

W11262425



SERVICE MANUAL

# Maytag Commercial Stack Washer/Dryer 50Hz



MODELS:

MLE22PD    MLE22PN  
MLG22PD    MLG22PN

**TECHNICAL EDUCATION**

# FORWARD

This Service Manual, (Part No. W11262425), provides the Commercial Laundry Service Professional with information on the operation, and service of the Maytag Commercial Stack Washer/Dryer. For specific information on the model being serviced, refer to the “Installation Instructions,” or “Tech Sheet” provided with the Stack Washer/Dryer or on the Service Website. The Wiring Diagrams used in this Service Manual are typical and should be used for training purposes only. Always use the Wiring Diagram located in the Tech Sheet supplied with the product, or on the Service Website, when servicing the Stack Washer/Dryer.

The Service Website is located online at [www.serviceconnections.org](http://www.serviceconnections.org). For access to the website or for questions, please contact your Field Service Manager.

## GOALS AND OBJECTIVES

The goal of this Service Manual is to provide information that will enable the Commercial Laundry Service Professional to properly diagnose malfunctions and repair the Maytag Commercial Stack Washer/Dryer. The objectives of this Service Manual are to:

- Understand and follow proper safety messages.
- Understand and diagnose improper installations.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the Stack Washer/Dryer to its proper operational status.

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authorized Commercial Laundry Service Professionals.

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## **INTERACTIVE SERVICE MANUAL INSTRUCTIONS**

View on PC, MAC, iPad, iPhone and Android devices.

Acrobat Reader is available for all devices to open .pdf documents.

Click on any topic in the Table of Contents to go directly to that section.

Click on any link that says (See page ??) to go directly to the page referenced.

Click  to view the video procedure on YouTube.



## **VIEW EQUIPMENT & SAFETY VIDEO**

**---- NOTES ----**

# GENERAL

## SAFETY

### Your safety and the safety of others are very important.

We have provided many important safety messages in this manual and on your appliance. Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word "DANGER" or "WARNING." These words mean:



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



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

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

### IMPORTANT

#### Electrostatic Discharge (ESD)

#### Sensitive Electronics

ESD problems are present everywhere. ESD may damage or weaken the electronic control assembly. The new control assembly may appear to work well after repair is finished, but failure may occur at a later date due to ESD stress.

- Use an anti-static wrist strap. Connect wrist strap to green earth connection point or unpainted metal in the appliance

-OR-

Touch your finger repeatedly to a green earth connection point or unpainted metal in the appliance.

- Before removing the part from its package, touch the anti-static bag to a green earth connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts; handle electronic control assembly by edges only.
- When repackaging failed electronic control assembly in anti-static bag, observe above instructions.

## MODEL NUMBER DESIGNATIONS

<b>MODEL NUMBER</b>	M	LE	22	PD	A	W	W	0
<b>BRAND</b>								
M Maytag								
<b>PRODUCT</b>								
LE Laundry Stack - Electric Heat								
LG Laundry Stack - Gas Heat								
<b>MODEL NUMBER</b>								
20 Stack Washer/Dryer (Starting 2010)								
22 Stack Washer/Dryer (Starting 2018)								
<b>CONTROL</b>								
PD Processor Coin drop								
PR Processor Reader								
PN Processor Non-coin								
<b>MARKETING CODE</b>								
A First in series								
B Second in series								
<b>VOLTAGE CODE</b>								
W 120V 60Hz (U.S.)								
X 120V 60Hz (Canada)								
G 220-240V 50Hz (Export)								
Y 240V 60Hz (U.S.)								
Z 240V 60Hz (Canada)								
<b>COLOR</b>								
W White								
<b>ENGINEERING CHANGE (NUMERIC)</b>								

## SERIAL NUMBER DESIGNATIONS

<b>SERIAL NUMBER</b>	M	7	35	10901
<b>DIVISION RESPONSIBILITY</b>				
M Marion, Ohio				
<b>YEAR OF PRODUCTION</b>				
7 2017				
8 2018				
9 2019				
<b>WEEK OF PRODUCTION</b>				
35 35th Week in the calendar year				
<b>MANUFACTURING SEQUENCE NUMBER</b>				

# MODEL & SERIAL NUMBER LABEL AND TECH SHEET LOCATION

Location of Model & Serial Number Label



Location of Tech Sheet & Parts List

# WARRANTY

## MAYTAG COMMERCIAL LAUNDRY LIMITED WARRANTY MHN33PDCWW, MHN33PDCXW, MHN33PDCGW, MHN33PRCWW, MHN33PNCGW, MLE22PDAYW, MLG22PDAWW, MLE22PDAZW, MLE22PRAYW, MLG22PRAWW, MLE22PRAZW, MLE22PDAGW, MLG22PDAGW, MLE22PNAGW, MLG22PNAGW

### IF YOU NEED SERVICE:

Contact your authorized Maytag Commercial Laundry distributor. To locate your authorized Maytag Commercial Laundry distributor, visit [www.MaytagCommercialLaundry.com](http://www.MaytagCommercialLaundry.com).

For written correspondence:

**Maytag Commercial Laundry Service Department**  
2000 N M 63  
Benton Harbor, Michigan 49022-2632 USA

### SEVEN YEAR LIMITED WARRANTY

#### WHAT IS COVERED

##### **FIVE YEAR LIMITED WARRANTY (PARTS ONLY – LABOR NOT INCLUDED)**

For the first five years from the original date of purchase, when this commercial appliance is installed, maintained, and operated according to the instructions attached to or furnished with the product, Maytag brand of Whirlpool Corporation (hereafter "Maytag") will pay for factory specified replacement parts to correct defects in materials or workmanship that existed when this commercial appliance was purchased. This limited warranty does not include labor.

##### **SIXTH THROUGH SEVENTH YEAR LIMITED WARRANTY (CERTAIN COMPONENT PARTS ONLY – LABOR NOT INCLUDED)**

In the sixth through seventh years from the date of original purchase, when this commercial appliance is installed, operated, and maintained in a vended and/or multi-housing environment ONLY according to instructions attached to or furnished with the product, Maytag will pay for factory specified replacement parts for the following components to correct non-cosmetic defects in materials or workmanship in the part that prevent functioning of the product and that existed when this commercial appliance was purchased. This is a limited 7-year warranty on the below named parts only and does not include labor.

Washer only: Drive Bearings, Tub Seal, Bearing Spacer, Hub, Cross Piece, Drum, Rear Tub, Front Tub, Drum Shaft

**YOUR SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PART REPLACEMENT AS PROVIDED HEREIN.** Maytag recommends that you use an "authorized" service provider to diagnose and repair your Commercial Laundry product. Maytag will not be responsible under this warranty to provide additional replacement parts as a result of incorrect diagnosis or repair by an "unauthorized" service company. Except in the European Union, this limited warranty is valid only when the commercial appliance is used in the country in which it was purchased. This limited warranty is effective from the date of the original consumer purchase. Proof of original purchase date is required to obtain service under this limited warranty.

#### WHAT IS NOT COVERED

1. All other costs including labor, transportation, shipping, or custom duties for covered parts.
2. Factory specified replacement parts if this commercial appliance is used for other than normal, commercial use or when it is used in a manner that is inconsistent to published user or operator instructions and/or installation instructions.
3. Service calls to correct the installation of your commercial appliance, to instruct you on how to use your commercial appliance, to replace or repair house fuses, or to correct external wiring or plumbing.
4. Service calls to repair or replace appliance light bulbs, air filters, or water filters. Consumable parts are excluded from warranty coverage.
5. Damage resulting from improper handling of product during delivery, theft, accident, alteration, misuse, abuse, fire, flood, acts of God, improper installation, installation not in accordance with local electrical or plumbing codes, or use of products not approved by Maytag.
6. Pick up and delivery. This commercial appliance is designed to be repaired on location.
7. Repairs to parts or systems resulting from unauthorized modifications made to the commercial appliance.
8. The removal and reinstallation of your commercial appliance if it is installed in an inaccessible location or is not installed in accordance with published installation instructions.
9. Damage resulting from exposure to chemicals.
10. Changes to the building, room, or location needed in order to make the commercial appliance operate correctly.
11. Factory specified replacement parts on commercial appliances with original model/serial numbers that have been removed, altered, or cannot be easily determined.
12. Discoloration, rust, or oxidation of stainless steel surfaces.
13. Factory specified replacement parts as a result of incorrect diagnosis or repair by an "unauthorized" service company.
14. Replacement parts during the sixth through seventh years from the date of original purchase where the commercial appliance is installed, operated and maintained in a setting other than a vended and/or multi-housing environment.
15. Replacement parts during the sixth through seventh years from the date of original purchase where the defective part is not preventing the functioning of the product.

**The cost of repair or replacement under these excluded circumstances shall be borne by the customer.**

### DISCLAIMER OF IMPLIED WARRANTIES

IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO SEVEN YEARS OR THE SHORTEST PERIOD ALLOWED BY LAW. Some locations may not allow limitations on the duration of implied warranties of merchantability or fitness, so this limitation may not apply to you. This warranty gives you specific legal rights, and you also may have other rights that vary.

### DISCLAIMER OF REPRESENTATIONS OUTSIDE OF WARRANTY

Maytag makes no representations about the quality, durability, or need for service or repair of this major appliance other than the representations contained in this Warranty. If you want a longer or more comprehensive warranty than the limited warranty that comes with this major appliance, you should ask your retailer about buying an extended warranty. The benefits to you given by this warranty are in addition to other rights and remedies available to you under a law in relation to the goods or service to which this warranty relates. Please contact Maytag for further information on warranty terms.

### LIMITATION OF REMEDIES; EXCLUSION OF INCIDENTAL AND CONSEQUENTIAL DAMAGES

**YOUR SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR AS PROVIDED HEREIN. MAYTAG SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.** Some locations do not allow the exclusion or limitation of incidental or consequential damages, so these limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you also may have other rights that vary by location.

# INFORMATION & SPECIFICATIONS

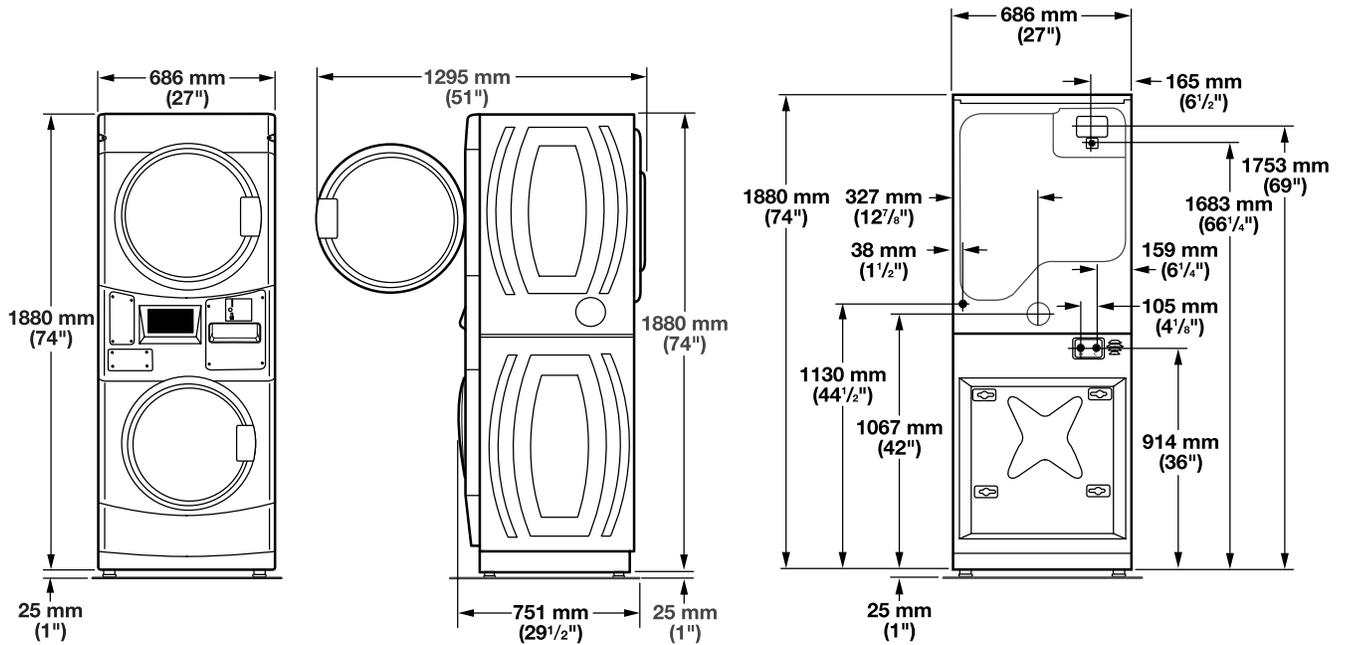
## DIMENSIONS

### Dimensions

Front View

Side View

Back View

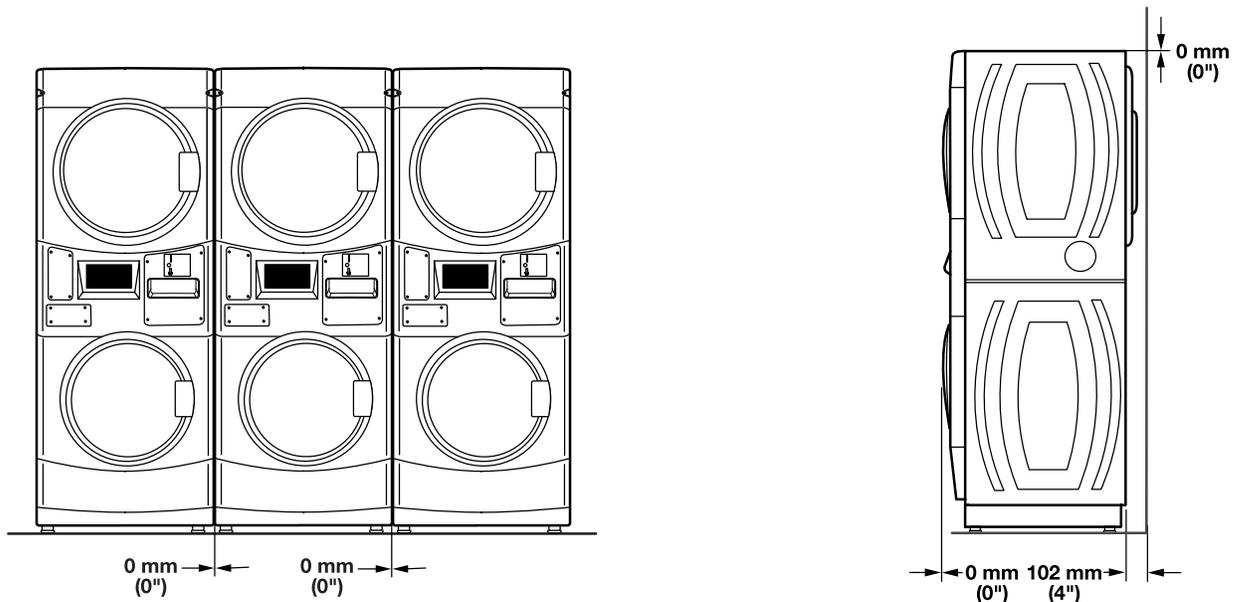


## CLEARANCES

### Clearances

Side Clearances

Back/Top Clearances

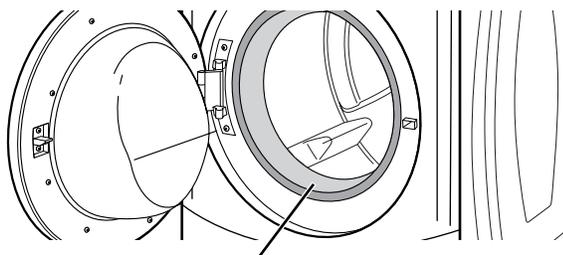


# MAINTENANCE INSTRUCTIONS

## Washer

### Cleaning The Door Seal/Bellow

1. Open the washer door and remove any clothing or items from the washer.
2. Inspect inner glass door. If debris is present, wipe it off using a damp cloth.
3. Inspect the colored seal/bellow between the door opening and the basket for stained areas. Pull back the seal/bellow to inspect all areas under the seal/bellow and to check for foreign objects.



Seal/bellow

4. If stained areas are found, wipe down these areas of the seal/bellow:
  - a) Mix a dilute solution, using 177 mL (3/4 cup) of liquid chlorine bleach, and 3.8 L (1 gal.) of warm tap water.
  - b) Wipe the seal/bellow area with the dilute solution, using a damp cloth.
  - c) Let stand 5 minutes.
  - d) Wipe down area thoroughly with a dry cloth and let the washer interior air dry with door open.

### IMPORTANT:

- Refer to the bleach manufacturer's instructions for proper use.

## Maintenance Instructions:

This washer has a special cycle that uses higher water volumes in combination with liquid chlorine bleach to thoroughly clean the inside of the washer.

### NOTES:

- Read these instructions completely before beginning the cleaning process.

### To Clean Washer Interior:

1. Open the washer door and remove any clothing or items from the washer.

### Use Liquid Chlorine Bleach:

Open the dispenser drawer and immediately add 160 mL (2/3 cup) of liquid chlorine bleach to the bleach compartment.

**NOTE:** Do not add any detergent. Use of more than 160 mL (2/3 cup) of bleach will cause product damage over time.

2. Close the washer door and the dispenser drawer.
3. To start the Washer Cleanout cycle, first enter "Service Mode." Press and hold the Delicates keypad until P01 is displayed. Press Extra Rinse to advance to P08 then press Start.

**NOTE:** The door will lock, the basket will rotate 1/2 turn, then the door will unlock and lock again, then the Washer Cleanout Cycle will continue.

- The washer will not fill, but the basket will rotate while the washer runs a short

sensing cycle. This will take approximately 3 minutes.

4. The cycle will determine whether clothing or other items are in the washer.

a) If no items are detected in the washer, it will proceed to Step 7.

b) If any items are detected in the washer, "F-34" will be displayed. Then the door will unlock.

- Enter the service mode. Press and hold the Delicates keypad until P01 is displayed. Then press Start - All segments of the display will flash. This will clear current Fault
5. Once the cycle has begun, allow the cycle to complete.
  6. After the cycle is complete, leave the door open slightly to allow for better ventilation and drying of washer interior.

## Washer

### Always Do The Following To Maintain Washer Freshness:

- Use only "HE" High Efficiency detergent.
- Leave the door slightly open after each cycle to allow for better ventilation and drying of washer interior.
- Clean the washer monthly (see "To clean washer interior"), using 160 mL (2/3 cup) of liquid chlorine bleach.
- If the procedure does not sufficiently improve the washer freshness, please evaluate the installation and usage conditions for other causes.

### Cleaning The Exterior

Use a soft damp cloth or sponge to wipe up any spills. Occasionally wipe the outside of the washer to keep it looking new. Use mild soap and water. Do not use abrasive products.

### Cleaning The Dispenser Drawer

The dispenser drawer is removable for easy cleaning.

1. Unlock the dispenser drawer for removal by inserting a flat-blade screwdriver into the catch release. Remove the dispenser drawer.
2. Remove the inserts (the siphon from the softener and bleach compartments).
3. Wash the parts under running water.

**NOTE:** Do not wash components in the dishwasher.

4. Reinstall the inserts and return the dispenser to the drawer.

## Water Inlet Hoses

Replace the inlet hoses after 5 years of use to reduce the risk of hose failure. Periodically inspect and replace inlet hoses if bulges, kinks, cuts, wear, or leaks are found.

When replacing the inlet hoses, record the date of replacement.

## Dryer

### Maintenance Instructions:

- Clean lint screen before and after each cycle.
- Removing accumulated lint:

From inside the dryer cabinet:

Lint should be removed every 2 years or more often, depending on dryer usage. Cleaning should be done by a qualified person.

From the exhaust vent:

Lint should be removed every 2 years, or more often, depending on dryer usage.

- Keep area around dryer clear and free from combustible materials, gasoline and other flammable vapors and liquids.
- Keep dryer area clear and free from items that would obstruct the flow of combustion and ventilation air.

### If Dryer Does Not Operate, Check The Following:

- Electrical supply is connected.
- Circuit breaker is not tripped or house fuse is not blown.
- Door is closed. Listen closely to hear the door switch activate.
- Cycle selection button has been pushed firmly.
- For gas dryers, check that gas supply shut-off valves are set in open position.

## SHIPPING BOLTS - REMOVE

### **⚠️ WARNING**

#### **Excessive Weight Hazard**

**Use two or more people to move and install stacked washer/dryer.**

**Failure to do so can result in back or other injury.**

1. There are 4 shipping bolts in the back panel of the washer securing the suspension system during transportation.
2. Use a 13mm (1/2") wrench to loosen each of the bolts.
3. Once a bolt is loose, move it to the center of the opening and remove the bolt, including the plastic spacer covering the bolt. Remove all 4 shipping bolts and spacers.
4. If the washer has a separate power cord, once all 4 bolts are removed, push the power cord plug into the hole in the back of the washer and pull the cord out of the hole at the other side.
5. Cover the holes that the power cord came out of with the plastic caps attached to the back of the washer.
6. Remove the drain hose from inside of the washer tub and attach it to the back drain port on the upper right side of the back panel securing it with the included clamp.
7. Cover the washer back panel openings that the shipping bolts came out of using the plastic hole plugs shipped with the washer.

## SHIPPING BOLTS - REINSTALL

### **⚠️ WARNING**



#### **Electrical Shock Hazard**

**Disconnect power before servicing. Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

1. If washer must be transported after shipping bolts have been removed, at least 2 shipping bolts must be re-installed to avoid damage to washer components from the movement of the weights and the tub.
2. Unplug washer or disconnect power.
3. Turn off the water supply to the washer.

### **⚠️ WARNING**

#### **Excessive Weight Hazard**

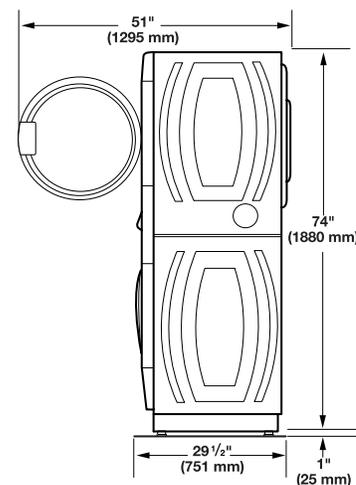
**Use two or more people to move and install stacked washer/dryer.**

**Failure to do so can result in back or other injury.**

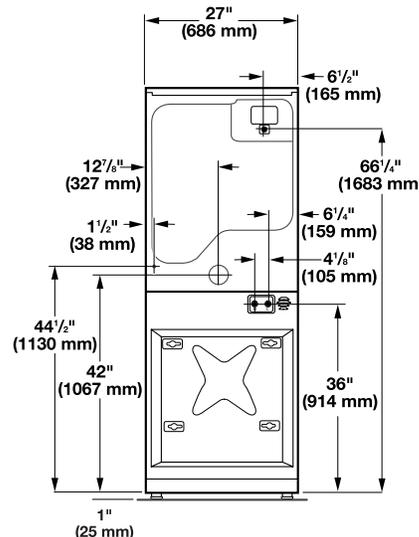
4. Remove the back panel from the washer.
5. Assemble plastic tub spacers onto shipping bolts. Insert each shipping bolt assembly through hole in the back brace and into the hole in the tub. Tighten loosely with a 13mm (1/2") wrench.
6. Slide shipping bolt towards the outer edge of the washer before tightening the bolt completely to secure the spacer in place.
7. Reinstall the back panel before transporting the washer.

# SPECIFICATIONS

MODEL – COIN READY/ CARD READY & NON-VEND	MLE22PDAGW/ MLE22PNAGW	MLG22PDAGW/ MLG22PNAGW
	Int'l	Int'l
Fuel Type	Electric	Gas
<b>WASHER SPECIFICATIONS</b>		
<b>CAPACITY</b>		
Cylinder Volume – cu. ft. (liters)	3.10 (88)	3.10 (88)
Cylinder Diameter – in. (mm)	21.60 (547)	21.60 (547)
Cylinder Depth – in. (mm)	13.40 (340)	13.40 (340)
<b>WATER INLET HOSE / DRAIN HOSE</b>		
Operating Pressure – psi (bar)	20 – 100 (1 – 8)	20 – 100 (1 – 8)
Inlet Hose Length – ft. (m)	4 (1.22)	4 (1.22)
Drain Hose Length – ft. (m)	6 (1.83)	6 (1.83)
<b>APPROXIMATE WATER USAGE</b>		
Average Total Water Usage Per Cycle – gallons (liters)*	10.71 (40.50)	10.71 (40.50)
Average Hot Water Usage, Warm Water Cycle – gallons (liters)	.71 (2.69)	.71 (2.69)
Average Hot Water Usage, Hot Water Cycle – gallons (liters)	2.71 (10.26)	2.71 (10.26)
<b>ELECTRICAL REQUIREMENTS+</b>		
Voltage	N/A	N/A
Electrical Requirements / Frequency	N/A	N/A
Breaker / Fuse – amps	N/A	N/A
<b>DIMENSIONS – DOOR OPENING – IN. (MM)</b>		
<b>EXTRACT SPEED – MAX G-FORCE / MAX RPM</b>	300 / 1,000	300 / 1,000
<b>MOTOR SIZE – HP (KW)</b>	.09 (.07)	.09 (.07)
<b>DRYER SPECIFICATIONS</b>		
<b>CAPACITY</b>		
Cylinder Volume – cu. ft. (liters)	6.70 (190)	6.70 (190)
Cylinder Diameter – in. (mm)	26.3 (666.8)	26.3 (666.8)
Cylinder Depth – in. (mm)	20.4 (518.3)	20.4 (518.3)
<b>ELECTRICAL REQUIREMENTS+</b>		
Voltage	220 – 240V	220 – 240V
Electrical Requirements / Frequency	50Hz	50Hz
Breaker / Fuse – amps	30	10
<b>DIMENSIONS – DOOR OPENING – IN. (MM)</b>		
<b>DRYER EXHAUST DUCT DIAMETER – IN. (MM)**</b>	4 (100)	4 (100)
<b>AIRFLOW (CFM)</b>	215 (6.10)	230 (6.5)
<b>ELECTRIC HEATING ELEMENT (WATTS)</b>	4,600	N/A
<b>GAS RATING – BTU/HR. (KCAL/HR.)</b>	N/A	20,000 (5,040)
<b>GAS INLET SIZE</b>	N/A	3/8 NPT
<b>MOTOR SIZE – HP (KW)</b>	.33 (.25)	.33 (.25)
<b>MACHINE SPECIFICATIONS</b>		
<b>DIMENSIONS</b>		
Width – in. (mm)	27 (686)	27 (686)
Depth – in. (mm)	29.50 (751)	29.50 (751)
Height – in. (mm)	74 (1,880)	74 (1,880)
<b>CRATED DIMENSIONS</b>		
Crated Width – in. (mm)	29.25 (743)	29.25 (743)
Crated Depth – in. (mm)	34 (864)	34 (864)
Crated Height – in. (mm)	75.75 (1,924)	75.75 (1,924)
<b>APPROXIMATE WEIGHT</b>		
Uncrated – lbs. (kg)	372 (169)	378 (171)
Crated – lbs. (kg)	383 (173)	389 (176)



**SIDE VIEW**



**BACK VIEW**

See Installation Guide for complete dimension details.



See [maytagcommerciallaundry.com](http://maytagcommerciallaundry.com) for complete warranty details.

Dimensions are for planning purposes only. See specific instructions for proper installation. Because of continuous product improvement, Maytag reserves the right to change specifications without notice.

\*Based on 2018 United States DOE J2 Testing with factory preset cycles.

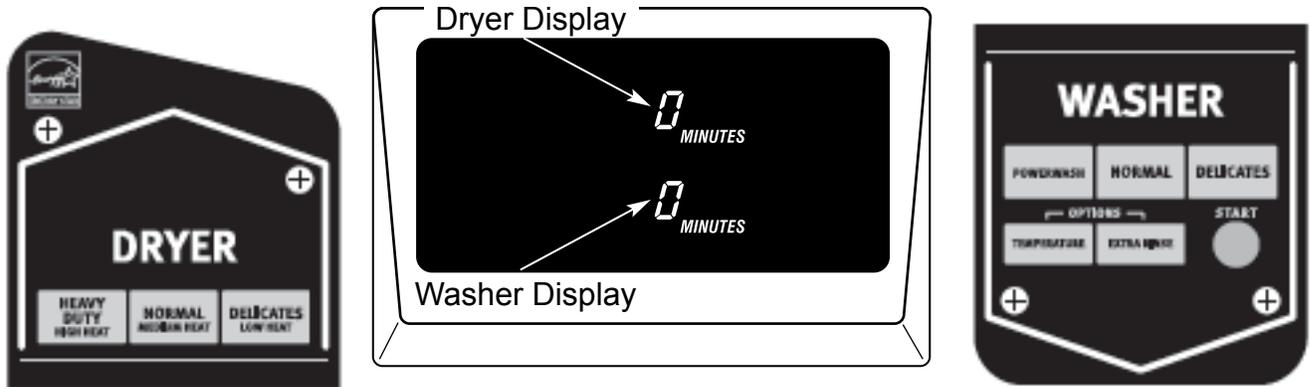
\*\*Use 4" (100mm) diameter rigid aluminum or galvanized steel duct. Never use plastic, non-metal, or combustible duct.

+It is recommended that a separate circuit serving only this washer / dryer be provided.

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# BASIC OPERATION

## ELECTRONIC CONTROL SETUP INSTRUCTIONS



Dryer control fabric setting buttons

Display

Washer control fabric setting buttons

**NOTE:** After the washer/dryer has been installed and plugged in, the display will show “0 MINUTES” on the washer and dryer portions of the display. After the washer and dryer doors have been opened and closed, the display will show the price for each machine. On washer/dryers set for free cycles, the display sections will flash “SELECT CYCLE.”

1. PD Models: Insert coins until “SELECT CYCLE” flashes on the display portion of washer or dryer that is to be run.

PN Models: Factory set to zero vend price, and “SELECT CYCLE” flashes on the display portion of washer or dryer that is to be run.

PN models converted to PR: A debit card is required rather than coins. Generation 1 or 2 debit card systems may be used; but when the Generation 2 debit system is used, the controls will automatically be set to Enhanced Debit mode (J. Ed). In Enhanced Debit mode, the card balance will also display when a debit card is inserted into the reader.

2. Door must be closed on the desired washer/dryer before cycle selection is made.
3. Press the fabric setting button for the washer/dryer cycle desired. For washer cycles, also select the desired wash temperature. After the cycle is started, the time will display and count down.
4. If a cycle is interrupted by opening the door or power loss, “RESELECT CYCLE” will flash in the display. To restart the washer/dryer, close door and reselect desired cycle.

**NOTE:** When set for free vend operation an ongoing dryer cycle will cancel if the door is opened.

# GENERAL USER INFORMATION

## Factory Setting:

### Washer is programmed at the factory:

- Normal and Delicates cycles have an 11 minute wash period and 2 rinses, with the option of an extra rinse.
- The Powerwash cycle has 3 minutes of Prewash, a 14 minute wash period, and 4 rinses, with the option to deselect the extra rinse.
- 1.75 wash price for Normal and Delicates cycles, \$2.00 for Powerwash (PD models)
- \$0.00 wash price (PN models)

### Dryer is programmed at the factory:

- 45 minutes dry time for PN models
- 5 minutes per coin for PD models
- \$1.50 dry price (fixed cycle with top off, PD models)
- \$0.00 dry price (fixed cycle, PN models)

### '0 Minutes' showing in display

This condition indicates the cycle is complete. Opening the door will return the display to Vend Price or Select Cycle if set to Free Vend.

### Scrolling 'out of order' message, followed by a failure or diagnostic code, showing in display

This indicates the machine has recorded a Fault and is inoperative until the Fault Code is cleared and the cause of the fault has been addressed by a qualified Service Technician. Refer to the Tech Sheet for Fault Codes and Diagnostics.

### Washer Door Lock

Each washer cycle begins with a safety routine that will Lock - then Un-Lock - then Re-Lock the door. The door will remain locked until the end of a cycle or approximately 2 minutes after a power interruption.

## There are four (4) types of dryer pricing:

### Fixed 'Vend' Pricing

A dryer set up for 'Fixed Cycle' operation can only accept additional time accumulated by increments equal to the length of a complete dry cycle. A maximum of 75 minutes may be purchased. Coins or Debits inserted after 99 minutes will be held in escrow until after the cycle completes.

### Accumulator Pricing

If the price is set to one coin 1, then accumulator pricing is in effect. Cycle time can be purchased one coin at a time (PD models) up to the maximum time of 75 minutes.

### Fixed Cycle With Top Off Pricing

A dryer set to offer 'Top Off' capability will allow time to be added to an existing dry cycle in increments equal to the number of minutes of dry time per quarter (coin 1), up to 75 minutes, regardless of the cost required to start the dryer. Coins or Debits inserted after 99 minutes will be held in escrow until after the cycle completes.

**PN Models Converted to PR:** In Enhanced Debit Mode, the top off price can be set independently (see VALUE OF COIN 2), and the top off time is calculated according to the following equation:

$$\text{top off time} = \frac{\text{top off price}}{\text{full cycle price}} \times \text{full cycle length}$$

Hundredth increment offset is not applied to top off purchases.

### Free Cycles

This is established by setting the cycle price to zero. When this happens, 'SELECT CYCLE' will appear rather than a cycle price. Any cycle started as a free cycle will end when the door is opened.

# THEORY OF OPERATION

The idea behind the development of the Stack Washer/Dryer was to have a product with a small enough footprint that could deliver the same washing and drying capability as well as load size of the freestanding washer and freestanding single dryer in half the area. Combining payment systems and operating with a single coin drop and single coin box adds to the simplicity as well as keeping the cost of ownership down.

Commercial Stack Washer/Dryers may or may not require a payment system to operate. If required, once payment is established, following the instructions on the console leads the user through the procedure for selecting a cycle to care for particular fabrics. After a cycle has started, the display will show the selected cycle as well as the countdown of the time left in the cycle.

With a Smart Card system, after a valid card is inserted, a choice to turn on the washer or the dryer is given. After the selection is made the appropriate payment is debited from the user's card. With a coin system, the value of a wash or a dry cycle needs to be added before either cycle will be made available. The cost of the dry and the wash cycles shown on the display will decrease with each coin entered. With a dry cycle set for less than the wash cycle, the display prompts the user to select the dry cycle or add additional coins for a wash cycle.

There are 3 fabric care selections available for the washer. All selections are pre-programmed at the factory for optimum water temperature and spin speeds by fabric type. Water levels are also factory set and not adjustable by the user or the owner.

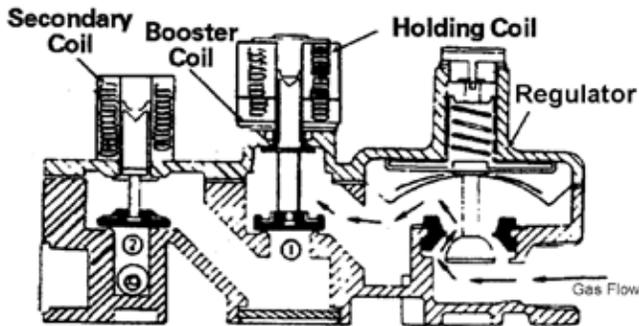
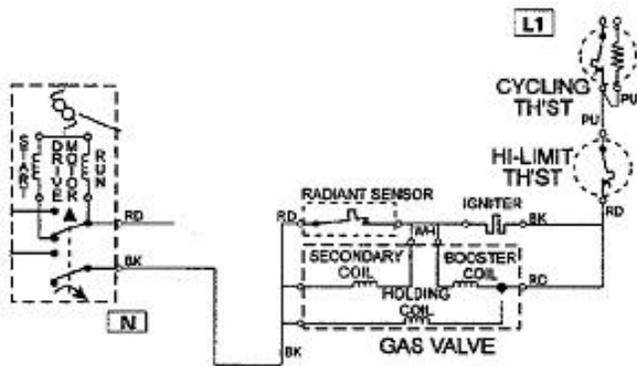
Dryers have 3 fabric care settings and there is no cycle available for drying without heat. All dryers are factory preset for 2 minutes of cool down at the end of a cycle. Any dry cycle started as free vends or OPL will be cancelled if the door is opened during the cycle and a complete cycle will need to be restarted to finish drying the load.

The maximum time selectable for a dry cycle is 99 minutes. Coins entered after 99 minutes is displayed will be held in escrow for 30 minutes if Clear Escrow is enabled or indefinitely if Clear Escrow is disabled, and can be used for a subsequent dry or a wash cycle. Additional coins entered after the total needed for wash cycle will also be held in escrow, and can be used for a subsequent wash or a dry cycle.

Communication with the user is important and the display will advise the user if a washer was 'UNBALANCED' or if the user has added too much detergent (SUDS). At the end of a cycle if the wash cycle was aborted and finished without completing the entire cycle, one of the aforementioned messages will appear on the display. The message will remain on the display until after the door is opened and an additional 2 minutes has elapsed. This provides adequate time for the user to determine that the load did not complete as expected and to view the message on the display. The following or subsequent wash cycle will not be effected by the previous load unless the residual detergent is left in the washer and or the next user adds too much detergent as well.

# UNDERSTANDING THE GAS VALVE AND IGNITION SYSTEM

The sensor, ignitor and gas valve are interrelated and function as the ignition and heat source for gas dryers. At the start of the cycle the radiant sensor contacts are closed, the ignitor is at room temperature and the gas valve is closed, blocking the flow of gas. In the wiring diagram below, the radiant sensor contacts are wired in parallel with the gas valve secondary coil. This bypasses current around the secondary coil when the radiant sensor contacts are closed. Therefore valve #2 cannot open as long as the radiant sensor contacts are closed.



The booster coil and the ignitor are wired in parallel, although they are still wired in series with both the radiant sensor and secondary coil combination.

When the radiant sensor contacts are closed, full line voltage is available to the booster coil and to the ignitor. When the radiant sensor contacts open, the current has to flow through the secondary coil on gas valve #2 in order to get to the booster coil and the ignitor.

A significant voltage drop develops across the secondary coil, which renders both the booster coil and the ignitor ineffective due to their low resistance and the reduced voltage available, even though they are still in the circuit.

## Radiant Sensor Contacts Closed

The holding coil, the booster coil, and the ignitor all receive line voltage. The holding coil and booster coil open gas valve #1. Gas valve #2 is still closed, prohibiting gas to flow to the burner. The ignitor, operating at line voltage, begins to get very hot (as the ignitor gets hotter the resistance of the ignitor drops). The ignitor glow radiates heat to the radiant sensor and as long as the radiant sensor contacts are closed the secondary coil of the gas valve #2 are bypassed.

## Radiant Sensor Contact Open

The ignitor is now very hot and valve #1 is open. The radiant heat from the ignitor causes the contacts in the radiant sensor to open. With the radiant sensor contacts open the secondary coil of the gas valve is no longer bypassed. The secondary coil is now in series with the parallel circuit combination of booster coil and ignitor.

Because of the relatively low resistance of the hot glowing ignitor, most of line voltage is dropped across the secondary coil. The remaining voltage is dropped across the booster coil and ignitor. The secondary coil now opens gas valve #2 allowing the gas to flow through both valve #1 and valve #2 to the burner where it comes in contact with the still very hot ignitor and the flame is ignited.

**NOTE:** Since the ignitor will begin to cool, the tip of the ignitor is left in the flame to keep the resistance low enough to keep the secondary coil powered, which keeps the gas flowing and the flame burning.

<b>⚠ WARNING</b>

<b>Explosion Hazard</b>
<p>Keep flammable materials and vapors, such as gasoline, away from dryer.</p> <p>Do not dry anything that has ever had anything flammable on it (even after washing).</p> <p>Failure to follow these instructions can result in death, explosion, or fire.</p>

## CLEANING THE DRYER LOCATION

Keep Dryer area clear and free from items that would obstruct the flow of combustion and ventilation air.

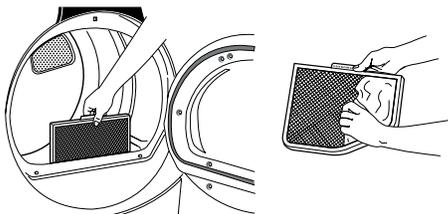
## CLEANING THE LINT SCREEN

### Every load cleaning:

The lint screen is located in the door opening of the dryer. A screen blocked by lint can increase drying time.

### To clean:

1. Pull the lint screen straight up. Roll lint off the screen with your fingers. Do not rinse or wash screen to remove lint. Wet lint is hard to remove.



2. Push the lint screen firmly back into place.

### IMPORTANT:

- Do not run the dryer with the lint screen loose, damaged, blocked, or missing. Doing so can cause overheating and damage to both the dryer and fabrics.
- If lint falls off the screen into the dryer during removal, check the exhaust hood and remove the lint.

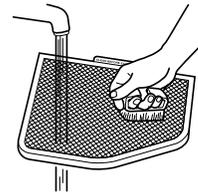
### As needed cleaning:

Laundry detergent and fabric softener residue can build up on the lint screen. This buildup can cause longer drying times for the clothes, or cause the dryer to stop before the load is completely dry. The screen is probably clogged if lint falls off while the screen is in the dryer.

Clean the lint screen with a nylon brush every 6 months, or more frequently, if it becomes clogged due to a residue buildup.

### To Wash:

1. Roll lint off the screen with your fingers.
2. Wet both sides of lint screen with hot water.
3. Wet a nylon brush with hot water and liquid detergent. Scrub lint screen with the brush to remove residue buildup.



4. Rinse screen with hot water.
5. Thoroughly dry lint screen with a clean towel. Reinstall screen in dryer.

# CLEANING THE DRYER INTERIOR

## To clean dryer drum:

1. Make a paste with powdered laundry detergent and very warm water.
2. Apply paste to a soft cloth, or, apply a liquid non flammable household cleaner to the stained area and rub with a soft cloth until all excess dye and stains are removed.
3. Wipe drum thoroughly with a damp cloth.
4. Tumble a load of clean cloths or towels to dry drum.

**NOTE:** Garments which contain unstable dyes, such as denim blue jeans or brightly colored cotton items, may discolor the dryer interior. These stains are not harmful to the dryer and will not stain future loads of clothes. Dry unstable dye items inside out to avoid dye transfer.

# REMOVING ACCUMULATED LINT

## From Inside the dryer cabinet:

Lint should be removed every 2 years, or more often, depending on dryer usage. Cleaning should be done by a qualified person.

## From the exhaust vent:

Lint should be removed every 2 years, or more often, depending on dryer usage.

# VACATION AND MOVING CARE

## Vacation Care:

Operate the dryer only when people are present. If going on vacation or not using the dryer for an extended period of time:

1. Unplug dryer or disconnect power.
2. Close shutoff valve in gas supply line.
3. Clean lint screen.

## Moving care:

### For power supply cord-connected dryers:

1. Unplug dryer.
2. Close shutoff valve in gas supply line.
3. Disconnect gas supply line pipe and remove fittings attached to dryer pipe.
4. Cap the open fuel supply line.
5. Make sure leveling legs are secure in dryer base.
6. Use masking tape to secure dryer door.

<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> <b>Disconnect power before servicing.</b> <b>Replace all parts and panels before operating.</b> <b>Failure to do so can result in death or electrical shock.</b>

### For direct-wired dryers:

1. Disconnect power.
2. Disconnect wiring.
3. Make sure leveling legs are secure in dryer base.
4. Use masking tape to secure dryer door.

# COMPONENT ACCESS

## CHEMICAL DISPENSER DRAWER AND PARTS

1. Pull the chemical dispenser drawer out as far as it will go.

2. Press the release tab down in the top left back corner of the drawer using a putty knife or a small flat blade screwdriver.



3. Pull the dispenser drawer out of the washer.

4. The detergent cup insert can be removed for cleaning by lifting it out of the chemical dispenser drawer.



5. To remove the detergent flapper, place a flat blade screwdriver in the slot between the hinges at the top of the flapper and twist both ways to release the flapper.



6. The locking tab can be removed by unclipping it from slots in the top left back corner of the chemical dispenser drawer.

7. Reinstall it by clipping it onto the crossbar in the openings.



8. To remove the front decorative plate of the chemical dispenser remove four T-20 security screws.



9. The chemical dispenser drawer facia is secured with sheet metal screws. The User Interface facia is secured with machine screws. Make sure not to interchange these screws.

10. The front of the chemical dispenser drawer is called the handle, and it can come off if pulled too hard.

11. Reinstall the handle by straightening the tabs, hook the top three tabs onto the drawer and rotate the front down to engage the three tabs at the bottom into the slots of the drawer.



12. There is a bottom cover under the bleach and fabric dispenser cups. This cover should be removed and the siphon holes cleaned to maintain good elimination of chemicals during the cycle.



# CONTROL PANEL

<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> Disconnect power before servicing. Replace all parts and panels before operating. Failure to do so can result in death or electrical shock.

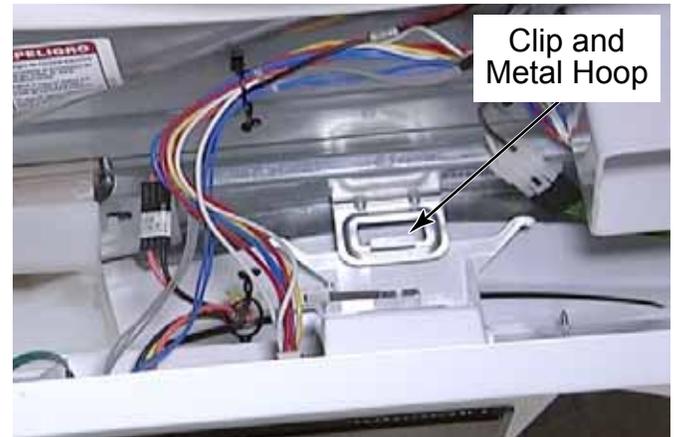
1. Remove the chemical dispenser drawer (See page 4-1).
2. Remove four T-20 security screws, two from the left and right edges of the control panel.



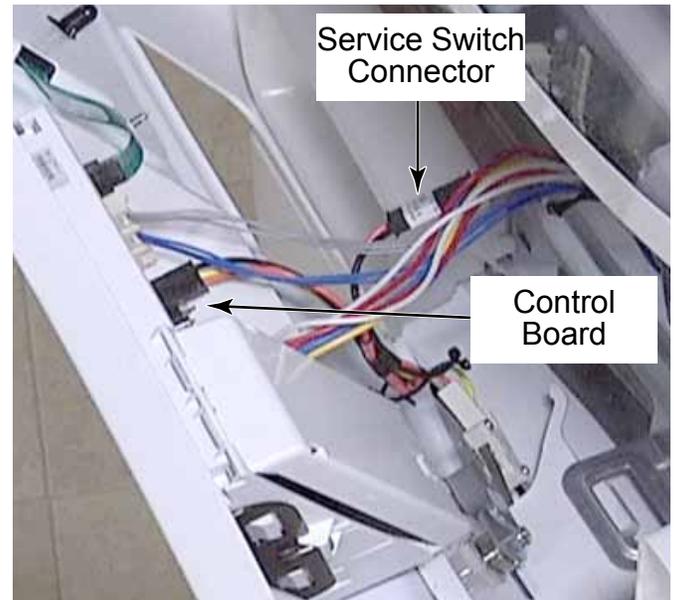
3. Pull the control panel forward and tilt the top edge down.



4. Place hook on bottom edge of the service switch bracket into metal hoop to hold the control panel open in the service position.



5. To remove control panel, disconnect the wire connectors from the control board.



6. Lift the control panel to release the hook from the hoop on the control panel bracket.
7. Remove the control panel and place it on a covered work surface.

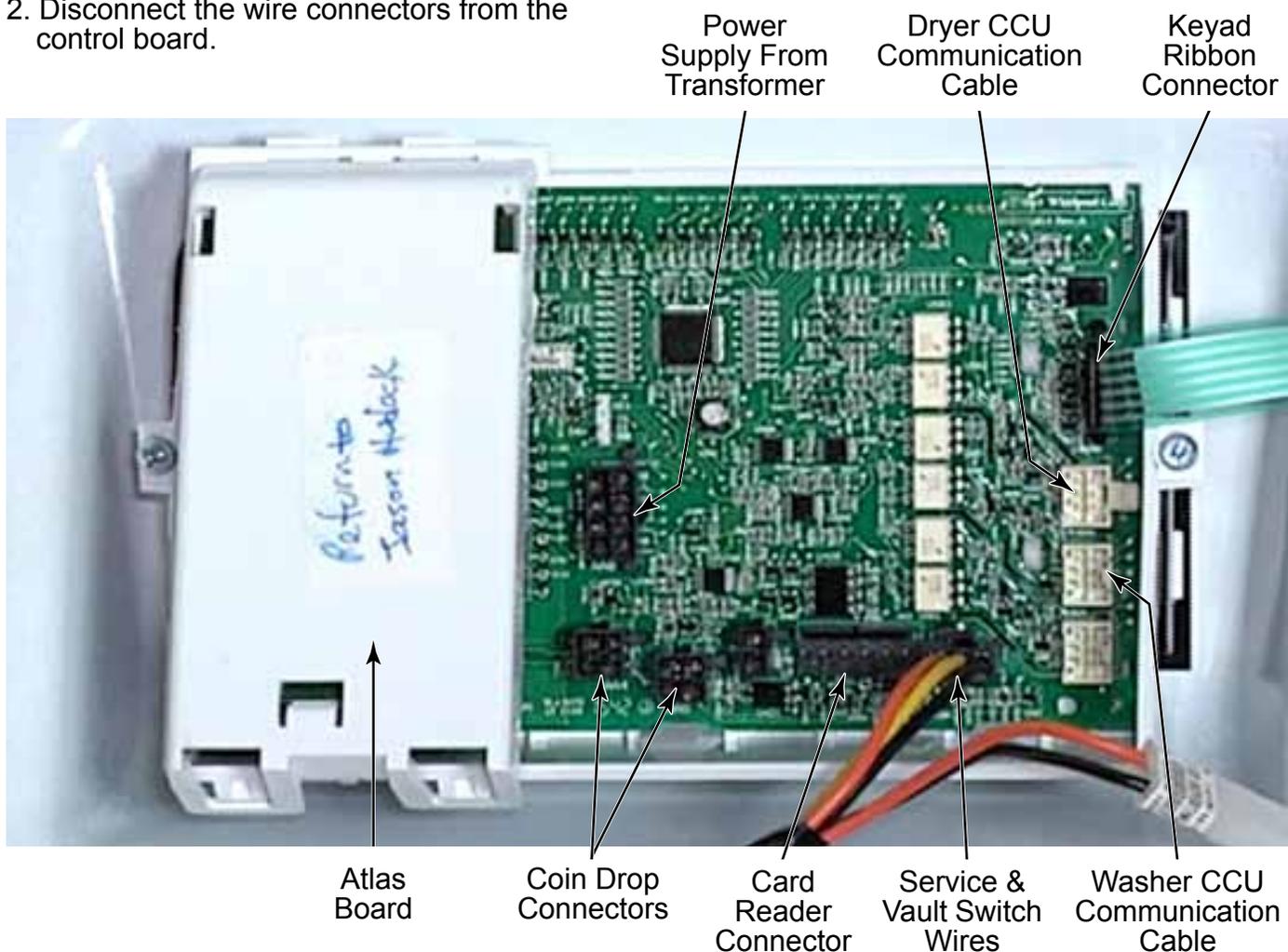
# CONTROL BOARD CONNECTORS

**⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Open the control panel (See page 4-4).
2. Disconnect the wire connectors from the control board.



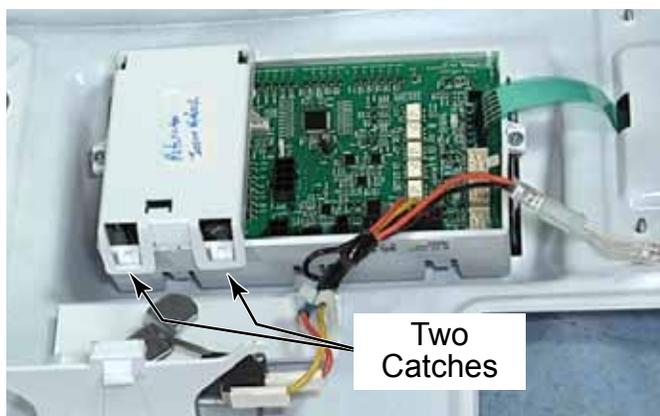
# CONTROL BOARD

## ⚠ WARNING

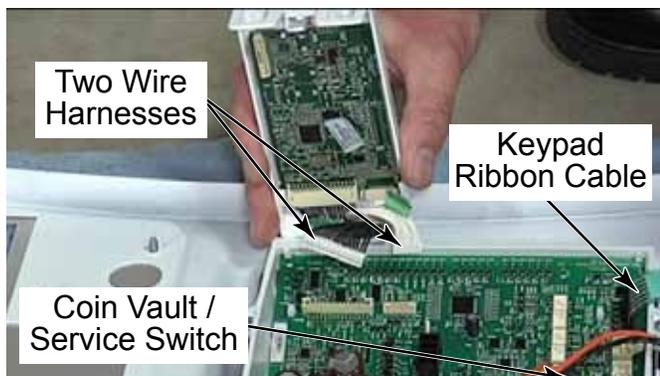


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Open the control panel (See page 4-3).
2. Disconnect the wire connectors from the control board.
3. To remove the atlas board, lift two catches off two tabs.



4. Tilt the board up. Press the locking tabs and disconnect two wire harnesses from the control board.

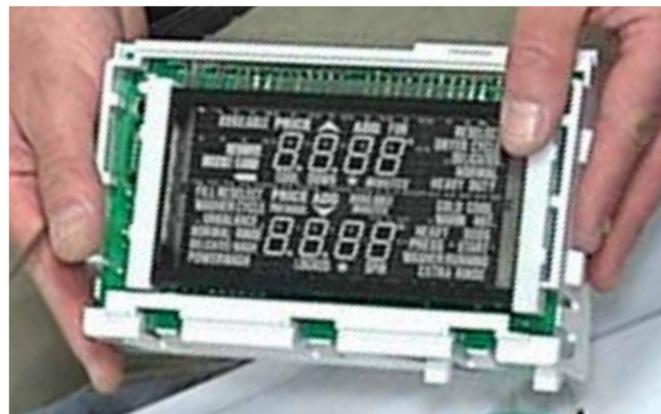


**TECH TIP:** The Atlas board contains the factory installed software for the Stack Washer/Dryer. This is available as a separate part.

5. Press the locking tab and disconnect the coin vault and service switch connector.
6. Press the locking tab and disconnect the ribbon cable to the keypad.
7. To remove the control board from the control panel, remove two Phillips head screws.
8. Use a flat blade screwdriver to release the locking tabs at one end and lift the control board assembly off the control panel cover.



9. Turn the assembly over to view the user interface display board, which shows both the washer and dryer display functions.



# KEYPAD ASSEMBLY

## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

4. Remove the keypad assembly from the front of the control panel cover.



1. Open the control panel (See page 4-3).
2. Press the locking tab and remove the keypad ribbon connector from the control board.



3. Remove the remaining two T-20 security screws securing the keypad to the control panel. Support the keypad so it will not fall when the last screw is removed.



# SERVICE SWITCH ASSEMBLY

## ⚠ WARNING

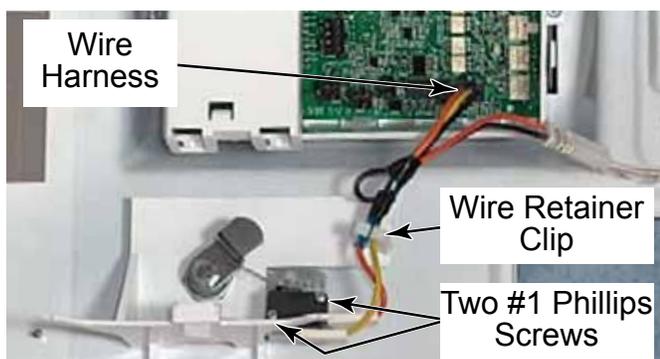


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Open the control panel (See page 4-3).

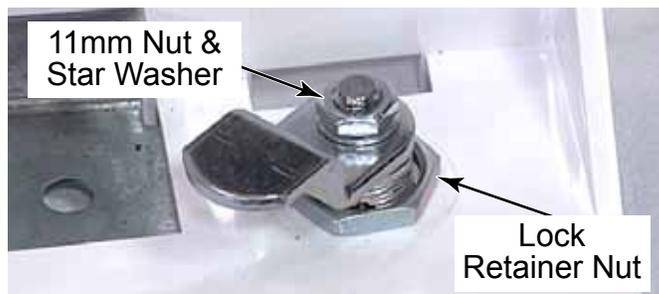


2. From inside the control panel, press the locking tab and disconnect the wire harness to the service switch from the control board.

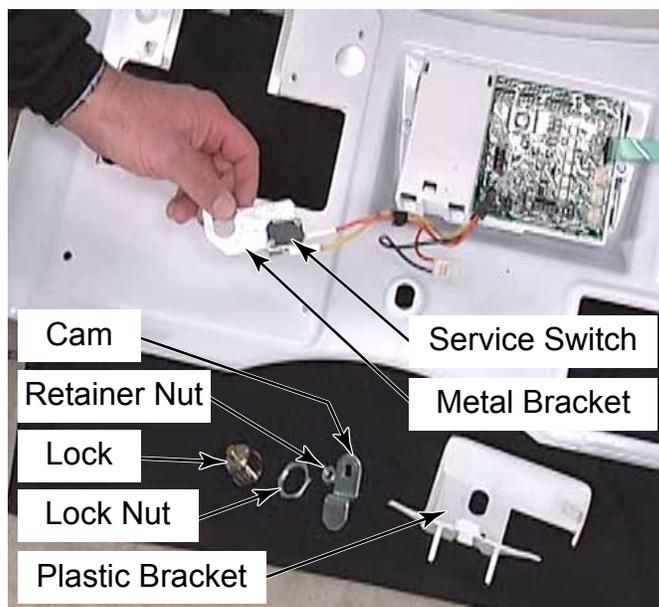


3. Remove two #1 Phillips head screws securing the switch to the bracket.
4. Remove the service switch wires from the retainer clip and remove the switch with the wire harness attached.

5. To remove the service switch cam and lock, remove the 11mm (7/16") nut and star washer securing the cam to the lock shaft. Remove the service switch cam from the shaft.
6. Remove the retainer nut securing lock to the control panel assembly. Remove lock from the front of the control panel cover.



7. Remove the switch bracket assembly and plastic bracket with hook that allows control panel to be hooked in the service position.



**TECH TIP:** When reassembling the service switch assembly, place the metal switch bracket against the control panel, and then the plastic bracket on top of the metal bracket.

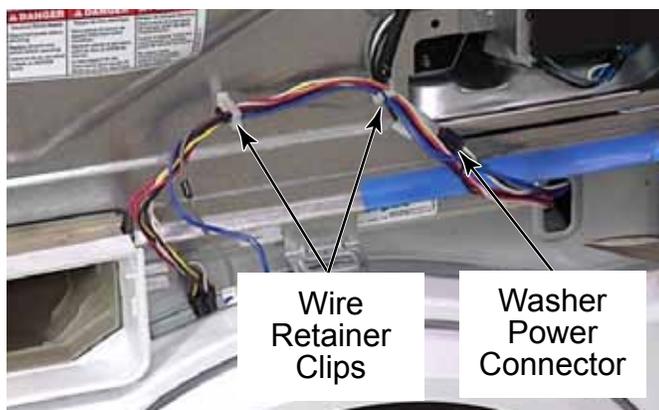
# CONTROL PANEL BRACKET

## ⚠ WARNING



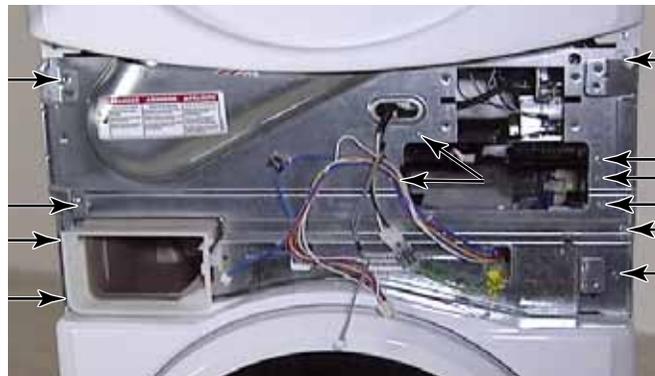
**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove the control panel (See page 4-3).
2. Remove the wires from the clips on the control panel bracket.
3. Lift the locking tab and disconnect the connector for power to the washer.



4. Remove four 1/4" hex head screws on the left edge securing the control panel bracket to the front of the Stack Washer/Dryer.
5. Remove four 1/4" hex head screws on the right edge securing the control panel bracket to the front of the Stack Washer/Dryer.

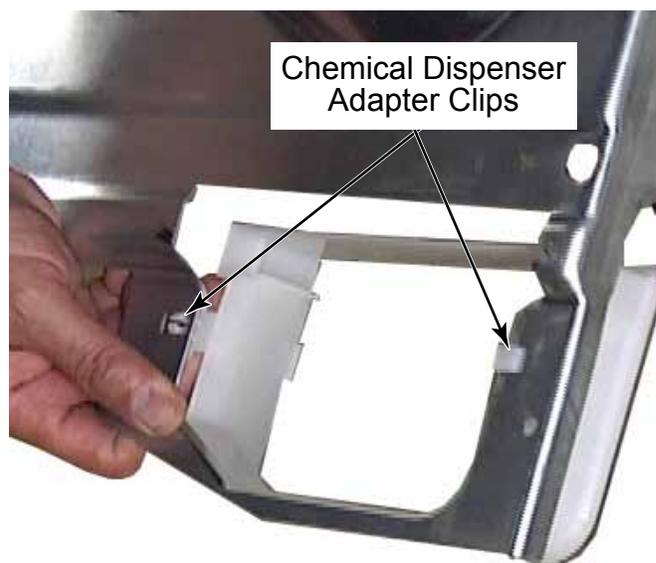
6. On PD models, remove four more 1/4" hex head screws around the coin vault.



7. To remove the control panel bracket, push the wires through the hole of the bracket and remove the control panel bracket.

**NOTE:** This provides access to the blower assembly and heater assembly for testing.

8. The chemical dispenser adapter has clips on the back side of the control panel bracket that can be released once the bracket is removed.

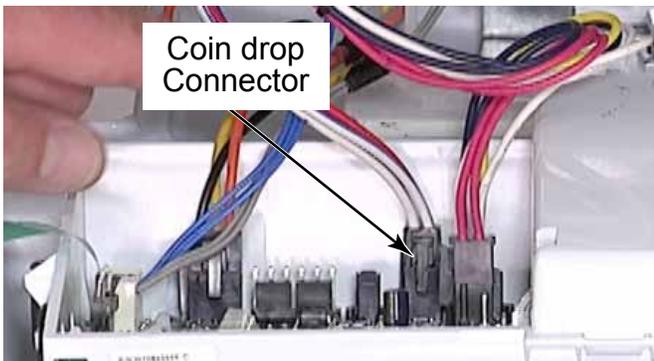


# COIN DROP

<b>⚠ WARNING</b>

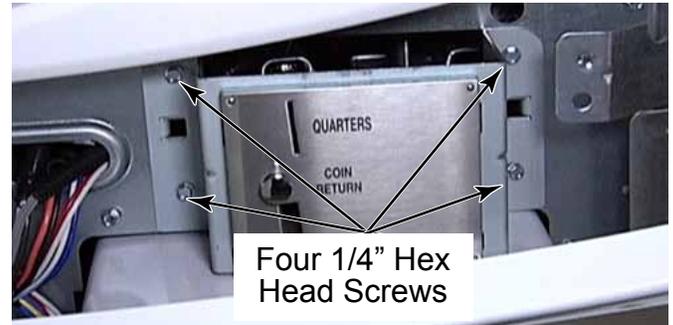
<b>Electrical Shock Hazard</b> <b>Disconnect power before servicing.</b> <b>Replace all parts and panels before operating.</b> <b>Failure to do so can result in death or electrical shock.</b>

1. Open the control panel (See page 4-3).
2. Press locking tab and disconnect coin drop wire connector from control board.



3. Release the wires from the wire clips inside the control panel.

4. Remove four 1/4" hex head screws securing the coin drop mounting bracket to the control panel bracket.



5. Pull the coin drop and bracket out while pulling the wires through the hole in the control panel bracket.

# COIN VAULT AND COIN VAULT SWITCH

## ⚠ WARNING

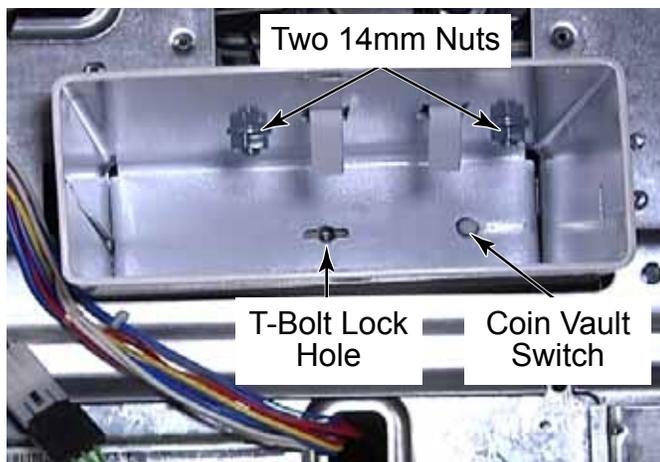


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. When fully installed, the owner will have to provide the key for the coin box. When the coin box is removed, a switch behind the coin vault will change state and indicate that the box was removed.

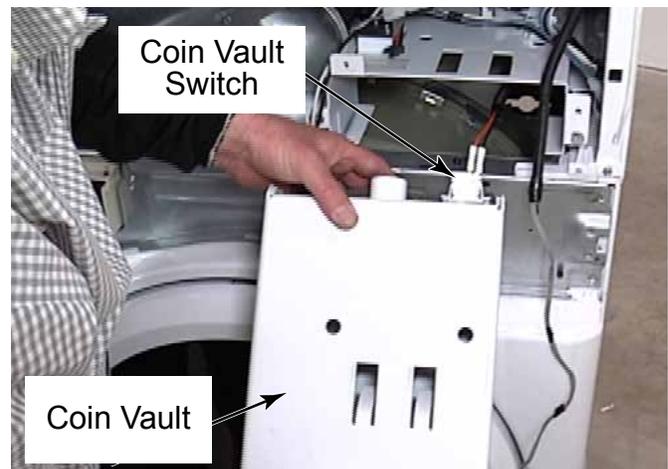
The slot next to the coin vault switch is for the long 1/4 turn “T” bolt shaft that passes through this hole and locks behind the vault.

2. Remove the control panel bracket (See page 4-8).
3. Unlock and remove the coin box from the coin vault.
4. Remove two 14mm (9/16”) nuts from the inside top of coin vault.



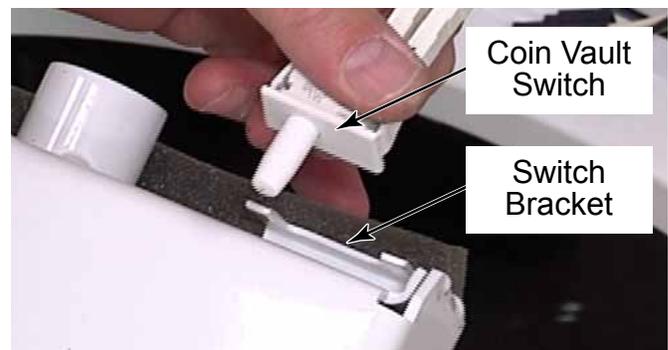
5. Lift the mounting bracket, with bolts attached, from the top of the coin vault.

6. Slide coin vault out of its support bracket.

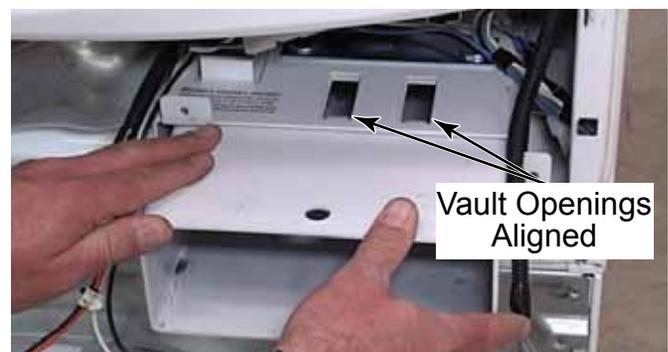


7. To remove the coin vault switch, reach into the coin vault compartment and press the switch plunger in as far as possible.

8. Slide the switch up out of the bracket on the back of the coin vault to remove it.



**TECH TIP:** When reinstalling the coin vault, make sure the vault openings in the bracket are aligned with the openings in the top of the coin vault. Then tighten nuts inside the coin vault.



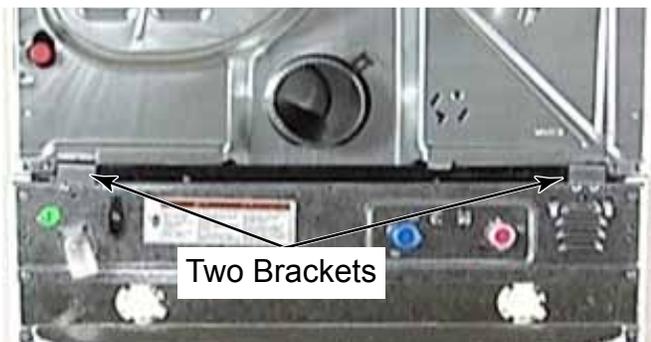
## DRYER REMOVE FROM STACK

### **⚠ WARNING**

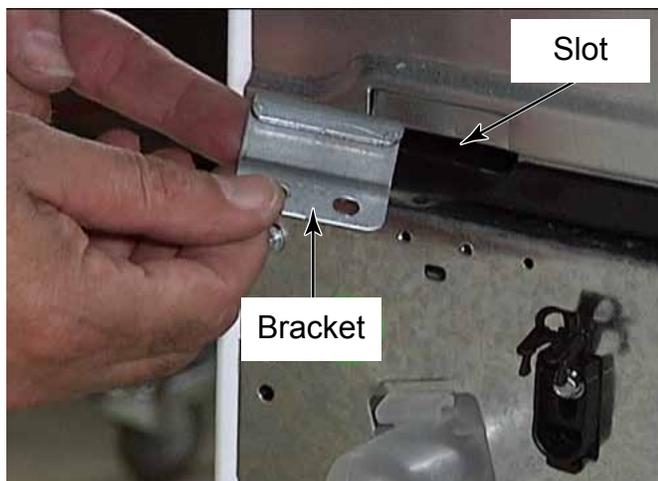


**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Remove the control panel bracket (See page 4-8).
2. Remove two 1/4" hex head screws from each bracket on the back of the stack.



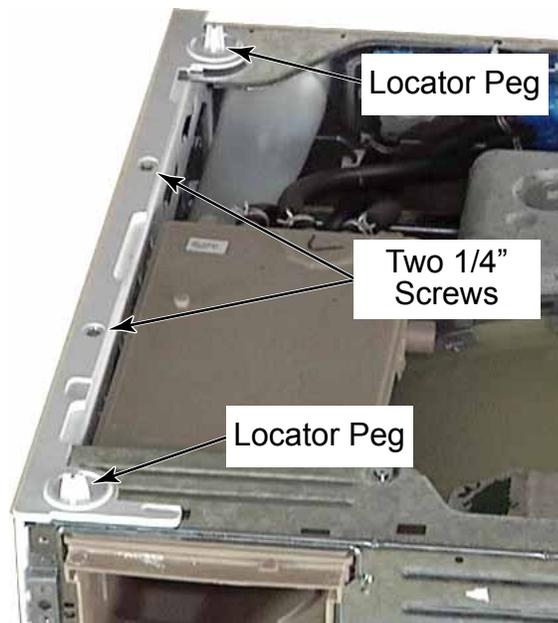
3. Lift each bracket out of a slot in the dryer.



### **⚠ WARNING**

**Excessive Weight Hazard**  
Use two or more people to move and install stacked washer/dryer.  
Failure to do so can result in back or other injury.

4. With two people, lift the dryer off the top of the washer and set it on a covered sturdy surface.
5. The washer has a plastic strip on the top edge of each side panel with locator pegs that fit into the corresponding holes of the dryer base.
6. To remove the locator strips, remove two 1/4" hex head screws from each strip.

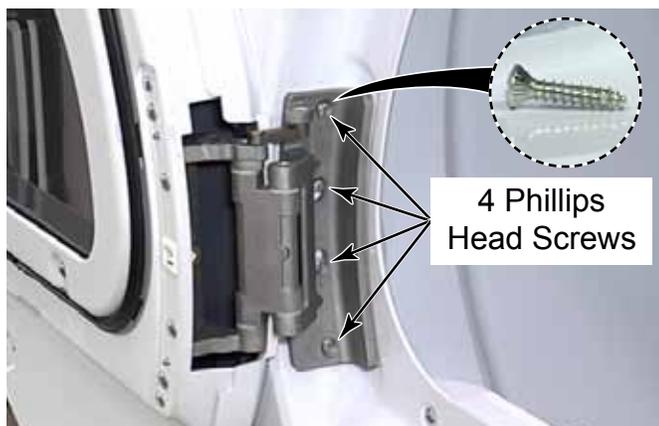


## DOOR AND HINGE ASSEMBLY - DRYER

1. The door hinge, on both doors of the Stack Washer/Dryer, swing completely open, 180 degrees.

2. Open dryer door.

3. Remove four Phillips head screws securing the door and hinge assembly to the front panel of the dryer.



4. Support the door when removing the last screw.

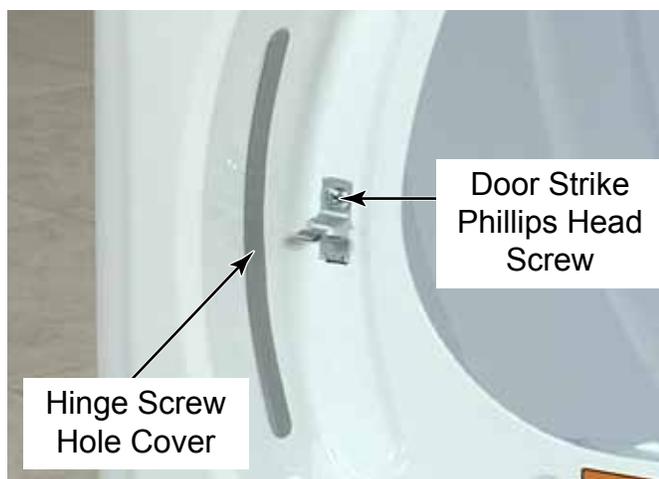
5. Remove the door and hinge assembly from the dryer.

6. There is a locating tab on the back of the hinge that fits into a hole in the front panel.



## REVERSE A DRYER DOOR

1. Remove dryer door (See page 4-12).
2. Remove the Phillips head screw securing door strike. This is a large pan head screw.
3. Rotate the top of the strike away from the dryer and slide the tab out of the slot in the front panel.
4. Turn strike 180° and install it on the opposite side of the door opening.

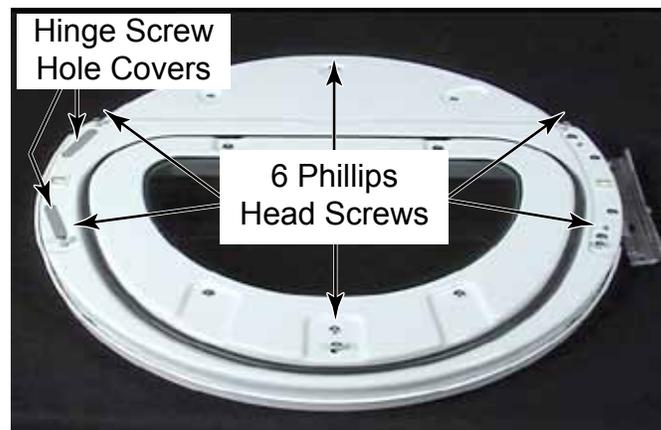


5. Remove the hinge screw-hole cover by gently prying two plastic pins out of the holes.

6. Install the hinge screw-hole cover on the opposite side of the door opening. Align the two pins, on the back of the cover, with the two middle holes for the door hinge.

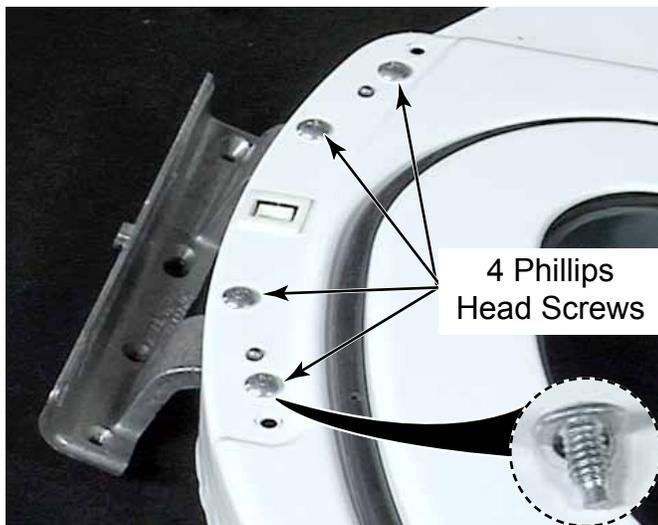


7. Press pins into holes as far as they will go.
8. Separate door halves by removing six Phillips head screws from the inside door panel.
9. Lift the inside off the outside door half.



10. Remove the two hinge screw-hole covers by gently prying two plastic pins out of the holes for each cover.

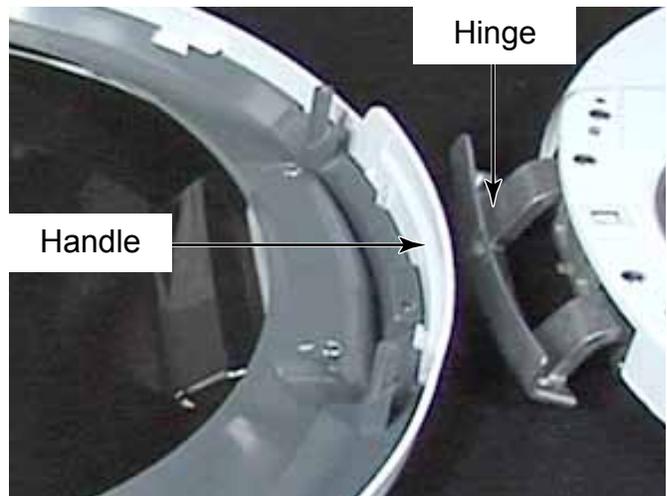
11. Remove four Phillips head screws securing the hinge to the door.
12. Rotate the hinge 180 degrees and install it on the other side of the door with the four screws just removed. There are two placement pins, in the hinge, that fit into two holes for correct hinge placement.



13. Install the hinge screw-hole covers where the hinge was removed from. Align the two pins on the back of the cover with the two holes for the door hinge screws. Press the pins into the holes as far as they will go.



14. Rotate the outer door 180 degrees. Place the inner door into the outer door with the hinge on the opposite side of the handle.

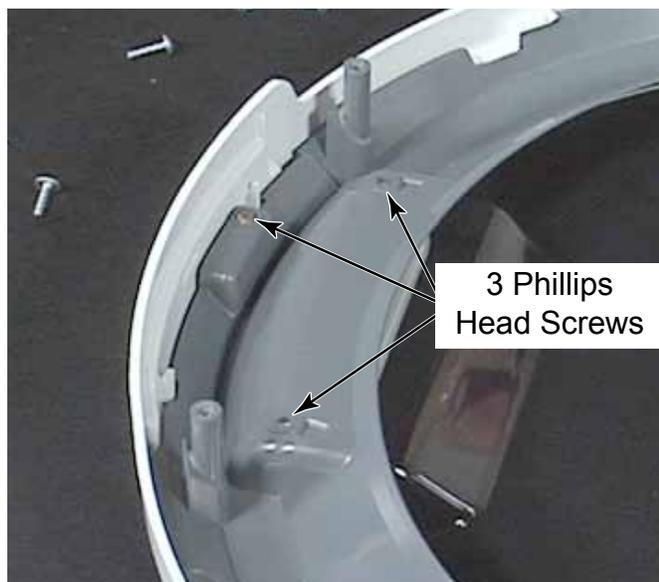


15. Place inner door into outer door with hinge opposite the handle side.
16. Reinstall the six Phillips head screws in the door. The longest screw goes in the hole at the top of the door. These screws have high and low threads for holding in plastic.

**NOTE:** Washer doors are not reversible.

## DOOR HANDLE - DRYER

1. To remove door handle after the door halves are separated (See page 4-14), remove three Phillips head screws.

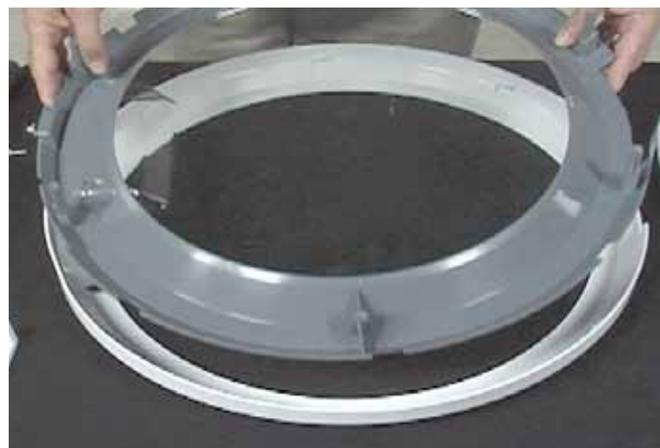


2. Use a flat blade screwdriver and press in, on the plastic tab, on the inside of the door handle.
3. Remove the handle from the door.



## INNER DOOR LENS - DRYER

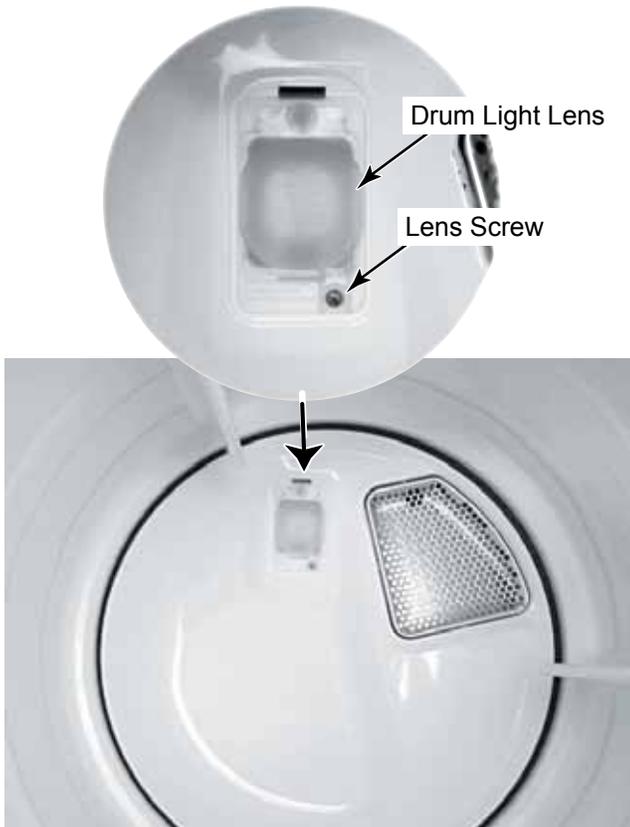
1. Separate door halves (See page 4-14).
2. Remove door handle (See left column on this page).
3. Rotate inner lens slightly to release the tabs securing it to the front door half. Lift the lens out of the door trim.



## DRUM LIGHT LENS

1. Open the dryer door.
2. Remove the Phillips head screw securing drum light lens to the back bulkhead, and remove the lens.

**NOTE:** There is no light socket on a commercial dryer, nor is there capability of adding a light on commercial dryers. The lens is maintained to prevent clothes catching the rear bulkhead and light bracket. Behind the light lens is a bracket with a mesh screen. This assembly needs to be maintained as it came from the factory.



## CONSOLE COVER - DRYER

### **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove two T-20 security screws, one on each side of the console cover. The panel will hold itself on the dryer after the screws have been removed.



2. Rotate the bottom of the console cover out and push up to lift it out of the channel on the top edge of the dryer top bracket.



3. Lay the console cover forward to access the dryer control board.



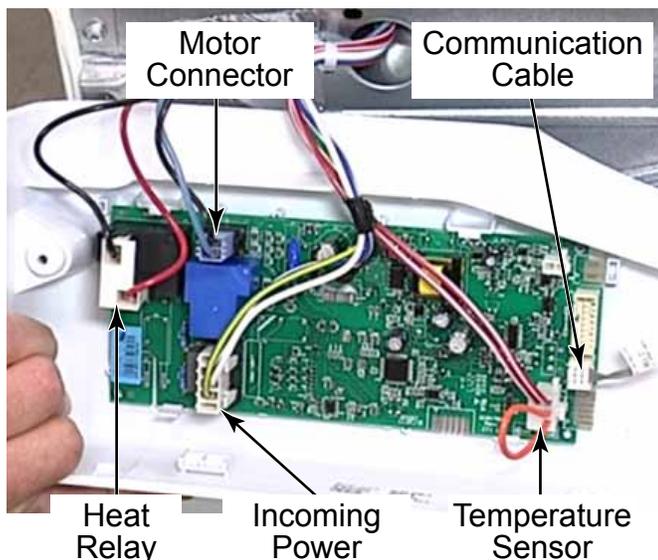
# CONTROL BOARD - DRYER

**⚠ WARNING**



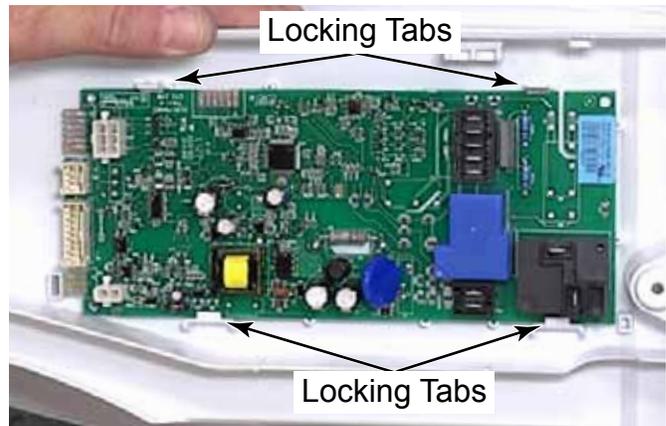
**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Open dryer console cover (See page 4-17).
2. Press the locking tab and disconnect the Rast connector for the control board to user interface communication cable.
3. Press the locking tab and disconnect the temperature sensor connector.
4. Press two locking tabs and disconnect the incoming power wire connector.
5. Disconnect the motor wire connector.
6. Disconnect the heat relay wire connector.

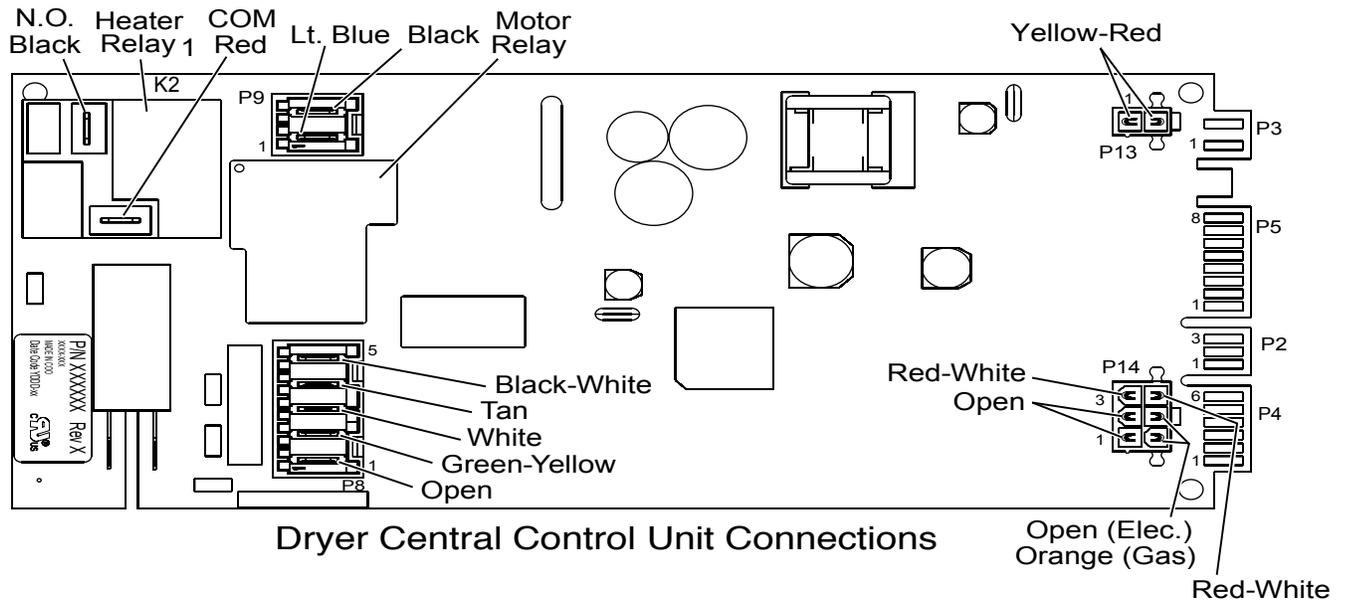


7. Remove the console cover.

8. To remove the control board from the console cover, release two tabs on the top edge of the board and remove it from the console cover.



# CCU CONNECTIONS - DRYER



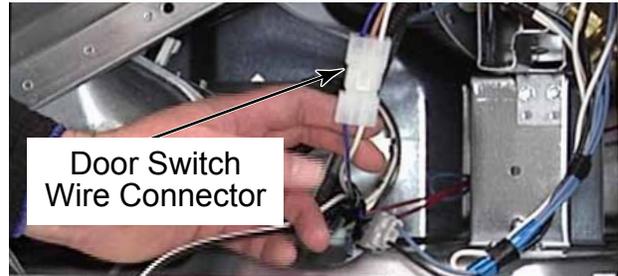
# FRONT PANEL - DRYER

**⚠ WARNING**

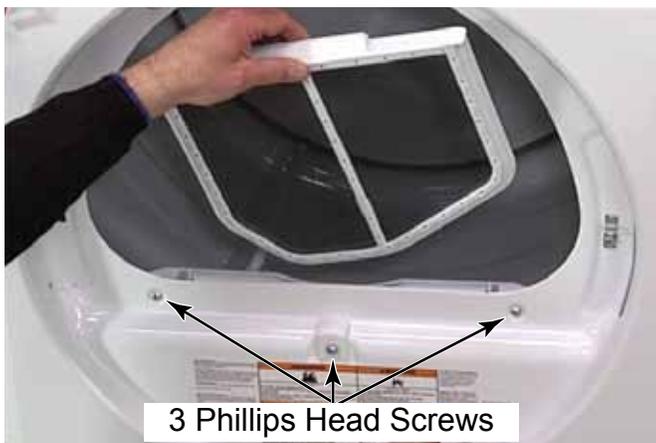


**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

**NOTE:** The door switch wire connector has three wires going to the door switch, and two wires going to the control board. The third wire would be for a cavity light, but commercial dryers do not come with one.



1. Open dryer console cover (See page 4-17).
2. Remove the control panel bracket (See page 4-8).
3. Open dryer door and remove the lint filter.
4. Remove three Phillips head screws, below door opening, securing the front panel to the blower housing cover. These screws are large pan head screws.



7. Remove two 1/4" hex head screws securing the bottom of front panel to dryer. These screws were hidden behind the control panel.



8. Remove two 1/4" hex head screws securing the top of the front panel to the dryer. These screws were hidden behind the dryer console panel. Make sure to support the front panel when removing the screws so it does not fall.



5. The center screw has a plastic bumper that will come off with the screw.
6. Lift the locking tab and disconnect the door switch wire connector.

9. It may be necessary to loosen the bottom two 1/4" hex head screws securing the dryer control panel bracket to the side panels.

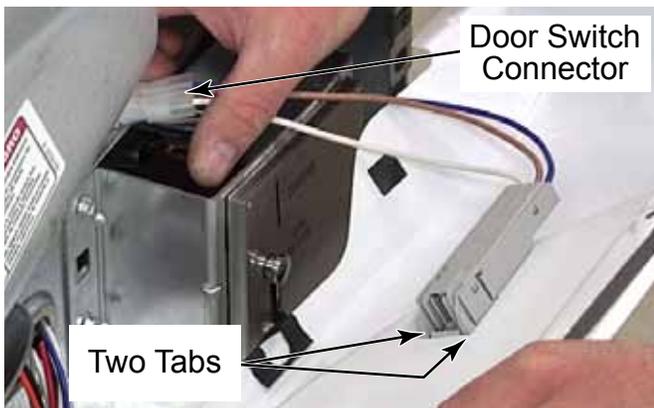
10. Pull the dryer front panel away from the dryer and remove the panel.

## DOOR SWITCH - DRYER

<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> <b>Disconnect power before servicing.</b> <b>Replace all parts and panels before operating.</b> <b>Failure to do so can result in death or electrical shock.</b>

1. Remove the dryer front panel (See page 4-20).
2. Lift the locking tab and disconnect the door switch wire connector.
3. Squeeze two tabs on the end of the door switch and push them through the hole from the back side of the dryer front panel.



4. Rotate the other end of switch assembly up and push it through the hole in front panel.
5. Pull the switch and wire connector out from the front of the panel.

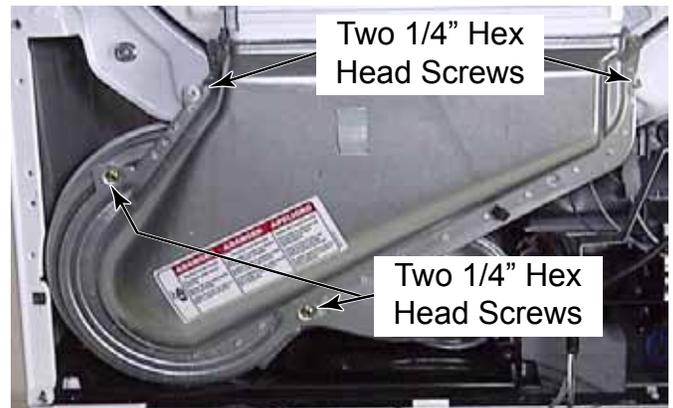


## BLOWER HOUSING COVER

<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> <b>Disconnect power before servicing.</b> <b>Replace all parts and panels before operating.</b> <b>Failure to do so can result in death or electrical shock.</b>

1. Remove the control panel bracket (See page 4-8).
2. Remove the dryer front panel (See page 4-20).
3. Remove four 1/4" hex head screws securing the blower housing cover to the blower housing.



4. Support the cover when removing the last screw.
5. Pull the cover out and down to remove the blower housing cover.

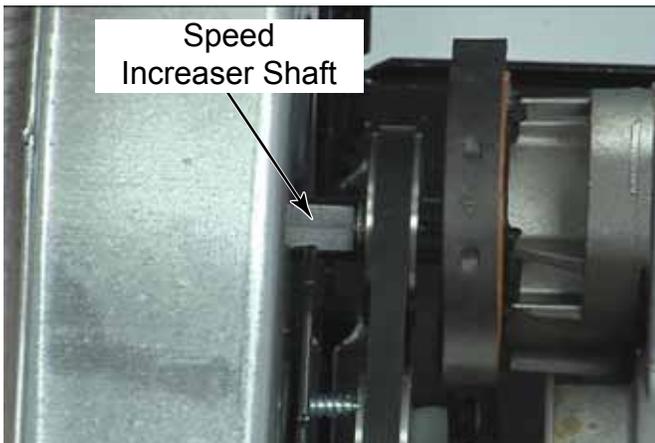
# BLOWER WHEEL

## ⚠ WARNING

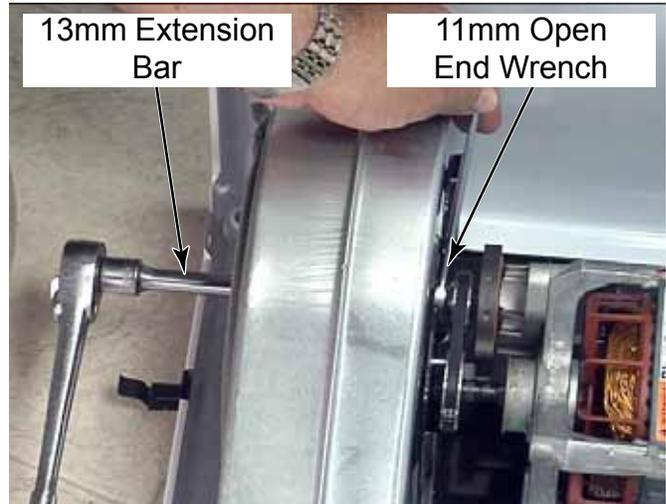


**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Remove the blower housing cover (See page 4-21).
2. Place a thin 11mm (7/16") open end wrench on the flat spot of the speed increaser shaft.

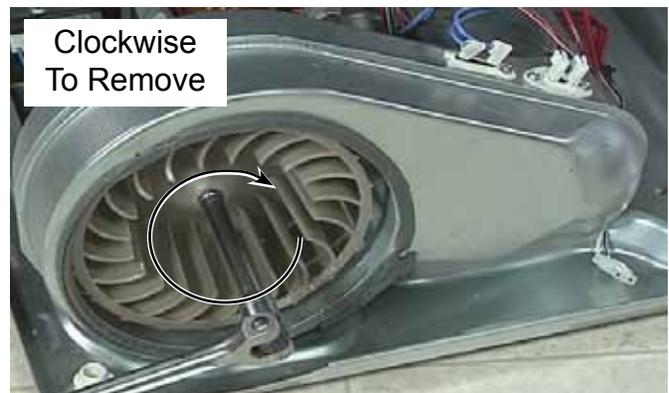


3. Insert the end of a 13mm (1/2") socket extension bar into center hole of the blower wheel.



**TECH TIP:** Tap the ratchet and extension bar in a quick motion, rather than applying slow pressure. This helps avoid rounding of the center hole of the blower wheel, which could stress and crack the blower wheel.

4. The blower wheel is reverse threaded, so it must be turned to the right to remove it.



# FRONT BULKHEAD - DRYER

## ⚠ WARNING



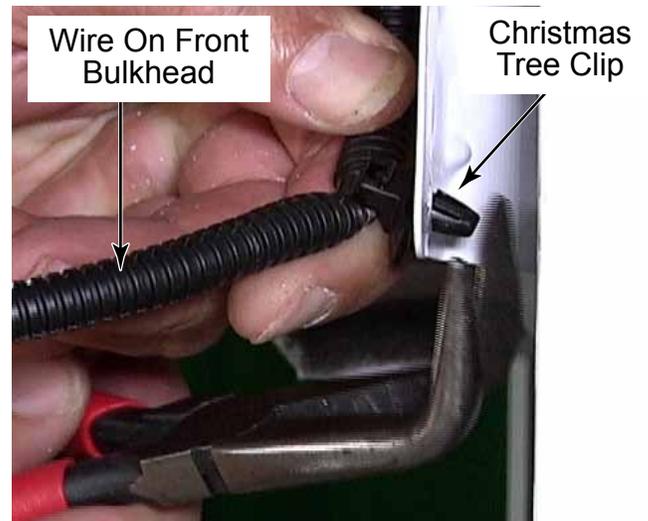
**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove the blower housing cover (See page 4-21).
2. Loosen, but do not remove, two 1/4" hex head screws at the top corners of bulkhead.
3. Remove two 1/4" hex head screws from the bottom corners of the bulkhead.



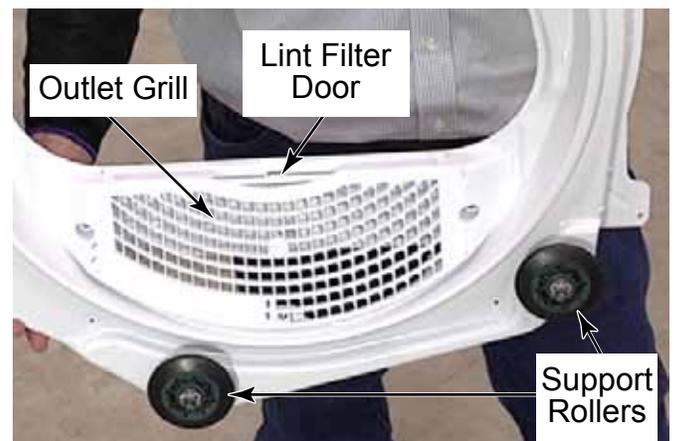
4. Lift the right side of the front bulkhead so the top screw can pass through the snowman hole. Pull the bulkhead away from the dryer enough to reach the Christmas tree clips inside.

5. Squeeze the clips, from the inside of the bulkhead, to release the wire from the front right side of the bulkhead.



6. Lift the left side of the front bulkhead so top screw can pass through the snowman hole.
7. Lower the front bulkhead to release the two rollers from the dryer drum.
8. Remove the front bulkhead.
9. Components on the inside of the front bulkhead are:

- Outlet grill
- Lint filter door
- Two support rollers



# FRONT SUPPORT ROLLERS AND SHAFTS

## ⚠ WARNING



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove the dryer front bulkhead (See page 4-23).
2. Remove the tri-clip and slide the support roller off shaft.
3. There is another tri-clip behind the roller for proper spacing.



**NOTE:** When replacing a roller, always replace both tri-clips to make sure the roller will stay in position while running.



**NOTE:** DO NOT lubricate this wheel or shaft. Lubrication attracts lint and dust which will cause premature wear of the support bearing. Clean shaft with fine steel wool to eliminate squeaks, or replace worn rollers.

4. Support roller shafts are secured to the front bulkhead with 14mm (9/16") nuts and a washer.



5. The washer is installed on the roller side of the shaft.



**NOTE:** To support the roller shaft while trying to remove the 14mm (9/16") nut a locking pliers needs to be used to hold the tip on the front of the roller shaft.



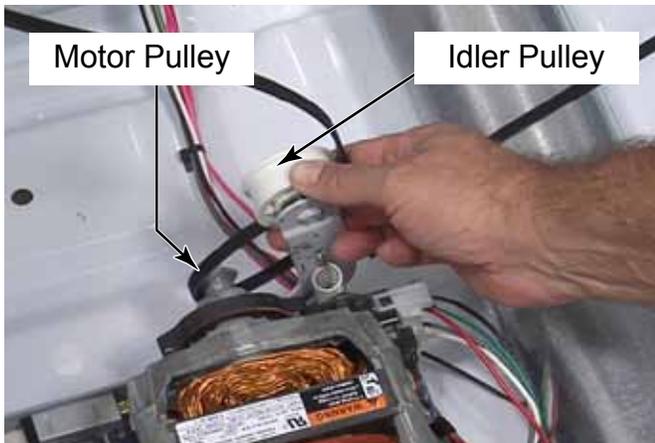
# BELT - DRYER

**⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

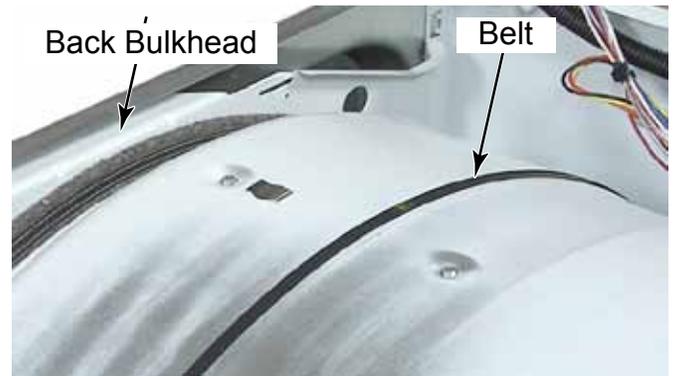
1. Remove the dryer front bulkhead (See page 4-23).
2. Reach in under the drum and lift the idler pulley to release tension on the belt.
3. Remove the belt from the motor pulley and then remove it from the idler pulley.



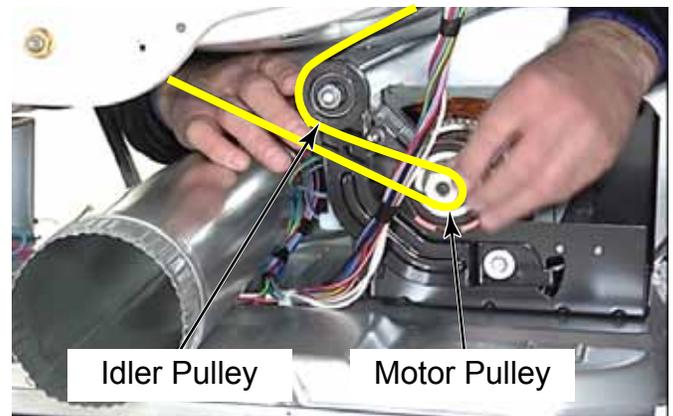
4. Remove the belt from the dryer.

**NOTE:** The belt is a multi-ribbed belt.

5. The belt can be reinstalled without removing the drum from the dryer. When reinstalling the belt, make sure the ribs of the belt are facing the drum.



6. Reach in under the drum and wrap the belt around the motor pulley. Lift the idler pulley and wrap the belt around the idler pulley wheel. Release the idler pulley to apply tension to the belt.



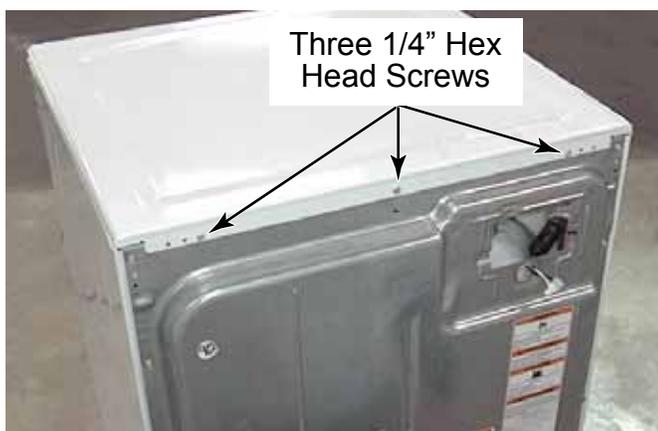
7. Turn the drum to align the belt travel.

## TOP PANEL - DRYER

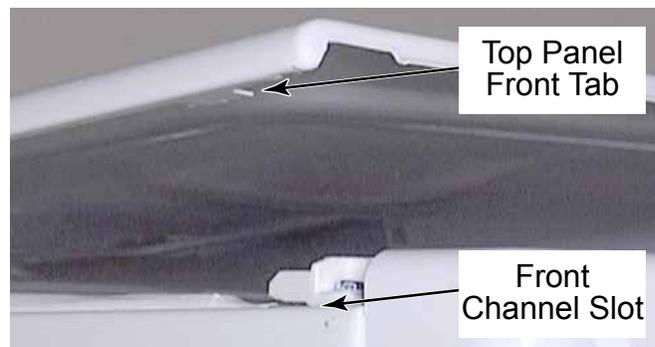
<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> Disconnect power before servicing. Replace all parts and panels before operating. Failure to do so can result in death or electrical shock.

1. Remove three 1/4" hex head screws from the back edge of the top panel.



2. Lift the back edge of the top. Slide it back slightly to unhook the tab from the slot in the channel at the front edge.



3. Remove the top from the dryer.



## BACK PANEL - DRYER

### **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove dryer top panel (See page 4-26).
2. Remove twelve 1/4" hex head screws securing the back panel to the back of dryer.



3. Grasp the top edge of the back panel and pull it away from the dryer.

4. Slide back panel off the exhaust duct that protrudes through a hole in the back panel.

5. Remove the back panel.



## CONSOLE BRACKET - DRYER

### **⚠ WARNING**



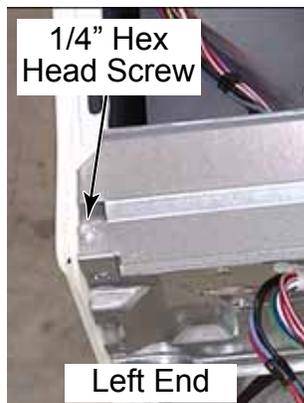
**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove the dryer front panel (See page 4-20).
2. Remove two 1/4" hex head screws from the left end of the console bracket.
3. Remove two 1/4" hex head screws from the right end of the console bracket.



4. Remove the dryer top panel (See page 4-26).
5. Remove the 1/4" hex head screw from the left end of the water channel bracket.

6. Remove the 1/4" hex head screw from the right end of the water channel bracket.



7. Lift and remove the water channel bracket.
8. Remove the 1/4" hex head screw securing the front end of the control bracket to the top edge of the console bracket.



9. Pull the console bracket forward and lift the brackets up and place them on top of dryer.



## DRUM - DRYER

<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> <b>Disconnect power before servicing.</b> <b>Replace all parts and panels before operating.</b> <b>Failure to do so can result in death or electrical shock.</b>

**NOTE:** To avoid damage to components in the cabinet, if the loosened belt was not previously removed, do not allow the belt to grab onto components in the base of the dryer.

**NOTE:** The front and back drum seals are made of a felt material. They are glued in place. Watch for pins or other user items, stuck in the felt, when removing the drum.

1. Remove the dryer front bulkhead (See page 4-23).
2. Remove dryer belt (See page 4-25).
3. Grasp the drum and pull it out of cabinet.



## BAFFLE REPLACE - DRYER

### **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

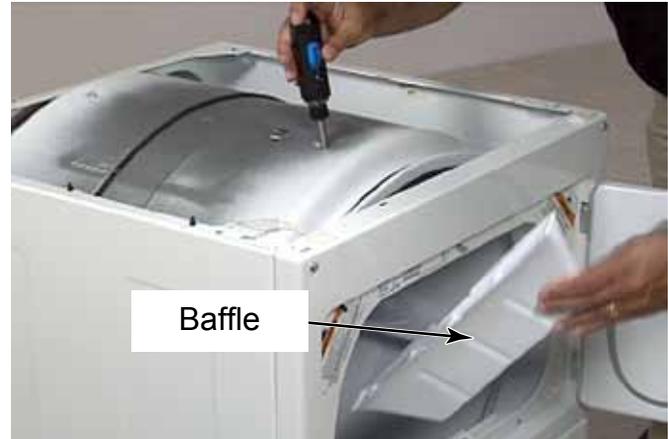
1. Remove dryer top (See page 4-26).
2. Remove two of the three 1/4" hex head screws securing the baffle to the drum.



**NOTE:** These screws have multiple thread depths that grab plastic securely to help avoid screws becoming loose from vibration.



3. Open dryer door and hold baffle with one hand while removing the third screw.



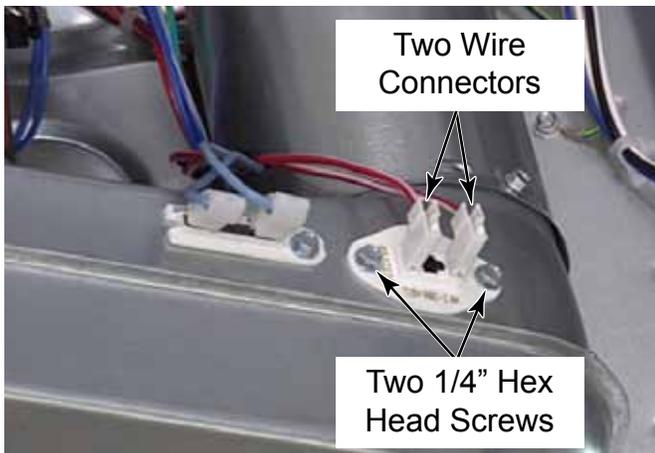
4. Remove baffle from dryer and replace if necessary.

## THERMISTOR - DRYER

<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> Disconnect power before servicing. Replace all parts and panels before operating. Failure to do so can result in death or electrical shock.

1. Remove the blower housing cover (See page 4-21).
2. Remove two wire connectors from the spade terminals.
3. Remove two 1/4" hex head screws and remove the thermistor.



**NOTE:** The resistor mounted in the thermistor changes resistance as heat changes. The electronic control can determine the operating temperature of the dryer based on the resistance being read from the thermistor.

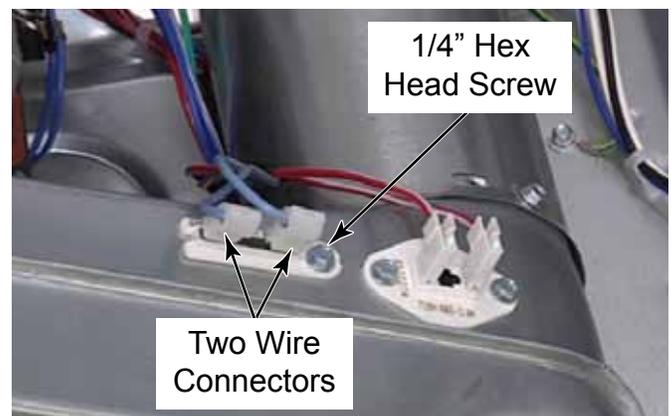
**TECH TIP:** This resistor has a plastic cone molded over it and the thermistor needs to be removed periodically to clean built up lint from this cone.

## THERMAL FUSE - DRYER

<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> Disconnect power before servicing. Replace all parts and panels before operating. Failure to do so can result in death or electrical shock.

1. Remove the blower housing cover (See page 4-21).
2. Remove two wire connectors from the spade terminals.
3. Remove the 1/4" hex head screw securing the thermal fuse to the blower housing.



4. Remove the thermal fuse.

**NOTE:** The thermal fuse is non-resettable. The rating is printed on the thermal fuse, 91 degrees Celsius. That is the temperature that the fuse will open, shutting down the operation of the heat components.

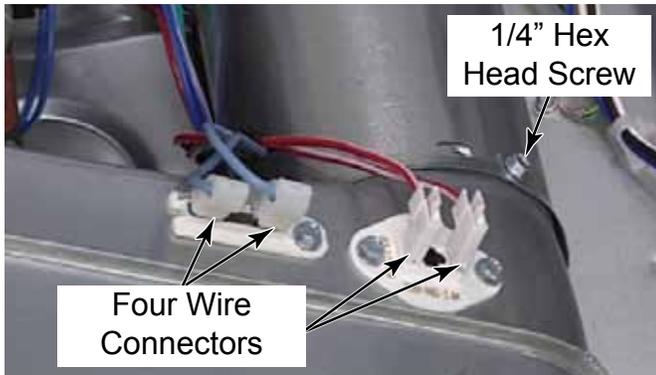
# BLOWER HOUSING

## **⚠ WARNING**

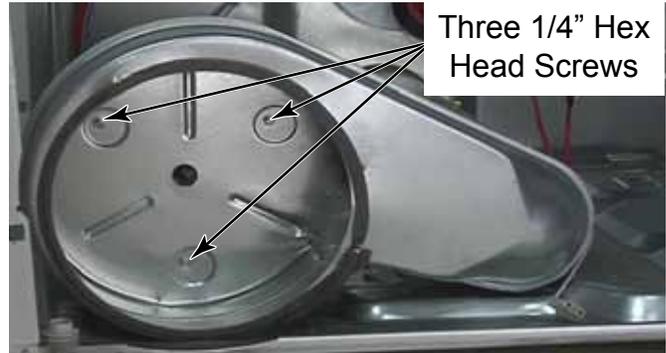


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove blower wheel (See page 4-22).
2. Remove wire connectors from thermistor and thermal fuse (See page 4-31).
3. Remove the short 1/4" hex head screw securing blower housing to exhaust duct.



4. Remove three 1/4" hex head screws from inside the blower housing securing it to the motor bracket.
5. Remove the blower housing



# IDLER PULLEY

## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove dryer drum (See page 4-29).
2. Remove the 10mm (3/8") hex head bolt securing idler arm to motor base bracket.

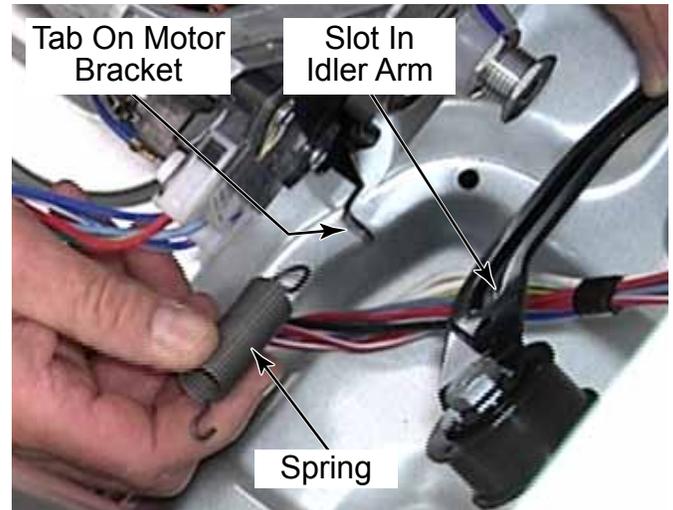


3. The mounting bolt has a shoulder and a permanent washer.

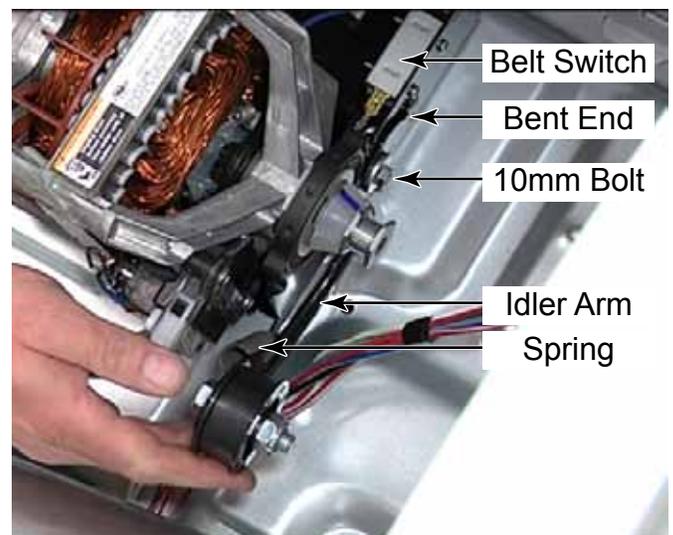


4. The spring attached to the idler arm may just fall off while removing the assembly.
5. Pull the idler arm away from the motor bracket and remove it.

6. The other end of the spring attaches to a tab on the base of the motor.
7. When reinstalling the idler pulley assembly, reattach the spring to the tab on the motor bracket and to the slot in the idler arm.



8. Place the bent end of the idler arm through the hole in the motor bracket. This is what actuates the belt switch if the belt breaks.
9. Reinstall the bolt to secure the idler arm to the motor bracket.
10. Test operation of idler pulley assembly by lifting it up to feel the tension of the spring and listen for the sound of the belt switch.



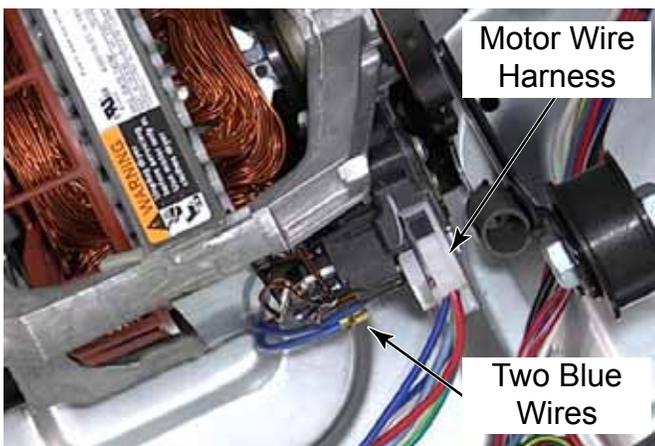
# MOTOR AND SPEED INCREASER - DRYER

## ⚠ WARNING



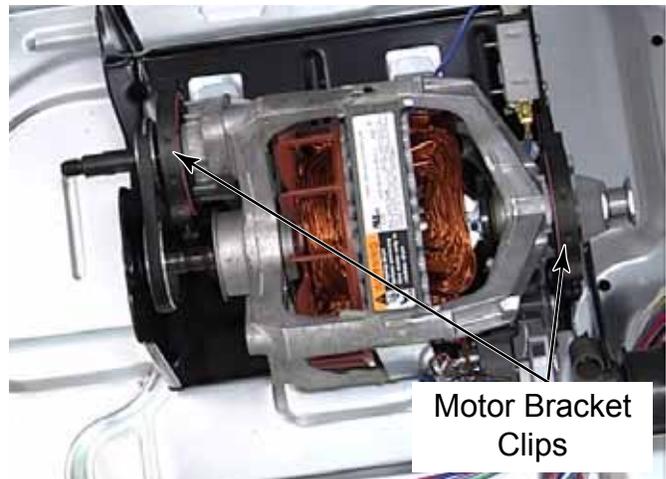
**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Remove dryer drum (See page 4-29).
2. Remove blower wheel (See page 4-22).
3. Remove the motor wire harness. Lift the locking tabs on the top and bottom with a flat blade screwdriver. Pull the plug off the motor connector.
4. Remove the two blue wires, with spade connectors, that go to the belt switch. The 1/4" spade terminal is connected to the motor overload. The 3/16" spade terminal is connected to terminal four of the motor centrifugal switch.

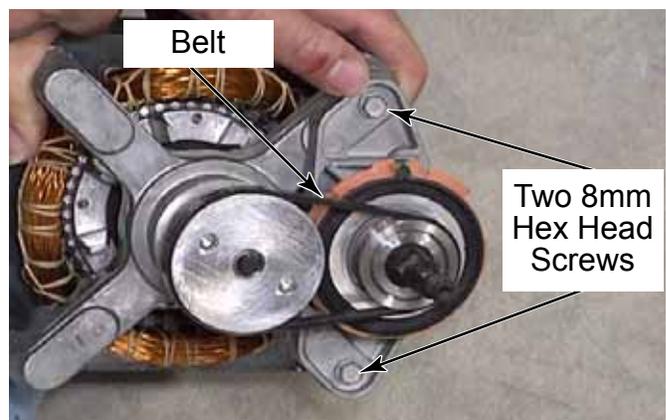


5. Remove the two motor clips. Place a 8mm (5/16") nut driver over the upward pointing end tip of the mounting clip. Press the tool handle down and toward the motor until the clip pops off the hook of the bracket.

6. Remove the back motor clip the same way.



7. Lift the motor out of the cabinet with the speed increaser attached.
8. To remove the speed increaser, remove the belt by rolling it off while pulling the belt away from the pulley.
9. Remove the two 8mm (5/16") hex head screws securing the speed increaser to the front of the motor.

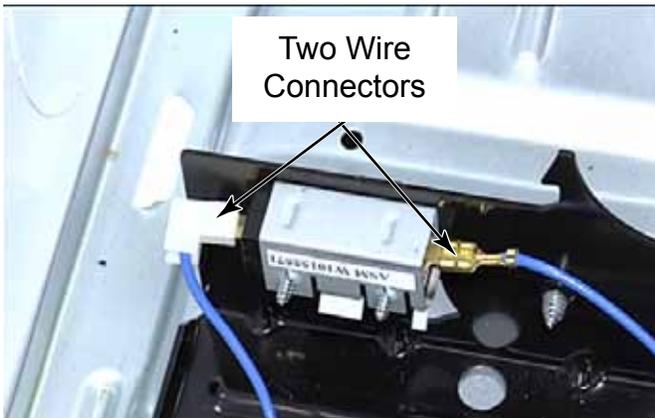


# BELT SWITCH

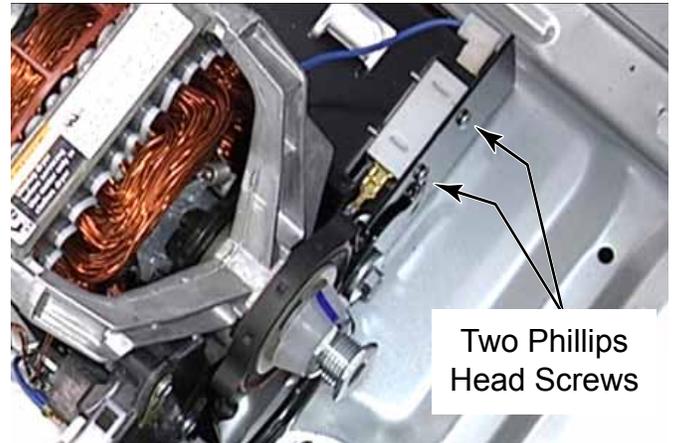
<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> <b>Disconnect power before servicing.</b> <b>Replace all parts and panels before operating.</b> <b>Failure to do so can result in death or electrical shock.</b>

1. Remove dryer drum (See page 4-29).
2. Remove the two blue wire spade connectors from the switch.



3. Remove two Phillips head screws from the back of the motor mounting bracket.



**NOTE:** The belt switch is normally open.

## MOTOR BRACKET - DRYER

### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Remove dryer motor (See page 4-34).
2. Remove two 8mm (5/16") hex head screws securing the bracket to base of the dryer.



3. Lift the bracket and pull to the right to remove the two tabs that pass through the dryer base.



4. Remove the bracket from the dryer.
5. To reduce excess vibration transferred from the motor bracket to the cabinet, there is an anti-vibration pad under the motor bracket.



## BACK SUPPORT ROLLERS & SHAFTS

### **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

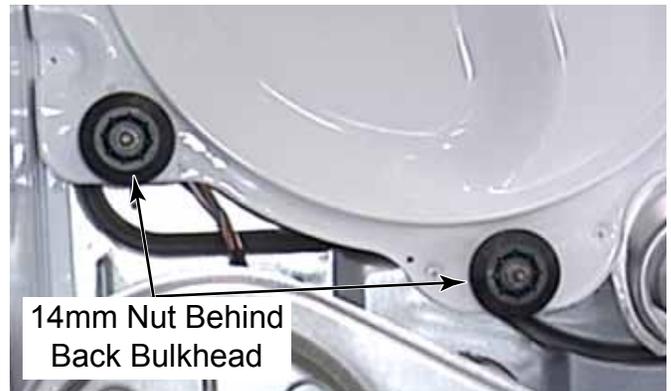
1. Remove dryer drum (See page 4-29).
2. Two back support rollers are mounted to the back bulkhead on shafts. Remove the tri-clip from the shaft.



3. Slide support roller off the shaft.
4. There is another tri-clip behind the roller for proper spacing. When replacing a roller, always replace both tri-clips to make sure roller will stay in position while running.

**NOTE:** Do not lubricate this wheel or shaft because lubrication attracts lint and dust which will cause premature wear of the support bearing. Clean shaft with fine steel wool to eliminate squeaks or replace worn roller supports.

5. Use an adjustable wrench between the back bulkhead and the back panel to remove the 14mm (9/16") nut on each shaft.



**NOTE:** To support the roller shaft while trying to remove the 14mm (9/16") nut, a Vice Grip needs to be used to hold the tip on the front of the roller shaft. Gripping the shaft will damage the bearing surface and cause noisy rollers and premature failure of support rollers.



## AUTO TRANSFORMER - GAS DRYERS

### **⚠ WARNING**

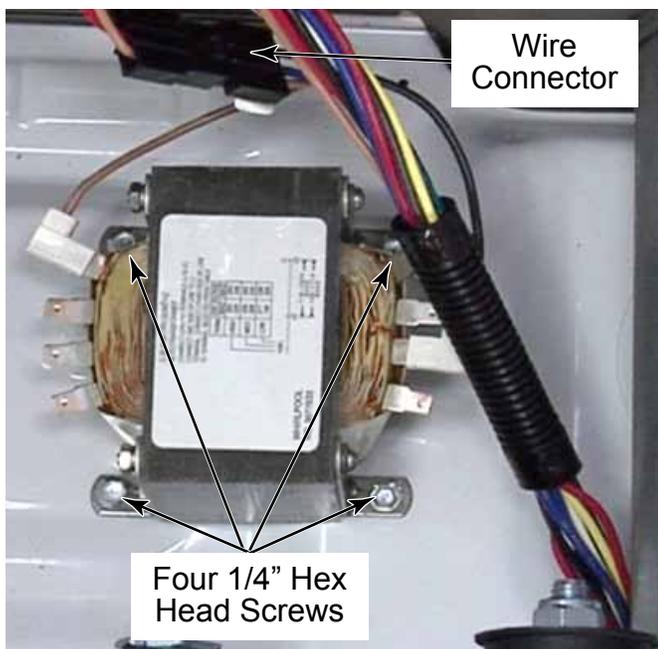


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

**NOTE:** These screws are short sheet metal screws with permanently attached serrated washers.



1. Remove the dryer drum (See page 4-29).
2. Lift the locking tab and disconnect the wire connector.
3. Remove four 1/4" hex head screws that secure the auto transformer to the base of the dryer.



## SIDE PANEL - DRYER (LEFT SIDE SHOWN)

### **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

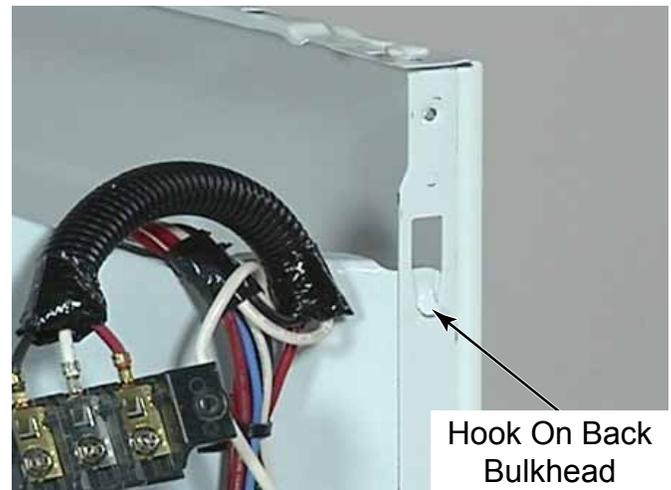
1. Remove dryer drum (See page 4-29).
2. Remove dryer back panel (See page 4-27).
3. Remove the 1/4" hex head screw in lower front left corner of dryer.



4. Remove two 1/4" hex head screws from lower back edge of side panel, one from the corner into the base and one above that into back bulkhead.

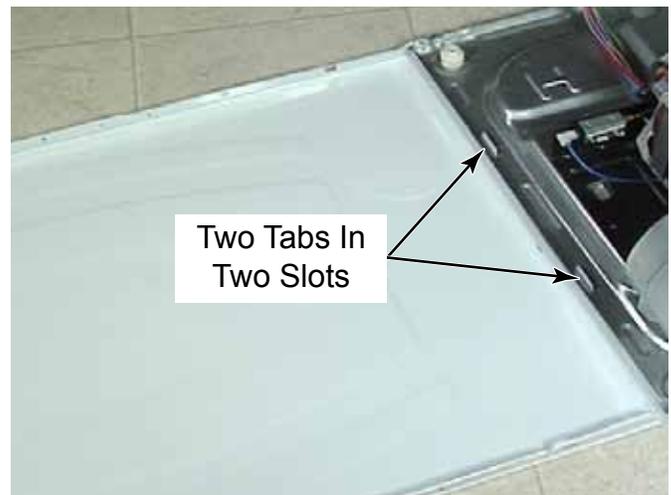


5. Support side panel and lift back bulkhead and move it forward to release hook from the back edge of the side panel.



6. Lay side panel down while continuing to support back bulkhead.

7. To completely remove side panel, lift base of dryer to release two tabs of the side panel from two slots in the base.



## BACK BULKHEAD

### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before  
operating.  
Failure to do so can result in death or  
electrical shock.

1. Remove dryer drum (See page 4-29).
2. Remove dryer side panels (See page 4-39).
3. Support back bulkhead when removing side panels.



4. Use a pair of pliers to squeeze two Christmas tree clips to release wire ties holding wiring harness to back bulkhead.

## HEAT PLENUM

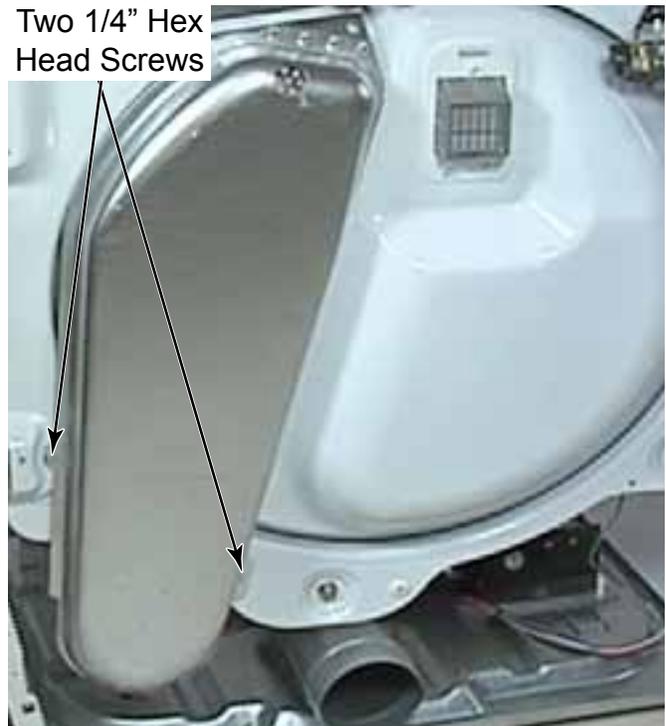
### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before  
operating.  
Failure to do so can result in death or  
electrical shock.

1. Remove dryer back panel (See page 4-27).
2. Remove two 1/4" hex head screws securing the heat plenum to back of the back bulkhead.

Two 1/4" Hex  
Head Screws



3. Tilt lower edge of heat plenum out, away from back bulkhead, to release the tab on the top of the heat duct from inside heat plenum. Pull heat plenum away from back bulkhead.

## RADIANT SENSOR

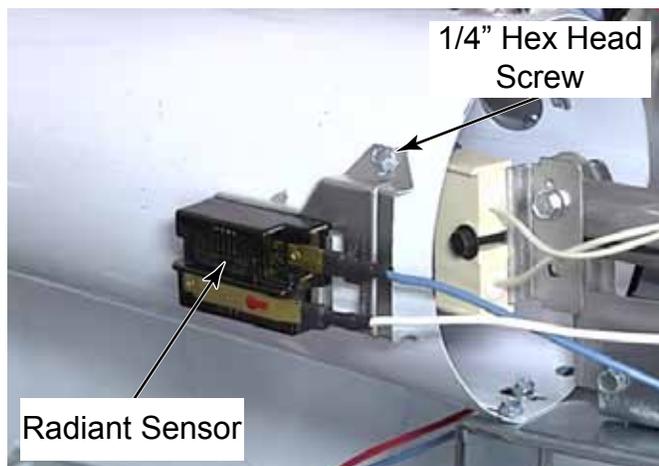
### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Remove the control panel bracket (See page 4-8).
2. Remove the two wire connectors from the spade terminals.

**NOTE:** The spade connectors are on tight and pulling hard on the wire or connector without care may pull the radiant sensor male terminal off the control and render the radiant sensor useless.



3. Remove the 1/4" hex head screw.
4. Rotate radiant sensor down to release the tab securing the other side.

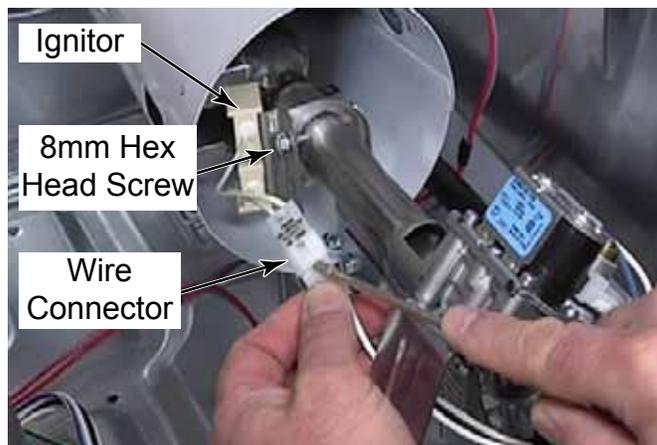
## IGNITOR

### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Remove the control panel bracket (See page 4-8).
2. Disconnect wire connector to ignitor.
3. Hold on to bracket and remove the 8mm (5/16") hex head screw to remove bracket and ignitor.



4. Remove ignitor from bracket by removing the 8mm (5/16") hex head screw.

**NOTE:** Do not touch the dark ignitor end, skin oil will make a hot spot on the ignitor causing it to fail prematurely.

**NOTE:** Take care not to bump or tap the ignitor. It is extremely brittle.

## BURNER HIGH LIMIT

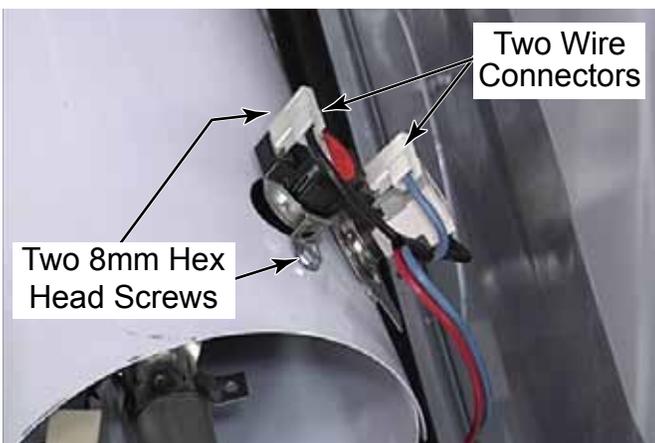
### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Remove the control panel bracket (See page 4-8).
2. Remove two wire connectors.
3. Remove two 8mm (5/16") hex head screws and remove burner high limit.

**NOTE:** The burner high limit and burner thermal limit should be ordered and replaced as a set. The burner high limit is resettable and cycles to keep the temperature from getting too hot in the burner.



## BURNER THERMAL LIMIT

### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Remove the control panel bracket (See page 4-8).
2. Remove the 1/4" hex head screw and lift to release the tab on the other side.
3. Remove the wire connector from the spade terminals.

**NOTE:** The burner thermal limit is not resettable, it will disable the heat if it trips.



**TECH TIP:** If the burner thermal limit is being replaced, the burner high limit should be replaced as well, since the burner high limit should have shut the heat off before the dryer reached the temperature at which the burner thermal limit would trip.

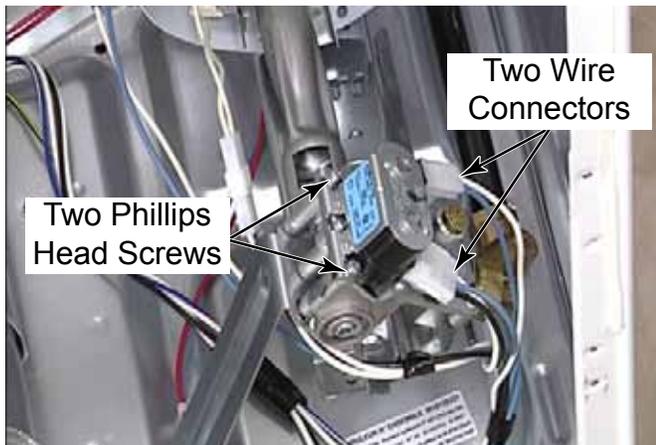
# GAS VALVE COILS

## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove the control panel bracket (See page 4-8).
2. Use a flat blade screwdriver to lift the locking tab and disconnect the wire connector from each coil.
3. Remove two Phillips head screws securing the bracket to the top of the coils.



4. Lift the bracket off the coils.

5. Lift the booster and holding coil, with three terminals, off the post.
6. Lift the secondary coil, with two terminals, off the post.



7. There is a locating pin on the top of each coil that fits into a hole in the bracket for proper orientation of each coil.



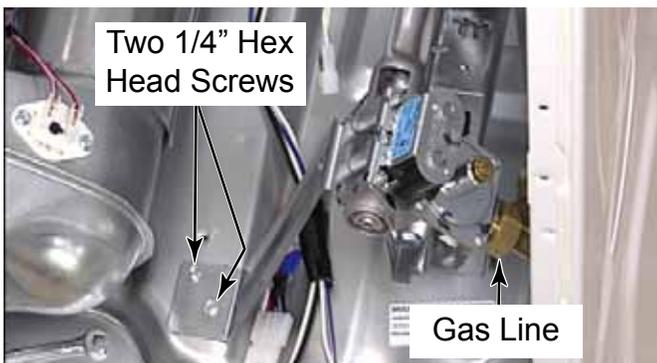
# GAS BURNER ASSEMBLY

## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove the control panel bracket (See page 4-8).
2. Use a flat blade screwdriver to lift the locking tab and disconnect the wire connector from each coil (See page 4-43).
3. Lift the locking tabs and disconnect the wire connector to the ignitor (See page 4-41).
4. Disconnect two spade wire connectors from the radiant sensor (See page 4-41).
5. Remove two 1/4" hex head screws securing the brace to the bottom of the dryer.

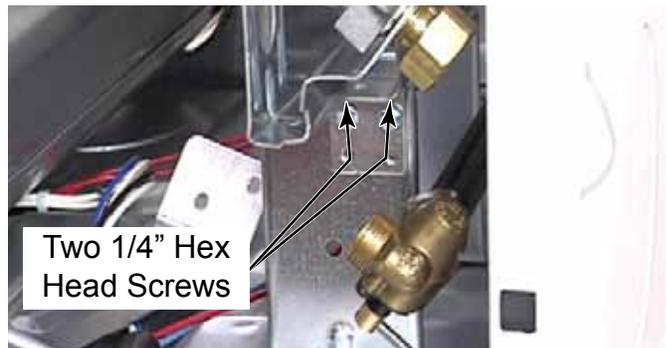


6. Remove the brace by twisting the top tab out from under the coils.
7. Turn off the gas valve by turning the shutoff valve, attached to the union, 1/4 turn counter clockwise.

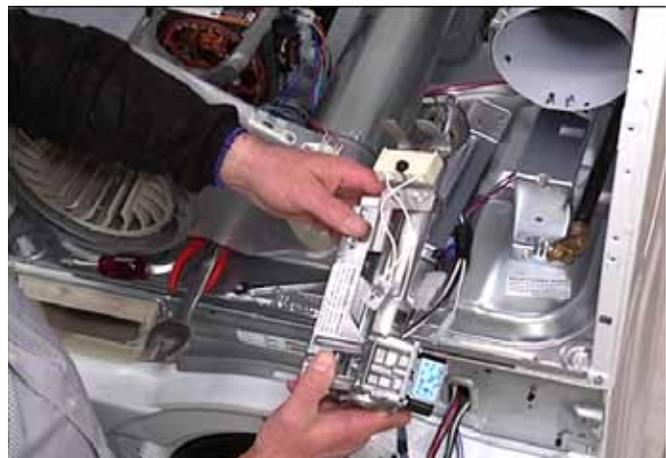
8. Use a 25mm (1") open end wrench on the gas line union to remove gas line from the valve.

**NOTE:** From the front of the dryer the wrench will need to be lifted up to loosen the nut, because it is reverse threaded.

9. Remove two 1/4" hex head screws under the bracket securing the gas valve bracket.



10. Slide gas burner assembly out of burner cone. Make sure not to bump the ignitor.



11. When reinstalling the gas burner assembly, make sure the tab is inserted into the slot in the top of the bracket.

**NOTE:** The gas burner assembly part number is on a sticker on the bottom of the assembly. Below the gas burner assembly is a wire connector with a blue circular object plugged in. This is an MOV, metal oxide varistor. This filter keeps electrical noise, caused by the gas valve coils, from interfering with operation of control board.

## GAS VALVE REMOVE FROM BRACKET

### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

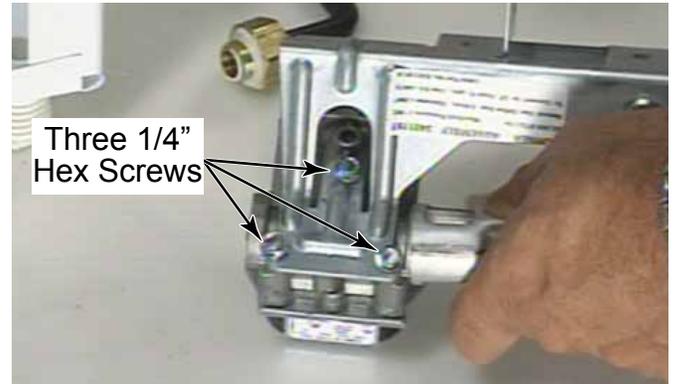
1. Remove the gas burner assembly (See page 4-45).
2. Insert a 10mm hex wrench into gas valve.



3. Turn the fitting counterclockwise to unscrew it from the gas valve.

**NOTE:** Use an appropriate sealant, rated for natural gas or LP depending on fuel type, during reassembly of this gas valve fitting.

4. Remove three 1/4" hex head screws from the bottom of the bracket to remove the gas valve body from the bracket.



5. The gas valve orifice is now accessible and can be removed with a 10mm wrench.

6. Do not use sealant on the threads of the orifice as it can block the gas flow and it is not needed.



**TECH TIP:** When replacing a gas valve assembly it is always prudent to remove the orifice from the original gas valve and install it on the new valve. This helps avoid having the wrong size orifice on the dryer after a gas valve replacement.

**NOTE:** All replacement gas valves for this dryer come set for natural gas use. When working on a dryer that uses LP gas, the valve will need to be reconfigured. See instructions with the LP kit.

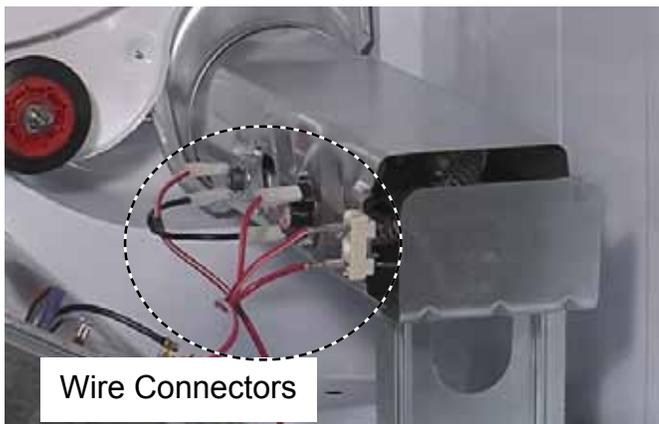
# HEATING ELEMENT

## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Remove the control panel bracket  
(See page 4-8).
2. Remove 6 wire connectors from burner high limit, burner thermal limit and heater coil.

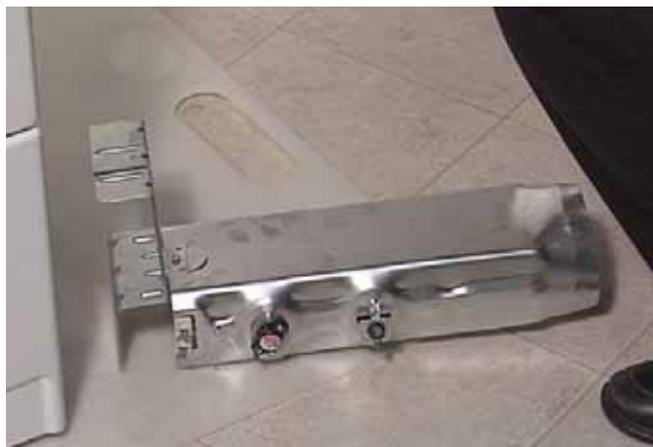


3. Remove the 1/4" hex head screw securing bracket to bottom of dryer.

4. Lift bracket and heater assembly to remove the bottom edge of the assembly and press down to release the tab from inside the heat plenum at the back of the dryer.



5. Remove assembly from the dryer.



# HEATER COIL

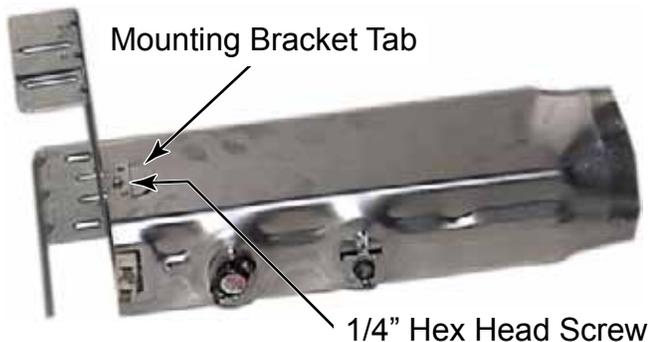
## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. If element is serviceable, remove electric heater assembly (See page 4-46).
2. Remove the 1/4" hex head screw from the bottom of the housing.
3. Slide mounting bracket tab out of slot in the housing and remove it.

**NOTE:** Most heater element assemblies have a serviceable electric coil element and others will be supplied as an assembly. If the element is serviceable: remove the 1/4" hex head screw from the side of the housing. Remove the heater coil from the housing using one pair of pliers to hold the housing and another pair of pliers to pull the heater coil up out of the housing.

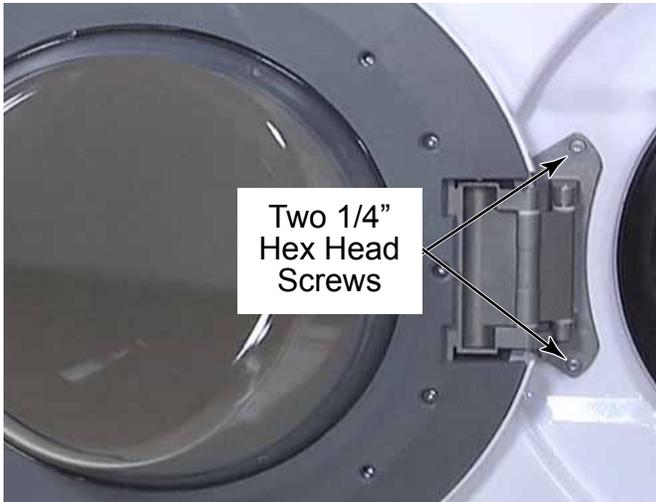


## DOOR AND HINGE ASSEMBLY - WASHER

1. Open the washer door.

**NOTE:** The door hinge swings completely open 180 degrees.

2. Remove two 1/4" hex head screws securing the washer door to the front panel.



3. Lift the door to release two clips from slots in the front panel and remove the door and hinge assembly.

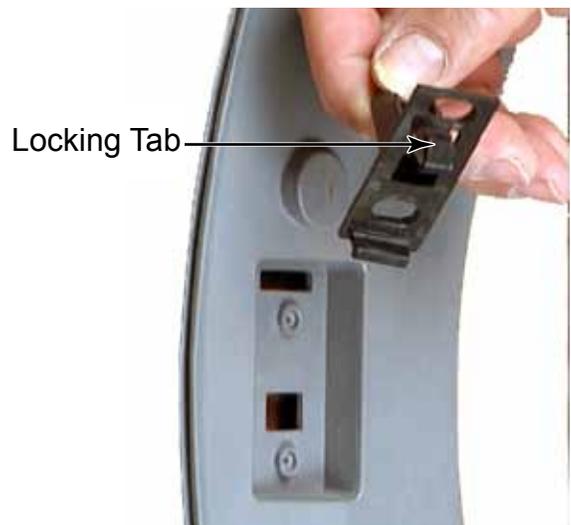


## DOOR HOOK - WASHER

1. Open the washer door.
2. Remove two T-20 screws securing the hook to the door.



3. Lift the locking tab and rotate the hook up and out of the slots in the door.



**REASSEMBLY NOTE:** The door hook should be able to move freely, back and forth, when properly installed. The screws have shoulders to help keep the hook from becoming too tight. Make sure these screws are used when reinstalling or replacing the door hook.

## DOOR PARTS AND DISASSEMBLY - WASHER

1. The door contains the outer lens, the outer trim, the door handle, the inner trim, the glass bowl, the hinge and the door hook.

**NOTE:** To avoid damage, lay a towel, or another covering, on a work surface and place removed hardware and tools on the covering.



2. To disassemble the door, remove eight T-20 screws from inside the door.
3. The 3 screws on the hinge side are not removed unless replacing the hinge.



4. Use a small flat blade screwdriver to release the clips around the edge of the outer door trim to start separating it from the inner door.

5. Finish removing the outer door trim by hand.

6. The door handle can now be removed from the slots that are used to locate it on the



outer trim.

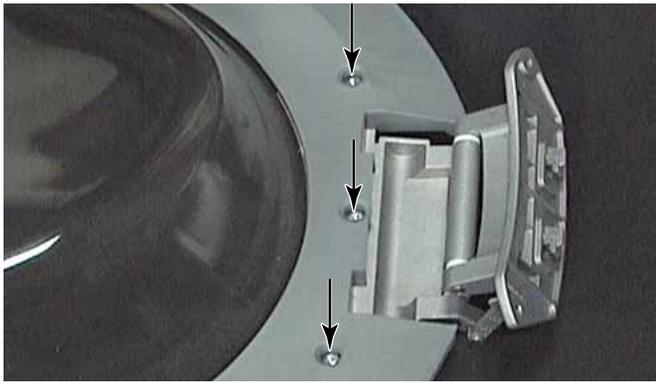
7. The outer door lens can then be lifted off the front of the door assembly.

**NOTE:** The lens and the outer trim can be removed together. The only reason to separate them is if one of the parts needs replacing; the lens, outer trim or door handle.



8. To remove the door hinge, remove three T-20 machine screws securing the hinge to the inner door panel. The hinge is also used to hold part of the inner door panel and must be removed to replace the bowl.

**NOTE:** The door hinge is secured with machine screws. The door halves are secured with screws for plastic. These screws must not be interchanged.



9. To remove the bowl, remove the hinge and remove three T-20 screws from each of the two brackets secured to the inner door panel. These screws also have threads for plastic but are shorter than the screws securing the door halves together.

11. When reassembling the bowl and inner door trim, position the notch on the rim of the bowl, at the bottom of the door, aligned with the 2 notches on the inner door panel.



10. Support the inner door trim to avoid having it drop when removing the bowl brackets.

12. There is no gasket or sealing material between the inner door panel and bowl. The bellow seats and seals against the glass of the bowl which should keep water from reaching this area. This is why the glass bowl needs to be cleaned periodically to avoid build up of hair and debris, which will cause water leakage through the door seal.

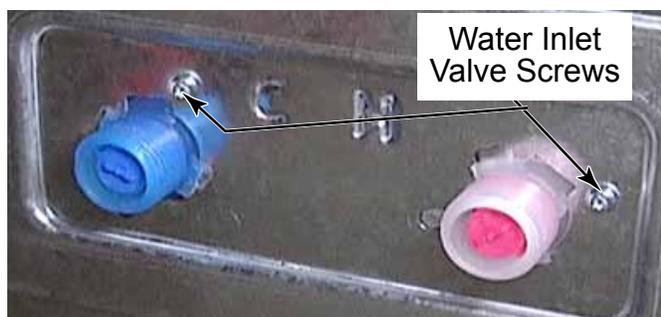
# WATER INLET VALVES

## ⚠️ WARNING

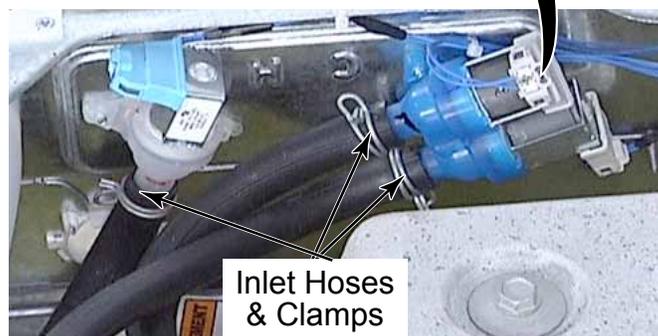
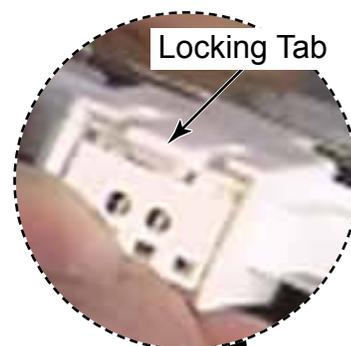


**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove the washer hoses from the hot and cold water inlet valves.
4. Remove dryer from stack (See page 4-11).
5. Remove the T-20 security screw securing the water inlet valve to the back of the washer.

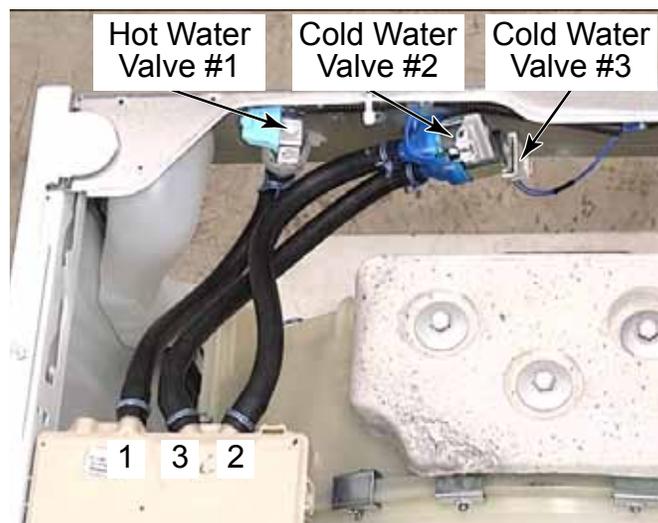


6. Reach inside the washer and twist the water inlet valve body to align the locking tabs with the cut-outs in the back panel.
7. Pull the valve out of the hole in the panel to gain access to the hose clamp and Rast connector.
8. Squeeze the clamp and move it down the hose. Pull the hose off the water inlet valve.



9. Lift the locking tab and disconnect the Rast connector.

**TECH TIP:** The hot water valve number 1 has the blue connector and connects to the left inlet of the chemical dispenser. The cold water valve number 3 on the bottom has the white connector and connects to the middle inlet of the chemical dispenser. The cold water valve number 2 on the top has the grey connector and connects to the right inlet of the chemical dispenser. These valves receive control signals from the CCU to manage the temperature and tub water levels for the incoming water.



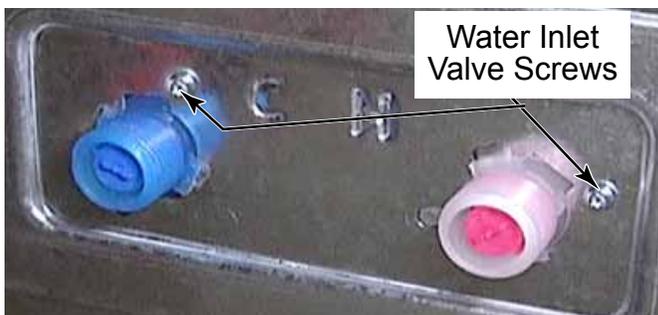
# WATER INLET VALVES - REMOVE FROM BACK WITHOUT REMOVING DRYER

## ⚠ WARNING



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove the washer hoses from the hot and cold water inlet valves.
4. Remove the back panel (See page 4-68).
5. Remove the T-20 security screw, on the back of the washer, securing the water inlet valve.



6. Reach inside the washer and twist the water inlet valve body to align the locking tabs with the cut-outs in the back panel.



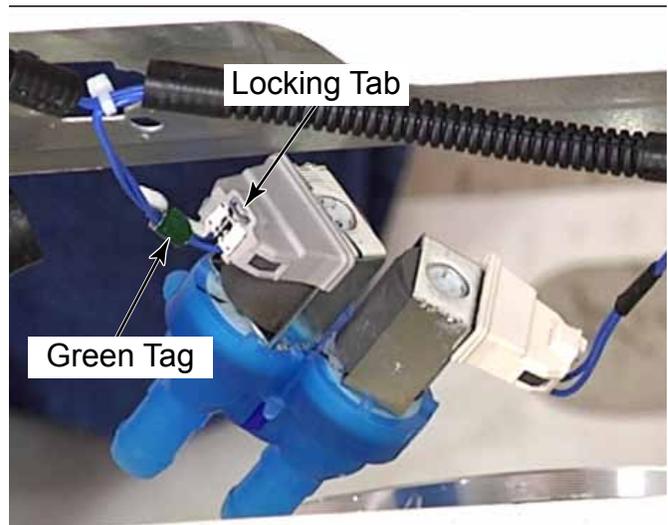
7. Pull the valve out of the hole in the panel and lower it to gain access to the hose clamps and Rast connectors.

**NOTE:** For proper reinstallation, make a mark on the hose that is connected to the port that has a green tag on the wire harness connector (See bottom photo).

8. Squeeze the clamps and move them down the hose. Pull hoses off water inlet valve.



9. Lift the locking tab and disconnect the rast connector from each of the two cold water inlet valves.



# RFI LINE FILTER

**⚠ WARNING**

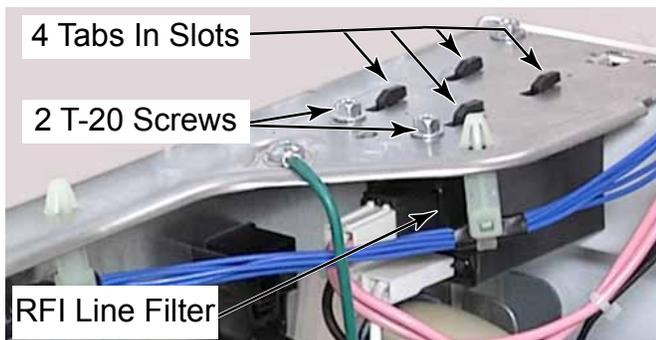


**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Unplug washer or disconnect power.

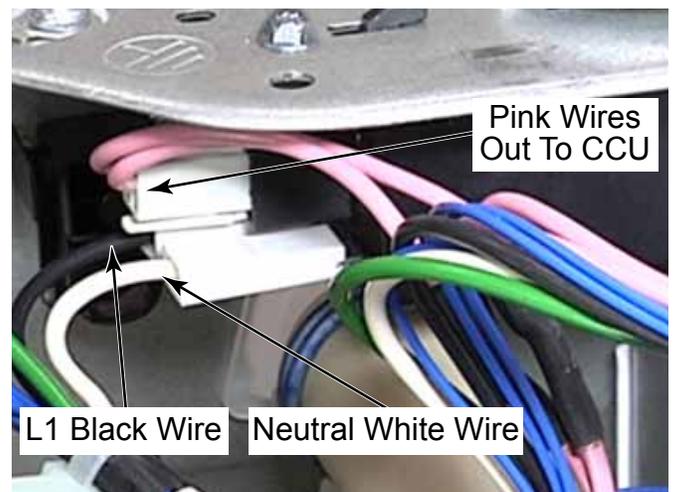


2. Remove two T-20 1/4" hex head screw from the top of the back right corner brace.



3. Slide the RFI line filter toward the water inlet valves to release the tabs in the slots and pull it down to remove it.

4. To disconnect the RFI Filter, pull the incoming power, L1, black wire, and neutral, white wire connectors off their spade terminals.
5. Press the locking tab and remove the connector for the pink wires that go to the CCU and the UIC transformer.



**NOTE:** Problems can occur with this washer if the AC Power is connected with reverse polarity. When properly installed the neutral, white wire connector, should be toward the front of the washer as viewed from the RFI filters installed orientation.

**TECH TIP:** To test for proper polarity, power must be reconnected to the washer. Test between the neutral wire connector and any chassis earth connection with a volt meter. If the polarity is correct, there should be no voltage present. Disconnect the washer from power before proceeding.

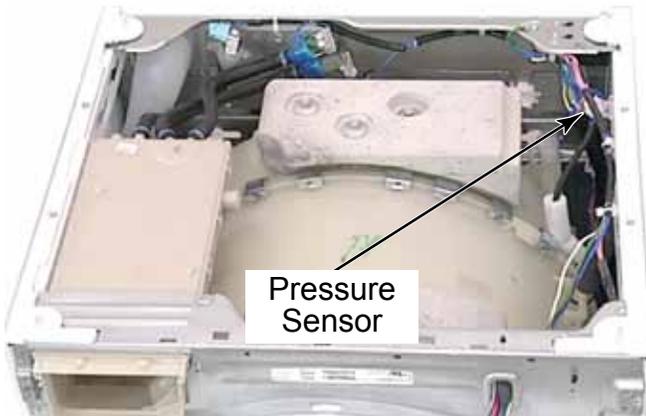
# PRESSURE SENSOR

## ⚠ WARNING

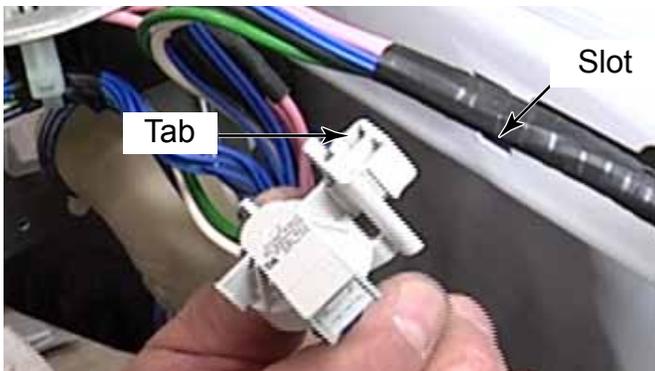


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Remove the back panel (See page 4-68) or Remove dryer from stack (See page 4-11).

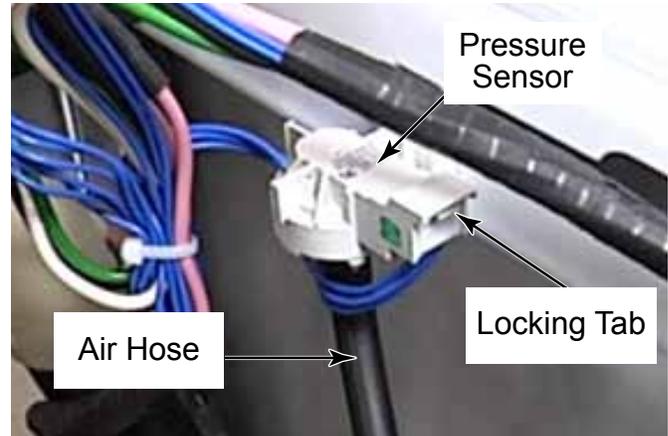


3. Rotate the pressure sensor 90 degrees counter clockwise.
4. Pull the rectangular tab out of the slot in the top of the washer side panel.



5. Disconnect the air hose on the bottom of the pressure sensor. There is no clamp, gently twist the hose while pulling it off the pressure sensor.

**NOTE:** This hose should be snug to avoid air leaks.



6. Press the locking tabs and disconnect the Rast connector from the pressure sensor.
7. Remove the pressure sensor from the washer.

**NOTE:** The air hose, connected to the bottom of the pressure sensor, goes down the right side of the washer and connects to the tub-to-pump hose, attached to the bottom of the outer tub.

# CHEMICAL DISPENSER ASSEMBLY

## **⚠ WARNING**



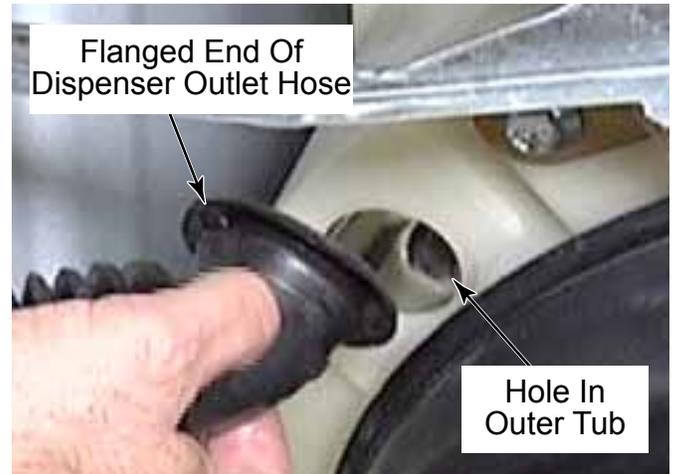
**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove dryer from stack (See page 4-11).
4. Use a small flat blade screwdriver in the spring at the bottom edge of the bellow. Pull to expand the spring and remove the retaining wire from the groove securing the bellow to the washer front panel.



5. Peel the bellow off the edge of the front panel and push it into the cabinet opening in the upper left corner.

6. Reach in behind the front panel and squeeze the tub dispenser outlet hose. Pull the flange out of the hole in the outer tub.



7. Remove three T-20 screws from the washer front support bracket securing the top and front of the chemical dispenser.

**NOTE:** These screws have higher, wider spaced threads that are made for holding tightly to plastic. The head shape on these three screws is also different, a round flat top, for easy identification.



8. Remove the hoses coming from the water inlet valves. Squeeze each clamp and move it down the hose. Pull each hose off the back of the chemical dispenser.

**NOTE:** Make sure the hoses are reinstalled on the same connectors as they are removed from. The left hose goes to the hot water valve number 1. The middle hose goes to the lower cold water valve number 3. The hose on the right goes to the upper cold water valve number 2.



Hot Water Valve 1      Lower Cold Valve 3      Upper Cold Valve 2

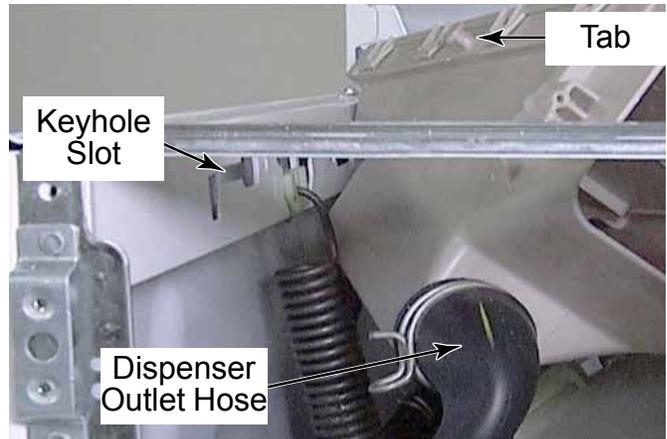
9. There is a flow restrictor in the end of each hose. Remove it for cleaning, if necessary, by pulling it out of the end of the hose.



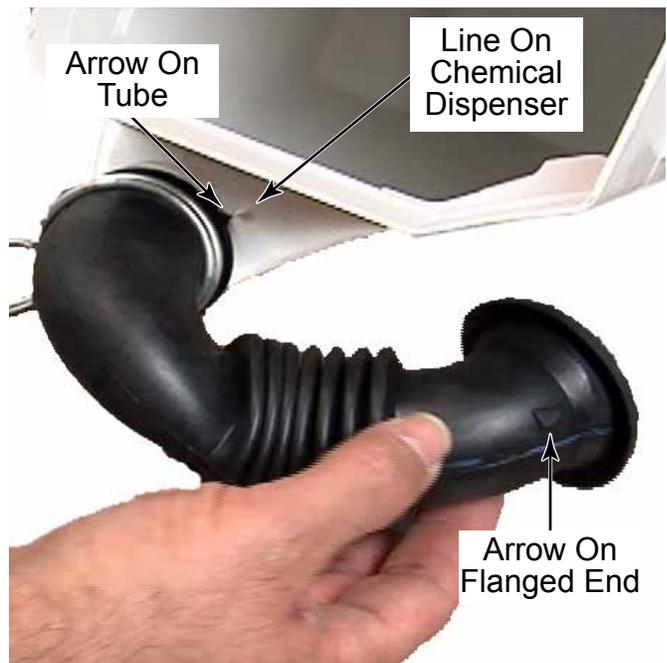
Flow Restrictor

10. Reinstall a restrictor, if removed, before reconnecting a hose.

11. Slide the chemical dispenser toward the back of the washer to release the tabs securing it to the left side panel and remove the chemical dispenser.



**NOTE:** There are alignment marks on the hose and dispenser as well as on the outer tub to assist with proper alignment of the dispenser outlet hose during reinstallation.



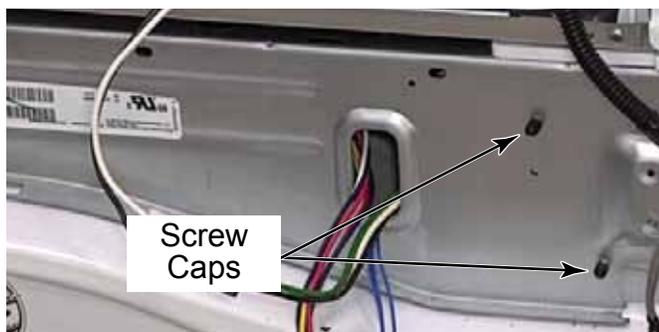
# UIC TRANSFORMER

## **⚠ WARNING**

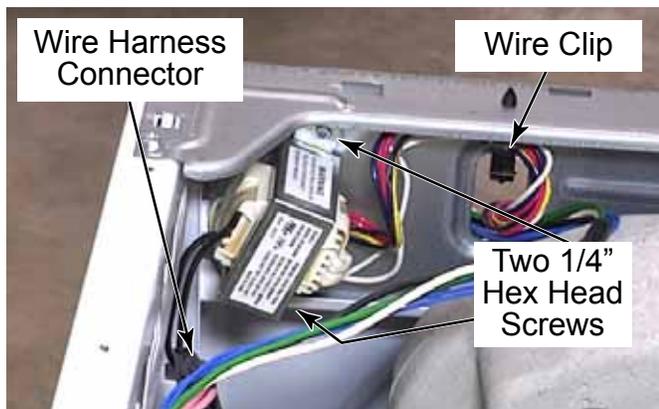


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

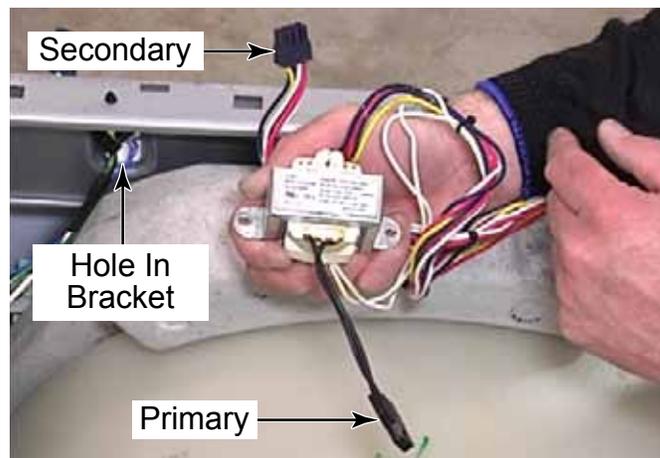
1. Unplug washer or disconnect power.
2. Remove the washer front panel (See page 4-58).
3. Remove the screw caps that are factory installed on transformer screw tips that point out the front of the washer front support bracket. Reinstall the screw caps when the transformer is remounted and secured.



4. Lift the locking tabs and disconnect the wire harness connector.



5. Remove two 1/4" T-20 hex head screws securing the transformer to the inside right end of the washer front support bracket.
6. Release the wire clip securing the transformer wiring behind the bracket.
7. Pull wires out through hole in the bracket.



**NOTE:** 230 volts comes into the transformer primary. Power coming out of the secondary is divided into the various power outputs needed to run different circuits in the washer. The two white wires will have approximately 20 volts. The two red wires will have about 26 volts. Blue to yellow wires will have about 4.5 volts.

# FRONT PANEL - WASHER

**⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

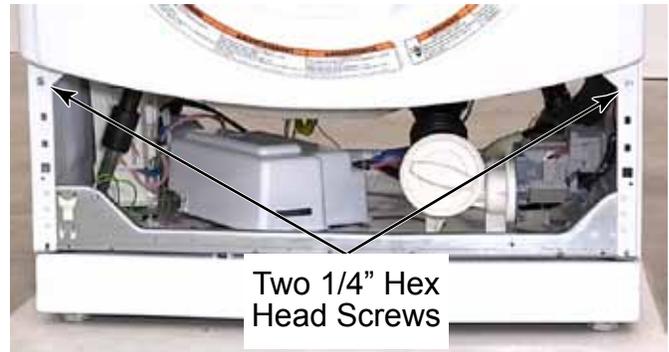
1. Unplug washer or disconnect power.
2. Remove the control panel.  
(See page 4-3).
3. Remove the toe panel (See page 4-61).
4. Remove two T-20 screws securing the door lock assembly to the front panel.



5. Remove the spring loaded retainer that holds the bellow to the washer front.



6. Push the bellow into the cabinet opening.
7. Remove two 1/4" hex head screws, that were hidden by the washer toe panel, securing the bottom of the front panel to the washer side panels.



8. Support the front panel when removing the top screws.
9. Remove two 1/4" hex head screws, that were hidden by the control panel cover, securing the top of the front panel to the washer side panels.



10. Remove the front panel from the washer.



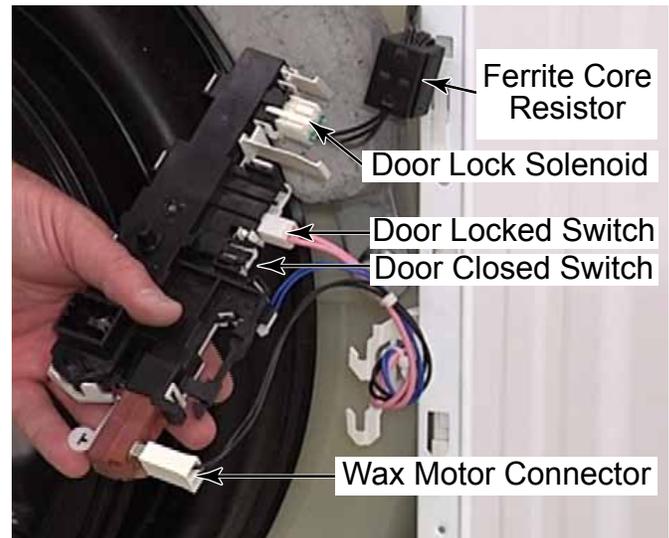
## DOOR LOCK / SWITCH ASSEMBLY - WASHER

### **⚠ WARNING**

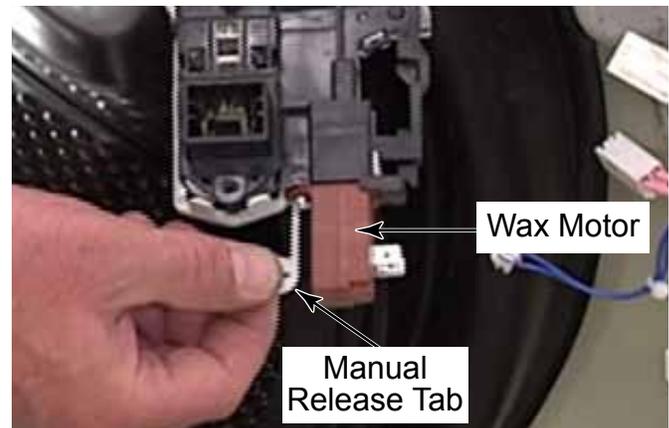


**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

1. Unplug washer or disconnect power.
2. Open the washer door.
3. Remove the front panel of the washer (See page 4-58).
4. The door lock solenoid at the top of the assembly has a ferrite core resistor on the wire to reduce electrical line noise.
5. Disconnect the bottom wire connector from the wax motor, also called the thermal safety.
6. Disconnect the door locked switch
7. Lift the locking tab and disconnect the door closed switch rast connector.
8. Disconnect the door lock solenoid at the top of the door lock assembly and remove it.



**TECH TIP:** In case of a power failure, the latch should unlock automatically after 2 minutes, but if not, the door can be opened manually by removing the washer toe panel and reaching up to pull down on the manual release tab at the bottom of the door lock assembly. A reason for the lock not self-opening after 2 minutes would be if the power interruption occurred prior to 2 minutes of cycle time, which would not allow enough time for the wax motor to energize and extend completely.



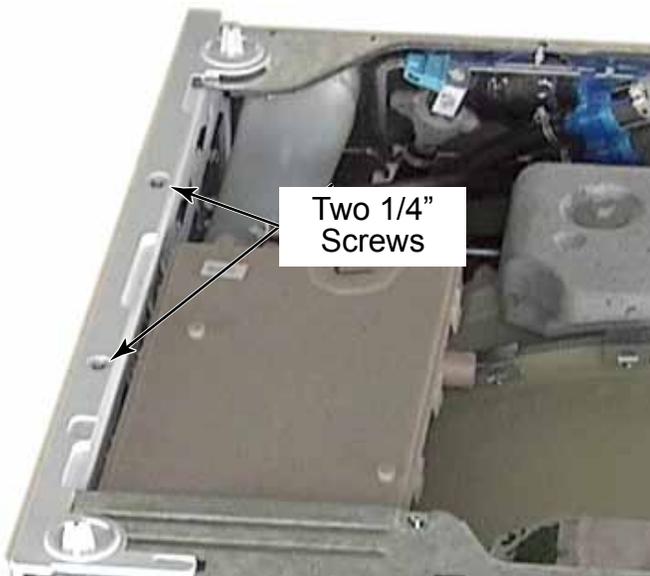
## FRONT SUPPORT BRACKET - WASHER

### **⚠ WARNING**



**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before  
operating.  
Failure to do so can result in death or  
electrical shock.

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove dryer from stack (See page 4-11).
4. Remove the UIC transformer (See page 4-57).
5. Remove the two 1/4" hex head screws securing the plastic strips with locator pegs on the top edge of each side panel.



6. Remove three T-20 screws from the washer front support bracket securing the top and front of the chemical dispenser.



7. Remove two 1/4" hex head screws from the top edge of the left and right ends securing the front support bracket to the side panels.



8. Lift the bracket and remove it from the washer.

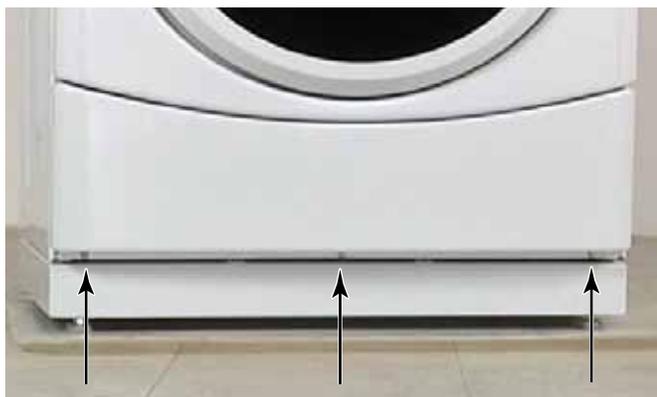
## TOE PANEL

### **⚠ WARNING**



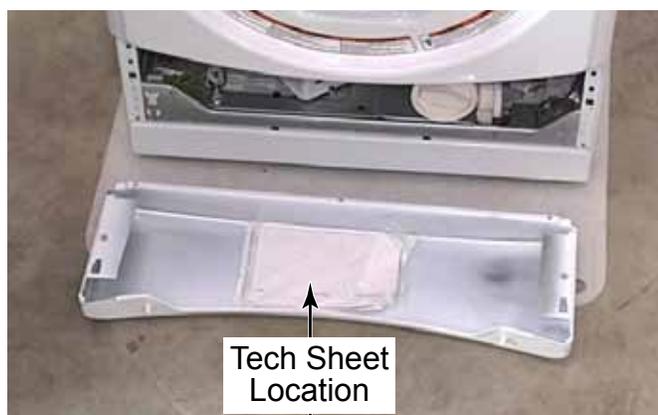
**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Remove three 1/4" hex head screws, at the bottom of the toe panel, securing the panel to the front of the washer.

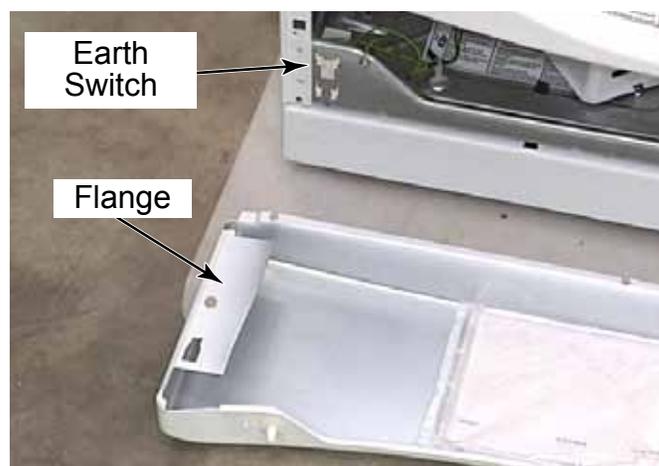


3. Slide toe panel down and out to remove it.

4. The tech sheet and parts list is in a plastic cover on back side of lower service panel.

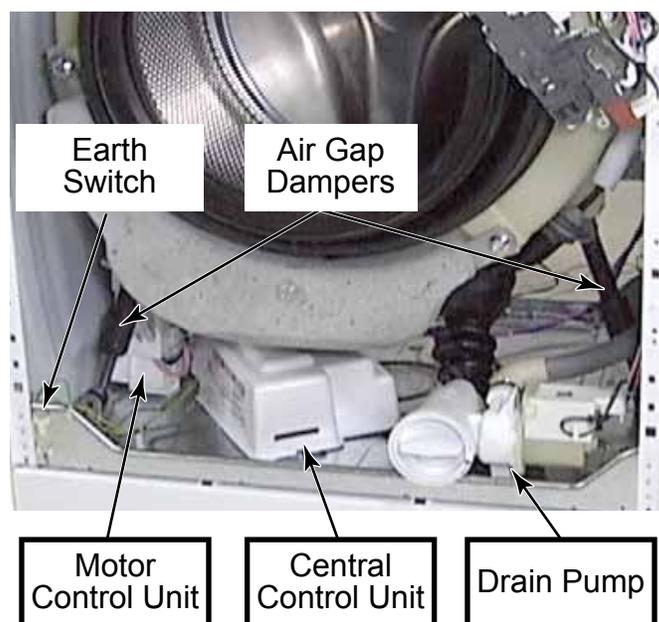


5. The flange, on the inside left end of the toe panel, presses against the earth switch in the lower left corner of the washer cabinet. Make sure to not bend the flange or the switch will not be pressed and the washer will not work.



6. Components located behind toe panel are:

- Earth switch
- Air gap dampers
- Motor control unit
- Central control unit
- Drain pump



# CENTRAL CONTROL UNIT (CCU) - WASHER

## ⚠ WARNING



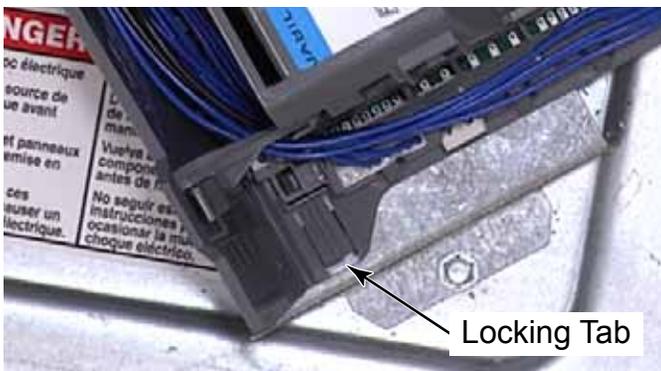
**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Remove the toe panel (See page 4-61).
3. Remove the drip cover by lifting it off the CCU. There are metal tabs on the bracket that fit into slots at front and back of cover.



Tab Slots

4. Use a small flat blade screwdriver to lift the locking tab securing CCU to the washer.



Locking Tab

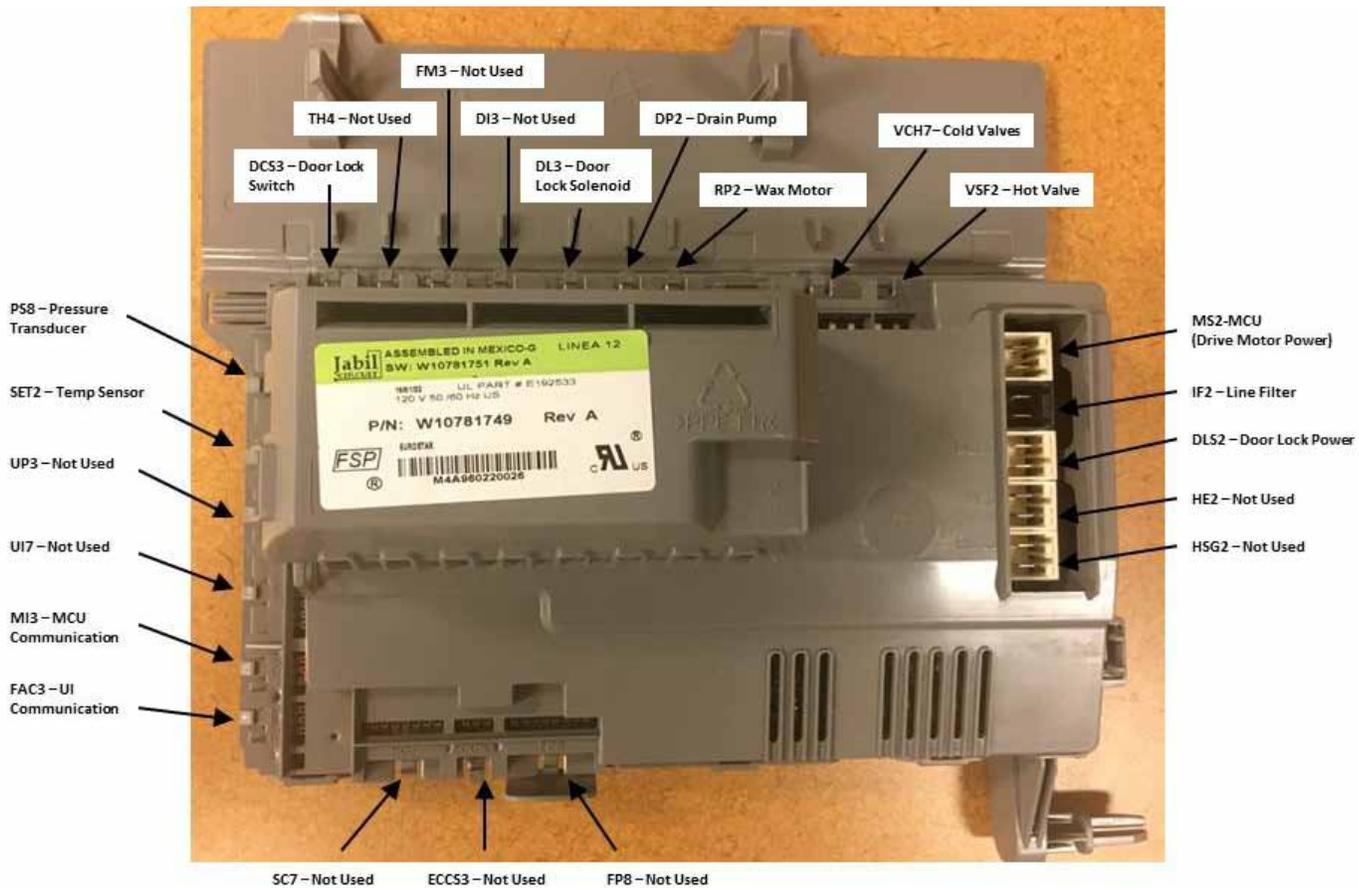
5. Slide the CCU towards the front of the washer to release tabs from keyhole slots in the bracket, in the base of the washer, and remove it.
6. Release two clips securing the side access cover and open the cover to gain access to the wire connectors.



Two Access Cover Clips

7. It is advisable to take a picture of the wire connectors, before disconnecting them, for proper reinstallation.
8. Disconnect the wires from the CCU by pressing the locking tab down and pulling the Rast connector out.
9. There are colored marks on the rast connectors that correspond to the colors on the CCU for each connector. Rast connectors are also keyed to help in proper reinstallation.
10. Continue disconnecting until all Rast connectors have been removed from the CCU.
11. Disconnect three more wire connectors on the top of the CCU by pressing the locking tab and pulling the connector out.
12. Slide the CCU forward to release the tabs from the mounting bracket. Remove the CCU.

# CCU CONNECTIONS - WASHER



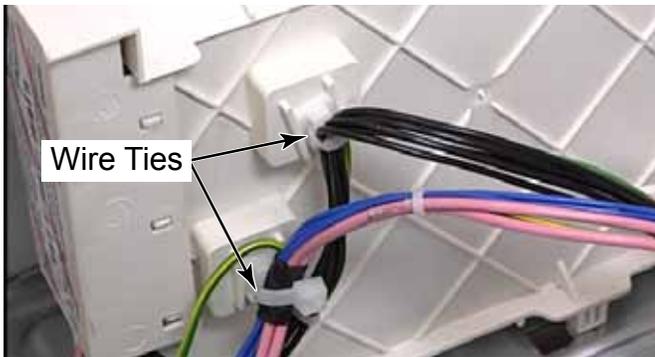
# MOTOR CONTROL UNIT (MCU)

## **⚠ WARNING**

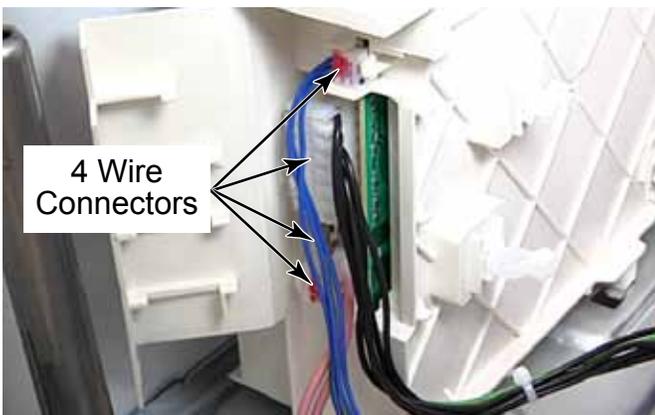


**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before operating.  
Failure to do so can result in death or electrical shock.

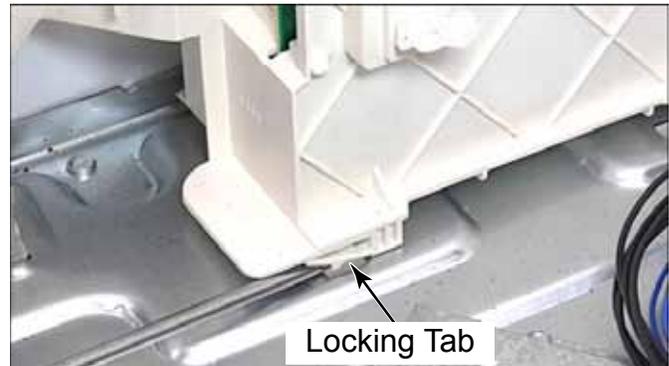
1. Unplug washer or disconnect power.
2. Remove the toe panel (See page 4-61)
3. Cut the wire ties on the side of the MCU. Make sure not to cut the plastic base clip the wire tie secures to. Remove the base clips and install them on replacement MCU.



4. Open the door of the MCU and disconnect the four wire connectors from the MCU.



5. Use a flat blade screwdriver to lift the locking tab securing the MCU to the base of the washer.



6. Slide the MCU forward to release the tabs from the keyhole slots in base of washer.
7. Remove the MCU from the washer.

**NOTE:** New wire ties will be provided with a replacement MCU but not new base clips. It is necessary to replace all cut, broken or damaged wire ties.

# DRAIN PUMP

## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove the toe panel (See page 4-61).
4. Place a towel or shallow pan below the pump to catch any water that may be left in the system.

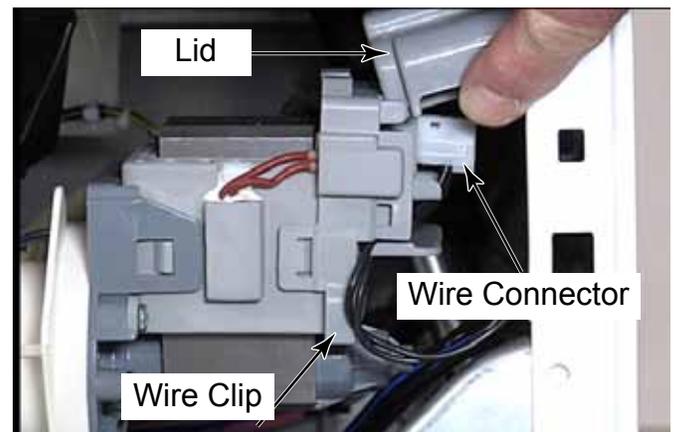


5. **TECH TIP:** If water is seen in the washer, there may be too much to catch all at one time. Loosen the filter, but do not remove it. Secure the filter when water reaches a depth that is easy to carry. Dump the collected water and return the pan to catch the remaining water.
6. The pump has a clean out filter that allows for removal of large objects that may have passed from the spin basket.

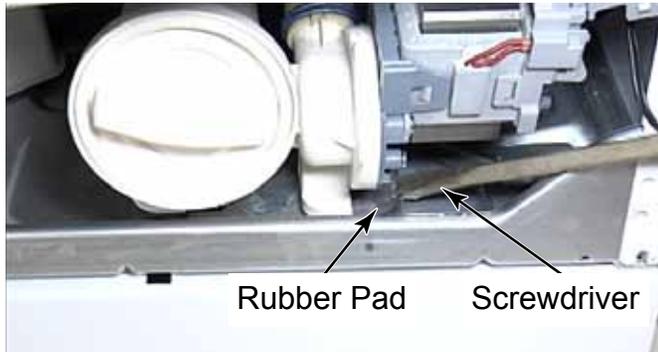
7. Unscrew the pump filter and pull it out of the pump. If necessary, use a pair of pliers to loosen it.



8. Move the wires down to release them from the clip on the front of the pump motor.
9. Flip open the lid on the right end of the pump motor to access the wire connector.
10. Press the locking tab and disconnect the wire connector from the pump motor.



11. Use a large flat blade screwdriver to lift the right edge of the rubber pad, on right pump support, out of the hole in the washer base.



12. Slide the pump to the right and lift it from the base of the washer.

13. Squeeze the clamp, behind the clean out filter, and move it down the hose.

14. Pull the tub-to-pump hose off the pump.



15. Pull the pump out of the washer as far as it will go.

16. Squeeze the clamp and pull the drain hose off the pump.



17. The two screws securing the rubber mounting piece to the bottom of the pump support do not need to be removed to remove the pump assembly.



18. The pump is one service part all together.

19. The filter has a large keyed shape on the top and a smaller shape on the bottom, which fit into corresponding sized shapes in the filter housing, to avoid improper filter orientation when it is reinstalled.



## DRAIN HOSE AND FITTING

### **⚠ WARNING**



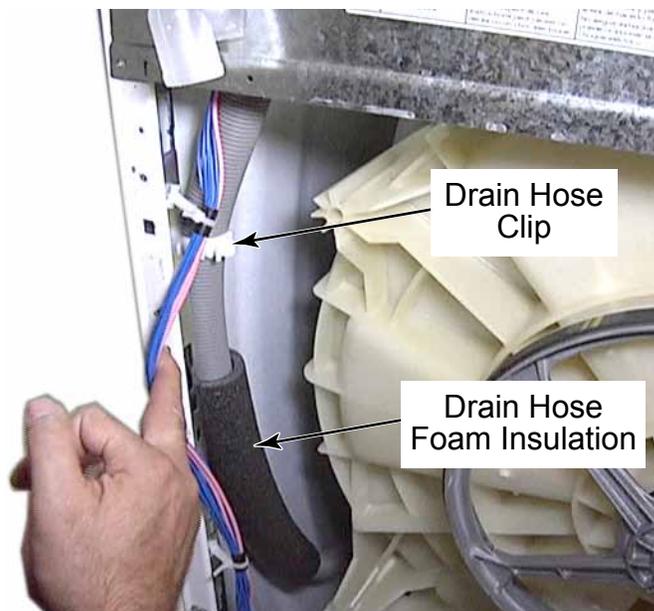
**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove dryer from stack (See page 4-11) or remove the two brackets from the back panel securing the dryer to the washer, tilt the dryer forward from the back, block the dryer up and remove the back panel.
4. Disconnect the drain hoses from both sides of the fitting in the top back panel.
5. Press the clip, on the top of the fitting, down and into washer from the back. The bottom edge of the fitting has a channel that fits over the metal edge of the mounting hole.



6. Remove the fitting from inside the washer.

7. There is some foam insulation, on the drain hose inside the washer, to avoid damage from wear due to movement against the side panel of the washer.
8. There is a clip that holds the drain hose at the back corner of the washer.



**NOTE:** Each washer comes from the factory with a “U” Bend fixture to be used on the drain hose end that fits into the stand pipe or over the sink edge. The “U” Bend needs to be fitted to the drain hose at the very end with no more than 5cm (2”) of the end of the drain hose extending past the end of the “U” Bend. Secure excess drain hose to plumbing or another structure to avoid having the drain hose rubbing or bouncing on other surfaces, which could cause wear of the drain hose and leaks.

**TECH TIP:** Do not insert excess drain hose into a stand pipe. This will cause siphoning of water out of the washer and down the drain during the fill process, which can result in a F20 code.

## BACK PANEL - WASHER

### **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.

**NOTE:** there are two cutouts on each side of the back panel where the 1/4" hex head screws do not need to be removed to remove the back panel.

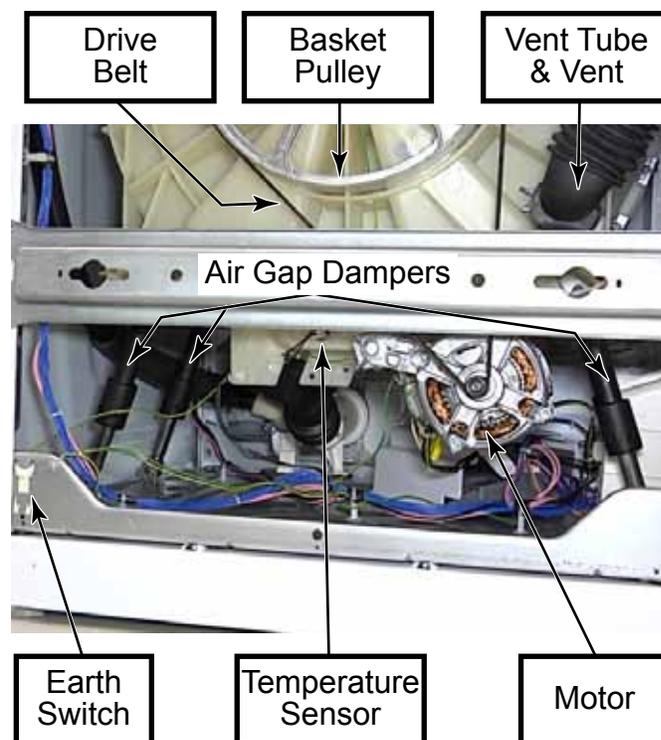
3. Remove 13 1/4" hex head screws securing the back panel to the washer. The screw in the center hole is shorter than the rest of the screws.



4. Pull the bottom edge out and slide the panel down from behind the lip at the top edge to remove the panel.

5. Components located behind the back panel of the washer are:

- Drive belt
- Basket pulley
- Vent tube and vent
- Temperature sensor
- Motor
- Air gap dampers
- Earth switch

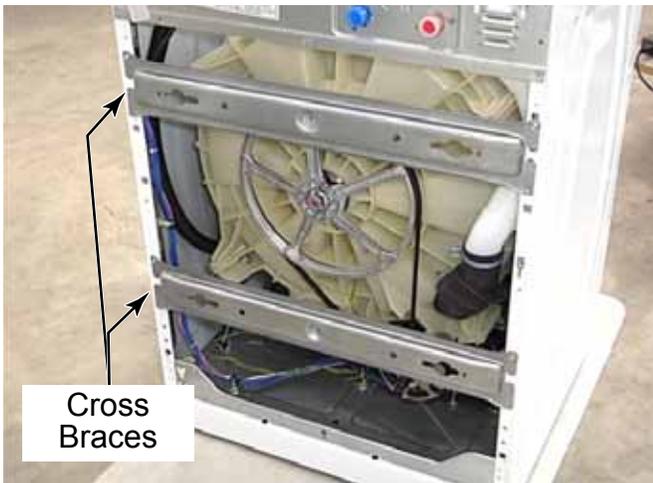


## CROSS BRACES

<b>⚠ WARNING</b>

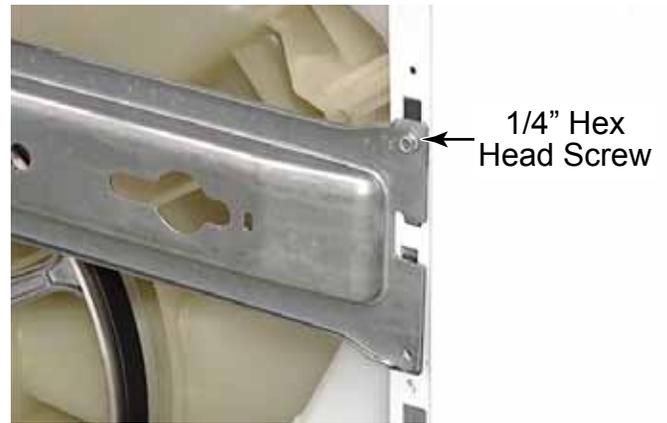
<b>Electrical Shock Hazard</b> <b>Disconnect power before servicing.</b> <b>Replace all parts and panels before operating.</b> <b>Failure to do so can result in death or electrical shock.</b>

1. Unplug washer or disconnect power.
2. Remove the back panel (See page 4-68).
3. There are two cross braces that do not need to be removed when removing the back panel.



4. It is recommended to remove these cross braces for ease of service when removing components from the back of the washer.

5. Remove two 1/4" hex head screws securing the top cross brace to the back edge of the side panels.



6. Repeat the same procedure to remove the bottom cross brace.
7. Lift and remove each cross brace.

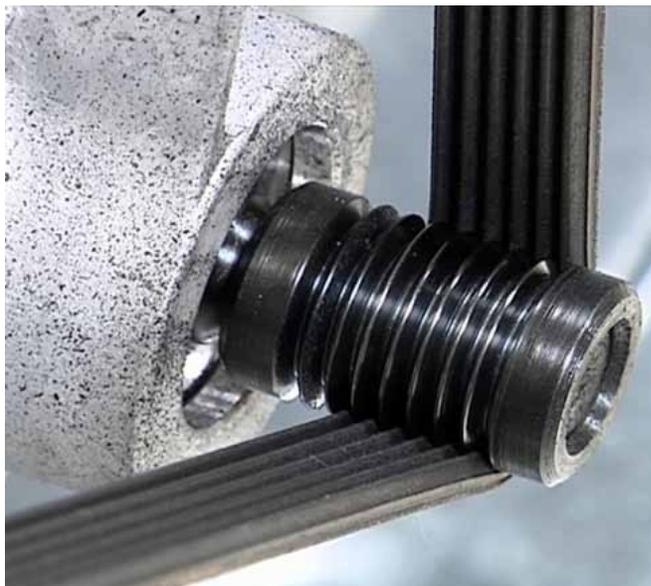


**NOTE:** With the dryer mounted to the top of the washer it is not recommended that a washer cross brace be removed. When the dryer is removed from the stack, if one or both braces are removed for any purpose, do not move or lean on the washer because the side panels will be damaged.

## DRIVE BELT

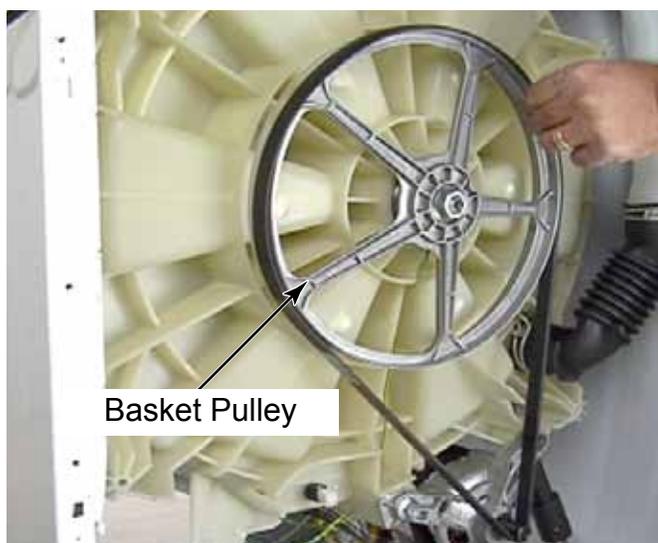
<b>⚠ WARNING</b>

<b>Electrical Shock Hazard</b> <b>Disconnect power before servicing.</b> <b>Replace all parts and panels before operating.</b> <b>Failure to do so can result in death or electrical shock.</b>



1. Unplug washer or disconnect power.
2. Remove the back panel (See page 4-68).
3. Turn the basket pulley with one hand and guide belt off basket pulley with the other.

- The drive belt is a ribbed, fiber reinforced belt.
- The grooves of the belt should ride in the grooves of the motor pulley starting at the end furthest away from the motor.
- When reinstalling the belt, wrap the belt around the bottom side of the motor pulley, up through the slot cut out in the outer tub, and roll the belt on around the basket pulley.



**NOTE:** Both back braces have been removed for visual clarity, they do not need to be removed to service the belt. It is not recommended to remove both washer back braces while the dryer is still in place above the washer. Damage to the washer cabinet or instability of the Stack Washer/Dryer may occur if both washer back braces are removed.

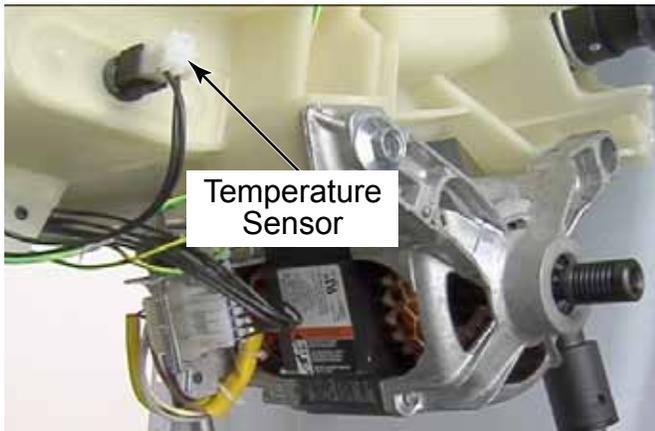
# TEMPERATURE SENSOR

## **⚠ WARNING**

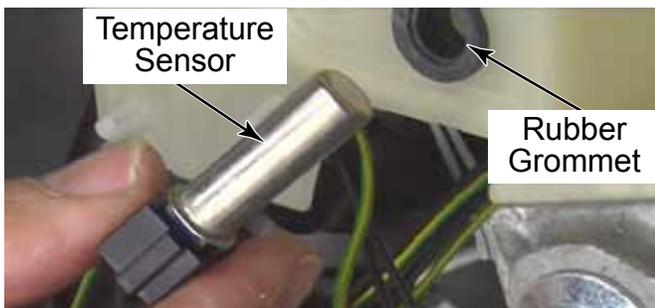


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove the back panel (See page 4-68).



4. Press the locking tab and remove the wire connector from the sensor.
5. Grasp the temperature sensor firmly and pull using a twisting motion until the temperature sensor comes out.



6. When reinstalling the temperature sensor, push it into the grommet using a twisting motion until it is fully seated.
7. Remove and replace the grommet only if necessary.
8. When installing a grommet, the flanges of the grommet must seal inside and outside of the hole in the tub. It is easier to reinstall the grommet when separated from the sensor.
9. It may help to wet the temperature sensor when reinstalling it since it is a tight fit in the rubber grommet.

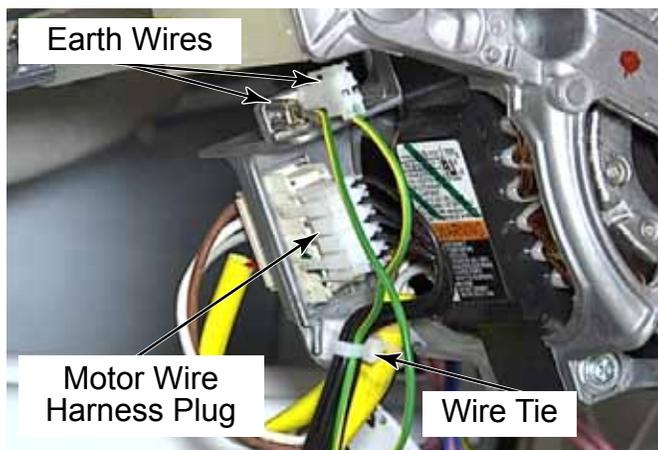
# MOTOR

## **⚠ WARNING**

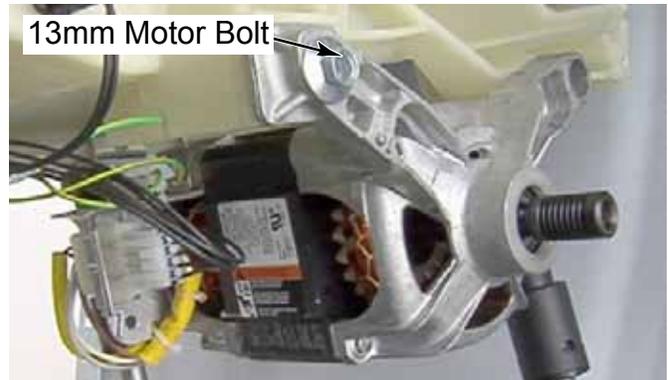


**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

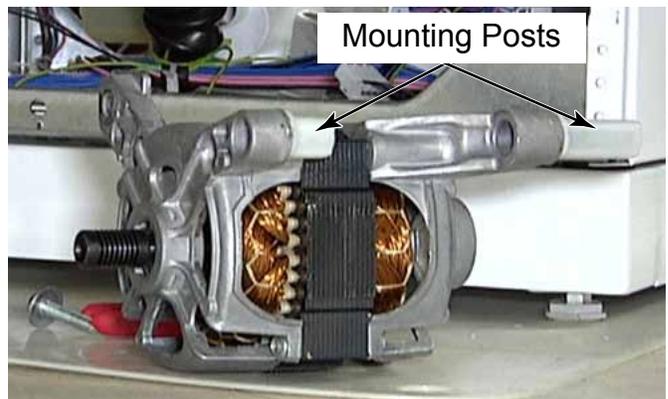
1. Unplug washer or disconnect power.
2. Remove the drive belt (See page 4-70).
3. Press the locking tab and pull one earth wire connector off the spade.
4. Disconnect the other earth wire from the motor by pulling it off the spade connector.
5. Cut the wire tie securing the motor wire harness and earth wires.
6. Press the locking tabs and disconnect the motor wire harness plug.



7. Remove the 13mm (1/2") bolt securing the motor to the outer tub.



8. Rotate the motor down and slide the mounting posts out of the holes of the tub by rocking the motor up and down while pulling it away from the washer.



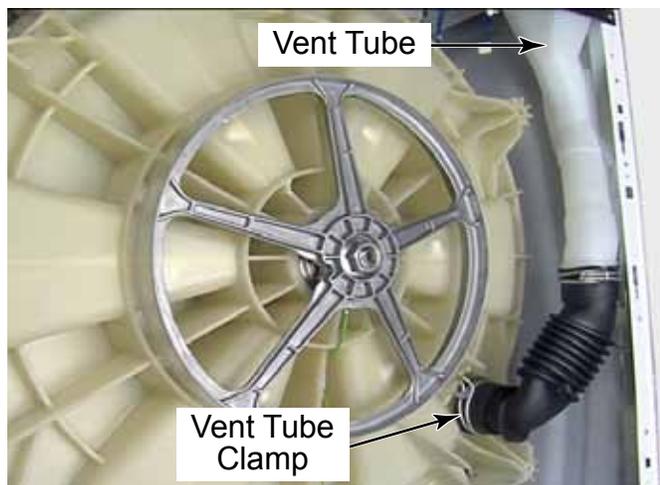
## VENT TUBE

### **⚠ WARNING**



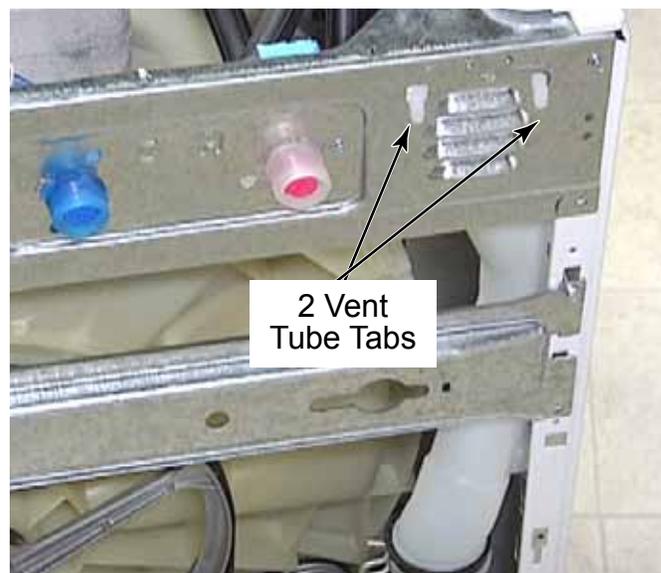
**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Remove the back panel (See page 4-68).
3. Squeeze the clamps on the vent tube elbow and move them toward the middle of the elbow.



4. Twist the ends of the elbow and pull them off to remove it from the washer.

5. To remove the vent tube from the washer, reach inside from the back of the washer and lift the vent tube to release 2 tabs from slots in the top back brace.



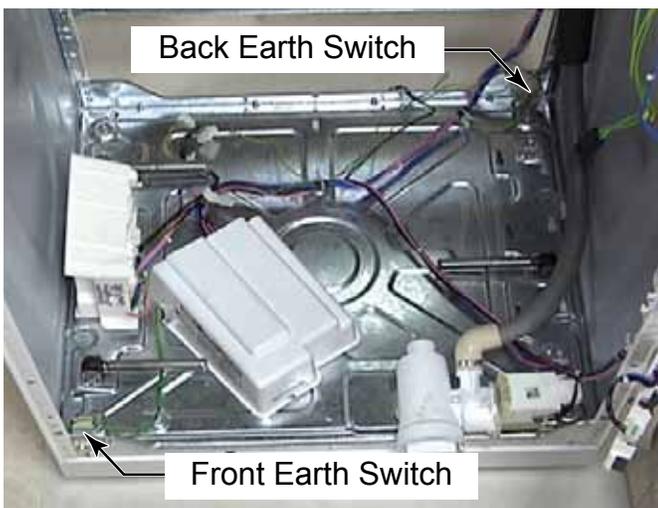
# EARTH SWITCH

## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

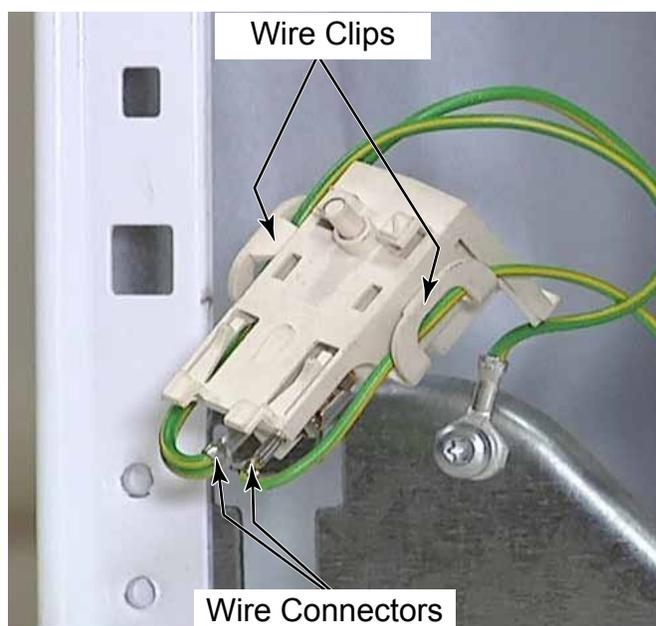
1. Unplug washer or disconnect power.
2. Remove the toe panel (See page 4-61)  
or  
Remove the back panel (See page 4-68).



3. Use a flat blade screwdriver to press in on the 2 locking tabs in the bottom slots to release the switch.



4. Slide the switch up and pull it out of the slots to remove it.
5. Release the 2 wires from the clips on each side of the earth switch and pull the connectors off the spade terminals.



# AIR GAP DAMPER

## ⚠ WARNING



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove the toe panel (See page 4-61) or  
Remove the back panel (See page 4-68).
4. Use a small flat blade screwdriver to lift one of the locking tabs. Turn the fitting of the damper slightly to hold that locking tab unlocked.
5. Reach around to the other side and release the other locking tab.
6. Turn the upper half of the damper body 90 degrees and pull the tab out of the slot in the tub.



7. The damper is attached to the base in the same way, with 2 locking tabs.



8. To separate the two halves of an air gap damper, Disconnect either the bottom or the top of the air gap damper from the washer. Slide the two halves of the air gap damper apart to separate them.

**NOTE:** In the base there is a moulded stop that will keep the damper from rotating in the wrong direction.

**TECH TIP:** When removing the left back air gap damper, use a hammer and a punch to level the raised tab toward the back, on the base of the washer.



**TECH TIP:** When removing the tub, the air gap dampers simply separate when the tub assembly is pulled up out of the washer.

## BELLOW

### **⚠ WARNING**

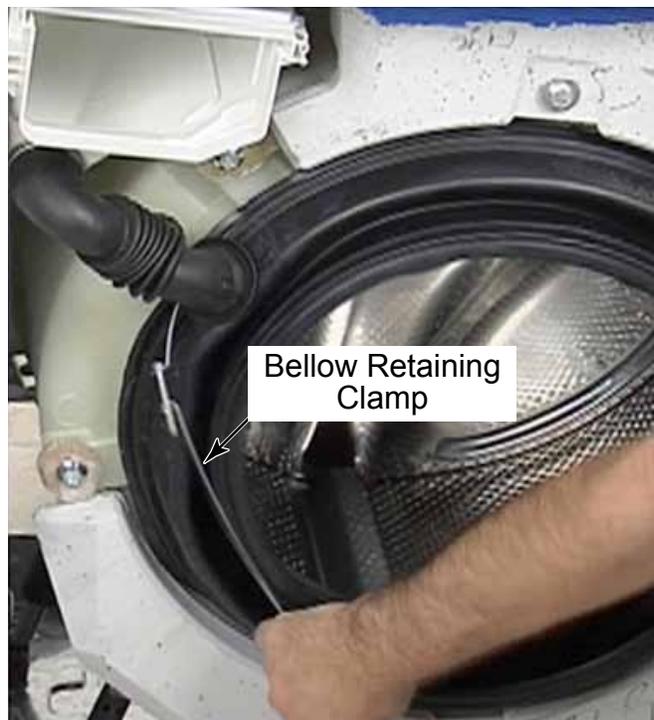


**Electrical Shock Hazard**  
Disconnect power before servicing.  
Replace all parts and panels before  
operating.  
Failure to do so can result in death or  
electrical shock.

1. Unplug washer or disconnect power.
2. Remove the washer front panel  
(See page 4-58).
3. Loosen the Phillips head screw on the  
clamp securing back of bellow to outer tub.



4. Remove the bellow retaining clamp from  
around the bellow.



5. Peel the bellow off the flange of the outer  
tub to remove it.



**NOTE:** There is a deflector tab at the top center of the bellow that helps keep clothes from getting between the bellow and the glass.

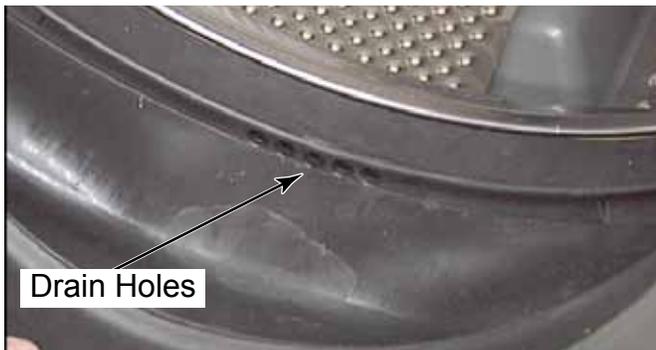
6. Reinstalling the bellow on the outer tub is easier before reinstalling the front weights.

7. The bellow has a tab that says "UP". Place this at the top center of the outer tub.



8. Wrap the top of the bellow over the outside edge of the outer tub, and at the same time press the inside lip of the bellow between the outer tub and the spin basket.

9. Make sure the drain holes are positioned at the bottom center of the washer opening.



10. Place the bellow clamp in the groove of the bellow all the way around.

11. Position the Phillips head screw on the left side of the bellow.

12. Tighten the clamp with a Phillips screwdriver.

13. Make sure the bellow is not twisted causing it to distort which may cause vibrations in spin.

14. After replacing the front panel, reach in behind the front panel on the right side and position the door lock in the holes of the front panel.



15. Reinstall the two screws, removed earlier, to mount the door lock to the front panel.

16. Pull the bellow out and wrap the lip of the bellow around the lip of the front panel, all the way around the opening.

17. Position the bellow clamp in the groove around the opening of the front panel with the spring located at the bottom center of the opening.

18. Use a pair of needle nose pliers in the ring at one end of the spring. Stretch the spring and push the clamp over the edge of the lip around the entire opening. Make sure that it is held tight all the way around the opening.



# TUB AND SPIN BASKET ASSEMBLY

## **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove the chemical dispenser assembly (See page 4-55).
4. Remove the washer front support bracket (See page 4-60).
5. Remove the bellow (See page 4-76).
6. Disconnect the tub to pump hose from pump (See page 4-78).
7. Remove the back panel (See page 4-68).
8. Disconnect the vent tube (See page 4-73).
9. Remove the wiring connector from the temperature sensor (See page 4-71).
10. Remove the motor (See page 4-72).

11. Disconnect the pressure sensor hose from the bottom of the pressure sensor. Twist and pull the hose off the switch.



12. Place container below pump filter opening to catch any water that is left in washer.

13. Unscrew pump filter, pull it out of pump. Let any water drain, then reinstall the filter.



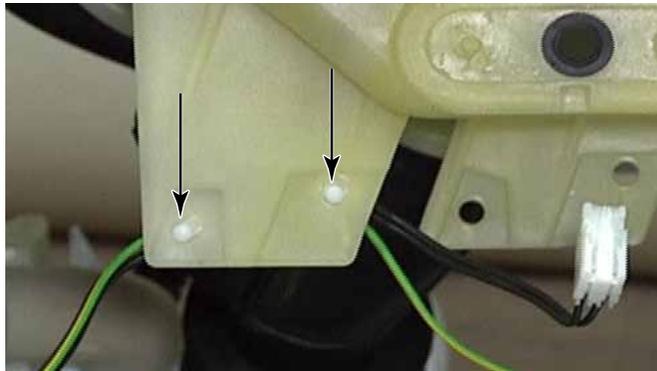
14. Disconnect the drain hose from the back of the pump filter. Move the clamp down the hose. Pull the drain hose off the back of the pump filter.



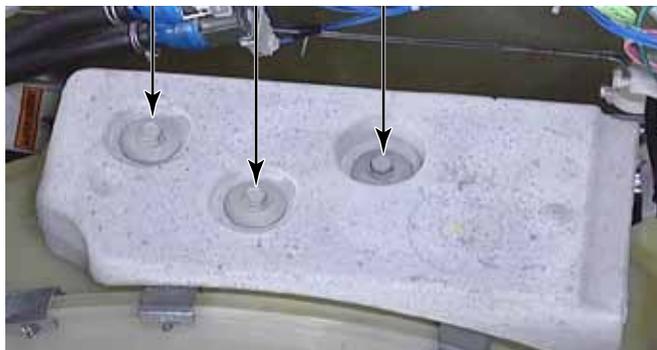
15. Disconnect the earth wire to the hub at the spade connection about 30cm (12") from the hub. Follow the earth wire down from the hub to the connector to locate the disconnecting point.



16. Remove the wire retainers by pressing the Christmas tree clips out of the holes in the bottom of the outer tub.



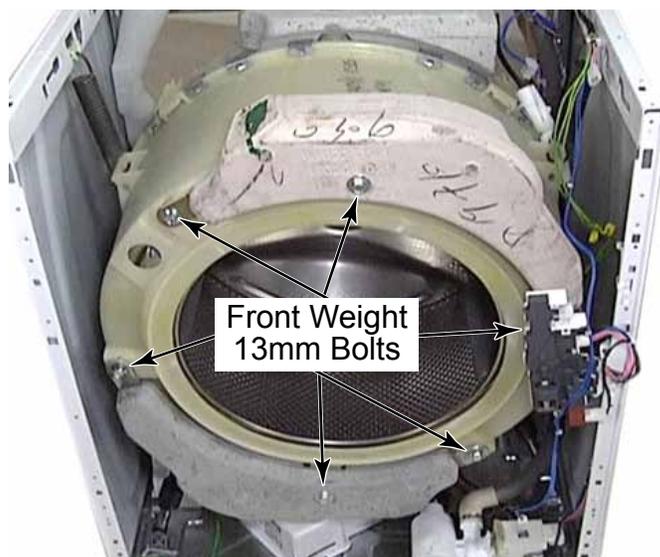
17. All three weights should be removed before removing the tub assembly. Remove three 13mm (1/2") hex head bolts securing the top weight to the tub.



**NOTE:** When reinstalling the weight bolts, make sure they are secured to between 19 and 21 newton meters of torque. Lift and remove the top weight.

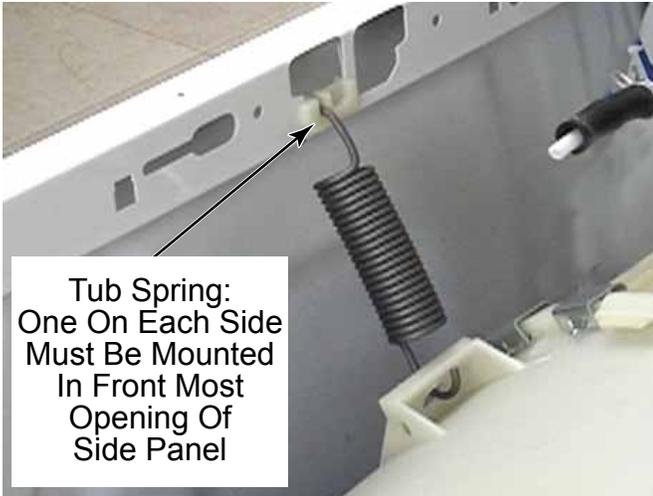
18. Remove three 13mm (1/2") hex head bolts securing the top front weight to the outer tub. Support the weight before removing the last bolt.

19. Remove three 13mm (1/2") hex head bolts securing the bottom weight to the outer tub. Make sure to support the weight before removing the last bolt.

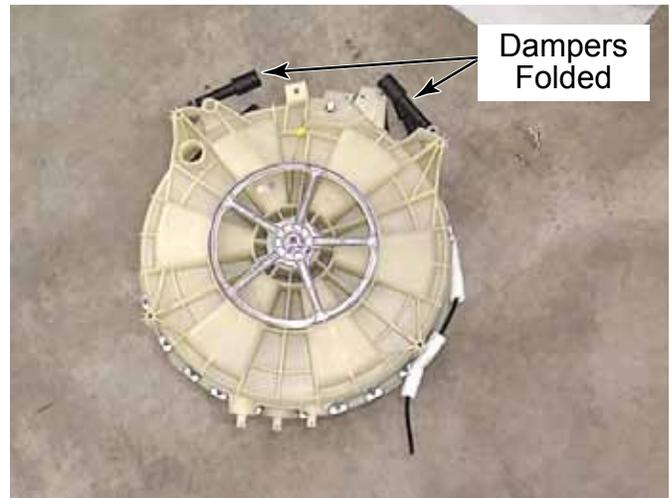


20. Lift the tub assembly to disengage the suspension spring from the right side.

21. Lift the tub assembly to disengage the suspension spring on the left side.



**TECH TIP:** To avoid damage, fold the top half of the dampers flat against the tub before reinstalling the tub assembly.



22. Lift the tub straight up to separate the air gap dampers then move the tub assembly forward and out of the cabinet.



23. After the tub assembly is properly hanging from the upper support springs, align and insert the air gap damper tubes mounted on the base into the damper tops mounted on the tub before reinstalling the weights and motor on the tub assembly.

**NOTE:** To avoid damage to components in the cabinet base or on the outer tub, do not let the tub drop free inside the cabinet.

## BAFFLE REPLACE - WASHER

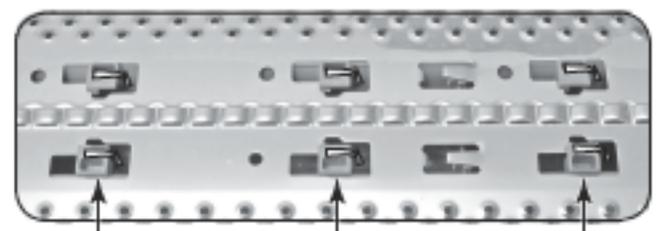
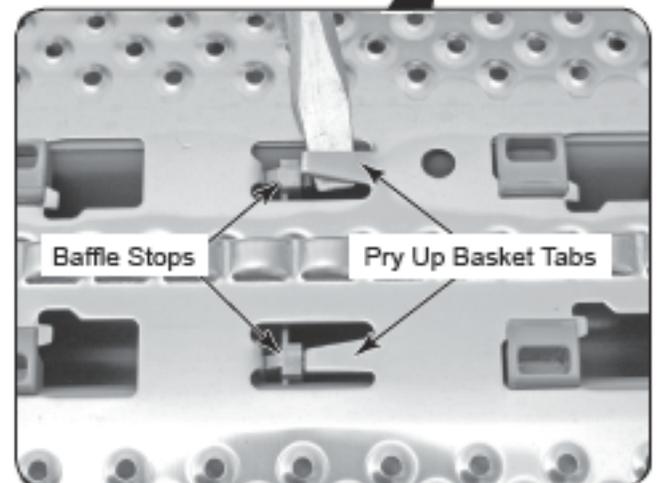
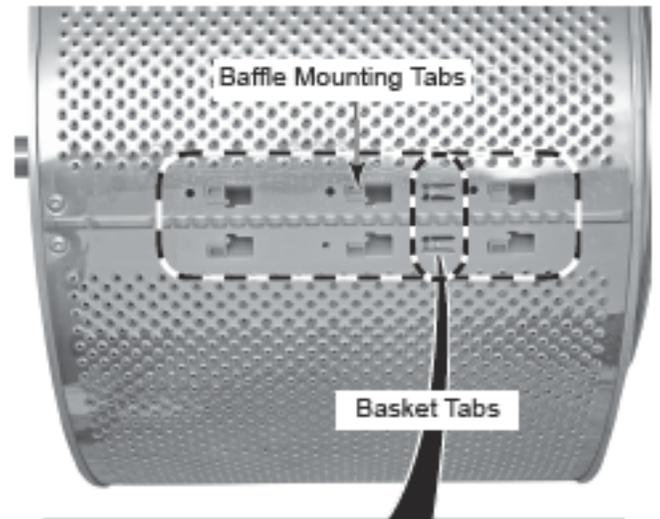
### **⚠ WARNING**



**Electrical Shock Hazard**  
**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

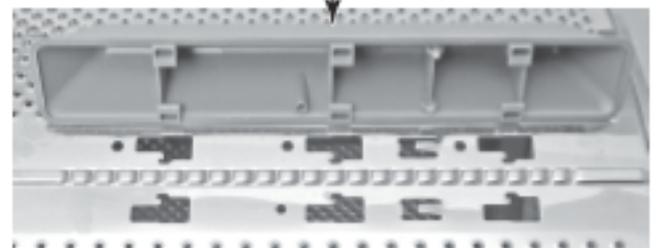
1. Unplug washer or disconnect power.
2. Turn off the water supply to the washer.
3. Remove the tub and spin basket assembly (See page 4-78).
4. Pry 2 metal tabs up with a flat blade screwdriver.
5. Slide the baffle to release the tabs from the slots in the spin basket and remove it.

**NOTE:** It is not necessary to remove the spin basket from the tub when replacing a broken baffle. Just break off the old baffle and remove all the broken parts. Make sure the pry tabs are lowered toward the center of the spin basket. Slide the new baffle into the slots in the spin basket until it locks in place behind the pry tabs.



Slide Baffle Forward & Lower Tabs Through Slots

Baffle Removed



**---- NOTES ----**

# COMPONENT TESTING

Before testing any of the components, perform the following checks:

- Control failure can be the result of corrosion of connectors. Therefore, disconnecting and reconnecting wires will be necessary throughout test procedures.
- All tests/checks should be made with a VOM or DVM having a sensitivity of 20,000 $\Omega$ -per-volt DC, or greater.
- Check all connections before replacing components, looking for broken or loose wires, failed terminals, or wires not pressed into connectors far enough.
- Resistance checks must be made with power cord unplugged from the outlet, and with wiring harness or connectors disconnected.
- Unless stated otherwise, make all resistance checks by disconnecting the component connector at the Central Control Unit (CCU).

	<b>⚠ WARNING</b>
	<b>Electrical Shock Hazard</b> Disconnect power before servicing. Replace all parts and panels before operating. Failure to do so can result in death or electrical shock.

## INLET VALVE SOLENOIDS



See page 4-51 for the procedure for accessing the water inlet valves.

To check the inlet valve solenoids at the component terminals, perform the following steps:

1. Unplug washer or disconnect power.
2. Disconnect the solenoid connectors from the inlet valve terminals.
3. Set the ohmmeter to the R X 100 scale.
4. Touch the ohmmeter test leads to any of the cold or hot water connector terminals. The meter should indicate 812 $\Omega$  on either coil.

To check the inlet valve solenoids at the CCU perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the inlet valve solenoid connector VSF2 and VCH7 (See page 4-63) from the CCU.
3. Set the ohmmeter to the R X 100 scale.
4. Touch the ohmmeter test leads to the following connector pins. The meter should indicate 812 $\Omega$ .

- VCH7 Connector  
Pins 1 & 3 (cold #3)  
Pins 5 & 7 (cold #2)



- VSF2 Connector  
Pins 1 & 3 (hot #1)





## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

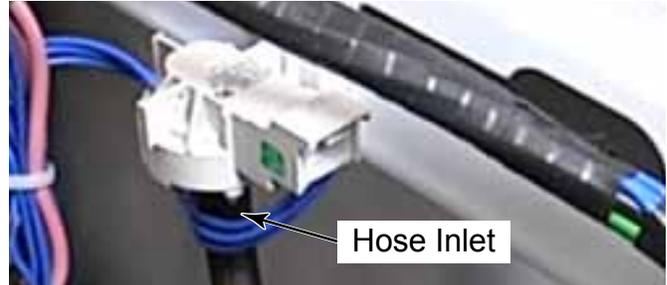
Failure to do so can result in death or electrical shock.

## PRESSURE SENSOR

See page 4-54 for the procedure for accessing the pressure sensor.

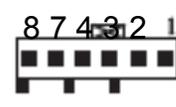
To check the pressure sensor at the component terminals, perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the wire connector and hose from the pressure sensor.
3. Set the ohmmeter to the R X 1 scale.
4. Touch ohm meter leads to connector pins 4, 7 and 8. The meter should indicate an open circuit (infinite  $\Omega$ ).



To check the pressure sensor at the CCU, perform the following steps with no water in the washer.

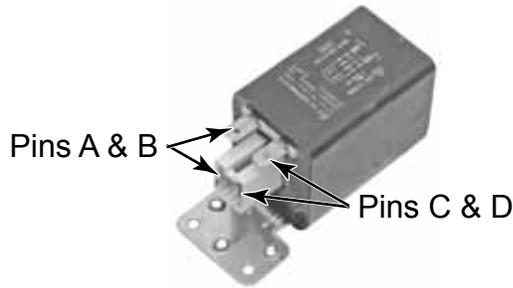
1. Unplug washer or disconnect power.
2. Disconnect pressure sensor connector PS8 from the CCU (See page 4-63).
3. Set the ohmmeter to the R X 1 scale.
4. Touch the ohmmeter test leads to connector pins 4, 7 and 8. The meter should indicate an open circuit (infinite  $\Omega$ ).



Connector PS8 at CCU

	<b>⚠ WARNING</b>
	<p><b>Electrical Shock Hazard</b></p> <p><b>Disconnect power before servicing.</b></p> <p><b>Replace all parts and panels before operating.</b></p> <p><b>Failure to do so can result in death or electrical shock.</b></p>

## RFI LINE FILTER



See page 4-53 for the procedure for accessing the RFI line filter.

To check the RFI line filter at the component terminals, perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the wire connectors from the RFI line filter.
3. Set the ohmmeter to the R X 1 scale.
4. Touch the ohmmeter test leads to the following connector pins (shown above). The meter should indicate 0Ω for each measurement.

Pins A and B

Pins C and D

To check the RFI line filter at the CCU, perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the RFI line filter connector IF2 (See page 4-63) from the CCU.
3. Set the ohmmeter to the R X 1 scale.
4. Touch the ohmmeter test leads to wire harness connector pins 1 and 2. The meter should indicated 30Ω.



Connector IF2 at CCU



## ⚠ WARNING

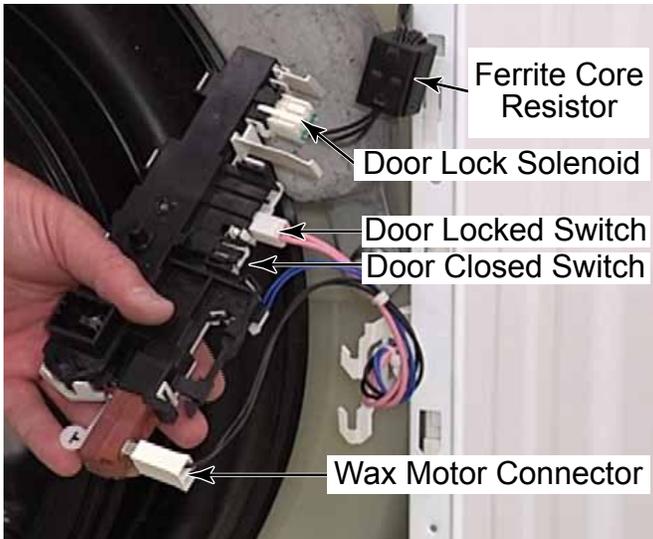
### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

## DOOR LOCK ASSEMBLY



5. Disconnect the Door Lock Coil (Locked or Unlocked), connector DL3 (See page 4-63) from the CCU.

6. To test the Door Lock Coil, touch the ohmmeter test leads to pins shown below at DL3. The meter should indicate as follows:

Pins 1 and 2 (Door Lock) =  $165\Omega$

Pins 2 and 3 (Door Unlock) =  $165\Omega$

Abnormal = open circuit (infinite  $\Omega$ )



Connector DL3 at CCU

See page 4-59 for the procedure for accessing the door lock assembly.

To check the door switch at the CCU, perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the Door Locked Switch (Locked/Unlocked), connector DLS2 (See page 4-63) from the CCU.
3. Set the ohmmeter to the R X 1 scale.
4. To test the Door Locked Switch, touch the ohmmeter test leads to pins 1 and 2 on connector DLS2. The meter should indicate as follows:

Door locked = Continuity

Door unlocked = No Continuity

Connector DLS2 at CCU



7. To test the Wax Motor perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the Wax Motor connector RP2 (See page 4-63) from the CCU.
3. Set the ohmmeter to the R X 100 scale.
4. Touch the ohm meter test leads to pins 1 and 2 on connector RP2. The meter should indicate as follows:

Pins 1 and 2 =  $1.2k\Omega$  at  $77^{\circ}\text{F}$

Abnormal = open circuit (infinite  $\Omega$ )



Connector RP2 at CCU



## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

## DRAIN PUMP MOTOR



To check the drain pump at the CCU, perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the drain pump connector DP2 (See page 4-63) from the CCU.
3. Set the ohmmeter to the R X 1 scale.
4. Touch the ohmmeter test leads to connector pins 1 and 2. The meter should indicate 13Ω.

See page 4-65 for the procedure for accessing the drain pump motor.

To check the drain pump at the component terminals, perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the wire connector from the drain pump.
3. Set the ohmmeter to the R X 1 scale.
4. Touch the ohmmeter test leads to the drain pump terminals. The meter should indicate approximately 13Ω.



Connector DP2 At CCU



## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

## TEMPERATURE SENSOR



See page 4-71 for the procedure for accessing the temperature sensor.

To check temperature sensor at component terminals, perform the following steps:

1. Unplug washer or disconnect power.
2. Disconnect the wire connector from the temperature sensor.
3. Set the ohmmeter to the R X 1K scale.
4. To check the temperature sensor, touch the ohmmeter test leads to the sensor terminals. The meter should indicate as shown in the chart below.

Temperature	Result
0°C (32°F)	35.9kΩ
30°C (86°F)	9.7kΩ
40°C (104°F)	6.6kΩ
50°C (122°F)	4.6kΩ
60°C (140°F)	3.2kΩ
71°C (158°F)	2.3kΩ
96°C (203°F)	1kΩ

To check the temperature sensor at the CCU, perform the following steps.

1. Unplug washer or disconnect power.
2. Disconnect the temperature sensor connector SET2 (See page 4-63) from the CCU.
3. Set the ohmmeter to the R X 1K scale.
4. Touch the ohmmeter test leads to connector pins 1 and 2. The meter should indicate as shown in the previous chart.



Connector SET2 at CCU

Default Wash Temps. (all rinses are COLD)
Hot = 45°C (113°F)
Warm = 33°C (91.4°F)
Cool = 21°C (69.8°F)
Cold = Tap Temperature

⚠ WARNING

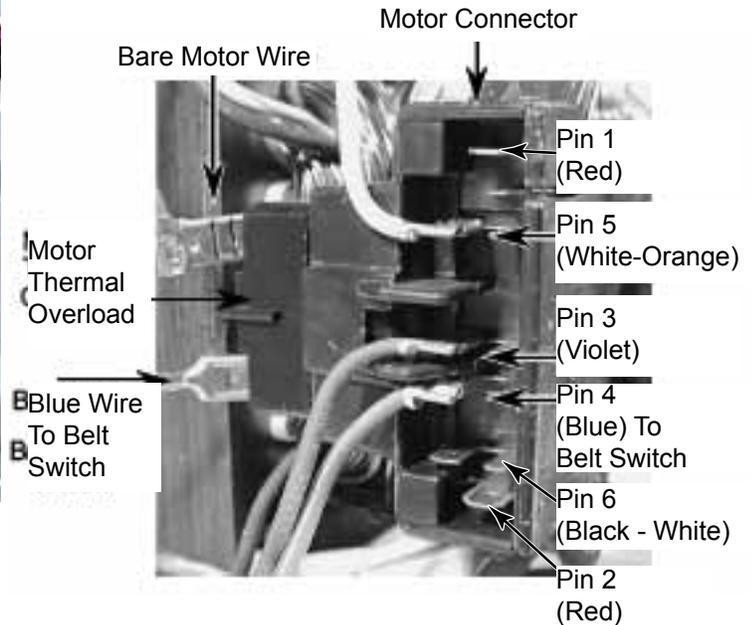
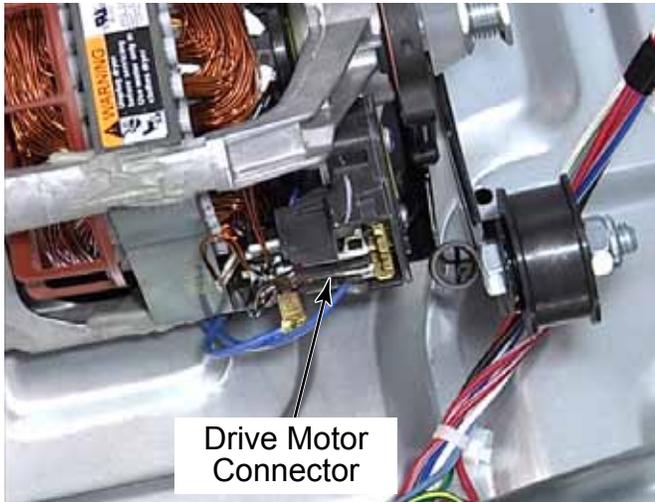
**Electrical Shock Hazard**

**Disconnect power before servicing.**

**Replace all parts and panels before operating.**

**Failure to do so can result in death or electrical shock.**

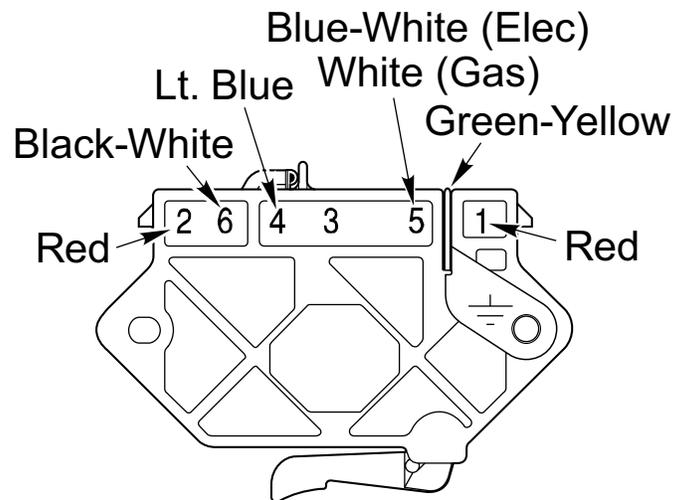
## DRIVE MOTOR - DRYER



See page 4-34 for the procedure for accessing the dryer drive motor.

1. Unplug dryer or disconnect power.
2. Disconnect the connector from the drive motor.
3. Set the ohmmeter to the R X 1 scale.
4. Touch ohmmeter test leads to the contact points shown in the table below.

Winding	Resistance	Contact Point
Main	2.4 - 3.6Ω	Lt. blue wire in back at pin 4 & bare copper wire on pin 5 of black drive motor switch
Start	2.4 - 3.8Ω	Lt. blue wire in back at pin 4 & bare copper wire on pin 3 of black drive motor switch.





## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

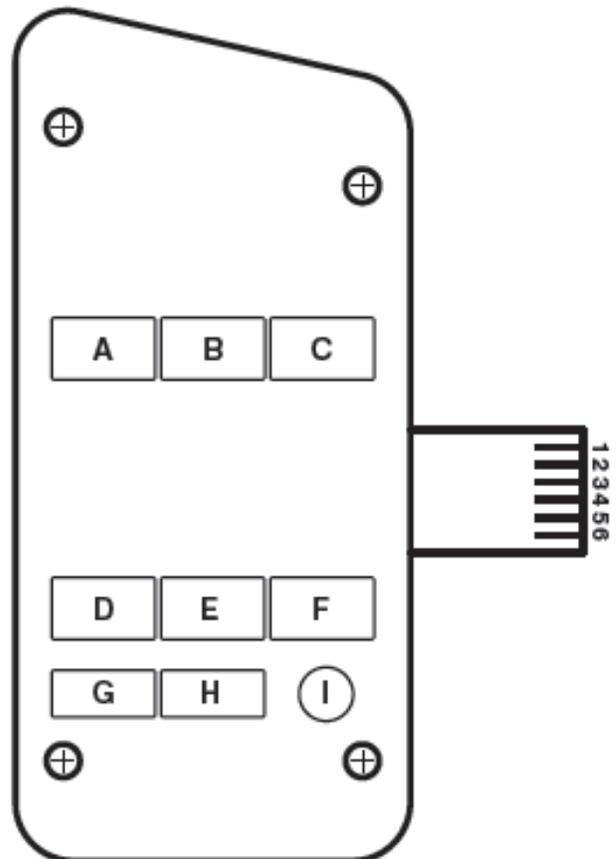
## KEYPAD CONTINUITY TEST

See page 4-6 for the procedure for accessing the keypad assembly.

1. Unplug washer or disconnect power.
2. Set the ohmmeter to the R X 1 scale. Set digital ohmmeters to lowest scale.
3. Touch the ohmmeter test leads to the contacts listed. Press the button listed for each pair of contacts. The meter should indicate continuity ( $0\Omega$ ). If the meter indicates an open circuit (infinite  $\Omega$ ), replace the keypad.
4. Test P-05 in diagnostics can be used to test the keypad function.

9 Button User Interface Membrane Switch

Contact	Contact	Button
3	6	A
3	5	B
3	4	C
2	6	D
2	5	E
2	4	F
1	6	G
1	5	H
1	4	I





## ⚠ WARNING

### Electrical Shock Hazard

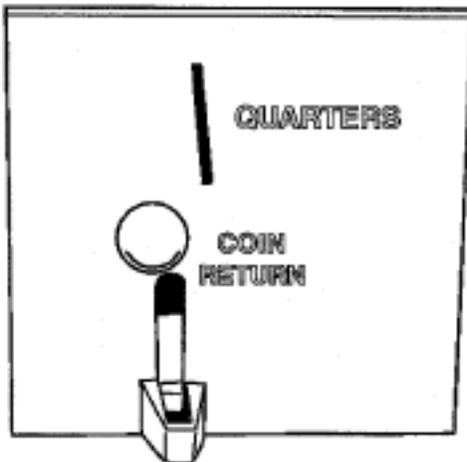
Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

## COIN DROP ACCEPTOR

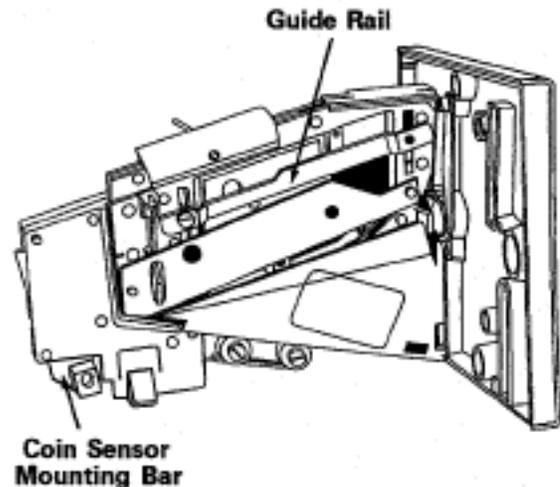
The coin drop acceptor is used only on the PD model washers. This is a mechanical coin drop assembly with a coin sensor attached. In normal use, occasional cleaning in hot water is all that is needed to maintain reliable operation of the coin drop acceptor. The coin drop does not need to be oiled, as it will only cause dirt and dust to collect or build up. This can disrupt the operation of the acceptor.



The coin drop assembly checks the diameter, thickness and magnetic properties of the coin.

There is a coin return button that can be pressed if the coin jams in the coin acceptor. When it is pressed, the button presses against a tab which is pushed to one side spreading the coin acceptor plates apart. This allows the coin to fall and roll into the coin return bail area. The face plate has a coin bail (arched area for the coin) which is located at the base of the coin return slot. The face plate can be removed from the coin acceptor by removing the two screws from the back side of the face plate.

The coin sensor is mounted to a bar located at the back of the coin acceptor. There is a window period for a coin to pass the coin sensor. If the coin fails to pass through at a certain speed, the microprocessor may assume the washer is being tampered with or it is a non-valid coin. The washer will then go into a standby mode and will not accept coins. The coin sensor is set in position at the time of manufacturing for the proper reading of coins.



A guide rail on the left plate of the coin drop assembly is adjustable (both at the front and back) to accept proper diameter coins, yet reject oversized coins. Adjust the front and back pins in the guide rail to just miss the quarter and tighten the front guide rail screws.



## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

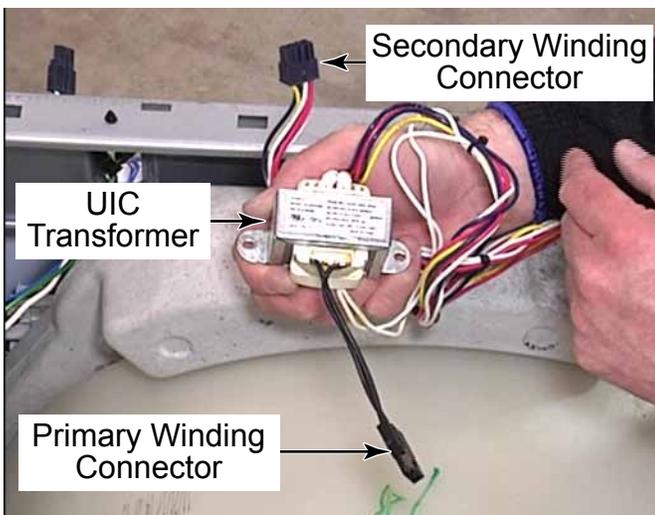
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

## TRANSFORMER

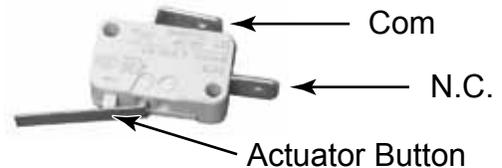
1. Unplug washer or disconnect power.
2. Set the ohmmeter to the R X 1 scale. Set digital ohmmeters to lowest scale.
3. Touch the ohmmeter test leads to the contacts listed below. The meter should indicate as shown in the chart below. If the meter indicates an open circuit (infinite  $\Omega$ ), replace the transformer.

Primary	30 - 35 $\Omega$
Secondary	
Blue to Blue	1 $\Omega$
White to White	2 $\Omega$
Yellow to Blue	0.5 $\Omega$
Red to Red	11 $\Omega$



**NOTE:** For visual clarity, the transformer has been removed from the washer. The transformer does not need to be removed to test it.

## EARTH SWITCH



See page 4-74 for the procedure for accessing a earth switch.

1. Unplug washer or disconnect power.
2. Remove the toe panel or the back panel of the washer.
3. Disconnect the wire connectors from either of the earth switch terminals.
4. Set the ohmmeter to the R X 1 scale.
5. Touch the ohmmeter test leads to the two earth switch terminals. The meter should indicate an open circuit (infinite  $\Omega$ ) with the actuator button pushed in, and a closed circuit (0  $\Omega$ ) with the actuator button released.



## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

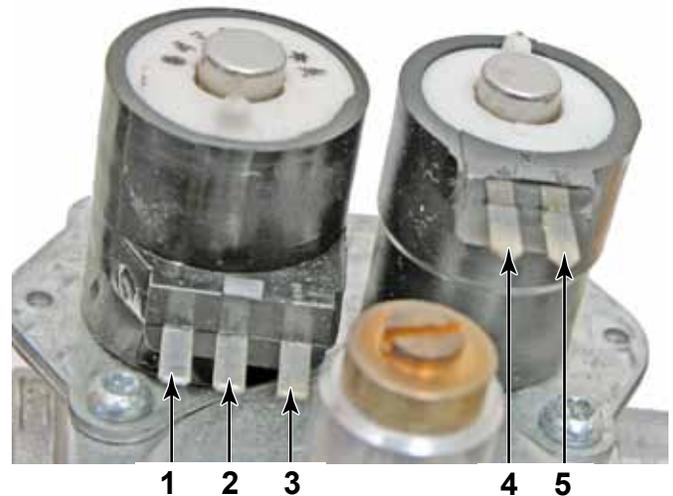
Failure to do so can result in death or electrical shock.

## GAS VALVE COILS

The gas valve is actually a regulator and 2 valves in 1. Each valve is in series with the other.

The primary valve has a split coil and requires both coils to lift the armature, but only 1 coil to hold it open. The second or secondary coil requires only 1 coil.

1. Unplug dryer or disconnect power.
2. Turn off gas supply to dryer.
3. Remove gas valve coils.  
(See page 4-43)
4. Disconnect the wire connectors from the coil terminals.
5. Set the ohmmeter to the R X 100 scale.  
Set digital ohmmeters to lowest scale.

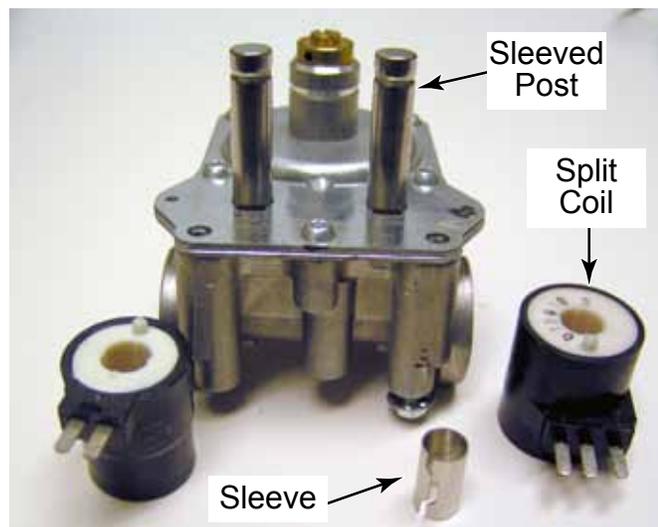


6. Touch the ohmmeter test leads to the indicated coil terminals. The meter should indicate as follows:

Pins 1 & 2 =  $1365\Omega \pm 25$

Pins 1 & 3 =  $560\Omega \pm 25$

Pins 4 & 5 =  $1220\Omega \pm 50$



**NOTE:** Black and oily soot on the interior drum and bulkhead surfaces probably indicates that the regulator is not set up for the proper gas type.

**NOTE:** Be aware that there is supposed to be a metal sleeve on the post under the split coil that has three terminals on it. Make sure to save the sleeve for reinstallation or replacement of the coils, because new coils do not come with a new sleeve (See photo in left column)

**IMPORTANT:** Make sure all harness wires are looped back through the strain relief after checking or replacing coils.



## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

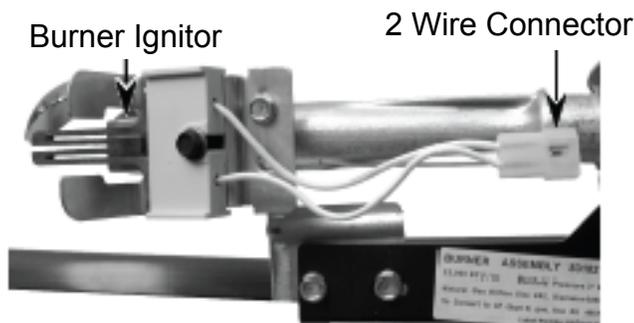
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

## BURNER IGNITOR

When the dryer control calls for heat, line voltage is applied to the ignitor. The ignitor will heat up quickly and glow as it reaches approximately 1204°C (2200°F) in about 30 seconds. Gas contacting the ignitor at this temperature will ignite immediately.

1. Unplug dryer or disconnect power.
2. Turn off gas supply to dryer.
3. Remove gas burner ignitor  
(See page 4-41).
4. Disconnect ignitor wire connectors from the main harness connector.
5. Set the ohmmeter to the R X 1 scale.  
Set digital ohmmeter to lowest scale.
6. Touch ohmmeter test leads to the 2-wire connector pins. The meter should indicate between 50 and 250  $\Omega$  at room temperature.



## MANOMETERS

Insufficient gas flow can cause problems. Therefore, checking the gas pressure at the time service calls are performed may avoid a return call.

Gas pressure can be checked with an instrument called a “manometer.” This device can detect a “low” LP tank, restricted gas flow, bad gas valve, a malfunctioning pressure regulator, too many gas appliances operating off of a small supply line, or an improperly converted appliance from Natural to LP gas.

Other types of manometers exist; however, the type of manometer we will discuss in this manual is a water tube with a glass tube inserted into it. Water is added to the outer tube and it rises within the inner tube to equalize and seek its own level, the same method is used in both arms of a “U” shaped tube Manometer.

A flexible rubber hose is connected to the upper, open end of the manometer and to the gas source. Gas pressure is exerted on one of the water columns, pushing it down. The water level then rises in the other column. The pressure is then read on the manometer as the water column pushes downward.

The water column (W.C.) for a Maytag dryer is 3.5” W.C. for Natural gas and 11” W.C. for LP gas.



## ⚠️ WARNING

### Electrical Shock Hazard

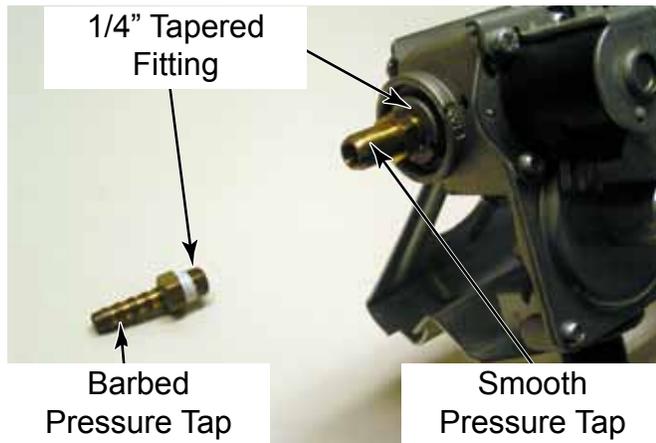
Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

### How to Use:

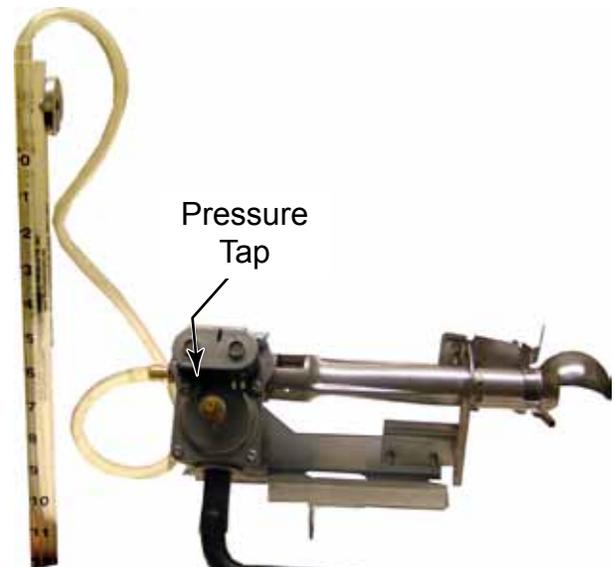
1. Disconnect power supply to dryer.
2. Remove front panel.
3. Shut off gas to dryer.
4. Install a 1/4" tapered fitting at the gas valve pressure tap. Use thread seal tape or compound on fitting.



5. Fill the manometer tube with water until each side equalizes at "0" water column.
6. Push the end of the manometer hose onto the pressure tap located on the gas valve.
7. Connect hose to one end of the manometer.
8. Turn on the gas and reconnect dryer to power. Run the dryer in a heat cycle. Read the manometer with the burner ON, (check for gas leaks).

9. When the gas is on, the amount of water column present is equal to the total amount of deflection shown in the manometer.

Once the test is completed, make sure the tapered fitting is removed from the gas valve and the plug is repositioned into the gas valve and resealed with pipe seal.



Check for gas leaks again with a soap or bubble solution. **DO NOT USE OPEN FLAME TO CHECK FOR GAS LEAKS.**

**IF HIGH WATER COLUMN PRESSURE IS DETECTED:** the gas flame can damage the flame spreader on the burner. (This can be caused by the wrong orifice, improper air mixture or high gas pressure. If pressure is higher than expected, contact the local gas utilities company to check the outside regulator.



## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

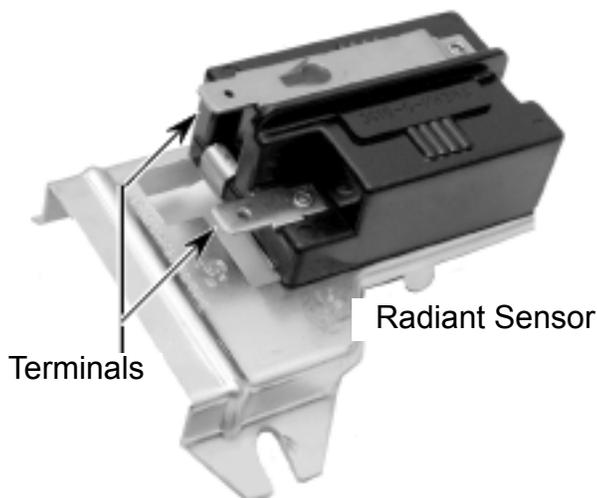
Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

## RADIANT SENSOR

1. Unplug dryer or disconnect power.
2. Turn off gas supply to dryer.
3. Remove radiant sensor (See page 4-41).
4. Disconnect the wire connectors from the radiant sensor terminals.
5. Set the ohmmeter to the R X 1 scale. Set digital ohmmeters to lowest scale.
6. Touch the ohmmeter test leads to the radiant sensor terminals. The meter should indicate a closed circuit ( $0\Omega$ ) when cold.

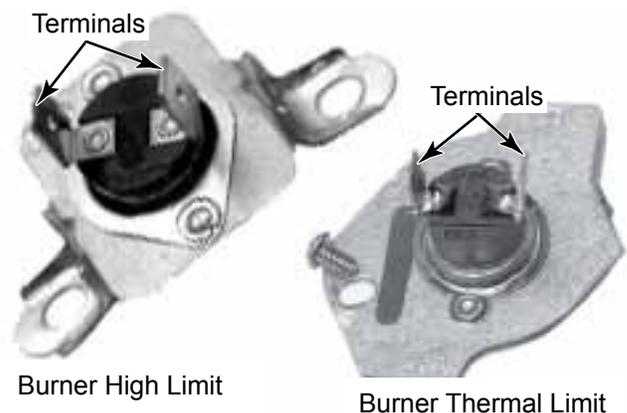
**NOTE:** If the ignitor stays on longer than 40 seconds, replace the Radiant Sensor.



## BURNER HIGH LIMIT & BURNER THERMAL LIMIT - GAS DRYERS ONLY

The burner thermal limit is a non-resettable device. The cutout temperature is  $178^{\circ}\text{C}$  ( $352^{\circ}\text{F}$ ).

1. Unplug dryer or disconnect power.
2. Turn off gas supply to dryer.
3. Remove burner high limit (See page 4-42) or burner thermal limit (See page 4-42).
4. Disconnect wire connectors from burner high limit and burner thermal limit terminals.
5. Set the ohmmeter to the R X 1 scale. Set digital ohmmeters to lowest scale.
6. Touch the ohmmeter test leads to the burner high limit or burner thermal limit terminals. The meter should indicate a closed circuit ( $0\Omega$ ).





## **⚠ WARNING**

### **Electrical Shock Hazard**

- Disconnect power before servicing.**
- Replace all parts and panels before operating.**
- Failure to do so can result in death or electrical shock.**

## **HEATING ELEMENT - ELECTRIC DRYERS ONLY**

1. Unplug dryer or disconnect power.
2. Remove the electric heating element.  
(See page 4-46).
3. Disconnect the wire connectors from the heater terminal block
4. Set the ohmmeter to the R X 1 scale.  
Set digital ohmmeters to lowest scale.
5. Touch the ohmmeter test leads to the terminals on the heater terminal block. The meter should indicate between 7 and 12 $\Omega$ .
6. Touch an ohmmeter test lead to an element terminal block connection, and the other test lead to the heater housing case. The reading should be an open circuit (infinite  $\Omega$ ). A resistance reading indicates a shorted coil.



For US models: The heater element on electric dryers is designed to provide 5600 watts when operated on 240 volts.

For Canadian models: The heater element on electric dryers is designed to provide 5250 watts when operated on 240 volts.

Service kits are available to operate electric heat dryers on 208 volts:

Part #W10206352A (US) 5100 watts

Part #W10206351A (Canada) 4100 watts



## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

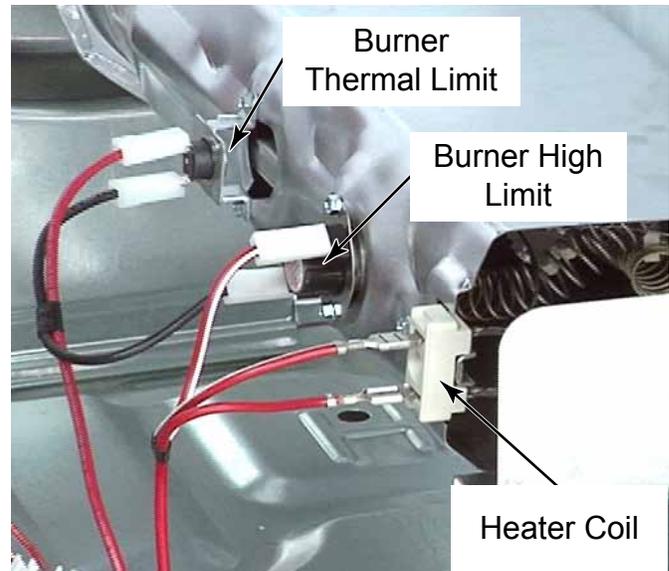
## BURNER THERMAL LIMIT - ELECTRIC DRYERS ONLY

Access the Electric Heating Element  
(See page 4-46).

The burner thermal limit is a non resettable device. The cutout temperature is 178° C (352° F).

If the dryer does not heat and there is 240VAC to the dryer, perform the following test.

1. Unplug dryer or disconnect power.
2. Disconnect the wires from the burner thermal limit.
3. Set the ohmmeter to the R X 1 scale.  
Set digital ohmmeters to lowest scale.
4. Touch the ohmmeter test leads to the burner thermal limit terminals. The meter should indicate continuity ( $0\Omega$ ). If the meter indicates an open circuit (infinite  $\Omega$ ), replace both the burner thermal limit and the burner high limit. In addition, check for a failed heater element, or a blocked, or improper exhaust system.



**NOTE:** Dryers that have poor ventilation, and exhibit higher than normal venting back-pressure, can begin cycling the heater with the burner high limit rather than the Operating Thermistor. When this occurs poor drying or long dry times are usually the result.



## ⚠ WARNING

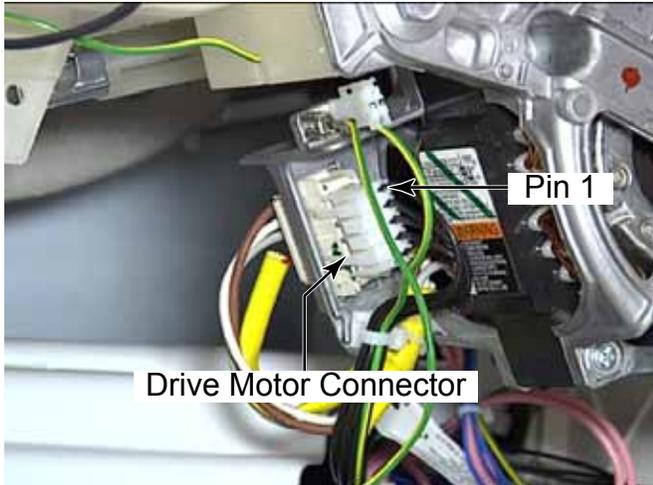
### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

## DRIVE MOTOR - WASHER



5. Touch the ohmmeter test leads to the contacts listed below. The meter should indicate as shown in the chart below. If the meter indicates an open circuit (infinite  $\Omega$ ), replace the motor.

Pins	Results
1 to 2	Normal = approx. 6.45 $\Omega$ Abnormal = Open circuit (infinite $\Omega$ )
2 to 3	
1 to 3	

1. Unplug washer or disconnect power.
2. Access the drive motor of the washer (See page 4-72).
3. Disconnect wire harness from the motor.
4. Set the ohmmeter to the R X 1 scale.  
Set digital ohmmeters to lowest scale.



## ⚠ WARNING

### Electrical Shock Hazard

**Disconnect power before servicing.**  
**Replace all parts and panels before operating.**  
**Failure to do so can result in death or electrical shock.**

## THERMISTOR - DRYER

Check the thermistor resistance value at any or all of the temperature levels in question, using the Dry Cycle, and the following process:

Hold a glass bulb thermometer capable of reading from 32° to 82°C (90° to 180°F) in the center of the exhaust outlet. The correct exhaust temperatures are as follows:

EXHAUST TEMPERATURES		
FABRIC SETTING	HEAT TURNS OFF*	HEAT TURNS ON
Heavy Duty	68° ± 3°C (155° ± 5°F)	6-8°C (10-15°F) Below the heat turn off temperature
Normal	68° ± 3°C (155° ± 5°F)	
Delicates	60° ± 3°C (140° ± 5°F)	

\* The measured overshoot using the glass bulb thermometer in the exhaust outlet can be 17°C (30°F) higher.

1. If the exhaust temperature is not within specified limits, unplug dryer or disconnect power.
2. Check the resistance of the thermistor.

**NOTE:** Thermistor resistance measurements must be made while dryer is disconnected from power.

The table below gives the resistance values that should be observed for the various temperature settings.

FABRIC SETTING	TEMPERATURE	Thermistor resistance value at heater shutoff (digital or analog meter) kΩ	
Heavy Duty	68° ± 3°C (155° ± 5°F)	2.1	1.7
Normal	68° ± 3°C (155° ± 5°F)	2.1	1.7
Delicates	60° ± 3°C (140° ± 5°F)	2.8	2.3

If needed, the following table gives temperatures and their associated resistance values.

THERMISTOR RESISTANCE			
TEMP. °C (°F)	RES. kΩ	TEMP. °C (°F)	RES. kΩ
10° (50°)	19.9	27° (80°)	9.2
16° (60°)	15.3	32° (90°)	7.4
21° (70°)	11.9	38° (100°)	5.7

- If the thermistor resistance checks within normal limit, replace Dryer CCU control.



## ⚠ WARNING

### Electrical Shock Hazard

Disconnect power before servicing.

Replace all parts and panels before operating.

Failure to do so can result in death or electrical shock.

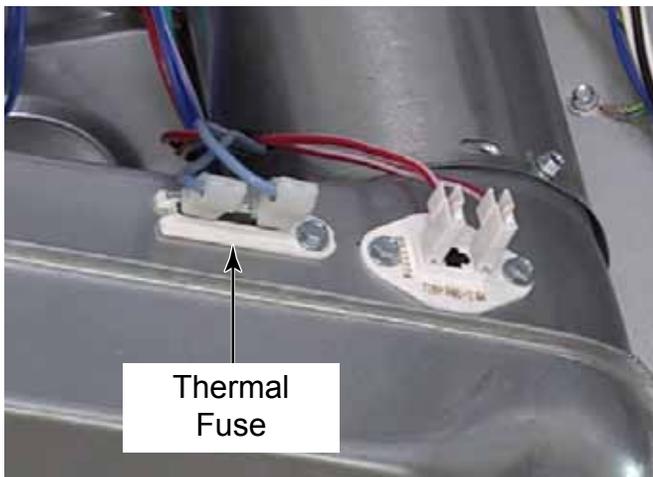
## THERMAL FUSE

1. Unplug dryer or disconnect power.
2. Turn off gas supply to dryer.
3. Disconnect wires from thermal fuse.
4. Remove thermal fuse (See page 4-31).
5. Set the ohmmeter to the R X 1 scale.  
Set digital ohmmeters to lowest scale.
6. Touch the ohmmeter test leads to the thermal fuse terminals. The meter should indicate continuity ( $0\Omega$ ). If the meter indicates an open circuit (infinite  $\Omega$ ), replace the thermal fuse.

The thermal fuse is wired in series with the drive motor. If the thermal fuse opens,  $91^{\circ}\text{C}$  ( $196^{\circ}\text{F}$ ), power to the motor is turned off. The centrifugal switch on the motor opens the gas valve coil circuit or electric element circuit.

Once the thermal fuse has opened, it will not reset, and must be replaced. Check for a failed thermistor, a shorted heater element or blocked exhaust.

**NOTE:** Thermal Fuse may be referred to as a Thermal Limiter in the parts manual.



**---- NOTES ----**

# DIAGNOSIS & TROUBLESHOOTING

## DIAGNOSTIC GUIDE

Before servicing, check the following:

- Make sure there is power at the wall outlet.
- Verify that both hot and cold water faucets are open and water supply hoses are unobstructed.
- Check all connections before replacing components. Look for broken or loose wires, failed terminals, or wires not pressed into or onto connections far enough.
- A potential cause of a control not functioning is corrosion on connections. Observe connections and check for continuity with an ohmmeter.
- Connectors: Inspect top of connector. Check for broken or loose wires. Check for wires not pressed into connector far enough to engage metal barbs.
- Resistance checks must be made with power cord unplugged from outlet, and with component connectors disconnected.

### FAILURE DISPLAYS

Active dryer diagnostic codes are shown on the upper portion of the display and active washer diagnostic codes are shown on the bottom portion of the display.

## DIAGNOSTIC CODES - DRYER

If the setup mode is entered and one of the following errors has previously occurred, the appropriate diagnostic code will be in the display on the upper portion of the screen.

CCU TRAC® INDICATION	DRYER DISPLAY	EXPLANATION
d 5	d 5	<b>COIN 1 ERROR</b> Blocked coin 1 or coin drop UI control circuit failure (coin recognition and customer display disabled while blockage persists).
d 9	d 9	<b>LOW VOLTAGE DETECTION ERROR</b> Voltage detected below 90 VAC for 8 seconds.
d 13	d 13	<b>COIN 2 ERROR</b> Blocked coin 2 or coin drop UI control circuit failure (coin recognition and customer display disabled while blockage persists).
d 16	d 16	<b>GENERATION 2 DEBIT CARD READER ERROR</b> Not receiving communications from installed debit card reader in Enhanced (Generation 2) Debit mode.
d 4	F 01	<b>DRYER MOTOR CONTROL CIRCUIT ERROR</b> Dryer motor control circuit error (cycles and price display disabled until diagnostic code is manually cleared). The control doesn't know if the motor relay is bad (stuck on), the motor relay drive circuit is bad (shorted), causing the motor relay to stay on, or the motor relay feedback circuit is bad.
d 2	F 22	<b>EXHAUST THERMISTOR OPEN ERROR</b> Exhaust thermistor open, temperature drops below -8°C (18°F) (>50 kΩ) for 1 minute in Run mode, or immediately in Factory Diagnostic Mode.
d 3	F 23	<b>EXHAUST THERMISTOR SHORTED ERROR</b> Exhaust thermistor shorted, temperature above 120°C (250°F) (<500 Ω) for 1 minute in Run mode, or immediately in Factory Diagnostic Mode.
d 22	F 70	<b>COMMUNICATION FAILURE FROM DRYER CCU TO UIC</b> UIC is not receiving communications from CCU (cycles and price display disabled while error persists or is manually cleared).
d 23	F 71	<b>COMMUNICATION FAILURE FROM UIC TO DRYER CCU</b> CCU is not receiving communications from UIC (cycles and price display disabled while error persists or is manually cleared).

# DIAGNOSTIC CODES - WASHER

If the setup mode is entered and one of the following errors has previously occurred, the appropriate diagnostic code will be in the display on the upper portion of the screen.

ACCU TRAC® INDICATION	DRYER DISPLAY	EXPLANATION
d 8	F 73	<b>UIC MICROPROCESSOR ERROR</b> UIC Microprocessor is not able to read or verify EEPROM (cycles and price display disabled until diagnostic code is manually cleared).
d 8	F 74	<b>UIC EEPROM ERROR</b> UIC EEPROM memory is a CRC failure (cycles and price display disabled until diagnostic code is manually cleared).

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 6	F 01	<b>WASHER CCU ERROR</b> Communication error within the Central Control Unit (CCU); the pump drive in CCU fails to activate; one of the main relays in the CCU fails to activate. <b>Possible Causes</b> – A power surge/drop. <b>Surge/drop procedure</b> 1. Clear error code. 2. Unplug washer or disconnect power. 3. Wait 2 minutes before reconnecting power. 4. Verify CCU by running a short diagnostic test.
d 11	F 11	<b>MCU ERROR</b> Motor Control Unit (MCU) has a failure. <b>Possible Causes</b> – A repeating under or overvoltage condition. If the failure occurs during a high-speed spin, the door remains locked for 2 minutes. <b>Procedure</b> 1. Clear error code. 2. Unplug the washer or disconnect power. 3. Using Ohm meter, check wire harness connections for continuity between drive motor and the MCU. 4. Check the motor and do a continuity test (page 16). 5. The MCU is good if the motor operates in diagnostic mode. If the motor fails to turn on, replace the MCU.
d 2	F 03 F 04	<b>ACCELEROMETER FAILURE</b> The accelerometer component failed. The X, Y, and Z limits are outside of the normal range. <b>Possible Causes</b> – CCU dislodged from mounting. – Accelerometer failure on CCU.

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 7	F 20	<p><b>NO WATER DETECTED ENTERING WASHER</b></p> <p>The first level of pressure sensor is not tripped after 6 minutes and/or the second level of pressure sensor is never reached. <b>NOTE:</b> The message “lo H2O” will appear before the F20 error is displayed, and the washer may try three times before the failure code is activated.</p> <p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– No water to washer; faucet(s) turned off.</li> <li>– Defective hot and/or cold valve(s).</li> <li>– Plugged or kinked inlet hoses or valves.</li> <li>– Pressure sensor or pressure sensor hose damaged, kinked, or disconnected.</li> <li>– Electrical connection from CCU (PS8) to pressure sensor damaged.</li> <li>– Blocked inlet from dispenser to tub.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code by opening and closing the front door, or by power cycling the washer. The following procedures will then help diagnose the reason for the failure.</li> <li>2. Unplug washer or disconnect power.</li> <li>3. Check incoming water pressure at faucet.</li> <li>4. Check inlet hoses for possible leaks.</li> <li>5. Make sure pressure sensor hose is in good condition and properly connected to tub and pressure sensor.</li> <li>6. Check that there is not a drain siphon problem.</li> <li>7. Perform continuity test on wire harness connections from CCU to inlet valves (VCH7 and VSF2), pressure sensor (PS8), and drain pump (DP2).</li> <li>8. Check inlet valves by running a diagnostic test.</li> <li>9. Check that the pump is not running while the washer is filling.</li> <li>10. Verify pressure sensor operation by accessing Help Mode while running a paid cycle.</li> </ol>
d 8	F 21	<p><b>LONG DRAIN</b></p> <p>The drain time exceeds 8 minutes without reaching empty level in pressure sensor.</p> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>■ Suds can cause delays in draining, indicated by an alternating display of “SudS” and a countdown timer. Washer drains for 4 minutes, pauses 5 minutes, then tries again for 4 additional minutes of draining. F21 will display if washer does not drain. (Normal drain takes less than 2 minutes).</li> </ul> <p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Damaged or blocked pump.</li> <li>– Drain hose blocked or exceeds recommended height.</li> <li>– Poor connection between CCU (DP2) and drain pump.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug washer or disconnect power.</li> <li>3. Make sure the drain hose is not sealed into the standpipe.</li> <li>4. Ensure the drain height is not more than 2.4 m (8 ft) above the base of the washer.</li> <li>5. Check the drain hose and make sure it is not plugged or kinked.</li> <li>6. Check the drain pump for foreign objects.</li> <li>7. Check the electrical connection between the pump and the CCU (DP2).</li> <li>8. Check the pump using a diagnostic mode.</li> <li>9. Check pressure sensor operation and the condition of the pressure sensor hose.</li> </ol> <p>If all the above are OK and pump is powered but does not pump water or water flow is poor, replace the pump.</p>

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 17	F 22	<p><b>DOOR LOCK ERROR</b></p> <p>Washer will make several attempts to lock the door, then customer will be asked to open door, clear obstructions, shut door, and reselect cycle. Washer will attempt to lock the door again. This procedure can repeat two times before customer loses vend and washer resets. If entire procedure happens twice without a successful door lock, F22 will appear.</p> <p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Misaligned or broken door latch.</li> <li>– Electrical connections from CCU (DLS2, DL3) to door lock are damaged.</li> <li>– Misaligned, broken, or overtightened door hook.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Ensure that the latch is secured to the front panel.</li> <li>4. Check for misaligned, broken, cracked, or loose door hook.</li> <li>5. Check the electrical connections between CCU (DLS2, DL3) and latch.</li> </ol> <p>If the latch fails to lock after checking all of the above, replace the latch.</p>
d 24	F 24	<p><b>TEMPERATURE SENSOR ERROR</b></p> <p>Water temperature sensor value is out of range (–5°C to 103°C [23°F to 217°F])</p> <p><b>NOTE:</b> To find correct Ohm reading, refer to the Water Temperature Sensor section, page 16.</p> <p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Water temperature sensor damaged.</li> <li>– Electrical connections from CCU (SET2) to temperature sensor damaged.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Perform Ohm test on Water Temperature Sensor and harness connection. This reading can be taken from the cable attached to CCU terminal SET2.</li> </ol> <p>If the water temperature sensor is out of range, replace it.</p>

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 12	F 25	<b>TACHOMETER ERROR</b>
		<p>If the MCU is unable to properly detect motor speed, the washer shuts down. If a failure occurs during high-speed spin, the door remains locked for 2 minutes.</p> <p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Damaged or poor contact in electrical connection from MCU to drive motor.</li> </ul> <p><b>Procedure for damaged MCU connection</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Check for broken belt.</li> <li>4. Verify that the shipping system, including shipping bolts and spacers, is removed, and that the power cord is not tangled in any components inside rear of washer.</li> <li>5. Verify electrical connection between MCU and drive motor connector.</li> <li>6. Reassemble any disassembled parts.</li> <li>7. Reconnect to power.</li> <li>8. Check operation of drive motor in diagnostic mode; if drum tumbles, the MCU and motor are OK.</li> </ol>
d 4	F 26	<b>DOOR SWITCH ERROR</b>
		<p>The door switch circuit is open for 5 seconds while the door is locked.</p> <p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Electrical connections from washer CCU (DCS3) to door switch in latch are damaged.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Verify the electrical connection between CCU and door switch by using the Help Mode (see appropriate symbols, page 15) or continuity test at CCU (DCS3) connection.</li> </ol> <p>If the door switch circuit fails to open or close, replace the door latch.</p>

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 21	F 27	<b>OVERFLOW CONDITIONS</b>
		<p>The overflow level is reached for more than 60 seconds. If the washer displays F27, the washer is probably full of water, and the water supply has been shut off. If not, water will be pouring out of the washer from the dispenser and door.</p> <p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Inlet valve(s) unable to close.</li> <li>– Pressure sensor hose is kinked.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Remove electrical connections for cold and hot inlet valves. If water continues to flow into washer, inlet valve needs to be replaced.</li> <li>4. Check if pressure sensor hose is kinked.</li> <li>5. Verify functionality of inlet valves by running a diagnostic cycle.</li> </ol>
d 20	F 28	<b>COMMUNICATION FAILURE BETWEEN WASHER CCU AND MCU</b>
		<p>The communication between the Central Control Unit (CCU) and the Motor Control Unit (MCU) has failed.</p> <p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Communication cable from CCU (MI3) to MCU is damaged.</li> </ul> <p><b>Procedure for communication cable</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Perform continuity test on wire harness connections from CCU (MI3) to MCU (be careful not to spread the Rast connector ends).</li> <li>4. Verify the drive motor operation in diagnostic mode. If drum fails to tumble, replace the MCU.</li> </ol>

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 19	F 29	<b>DOOR UNLOCK ERROR</b> The door is unable to unlock after six tries.
		<p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Misaligned or broken door latch.</li> <li>– Electrical connections from washer CCU (DLS2, DL3) to door lock are damaged.</li> <li>– Misaligned, broken, or overtightened door hook.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Manually unlock the door (page 16).</li> <li>4. Ensure that the latch is secured to the front panel.</li> <li>5. Check for misaligned, broken, cracked, or loose door hook.</li> <li>6. Check the electrical connections between CCU (DLS2, DL3) and latch (see page 16).</li> </ol> <p>If the latch fails to unlock after checking all of the above, replace the latch.</p>
d 10	F 31	<b>OVERHEATING OF MOTOR</b> The heat sink exceeds 100°C (212°F). If this condition is met, the washer CCU resets the MCU, then waits for the motor to cool down before restarting the motor. This procedure can repeat up to four times before F31 is displayed.
		<p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Improper installation of washer.</li> <li>– Poor electrical connection from CCU (MS2) to MCU.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Verify the washer is not located near a source of heat and has proper ventilation.</li> <li>4. Check the electrical connections between CCU (MS2) and MCU.</li> <li>5. Verify the drive motor operation in diagnostic mode.</li> </ol> <p>If, after the above tests, the motor overheats, replace the MCU.</p>

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 14	F 33	<b>PUMP DISCONNECTED</b> The electrical connection between the pump and the washer CCU is lost.
		<p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Poor connection between CCU (DP2) and drain pump.</li> <li>– Pump thermal overload caused by the pump running for an extended period of time.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Check electrical connection between pump and CCU (DP2) (see page 16).</li> <li>4. Check the pump using a diagnostic mode.</li> </ol> <p>If all of the above are OK and the pump still does not run, replace the CCU.</p>
d 15	F 34	<b>LOAD DETECTED IN WASHER DURING WASHER CLEANOUT CYCLE</b> The washer detects a load inside the washer tub at the beginning of the Washer Cleanout Cycle.
		<p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Load inside the washer during the Washer Cleanout Cycle.</li> <li>– Friction between the drum and bellows material.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Remove clothes from washer drum.</li> <li>4. Verify that misalignment of the spin basket and the T bearing on the boot is not causing friction (which is interpreted by the motor as a load in the washer).</li> </ol> <p>If bellows adjustment does not correct the friction issue, the spin basket will need to be replaced.</p>
d 23	F 70	<b>COMMUNICATION FAILURE BETWEEN WASHER CCU AND UIC</b> Communication between washer Central Control Unit (CCU) and User Interface Control (UIC) has failed.
		<p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Electrical connection between CCU and UIC is damaged.</li> </ul> <p><b>Procedure</b></p> <ol style="list-style-type: none"> <li>1. Clear error code.</li> <li>2. Unplug the washer or disconnect power.</li> <li>3. Verify that the communication cable is connected in the lower connector of the UIC.</li> <li>4. Verify continuity in the cable between the CCU and the UIC.</li> </ol> <p>If, after these procedures, the continuity test fails, replace the communication cable. If F70 is still present, replace the UI control.</p>

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 3	F 73 F 74	<b>UIC FAILURE</b> Communication error within the User Interface Control. <b>Possible Causes</b> – A power surge/drop. <b>Procedure</b> 1. Clear error code. 2. Unplug the washer or disconnect power. 3. Wait 2 minutes before reconnecting power. 4. Verify UIC by attempting to start a cycle or run diagnostic mode. If these procedures do not correct the failure, replace the UI control.
		<b>COIN 1 ERROR</b> The Coin 1 sensor is detected as blocked for 8 seconds. <b>Possible Causes</b> – Coin vault full of money. – Blocked or dirty sensor. <b>Procedure</b> 1. Clear error code. 2. Unplug the washer or disconnect power. 3. Clean the coin sensor. 4. Check for broken coin sensor switch on coin drop. 5. Check the wire harness connections between User Interface (AA4) and the coin sensor switch to ensure wires do not block the coin switch beam. 6. Shorting the connections 2 and 3 at AA4 on UIC will simulate a good coin sensor. If the above procedures do not solve the problem, replace the UIC.
d 9	d 9	<b>LOW VOLTAGE DETECTION ERROR</b> Incoming voltage detected below 90vac for 8 seconds. <b>Possible Causes</b> – Voltage drop due to multiple washers on same circuit. – Worn outlet. <b>Procedure</b> 1. Clear error code. 2. Unplug the washer or disconnect power. 3. Check the wire harness connection between the RFI filter and the transformer. If the above procedures do not solve the problem, replace the UIC.

ACCU TRAC® INDICATION	WASHER DISPLAY	EXPLANATION AND RECOMMENDED PROCEDURE
d 13	d 13	<b>COIN 2 ERROR</b> The Coin 2 sensor is detected as blocked for 8 seconds. <b>Possible Causes</b> – Coin vault full of money. – Blocked or dirty sensor. <b>Procedure</b> 1. Clear error code. 2. Unplug the washer or disconnect power. 3. Clean the coin sensor. 4. Check for blocked coin sensor switch on coin drop. d13 only occurs with coin 2 installed. If the above procedures do not solve the problem, replace the UIC.
		<b>GENERATION 2 DEBIT CARD READER ERROR</b> No communication from installed debit card reader in Generation 2 debit mode for 5 minutes. <b>Possible Causes</b> – Card reader Gen 2 not installed, when washer is in Ed mode. – Poor contact or communication cable not connected between UIC (AA3) and the card reader. – Card reader failure. <b>Procedure</b> 1. Clear error code. 2. Unplug the washer or disconnect power. 3. Check the wire harness connections between User Interface (AA3) and the debit card reader Gen 2. Do continuity test on cable. 4. Make sure you are using a Gen 2 card reader. 5. Reconnect power and wait for 5 minutes. If the above procedures do not solve the problem, replace the UIC.
d 16	d 16	<b>GENERATION 2 DEBIT CARD READER ERROR</b> No communication from installed debit card reader in Generation 2 debit mode for 5 minutes. <b>Possible Causes</b> – Card reader Gen 2 not installed, when washer is in Ed mode. – Poor contact or communication cable not connected between UIC (AA3) and the card reader. – Card reader failure. <b>Procedure</b> 1. Clear error code. 2. Unplug the washer or disconnect power. 3. Check the wire harness connections between User Interface (AA3) and the debit card reader Gen 2. Do continuity test on cable. 4. Make sure you are using a Gen 2 card reader. 5. Reconnect power and wait for 5 minutes. If the above procedures do not solve the problem, replace the UIC.

Critical errors are indicated as part of the 'out of order' message.

**NOTE:** Errors d5, d13, and d16 will not stop the ongoing cycle, although they will not allow another cycle to begin until the error is addressed.

# SERVICE DIAGNOSTIC TEST MODES

These tests allow factory or service personnel to test and verify all inputs to the main control board. You may want to do a quick and overall checkup of the washer/dryer with these tests before going to specific troubleshooting tests.

## ACTIVATING THE SERVICE DIAGNOSTIC TEST MODES

1. To enter Service Diagnostic Test Mode, follow procedures under “Control Setup Instructions” (See page 3-1) and make sure the washer/dryer is in service mode (display will show either 6.xx code, cycle count, money count, or active failure code). Do not advance past this screen.
2. Press and hold the DELICATES washer keypad for 1 second. The display will show “P-01” as shown in the chart below.
3. Press the EXTRA RINSE washer keypad to step through each selection 1-11. Press START to select each step to be run.

MODE	DIAGNOSTIC	UI Display
1	CANCEL CYCLE, RESET ERRORS, AND CLEAR ESCROW	P-01
2	CYCLE CREDIT	P-02
3	QUICK OVERVIEW TEST	P-03
4	MANUAL OVERVIEW TEST	P-04
5	BUTTON TEST	P-05
6	DRAIN AND SPIN	P-06
7	UI DIAGNOSTICS	P-07
8	CLEAN WASHER CYCLE	P-08
9	FACTORY DIAGNOSTICS	P-09
10	DRYER DIAGNOSTIC CYCLE	P-10
11	FACTORY TEST	P-11

### P-01 CANCEL CYCLE, RESET ERRORS, AND CLEAR ESCROW

To access canceling of cycle, resetting of errors, and clearing of escrow, perform steps 1 and 2 of Activating the Service Diagnostic Test Modes. Pressing START after “P-01” is displayed clears an active error code. Once START is pressed, the UI should turn fully on and then flash on and off for about 2 seconds, then display “P-01.”

### P-02 CYCLE CREDIT

To access cycle credit, perform steps 1 and 2 of Activating the Service Diagnostic Test Modes, and then perform step 3 until “P-02” is displayed.

Pressing START after “P-02” is displayed provides a cycle credit. When service diagnostic mode is exited, the highest priced cycle will display with all of the cycle options set to the maximum, along with “PRESS START” (unless end-of-cycle door opening is required).

### P-03 QUICK OVERVIEW TEST

To access Quick Overview Test, perform steps 1 and 2 of Activating the Service Diagnostic Test Modes, and then perform step 3 until “P-03” is displayed.

Pressing START after “P-03” is displayed initiates the Quick Overview Test.

(See page 6-9) for the complete Quick Overview Test procedure.

Pressing the DELICATES washer keypad will exit the Quick Overview Test and return to the service diagnostic modes. Power cycling the UI will also exit the Quick Overview Test, but will also exit the service diagnostic modes.

### P-04 MANUAL OVERVIEW TEST

To access Manual Overview Test, perform steps 1 and 2 of Activating the Service Diagnostic Test Modes, and then perform step 3 until “P-04” is displayed.

Pressing START after “P-04” is displayed initiates the Manual Overview Test.

(See page 6-10) for the complete Manual Overview Test procedure.

Pressing the DELICATES washer keypad will exit the Manual Overview Test and return to the service diagnostic modes. Power cycling the UI will also exit the Manual Overview Test, but will also exit the service diagnostic modes.

### **P-05 BUTTON TEST**

To access button test, perform steps 1 and 2 of Activating the Service Diagnostic Test Modes, and then perform step 3 until "P-05" is displayed.

Pressing START after "P-05" is displayed initiates the button test. "TEST" will be displayed.

Press the POWERWASH washer keypad – 1 is displayed.

Press the NORMAL washer keypad – 2 is displayed.

Press the DELICATES washer keypad – 3 is displayed.

Press the TEMPERATURE washer keypad – 4 is displayed.

Press the EXTRA RINSE washer keypad – 5 is displayed.

Press the START washer keypad – 6 is displayed.

Press and hold the DELICATES washer keypad and the test will be exited with the UI displaying "P-05."

### **P-06 DRAIN AND SPIN**

Pressing START after "P-06" is displayed starts the Drain and Spin cycle. The display will show the cycle status.

When the Drain and Spin cycle is complete, the UI will display "P-06." To exit the Drain and Spin cycle, press the DELICATES washer keypad to return to service mode. Press and hold the DELICATES washer keypad for 1 second to get to P-01, then press START to cancel the cycle.

### **P-07 UI DIAGNOSTICS**

To access UI diagnostics, perform steps 1 and 2 of Activating the Service Diagnostic Test Modes, and then perform step 3 until "P-07" is displayed.

Pressing START after "P-07" is displayed starts the UI diagnostics. The entire display illuminates, then by pressing each keypad, the corresponding words on the display will turn off, indicating that the switch is functioning. The washer/ dryer will exit UI diagnostics mode after 5 minutes of inactivity or unplugging the power cord.

Press and hold the DELICATES washer keypad and the test will be exited with the UI displaying "P-07."

### **P-08 CLEAN WASHER CYCLE**

Puts the washer into the clean washer cycle. To access the clean washer cycle, perform steps 1 and 2 of Activating the Service Diagnostic Test Modes, and then perform step 3 until "P-08" is displayed.

Pressing START after "P-08" is displayed starts the clean washer cycle. The display will show the cycle status.

When clean washer cycle is complete, the UI will display "P-08." To exit the Clean Washer cycle, press the DELICATES washer keypad to return to service mode. Press and hold the DELICATES washer keypad for 1 second to get to P-01, then press START to cancel the cycle.

**NOTE:** This cycle should not be used with anything still loaded in the wash basket.

### **P-09 FACTORY DIAGNOSTICS**

This diagnostics is used by the factory to gather data for setting the proper algorithms.

**NOTE:** There is no reason for field service to use P-09 in their diagnostics unless directed to do so by the manufacturer.

### **P-10 DRYER DIAGNOSTIC CYCLE**

Puts the dryer into an 8 minute diagnostic cycle (7 minutes of heat and 1 minute of cool down). To access dryer diagnostic cycle, perform steps 1 and 2 of Activating the Service Diagnostic Test Modes, and then perform step 3 until "P-10" is displayed. Pressing START after "P-10" is displayed starts the dryer diagnostic cycle. The display will show the cycle status. Pressing the HEAVY DUTY dryer keypad will increment the diagnostic cycle minutes up to 99, then roll over to 2 minutes. Pressing the DELICATES dryer keypad will cancel this cycle and exit the diagnostic mode.

### **P-11 FACTORY TEST**

This diagnostics is used by the factory to gather data for setting the proper algorithms.

**NOTE:** There is no reason for field service to use P-11 in their diagnostics unless directed to do so by the manufacturer.

### **EXITING THE SERVICE DIAGNOSTIC TEST MODES**

Press and hold the DELICATES washer keypad for 1 second. Power cycling will also exit the diagnostic modes.

## QUICK OVERVIEW TEST - WASHER

(See page 6-7) to access and initiate this procedure.

- This cycle consists of 9 steps. In each step, the washer will perform a Control Action as described in the table below. Once the action is completed, the washer will move to the next step.
- Each step can be differentiated from the others by looking at the display indication. Steps can be advanced if test requires it.
- To move to the next step before a control action is complete, press any keypad except the DELICATES washer keypad.
- To exit the Quick Overview Test at any time, press the DELICATES washer keypad.

Step	DISPLAY INDICATION	Control Action	Actuators to be Checked
1	DELICATES	Door locks, drum turns 1/2 revolution, then door unlocks and relocks.	<ul style="list-style-type: none"> <li>■ Door lock system</li> <li>■ Child safety routine</li> <li>■ Motor control (MCU)*</li> </ul>
2	PREWASH <b>Note:</b> Prewash flashes on the display and is very easy to miss.	Accelerometer tests are performed.	<ul style="list-style-type: none"> <li>■ Accelerometer</li> </ul>
3	CCU EEPROM Version (EC xx) NORMAL	Fill by both cold water inlet valves (4 liters) into BLEACH compartment.	<ul style="list-style-type: none"> <li>■ Cold water inlet valves #2 and #3</li> <li>■ Pressure sensor: Suds Level</li> </ul>
4	CCU Software Version (SC xx) POWER WASH	Fill by hot water inlet valve to Wash Level into MAIN WASH compartment.	<ul style="list-style-type: none"> <li>■ Hot water inlet valve #1</li> <li>■ Pressure sensor: Wash Level</li> </ul>
5	MCU Software Version (S <sup>1</sup> xx) DELICATES	Drum executes tumbling at wash speed (30 sec).	<ul style="list-style-type: none"> <li>■ Motor</li> <li>■ Motor control (MCU)*</li> </ul>
6	MCU Hardware Version (H <sup>1</sup> xx) NORMAL		
7	UIC EEPROM Version (EU xx) POWER WASH	Drain pump is ON.	<ul style="list-style-type: none"> <li>■ Drain pump</li> <li>■ Pressure sensor**</li> </ul>
8	UIC Software Version (SU xx) DELICATES	Drum rotates counter-clockwise and ramps up. Performs unbalance procedure before and after spinning. If not interrupted, the drum will slow and stop; after reaching 0 rpm, the door unlocks and Step 9 will be skipped.	<ul style="list-style-type: none"> <li>■ Motor</li> <li>■ Motor control (MCU)*</li> <li>■ Drain pump on</li> </ul>
9	NORMAL	This Step is only apparent if Step 8 is MANUALLY ADVANCED prior to the drum reaching 0 rpm (washer pumps out if needed). Door unlocks (washer returns to flashing mode).	<ul style="list-style-type: none"> <li>■ Door unlock</li> </ul>

The drain pump may be running in any of the last three steps, depending on the water level in the washer and reading of the pressure sensor.

\* In the event of an MCU-CCU communications error, the UI display will go blank for up to 5 minutes and then display an F28 error message.

\*\* The washer will drain until pressure sensor reaches lowest level for 10 seconds, then moves to next step.

# MANUAL OVERVIEW TEST - WASHER

(See page 6-7) to access and initiate this procedure.

Before replacing any system components, perform this Manual Overview Test.

- This cycle consists of 8 steps. In each step, the washer will perform a Control Action as described in the table below. Once the action is completed, the washer will move to the next step. Check Exit Condition column.
- Each step can be differentiated from the others by looking at the display indication.
- To move to the next step before a control action is complete, press any keypad except the DELICATES washer keypad.
- To exit the Manual Overview Test at any time, press DELICATES washer keypad.

Step	DISPLAY	Exit Condition	Control Action	To be Checked
1	DELICATES	On completion only	Door locks, drum turns 1/2 revolution, then door unlocks and relocks.	<ul style="list-style-type: none"> <li>■ Door lock system</li> <li>■ Child safety routine</li> </ul>
2	PREWASH	On completion only	Accelerometer tests are performed.	<ul style="list-style-type: none"> <li>■ Accelerometer</li> </ul>
3	NORMAL	On key press or if overfill level is detected	Filling with both cold inlet valves.	<ul style="list-style-type: none"> <li>■ Both Cold Inlet Valves #2 and #3</li> <li>■ Overfill level</li> </ul>
4	POWER WASH	On key press or completion	Drum executes reversing movement at wash speed (10 min.).	<ul style="list-style-type: none"> <li>■ Motor</li> <li>■ Motor Control (MCU)*</li> </ul>
5	DELICATES	On key press or completion	Drain pump is on (4 min.).	<ul style="list-style-type: none"> <li>■ Drain Pump</li> </ul>
6	NORMAL	On completion only	Drain pump is on (reach Suds Level plus 10 sec.).	<ul style="list-style-type: none"> <li>■ Drain Pump</li> </ul>
7	POWER WASH	On key press or completion	Drum rotates counter-clockwise and ramps up to maximum speed.	<ul style="list-style-type: none"> <li>■ Motor</li> <li>■ Motor Control (MCU)*</li> </ul>
8	DELICATES	On key press only after rpm = 0 and door is unlocked	Stop motor to 0 rpm. Door unlocks.	<ul style="list-style-type: none"> <li>■ Motor</li> <li>■ Motor Control (MCU)*</li> <li>■ Door lock system</li> </ul>

The drain pump may be running in any of the last three steps, depending on the water level in the washer and reading of the pressure sensor.

\* In the event of an MCU-CCU communications error, the UI display will go blank for up to 5 minutes and then display an F28 error message.

# DIAGNOSTIC TEST QUICK GUIDE

The following table summarizes keypad function among the diagnostic sub-modes.

Diagnostic Mode Keypad Function Table

Button	Function in Diag. Code Display Sub-Mode	Function in Display Flashing Sub-Mode	Function in Diag. Cycle Running Sub-Mode (Washer Running)	Function in Diag. Cycle Running Sub-Mode (Dryer Running)	Function in Diag. Cycle Running Sub-Mode (Dryer & Washer Running)
TEMPERATURE WASHER KEY PAD	Ignore	Toggle Customer Wash Cycle Credit	Go to help mode	Toggle Customer Wash Cycle Credit	Go to help mode
EXTRA RINSE WASHER KEY PAD	Acknowledge Diag. Code (Keep Code) Go to Set-up Mode	Start Washer Quick Overview Test Cycle	Ignore	Start Washer Quick Overview Test Cycle	Ignore
START/STOP/PAUSE WASHER KEY PAD	Clear Diag. Code Exit Diag. Code Display Sub-Mode Go to Display Flashing Sub-Mode	Exit Diag. Display Flashing Sub-Mode Go to Set-up Mode	Cancel Diag. Cycle Go to Set-up Mode	Cancel Diag. Cycle Go to Set-up Mode	Cancel Diag. Cycles Go to Set-up Mode
POWERWASH WASHER KEY PAD	Ignore	Start Washer Manual Overview Test Cycle	Ignore	Start Washer Manual Overview Test Cycle	Ignore
NORMAL WASHER KEY PAD	Ignore	Start Washer Quick Spin Cycle	Ignore	Start Washer Quick Spin Cycle	Ignore
DELICATES WASHER KEY PAD	Ignore	Start Washer Cleanout Cycle	Ignore	Start Washer Cleanout Cycle.	Ignore
HEAVY DUTY DRYER KEY PAD	Ignore	Ignore	Ignore	Increment dryer test time by one minute Rolls from 99 back to 2 minutes	Increment dryer test time by one minute Rolls from 99 back to 2 minutes
NORMAL DRYER KEY PAD	Acknowledge Diag. Code (Keep Code) Go to Set-up Mode	Start Dryer Field Diag. Cycle	Start Dryer Field Diag. Cycle	Ignore	Ignore
DELICATES DRYER KEY PAD	Ignore	Ignore	Ignore	Ignore	Ignore

## HELP MODE

This mode is used to verify the behavior of the washer, along with the operation of a customer cycle. It allows verification of the current status of many switches, actuators, valves, and relays. It also reports the current values of the drum speed, unbalance value, and power used by the MCU.

### a) Accessing the Help Mode for PD Models:

- Open the service door.
- Press the EXTRA RINSE washer keypad until the display reads 2.XX.
- Press the TEMPERATURE washer keypad.
- Press the EXTRA RINSE washer keypad to move to the next option (See page 6-13).
- If the washer displays an error code, consult the “Washer Diagnostic Codes” (See page 6-2).

### b) Accessing the Help Mode in dAS Mode:

- Open the service door or insert a manual diagnostic card.
- The message dAS will appear in the display.
- Press the TEMPERATURE washer keypad.
- Press the EXTRA RINSE washer keypad to move to the next option (see Help Mode Submenu).
- If the washer displays an error code, consult the “Washer Diagnostic Codes” section (See page 6-2).

Exit Help Mode Submenu by pressing the TEMPERATURE washer keypad.

## HELP CODES

Help Code	Description
00	No Help Code
0F	Oversuds detected during cycle, and washer was not able to resolve an unbalance condition detected during the final spin related to the oversuds detection (via pressure sensor) earlier in the cycle
32	More than six unbalance retries during the final spin – spin (and cycle) has been aborted
33	Oversuds detected during wash cycle, and washer was not able to resolve the condition – cycle has been aborted. Washer unable to sense that water has been fully drained within required time, sensing as an oversuds condition
71	Generation 2 debit card cycle polling message out of sequence
74	Generation 2 debit card remaining balance message out of sequence
75	Generation 2 debit card new card balance message out of sequence
88	Invalid messaging state found in data acquisition communications comm_suprv ( ) routine
99	Mismatch of cycle settings between CCU and UI. Wash cycle may not run as defined by card reader setup

# HELP MODE SUBMENU

- This sub-menu consists of many steps.
- To change to the next step, press the EXTRA RINSE washer keypad.
- To exit Help Mode and return to setup mode or dAS mode, press the TEMPERATURE washer keypad.

Submode	Display Portion	Description	Note	
1h.XX	lower	The XX value has a meaning according to the Help Code Table. This value is stored in EEPROM, and is added to as a new error is reported. The oldest drops out of history.*	Help code 1	
2h.XX	lower		Help code 2	
3h.XX	lower		Help code 3	
1.X##	upper	The X is f or d and ## is the code num as defined in the Ranked Stacked Washer/Dryer Diagnostic Codes Table.**	Dryer CCU Error History code 1	
1.X##	lower		Washer CCU Error History code 1	
2.X##	upper		Dryer CCU Error History code 2	
2.X##	lower		Washer CCU Error History code 2	
3.X##	upper		Dryer CCU Error History code 3	
3.X##	lower		Washer CCU Error History code 3	
4.X##	upper		Dryer CCU Error History code 4	
4.X##	lower		Washer CCU Error History code 4	
5.X##	lower		Washer UIC Error History code 1	
6.X##	lower		Washer UIC Error History code 2	
7.X##	lower		Washer UIC Error History code 3	
8.X##	lower		Washer UIC Error History code 4	
hF.LL	lower		Wash Water Level Selection. The wash water level is set to the default level when set to "hF.LL."	• Pressing the DELICATES washer key pad will toggle the "hF" setting from "LL" to "--." When set to "--" the wash water level is higher.
hE.ES	lower		Energy Saving Mode. Default for the washer is to use Automatic Temperature Control (ATC) for the cycle.	• Pressing the DELICATES washer key pad will toggle the "hE" setting from "ES" to "--." When not in energy saving mode, the Hot, Warm, and Cool water temps. are set to a higher level.
Sr.ON	lower		Suds routine selection. Default setting for the washer is to have the suds routine on; standard time is added to the cycle and communicates to the end user via the UI display if suds is detected during the first two drain/spins and the final spin. If turned off, "Sr.--" gain the ability to reduce suds routine time with the next programming option.	• Pressing the DELICATES washer key pad will toggle the "Sr" setting from "ON" to "--."
SL.05	lower		Suds routine time selection; can only change the setting if "Sr.--" is selected. Default setting for the washer is "05" minutes of suds/kill foam routine during the first two drain/spins. Allowable programming range is 0–5 minutes.	• Pressing the POWERWASH washer key pad will toggle the "SL" setting. For proper suds handling, it is recommended to keep the setting at "05" minutes.
rE.10	lower	Maximum final spin rebalance attempts. Default setting for the washer is "10" rebalance attempts before the cycle is cancelled. For out-of-balance load, allowable programming range is 4–10 attempts.	• Pressing the POWERWASH washer key pad will toggle the "rE" setting.	
SC.XX	upper	Where XX is the number of the dryer CCU software version		
SC.XX	lower	Where XX is the number of the washer CCU software version		
EC.XX	lower	Where XX is the number of the washer EEPROM CCU version		
SU.XX	lower	Where XX is the software version of the UIC		
EU.XX	lower	Where XX is the EEPROM version of the UIC		
SPIN XXX	lower	Where XXX is the speed in rpm (SPIN element of display is used for this)		
P XXX	lower	Where XXX is the relative amount of power being requested of the motor		
U XXX	lower	Where XXX is the relative amount of unbalance in the system. <b>NOTE:</b> 255 indicates that the unbalance has not been calculated; 254 indicates that the unbalance could not be calculated. Any other value is the current unbalance of the MCU.		

\* To erase the three help codes, press the START washer keypad.

\*\* The Errors displayed in this section are the history errors that have occurred in the washer/dryer (not necessarily an error that is in progress).

## HELP MODE SYMBOLS AND ELEMENTS

Along with the steps of the help mode, symbols and elements are mapped, at all times, to reflect the state of various inputs and outputs.

Dryer (Upper) Display Symbol	Description
▲	Dryer motor sensed on
○	Dryer door sensed closed
OR	Dryer heater relay on
&	Dryer motor relay on
*	Low voltage sensed

Washer (Lower) Display Symbol	Description
WASH	Water sensed above wash level
RE	Washer redistributing due to out-of-balance condition
○	Washer door sensed closed
DOOR LOCKED	Washer door sensed locked
COLD	Cold water output on
HOT	Hot water output on
OR	Door unlock output on
AVAILABLE	Washer drain pump output on

## HELP MODE KEYPAD FUNCTION TABLE

Key Pad Name on Interface	Generic Key Pad Function	Result While Help Code Not Displayed	Result While Help Code Displayed
TEMPERATURE WASHER KEY PAD	Slew	Exits help mode and returns to set-up mode – either dAS display or Manual Set-up Mode (2.)	Exits help mode and returns to set-up mode – either dAS display or Manual Set-up Mode (2.)
START/STOP/PAUSE WASHER KEY PAD	Mode Select	Inactive – no result	Clears all three help codes
EXTRA RINSE WASHER KEY PAD	Mode Advance	Advances to next help mode screen	Advances through each help code or from last to the extended fill option

# TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE/TEST
	<p><b>NOTE:</b> Possible Cause/Tests must be performed in the sequence shown for each problem.</p>
<b>BLANK DISPLAY</b>	<p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– UIC not powered or no power to the washer/dryer.</li> <li>– Wrong communication between CCU and UIC.</li> </ul> <p><b>Procedure for UIC not powered</b></p> <ol style="list-style-type: none"> <li>1. Check that the washer/dryer is plugged into a working outlet.</li> <li>2. Unplug washer/dryer or disconnect power.</li> <li>3. Check continuity from the power cord to the line filter.</li> <li>4. Check continuity from the line filter to the transformer.</li> <li>5. Perform Ohm meter test on the transformer (page 16).</li> </ol> <p><b>Procedure for wrong communication</b></p> <ol style="list-style-type: none"> <li>1. Unplug the washer/dryer or disconnect power.</li> <li>2. Wait for 2 minutes.</li> <li>3. Reconnect power.</li> </ol> <p>If the display fails to turn on, replace the UIC.</p>
<b>TOUCH-PADS DO NOT RESPOND WHEN PRESSED</b>	<p><b>Possible Causes</b></p> <ul style="list-style-type: none"> <li>– Keypad ribbon disconnected, damaged, or contaminated.</li> <li>– Door switch disconnected, loose, or damaged.</li> </ul> <p><b>Procedure if matrix key board is disconnected</b></p> <p>In this error, the keypad does not respond in any mode (normal operation, set-up, etc.)</p> <ol style="list-style-type: none"> <li>1. Unplug washer/dryer or disconnect power.</li> <li>2. Check that the keypad ribbon is connected to the UIC.</li> <li>3. Clean the matrix keypad ribbon connector of soap or other residues.</li> <li>4. Check the ribbon connector on the control board to see if there is corrosion on the contacts. Verify the function of the keypad. If it fails to operate, replace it.</li> </ol> <p><b>Procedure if door switch is disconnected</b></p> <p>In this error, the keypad works normally in set-up mode, but will not start a user paid cycle.</p> <ol style="list-style-type: none"> <li>1. Verify door switch operation by performing test for F26 error code (page 8), even if the F26 code is not displayed. If the above procedures fail to solve the problem, replace the UIC.</li> </ol>
<b>WON'T DISPENSE</b>	<ol style="list-style-type: none"> <li>1. Verify that water is coming into the dispenser.</li> <li>2. Verify that the washer/dryer is level.</li> <li>3. Remove the dispenser drawer insert and verify that the dispenser drawer is not clogged with detergent.</li> </ol>
<b>WASHER/DRYER VIBRATES</b>	<ol style="list-style-type: none"> <li>1. Verify that the washer/dryer is level.</li> <li>2. Verify that the shipping system, including shipping bolts and spacers, is removed, and that the power cord is not tangled in any components inside the rear of the washer/dryer.</li> <li>3. Verify that the leveling legs are locked into place and firmly in contact with the floor.</li> <li>4. Check for unbalanced load, especially when washing very small loads.</li> <li>5. Verify that dampeners are all connected in place and not damaged.</li> <li>6. Correct any twists in the door bellows.</li> <li>7. Ensure proper drive belt placement on motor pulley.</li> <li>8. Ensure that the washer/dryer is not installed on a wooden riser with a platform less than 19 mm (3/4") thick.</li> </ol>
<b>DRUM WON'T ROTATE</b>	<ol style="list-style-type: none"> <li>1. Check for broken drive belt.</li> <li>2. Check for drive motor failure error codes (F11, F25, F28). <ul style="list-style-type: none"> <li>• Check the electrical connection and verify the function of the cable between the MCU and drive motor.</li> </ul> </li> <li>3. Make sure that the door locks properly.</li> </ol>
<b>INCORRECT WATER TEMPERATURE</b>	<ol style="list-style-type: none"> <li>1. Make sure that the inlet hoses are connected properly.</li> <li>2. Check the water temperature sensor for an abnormal condition (page 16). Make sure the hoses from the inlet valves to the dispenser are connected properly.</li> <li>3. Verify hot and cold water operation in Quick Overview Test in diagnostic mode.</li> <li>4. Check for blocked filter screen in inlet valves.</li> </ol>

**---- NOTES ----**





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