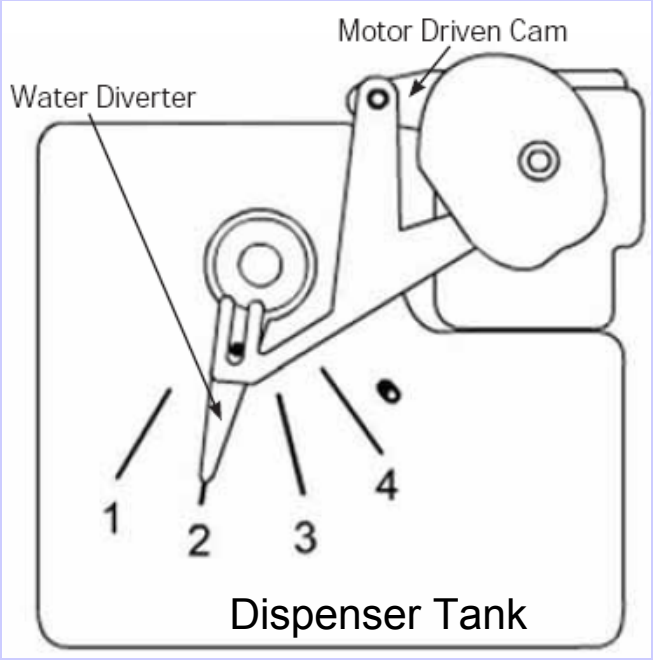
7. Lift up then remove the front panel from the 2 hooks.

Dispenser Assembly

The dispenser assembly provides automatic dispensing of detergent, bleach, and fabric softener as long as the user fills the compartments prior to starting the washer.

The products added to the dispenser are diluted with water before they are dispensed into the wash tub. This is accomplished by a water diverter that sprays a controlled jet of water into the proper compartment at the correct time. The water diverter movement is provided by a motor-driven cam located on the dispenser tank. The diverter motor and water valve are operated by the control board.

At the start of a cycle, after the wake-up routine is completed, the dispenser always moves into position before fill takes place.



Position	Dispenser Function
1	Pre Wash
2	Wash
3	Fabric Softener
4	Bleach

Dispenser Assembly (cont.)

Operation of the dispenser can be checked by using service test mode t15. (See ***Service Test Mode***.)

Specific failures associated with the dispenser can initiate error code E9. (See ***Service Test Mode***.)

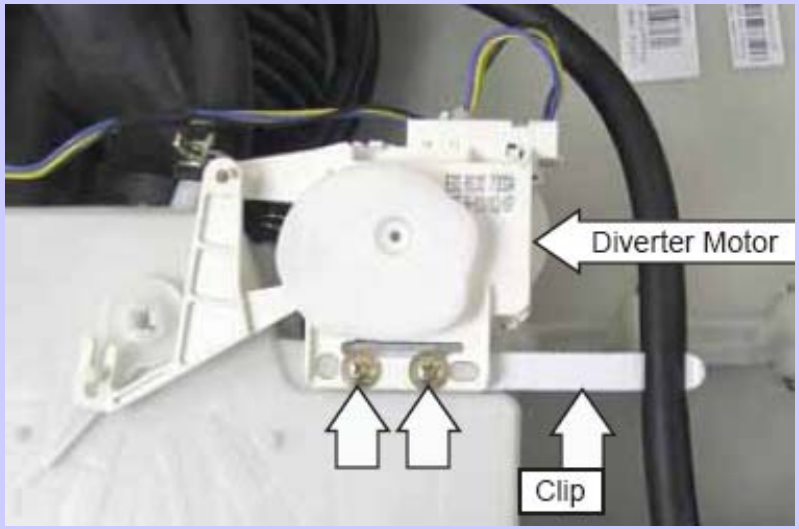
Caution: When testing the diverter motor, DO NOT remove the wiring harness from the diverter motor unless replacing the motor assembly. The motor assembly has a special locking connector and the wiring harness will not stay reconnected if removed and reinstalled on the same motor.

To remove the dispenser assembly:

1. Remove the top and control panels. (See 1. ***Top*** and ***Control Panels.***)
2. Remove the gasket inlet hose from the clip attached to the dispenser.

Dispenser Assembly (cont.)

3. Remove the 2 Phillips-head screws that attach the diverter motor and clip to the dispenser tank. Place the motor and clip aside.



4. Mark the positions of the 3 bulk dispenser hoses connected to the dispenser.

5. Remove the water inlet, tub vent, and bulk dispenser inlet hoses from the dispenser:

Note: The water inlet, tub vent, and bulk dispenser inlet hoses are difficult to remove.

a) Squeeze each clamp and slide it back.

b) Carefully break each hose loose by inserting a small fl at blade screwdriver under the hose to break the seal.

c) Remove the hoses.

Dispenser Motor

The dispenser is operated by a 120-VAC, 60-Hz motor. The dispenser motor receives commands from the control board and controls dispenser operation.

Operation of the dispenser motor can be checked by using the Service Test Mode t12. (See ***Service Test Mode***.)

Specific failures associated with the dispenser motor can initiate error codes E38, E39, and E62. (See ***Service Test Mode***.)

To remove the dispenser motor:

Access the dispenser assembly. (See ***Dispenser Assembly***.)

Caution: Lock tabs on the dispenser motor wiring harnesses are fragile. Tab breakage can occur if excessive release pressure is applied.

Note: In the following step, it can be helpful to insert a small flat blade screwdriver (as shown) to remove the wire harnesses.

Dispenser Motor (cont.)

1. Carefully press the lock tab and disconnect the 2 wire harnesses from the dispenser motor.

Harness Removal

2. Remove the 2 Phillips-head screws that attach the motor and gasket inlet hose clip to the dispenser tank. (See ***Dispenser Assembly***.)

3. Lift the dispenser motor vertically from the dispenser tank.

Power Board Assembly

To remove the power board assembly:
The power board and its cover are replaced as an assembly.

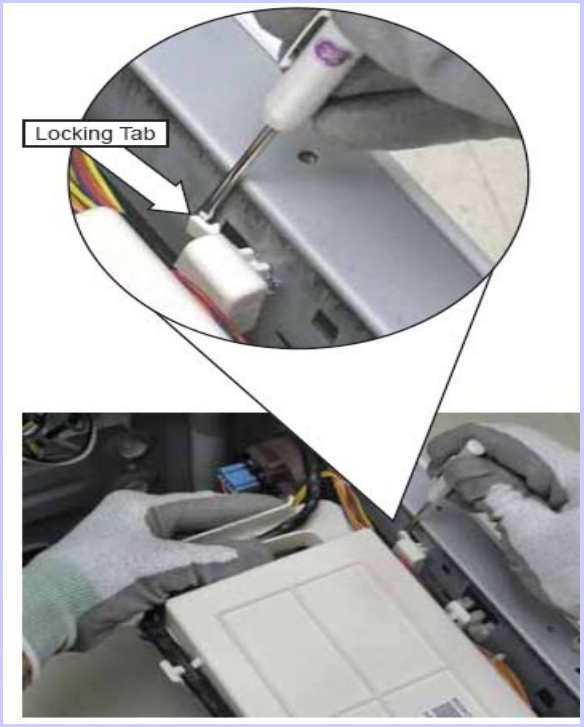
1. Remove the top panel.

Note: The power supply assembly is attached to the control bracket with a 6-mm hex-head screw and 2 tabs, and attached to the right side top brace with 1 locking tab.

2. Remove the 6-mm hex-head screw that attaches the power supply to the control bracket.

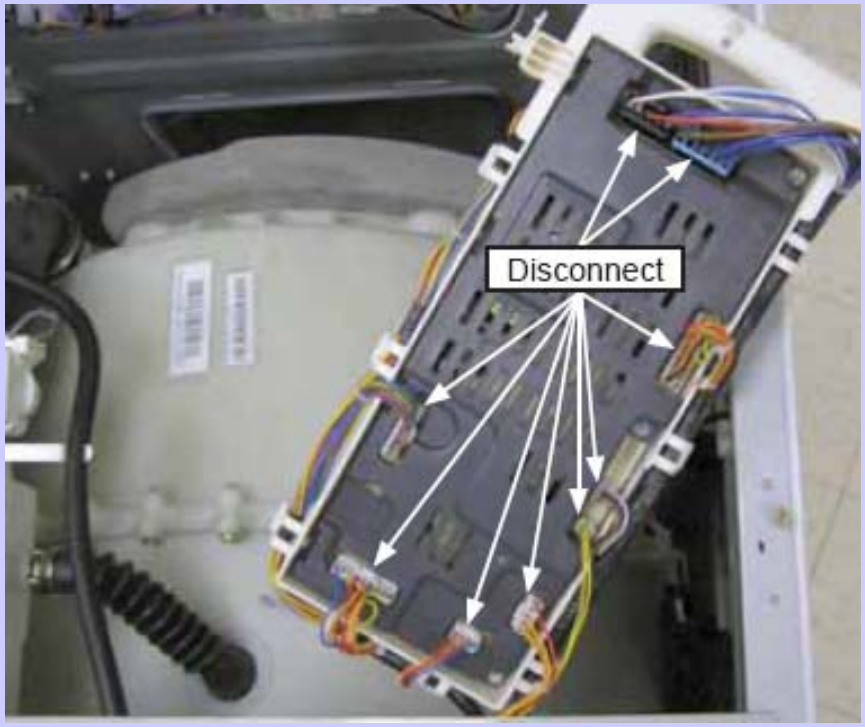
Power Board Assembly (cont.)

3. Using a small fl at blade screwdriver, carefully pry the locking tab away from the right side top brace while pulling the power supply up and towards the rear of the washer.



4. Invert the power board.

5. Disconnect the wire harnesses from the power board assembly.



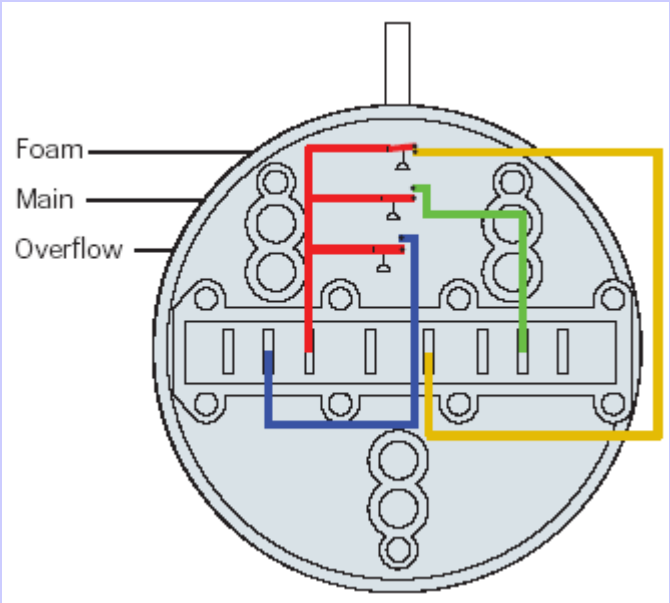
Water Level Control

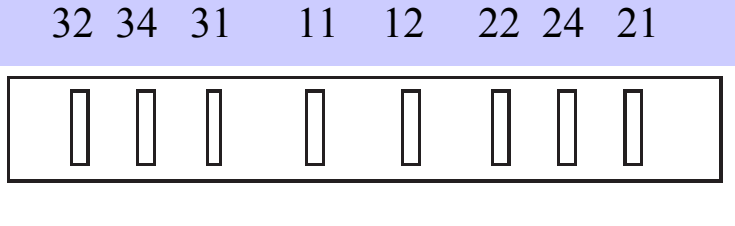
The water level control is installed on the cabinet right side top brace. The water level control is connected by a hose to an air chamber attached to the bottom of the outer tub. The water level control consists of 3 internal switches that monitor 4 water level conditions.

- When the water level rises in the outer tub, air is trapped in the air chamber.
- As the water level rises, the air pressure in the air chamber increases.
- The increased pressure operates the 3 internal switches.
- The washer has overflow protection and will automatically pump out regardless of whether the washer is on or off, as long as the unit is plugged in. This action supersedes all other commands.
- The 3 internal switches are identified as foam, main, and overflow. The 4 water level conditions monitored are empty, foam, main, and overflow.

Water Level Control (cont.)

Level	Switch Position		
	Foam	Main	Overflow
Empty	Closed	Open	Open
Foam	Open	Open	Open
Main	Open	Closed	Open
Overflow	Open	Closed	Closed





Water Level Control (cont.)

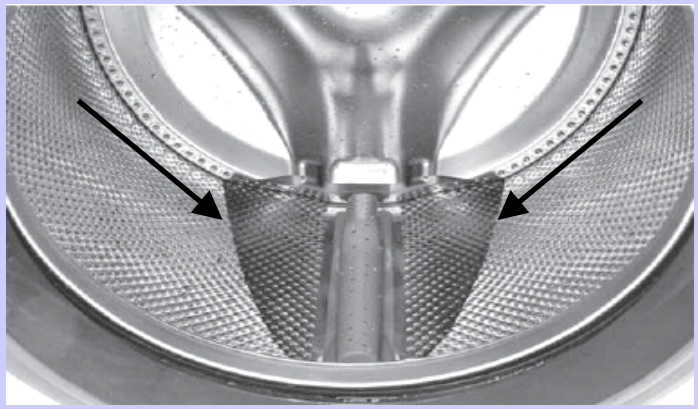
Water Level Control Operation

When the machine is empty, the foam switch is closed and the motor circuit is disabled. When the main wash cycle is activated, the fill valve begins operating. The machine fills to the foam water level, the foam switch opens, and tumble begins. Water temperature is read by the thermistor and fill valve percentage of operation (water tempering) is calculated for the main wash. When calculated, and/or when the load absorbs water, the tumbling will pause. Fill will continue until the main water level is reached (Adaptive fill), the main switch closes, and main wash tumbling begins.

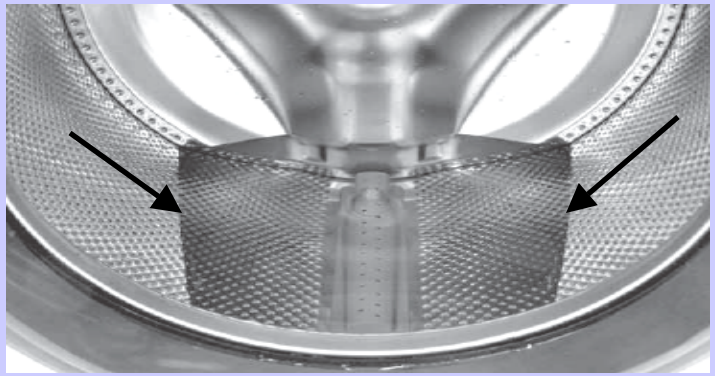
Water Levels

The foam water level, measured behind the baffle, is approximately 1 3/4 -inches deep, and approximately 1-inch deep measured at the bottom center of the wash basket.

Foam Water Level



The main water level, measured behind the baffle, is approximately 2 3/4 -inches deep, and approximately 2- inches deep measured at the bottom center of the wash basket.



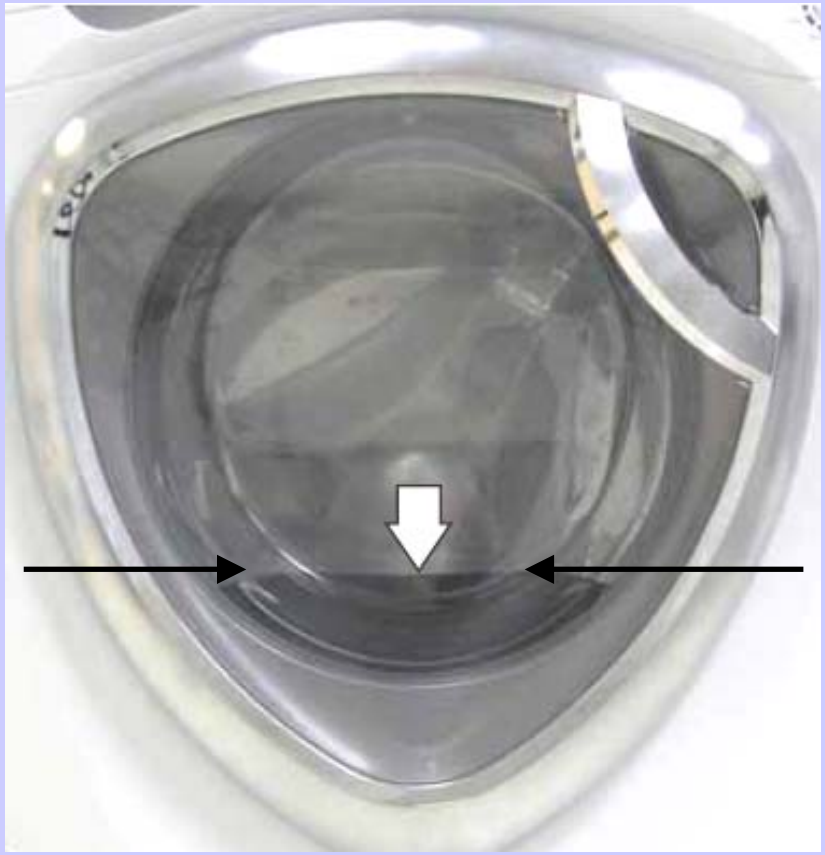
Water Level Control (cont.)

The overflow water level, measured at the bottom center of the wash basket, is approximately 7 ½ inches deep. Overflow protection will occur at this water level.

Operation of the water level control can be checked by using service test mode t09. (See ***Service Test Mode***.)

Specific failures associated with the water level control can initiate error codes E6 and E14. (See ***Service Test Mode***.)

Overflow Water Level



Water Valve

The water valve assembly consists of a valve body and two solenoid coils. The water valve has a flow rate of 2.1 gallons (8 liters) per minute. It is inserted and retained in a cutout in the rear of the cabinet and held in place by a single 6-mm hex-head screw. It is only available as a complete assembly.

Each solenoid coil has an approximate resistance value of 1.1K Ω.

Operation of the water valve can be checked by using service test modes t11 and t12. (See ***Service Test Mode***.)

Specific failures associated with the water valve can initiate error code E7. (See ***Service Test Mode***.)

Outlet Hose

Pump

The pump consists of a 120-VAC, 60-Hz motor, impeller, impeller housing, and a removable strainer that helps prevent foreign objects from entering the pump impeller and drain outlet.

- The pump runs whenever the washer is in the spin function of a cycle.
- The pump runs if the water level control overflow switch is closed and the washer is plugged in. (Overflow protection)
- **The pump is capable of eliminating 17 gallons (64 liters) per minute**.
- Recommended minimum standpipe diameter is 1 1/4 inches.
- Standpipe maximum height is 96 inches, measured from the floor at the washer location.
- **The pump motor has an approximate resistance value of 10.6 Ω.**

Operation of the pump can be checked by using service test mode t08. (See ***Service Test Mode***.)

Specific failures associated with the pump can initiate error code E8. (See ***Service Test Mode***.)

Heater Assembly

- The heater assembly consists of a heating element and a water temperature thermistor.
- The heater can operate in • **WHITES/HEAVY DUTY**, or **STAIN INSPECTOR** wash cycles, and when the sanitize wash temperature is selected.
- The heater assembly is held in place by a bracket attached to the inside of the outer tub and a 10-mm nut which compresses a rubber gasket to the tub opening.
- When the 10-mm hex nut is tightened, it squeezes the rubber gasket between 2 mounting plates to seal the heater assembly to the opening of the tub.
- The hex nut is set from the factory at 31 in. lbs of torque.

Operation of the heater assembly can be checked by using service test mode t10. (See ***Service Test Mode***.)

Specific failures associated with the heater assembly can initiate error codes E4 and E5. (See ***Service Test Mode***.)

Heating Element Specifications:

•120 VAC

•970 Watts

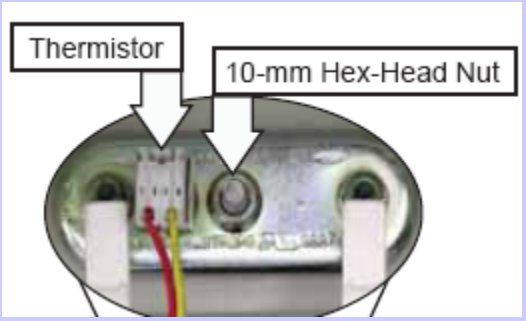
•Approximately 8 Amps

•Approximately 15 Ω

Thermistor Specifications:

•12 K • Ω at 75°F (24°C).

•Resistance goes down as temperature goes up.



Inverter

The inverter receives commands from the control board and controls motor operation. The inverter is enclosed in a protective housing and is located on the chassis, under the left side of the outer tub. It is inserted in 2 guides at the rear and held in place by a single Phillips-head screw at the front.

For the inverter to operate the motor correctly requires a supply voltage of 120 VAC, DC input from the control board, and the three motor windings intact.

To check the inverter:

1. Remove the service panel. (See 1. ***Service Panel***.)
2. Press the 4 tabs inward and remove the junction box cover.
3. Enter test mode t04, t13, or t14.
4. Check for 120 VAC between the blue and red wires at the AC input harness.

Note: The 120 VAC inverter supply voltage is present only when the motor is supposed to be operating.

Inverter (cont.)

5. Unplug washer, then check motor resistance.

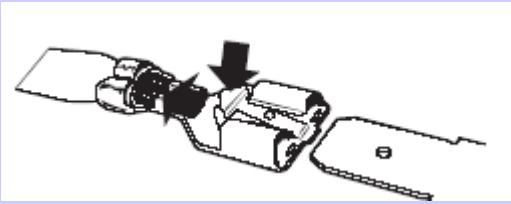
(See ***Motor Assembly***.)

6. If 120 VAC is present at the AC input harness and motor resistance is correct, replace the inverter.

Note: If the inverter overheats, the washer will stop for 5 minutes.

Note

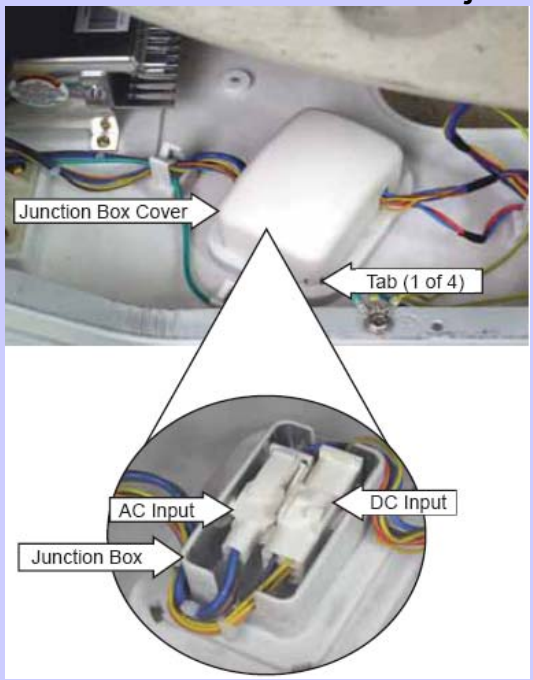
- The motor wire harness is soldered to the inverter. Any fault in the inverter or motor wire harness requires inverter replacement.
- The motor ground wire connector utilizes a releasing locking tab.



ELECTRICAL TERMINAL RELEASE/LOCKING TAB

Remove the inverter

1. Remove the service panel. (See ***Service Panel***.)
2. Press the 4 tabs inward and remove the junction box cover.
3. Disconnect the AC and DC input wire harnesses contained in the junction box.



4. Disconnect the motor wire harness
5. Press the lock tab and remove the motor ground wire.
6. Remove the plastic wire tie that holds the motor wiring in place.
7. Remove the single Phillips-head screw that holds the right front leg of the inverter to the base pan.
8. Slide the inverter rearward to clear the guides that hold the rear of the inverter to the chassis.
9. Remove the inverter through the enlarged opening on the left side of the front frame.

Motor Assembly

The motor assembly consists of a reversible, variable speed, 3-phase induction DC motor, and sensor. The motor drives the tub drive pulley with a 7-rib belt.

The sensor monitors motor rpm and is connected to the control board. The motor assembly is checked from the front of the washer and removed from the rear.

There are 2 methods to check the motor assembly.

Method A:

1. Remove the service panel. (See ***Service Panel***.)
2. Disconnect the motor wire harness.

   On the motor plug, check for an approximate resistance value of 6 ohms between any two of the three wires:

Blue to white - 6 Ω, Blue to red - 6 Ω, White to red - 6 Ω

The sensor has a resistance value of approximately 118 Ω between the two orange wires.

Operation of the motor assembly can be checked by using service test modes t04, t13, and t14. (See ***Service Test Mode***.)

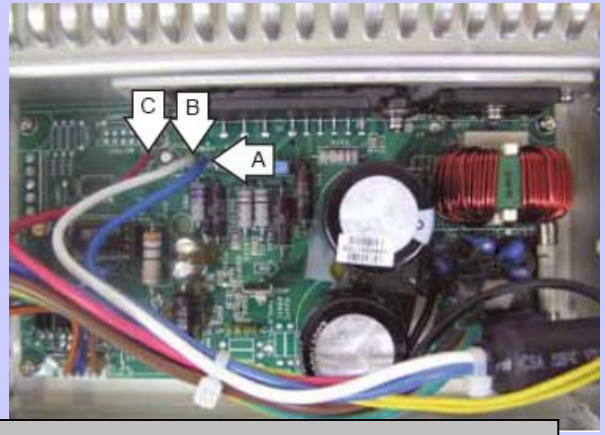
Motor Assembly (cont.)

Specific failures associated with the motor assembly can initiate error codes E3, and E15 through E25. (See ***Service Test Mode***.)

Method B:

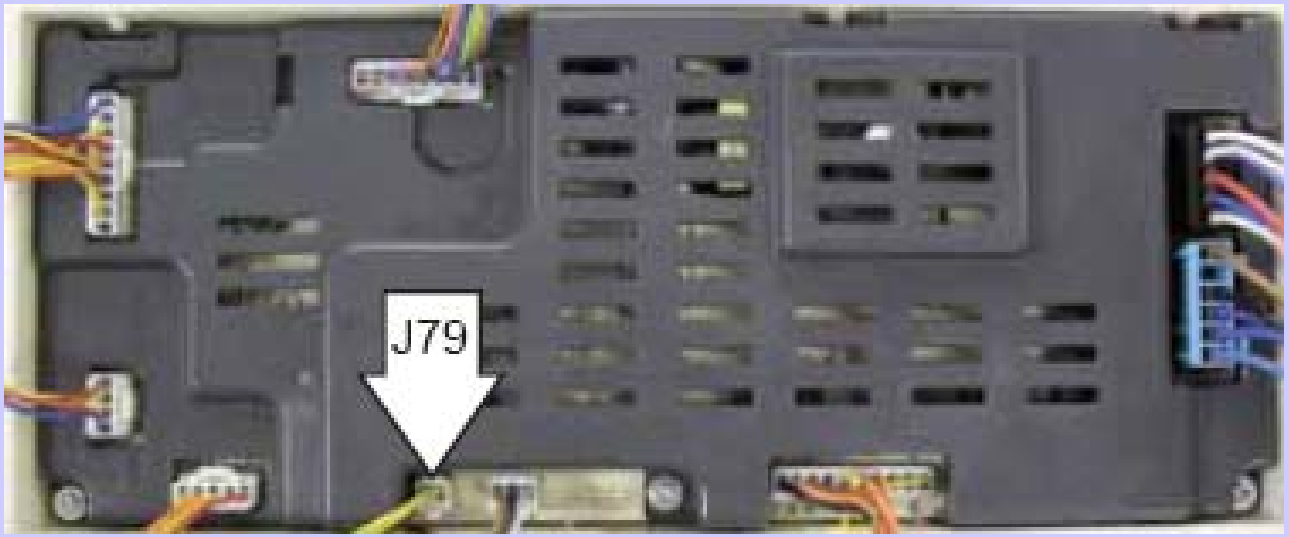
1. Remove the service panel. (See ***Service Panel***.)
2. Remove the single Phillips-head screw that holds the right front leg of the inverter to the base pan.
3. Slide the inverter rearward to clear the guides that hold the rear of the inverter to the base pan.
4. Position the inverter to access the inverter board.
5. On the inverter board, check for an approximate resistance value of 6 ohms between any two of the three terminals:

- A to B (Blue to white) – 6 Ω
- A to C (Blue to red) - 6 Ω
- B to C (White to red) - 6 Ω



Motor Assembly (cont.)

Note: The sensor and sensor wiring can be checked at the power board assembly. Check for a resistance value of approximately 118 Ω resistance between the 2 yellow wires located on the wire harness located at J79.



Door

To remove the door components:

Note: The hinge cover is attached to the door with 2 Phillips-head screws and 3 tabs located on the inside.

1. Remove the 2 Phillips-head screws.

2. Lift the right-side of the hinge cover and slide it to the right.

3. Remove the 2 Phillips-head screws that hold the door to the hinge door plate.

Door (cont.)

Note: Place the door on a soft, protected flat surface so that the door glass faces up. (The door should rest on the handle side.)

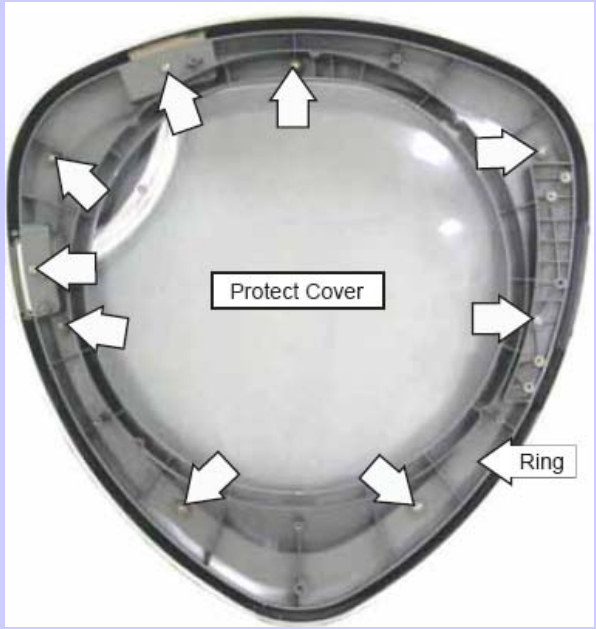
4. Remove the 10 Phillips-head screws that hold the door cover and door strike to the door frame.

5. Lift and unsnap the door cover from the door frame.

6. Lift the door glass out of the door frame.

7. Remove the 9 Phillips-head screws that attach the protect cover and ring to the door frame.

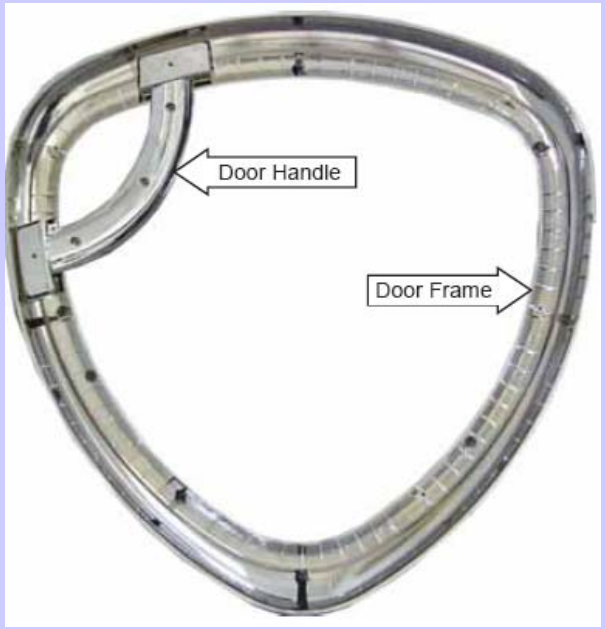
Door (cont.)



8. Lift and remove the protect cover and ring.

Note:

The door handle and door frame are replaced as an assembly. (Part # WH46X10210)

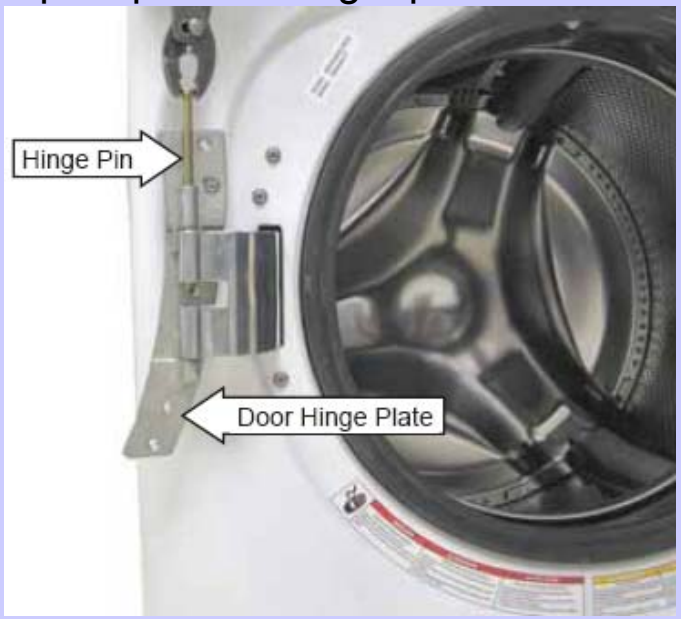


Door Hinge

To remove the door hinge:

1. Remove the door. (See ***Door***.)
2. Grasp the hinge pin with a pair of pliers and pull the pin out of the hinge. Remove the door hinge plate.

Note: It may be helpful to drive the hinge pin upward using a punch.



3. Remove the 3 Phillips-head screws that hold the door hinge to the front panel.

4. Remove the gasket from the front panel.
5. Push and fold the left side of the gasket inside the wash basket.

Door Hinge (cont.)

Note: The door hinge is attached to the front panel with 3 Phillips-head screws in front and 3 tabs on the back. After removing the screws, it may be necessary to strike the bottom of the hinge (as shown) to free it from the front panel.

6. Push the tub assembly back while pressing the hinge arm inward and carefully remove the door hinge through the opening.

Note: When installing the hinge, it may be necessary to strike the top of the hinge (as shown) to fully engage the 3 tabs on the rear of the front cover and to align the 3 screw holes in front.

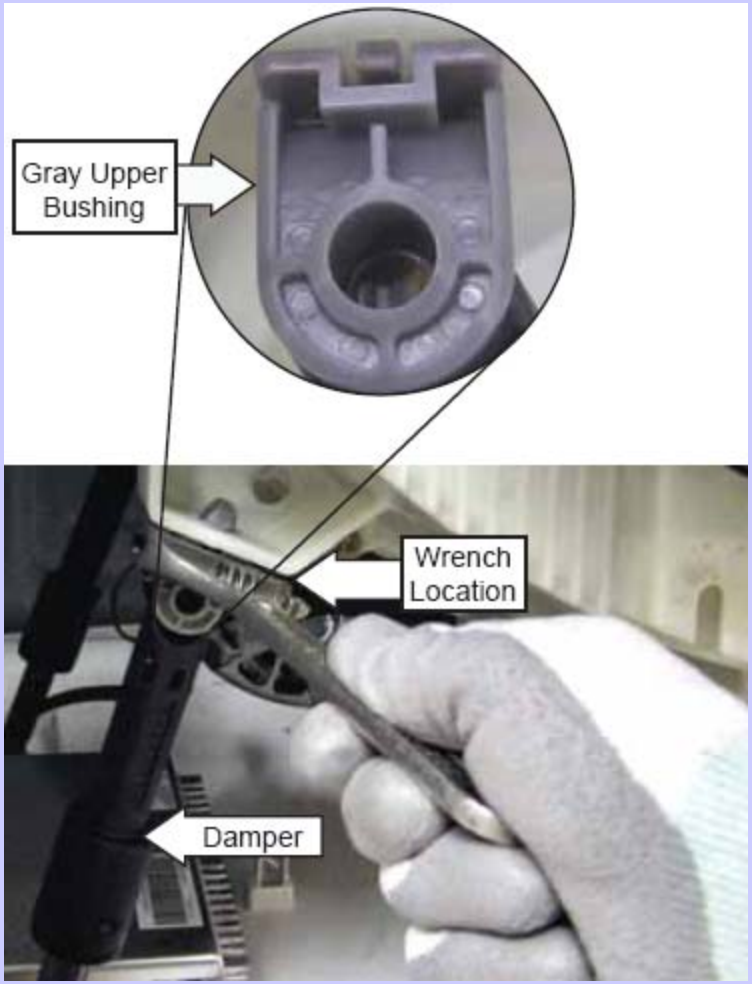
Dampers

Each of the 4 dampers are secured to the outer tub by a gray upper bushing that locks in a slot in the outer tub. Each damper is held to the chassis with a plastic pin.

To remove the dampers:

Caution: Do not twist the damper cylinder by hand to remove. Stress may result in the damper developing noise at a later date.

1. Remove the service panel.
2. Rotate the gray upper bushing a quarter-turn clockwise (as viewed from the top) using a 6-in. adjustable crescent wrench with a jaw opening of approximately 7/8 inch.
3. Compress and remove the damper from the slot in the outer tub.



Dampers (cont.)

4. Remove the pin that secures each damper to the chassis by pressing the lock tab while pulling the pin out.

Note: It may be helpful to tap the pins out with a small hammer while pressing on the lock tabs.

To replace the dampers:

Note: The pin will be damaged when removed from the chassis. Be sure to install the new pin supplied with the replacement damper.

1. Insert and fully seat the pin that secures each damper to the chassis.

Note: It may be helpful to tap the pins into the chassis with a small hammer.

2. Extend and fully insert the damper into the slot in the outer tub.

3. Rotate the gray upper bushing a quarter-turn counterclockwise (as viewed from the top), using a 6-in. adjustable crescent wrench with a jaw opening of approximately 7/8 inch.

Note: Ensure the 2 lock tabs on the gray upper bushing are in the square holes in the outer tub.

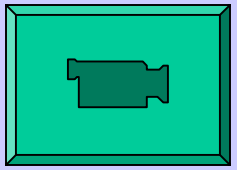
Service Test Mode

The washer control has a service test mode that can be utilized by the service technician in order to test critical components and to access error codes. This test mode will help the service technician to quickly identify failed or improper operation of washer components.

Caution: Testing is accomplished through built-in test procedures. Unplugging components for testing can damage component connections.

The washer must be in idle mode (blue screen is blank), before entering the test mode. Idle mode occurs when the washer has completed a cycle. If the cycle is interrupted, the washer will drain water when the power is re-applied. The water level switch must reset BEFORE the test mode can be entered. If water remains in the washer, manually drain the washer to reset the water level switch. A failed water level switch can cause an inability to enter the test mode.

Service Test Mode (cont.)

To enter the test mode:	To exit the test mode:
1. Press ***POWER*** button to clear any current cycles. **Note:** The display must be blank to proceed. 2. Press ***EXTRA RINSE-DELAY START-EXTRA RINSE-DELAY START*** A washer left in the test mode will exit the test mode and unlock the door after approximately 30 minutes	Press ***POWER*** button. 

Service Test Mode for Magellan Washer

Click here 

Service Test Mode (cont.)

Test Mode	Description
t01 Configure UI (User Interface)	Allows changing the configuration of the control for different models.
t02 Error Codes	Checks for any error codes reported by the controls.
t03 Version Information	Checks the software version.
t04 Vibration Test	Tests the washer vibration by spinning to the extra high spin speed as fast as possible. **Note:** No out of balance detection will be performed here, so the washer will spin up regardless of the out of balance that is placed in the drum.
t05 EEPROM Test	Checks the memory on the user interface control board, then the memory on the Power Board.
t06 UI Test	Verifies all LEDs operate correctly.
t07 Key Continuity	Verifi es that each key operates correctly.

Service Test Mode (cont.)

Test Mode	Description
t08 Pump Test	Test drain pump.
t09 Water Level Sensor	Fills to all 3 levels; then pumps out water.
t10 Temp & Heater	Verifies that both the Thermistor and Heater work.
t11 Hot Water Test	Verifies hot water valve turns on/off.
t12 Cold Water Test	Verifies cold water valve turns on/off.
t13 Tumble Test	Verifies washer tumbles (i.e., Wash Cycle).
t14 Spin Test	Verifies washer spins. **Note:** No out-of-balance detection will be performed here, so the washer will spin up regardless of any out-of-balance condition in the drum.

Service Test Mode (cont.)

Test Mode	Description
t15 Dispenser Test	Verifies the dispenser motor works and can locate all 4 dispenser positions.
t16 Bulk Pumps Test	Verifies all the Smart Dispenser Pumps work.
t17 Bulk Sensors Test	Verifies all the Smart Dispenser Sensors work.
t18 AutoSpin Profile	Tests each spin speed of the washer. **Note:** No out-of-balance detection will be performed here, so the washer will spin up regardless of any out-of balance condition in the drum.
t19 Bulk Manual Priming	Manually initiates the priming of the Smart Dispenser pumps.
t20 Bulk Primed Status	Checks the control status of the prime status of the pumps and allows the user to change/reset the prime status.

Diagnostic Tests

The following tables show the diagnostic tests and the button sequence that is required to perform them.

Service Mode Test		Sequence	
t01	Configure UI	Enter	Displays “configure UI”
		Power	Returns to service mode screen
t02		**Enter**	Displays error codes
		Start/ Pause	Clears highlighted error code from machine
		Power	Returns to service mode screen
t03	Version Info	Enter	Displays the current version of software
		Power	Returns to service mode screen
t04	Vibration Test	Enter	Spins up to 1300 rpm; then goes back to service mode screen
		Power	Interrupts and returns to service mode
t05	EEProm Test		Displays “test in progress” for a while; then displays UI Memory status
			Displays PB status
			Returns to service mode screen

Diagnostic Tests (cont.)

Service Mode Test		Sequence	
t06	UI Test	**Enter**	Lights up LEDs on the left side of UI and VFD; then lights up the right side LEDs
		Power	Returns to service mode screen
t07	Key Continuity	**Enter**	Begins testing
		Any Button but Power	Beep sounds as button is pressed
		Power	Returns to service mode screen
t08	Pump Test	**Enter**	Begins running the drain pump
		Power	Interrupts draining and returns to service mode
t09	Water Level Sensor	**Enter**	Unit begins to drain. When draining is complete, displays “Tub Empty”
		Start	Fills to foam level. Displays “Tub Empty” until fi ll is complete; then shows “Foam Level”
		Start	Fills to normal level. Displays “Foam Level” until fi ll is complete, then shows “Normal Wash Level”

Diagnostic Tests (cont.)

Service Mode Test		Sequence	
t09	(cont.)	**Start**	Fills to overflow level. Display shows “Normal Wash Level” until fill is complete. When overflow level is reached, the pump begins to drain out the water.
		Power	Drains and returns to service mode
t10	Temp Sensor and Heater	**Enter**	Displays “baseline” and “current” temperature. Unit fi lls with water and gets heated
		Power	Drains and returns to service mode screen
t11	Hot Water Valve Test	**Enter**	Fills with hot water. Display shows “Hot Water On”
		Power	Drains and returns to service mode screen
t12	Cold Water Valve Test	**Enter**	Fills with cold water. Display shows “Cold Water On”
		Start	Drains and returns to service mode screen
t13	Tumble Test	**Enter**	Unit tumbles
		Power	Returns to service mode screen

Diagnostic Tests (cont.)

Service Mode Test		Sequence	
t14	Spin Test	**Enter**	Displays “estimated” and “current” rpm. Unit begins spinning at 410 rpm
		Start	Ramps up to 1050 rpm
		Start	Ramps up to 1150 rpm
		Start	Ramps up to 1300 rpm
		Power	Ramps down and returns to service mode screen
t15	Dispenser Test	**Enter**	Displays “pre-wash” and dispenser moves to position 1
		Start	Displays “main detergent” and dispenser moves to position 2
		Start	Displays “bleach” and dispenser moves to position 4
		Start	Displays “fabric softener” and dispenser moves to position 3
		Start	Repeats above sequence, starting with “pre-wash”
		Power	Drains and returns to service mode screen

Diagnostic Tests (cont.)

Service Mode Test		Sequence	
t16	Bulk Pumps Test	**Enter**	Displays “left detergent pump”; water fills and primes left detergent
		Start	Displays “softener pump” and begins priming
		Start	Displays “right det pump” and begins priming
		Start	Continues cycling through the bulk pumps
		Power	Drains and returns to service mode screen
t17	Bulk Sensors Test	**Enter**	Displays the status of Left Detergent, Softener and Right Detergent
		Power	Returns to service mode screen
t18	Auto Spin Profile	**Enter**	Slowly ramps up to 90, then 120, then 410
		Power	Interrupts and returns to service mode screen
t19	Bulk Manual Priming	**Enter**	Displays “prime left detergent,” “prime softener,” prime right detergent” with one highlighted
		Enter	Begins priming selected, with water on to rinse it from dispenser drawer
		Power	Drains; then returns to service mode screen

Diagnostic Tests (cont.)

Service Mode Test		Sequence	
t20	Bulk Primed Status	**Enter**	Displays “left detergent pump,” “softener pump,” "right detergent pump” with one highlighted
		Enter	Displays “left det primed status”; choose status “yes” (lines primed) or “no” (lines not primed)
		Enter	Returns back to “Bulk Primed Status”
		Power	Returns to service mode screen

Error Codes

NOTE: It's important to note error codes should only be used to help identify components which require testing. ***Never replace a part based solely on an error code.*** The control can generate a false error if the right conditions exist. Use the code only as a reference and always check the component before replacing.

Error Code	Description	Action
E1 UI EEPROM E2 Power EEPROM	Internal problem with UI or MC board	• Replace board as necessary.
E4 Thermistor Short E5 Thermistor Open	Water Temperature Sensor Problem	•Check integrity of wiring and connections between main control and Thermistor Assembly. •Using ohmmeter, measure Thermistor resistance. If outside expected range, replace Thermistor Assembly. IF ABOVE STEPS DO NOT CLEAR THE PROBLEM: •Replace the main control.

Error Codes (cont.)

Error Code	Description	Action
E6 Pressure Switch	Water Level Sensor Problem	•Check integrity of wiring and connections between main control and Water Level Sensor. •Check integrity of Water Level Sensor; replace if necessary. •Check drain system. IF ABOVE STEPS DO NOT CLEAR THE PROBLEM: •Replace the main control.
E7 Slow Fill	Fill Problem	•Ensure manual water valves are fully open. •Check if water strainers on solenoid valve assembly are clogged. •Check for obstructions inside inlet water hoses. •Ensure solenoid valves do not leak when the valves are de-energized and the washer is powered down. •Measure coil resistance for both valves. If outside range (1000–1250 ohms at room temp.), replace solenoid valve assembly. IF ABOVE STEPS DO NOT CLEAR THE PROBLEM: •Replace solenoid valve assembly.

Error Codes (cont.)

Error Code	Description	Action
E8 Drain System	Drain Problem	•Ensure pump strainer is clean and free of debris. •Check for obstruction inside the drain hose. •Check pump impeller blades and bearing; if evidence of blade damage or seized bearings are present, replace the pump. •Check the electrical connections at the pump motor and harness. •Measure pump motor resistance. If outside range (9–14 ohms at room temp.), replace the pump.
E9 Dispenser Motor	Dispenser Problem	•. Check for obstruction in dispenser mechanism and linkages. •Check the electrical connections at the motor feedback switch and in the harness. •Check the electrical connections of water valves in the harness. IF ABOVE STEPS DO NOT CLEAR THE PROBLEM: •Replace dispenser motor assembly.

Error Codes (cont.)

Error Code	Description	Action
E10 Motor Communication Interface	Communication Problem Between Machine Control and Motor Drive	•Check integrity of wiring and connections between main control and motor drive. •Clear error code and run a cycle. •If fault persists and reappears, replace the Machine Control.
E11 Door Lock E12 Door Unlock E13 Door Open E28 Unexpected Door Unlock Detected	Door Lock Assembly Problems	•Check integrity of wiring and connections between main control and Door Lock mechanism. •Investigate Door Lock mechanism; check door microswitch operation, lock and unlock solenoid continuity and contact integrity; replace Door Lock mechanism if necessary. •IF ABOVE STEPS DO NOT CLEAR THE PROBLEM: •Replace the main control.

Error Codes (cont.)

Error Code	Description	Action
E14 Overflow Error	Overflow level was reached	•Check valve for any signs of leaks. •Check integrity of Water Level Sensor. Replace if necessary.
E15 Open Circuit	Open circuit in any of three motor phases detected No speed info present and bridge will be turned off immediately Motor will coast down Drive will preserve non-zero speed info during the stop check stage	Check integrity of wire connections between the Motor Drive Control and the motor. Clear fault and run cycle. If fault persists and reappears, replace the motor drive.

Error Codes (cont.)

Error Code	Description	Action
E16 Over Trip E18 Heatsink Over Temp E19 Motor Over Temp E20 Overload Current E21 Overload Power	Motor Drive operation above design limits	•Ensure all 4 shipping bolts have been properly removed. •Remove all foreign objects that may be lodged between inner and outer baskets. •Look for signs of seized bearing(s) on basket and drum motor. Replace components as necessary. •Inspect condition and mounting of door gasket. Replace and re-mount as necessary. •Ensure inner basket (drum) can rotate freely. IF ABOVE STEPS DO NOT CLEAR THE PROBLEM: •Replace motor drive or drum motor.
E22 Over Volts E23 Under Volts E24 Under Volts After Start E25 Power Up E3 Inverter EEPROM Fault Event E17 ADC Fault Event	Motor Drive Internal Problems	•Measure AC outlet voltage; ensure correct range (120V to 132V AC). •Check electrical connections at the motor drive. •Check harness integrity between main control and motor drive. •Unplug the unit, wait 30 seconds and restart the unit. •If the fault persists and reappears, replace the motor drive.

Error Codes (cont.)

Error Code	Description	Action
E26 LIN Comm Fail	There is a problem with the Communication between the Machine Control and the User Interface Control	•Check the integrity of the wiring between the Machine Control Board and the User Interface. •Clear the fault and run the cycle. If fault persists and reappears, replace the Machine Control.