



# SERVICE MANUAL

WHIRLPOOL & MAYTAG  
27" FRONT-LOAD  
GAS & ELECTRIC DRYERS



## FORWARD

This Whirlpool Service Manual (Part No. W11169659), provides the In-Home Service Professional with service information for the "WHIRLPOOL & MAYTAG 27" FRONT-LOAD GAS & ELECTRIC DRYERS."

The Wiring Diagram used in this Service Manual is typical and should be used for training purposes only. Always use the Wiring Diagram supplied with the product when servicing the dryer.

For specific operating and installation information on the model being serviced, refer to the "Use and Care Guide" or "Installation Instructions" provided with the dryer.

## GOALS AND OBJECTIVES

The goal of this Service Manual is to provide information that will enable the In-Home Service Professional to properly diagnose malfunctions and repair the "WHIRLPOOL & MAYTAG FRONT-LOAD DRYERS."

The objectives of this Service Manual are to:

- Understand and follow proper safety precautions.
- Successfully troubleshoot and diagnose malfunctions.
- Successfully perform necessary repairs.
- Successfully return the dryer to its proper operational status.

WHIRLPOOL CORPORATION assumes no responsibility for any repairs made on our products by anyone other than authorized In-Home Service Professionals.

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PRODUCT SPECIFICATIONS & WARRANTY INFORMATION SOURCES (inside back cover)

# Section 1:

## General Information

This section provides general safety, parts, and information for the "Whirlpool & Maytag Front-Load Gas & Electric Dryers."

- Dryer Safety
- Whirlpool Control Panel & Features (HMI in Dose)
- Whirlpool Control Panel & Features (Oncard)
- Maytag Control Panel & Features (Control)
- Model/Serial Number Location
- Wiring Diagram Location
- Model & Serial Number Nomenclature
- Product Specifications

## GENERAL INFORMATION

### Dryer 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.

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

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

**A DANGER**

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

**⚠ WARNING**

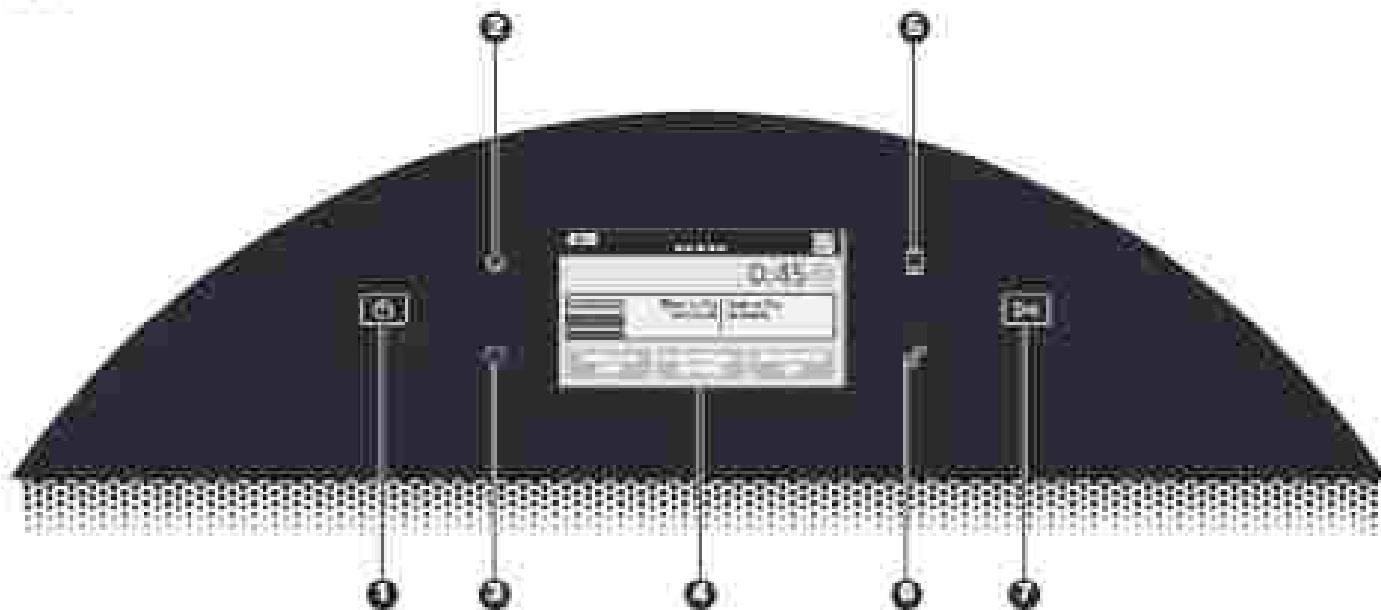
You can be killed or seriously injured if you don't follow instructions.

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.

## Whirlpool Control Panel & Features (HMI in Door)

Normal features and cycles are available on all models.

**NOTE:** The control panel features a sensitive surface that responds to a light touch of your finger. To ensure your selections are registered, touch the control panel with your fingers, not your fingernails. When selecting a setting or option, simply touch the appropriate button.



### 1 POWER/CANCEL BUTTON

Touch to turn the dryer on or off or to cancel a cycle.

### 2 HOME BUTTON

Touch this button and the LCD screen will show the Home screen, where you can select your cycle, settings, and options.

### 3 FAVORITES BUTTON

Stores and accesses your favorite cycles, and also accesses a history of recently run cycles.

### 4 LCD SCREEN

Use this screen to select cycle, settings, options, etc. Touching the screen gives access to frequently run cycles.

### 5 REMOTE ENABLE BUTTON

Download the Whirlpool® app and follow the instructions to connect your dryer to your home Wi-Fi network. You may also visit [www.whirlpool.com/connect](http://www.whirlpool.com/connect). If Canada, visit [www.whirlpool.ca/connect](http://www.whirlpool.ca/connect). After having connected to Wi-Fi, press the REMOTE ENABLE button any time you want to use the app. Pressing this button locks out the LCD screen and you will be prompted with a message about the dryer waiting for input from the app. To exit this mode, press the REMOTE ENABLE button again.

### 6 TOOLS BUTTON

Touch this button to access the Tools screen.

### 7 START/PAUSE BUTTON

Touch and hold to start or touch to pause a cycle. When the dryer drum begins to move, release the START/PAUSE button. Continuing to hold the Start/Pause button after the dryer has started will cause the dryer to stop.

### Tools



The Tools button gives access to many other settings, utility cycles, preferences, and information. Touch the TOOLS button to access the Tools screen, which contains the following (you will need to scroll down with your finger to access all of the sections):

#### Control Lock

Press this icon to lock the controls. Swipe up to unlock.

#### Mute

Press this icon to mute or unmute sounds.

#### Utility Cycle

Press this icon to access utility cycles: Steam, Ice, Steam, Clean Cycle, Steam Refresh.

Select Steam Refresh to reduce odors and light wrinkles in dry loads consisting of wrinkle-free cotton, cotton-polyester blends, common knits, and synthetics. If you will be unable to remove a load immediately, touch WRINKLE SHIELD to add up to 150 minutes of periodic tumbling. You may select the + Steam setting to add a short steam cycle after 60 minutes to help smooth out wrinkles.

#### Preferences

Press to access Times and Dates, Sound/Volume, Display Settings, and Regional. Follow the screen prompts.

#### WiFi

Press to access Connect to Network, SAD Dates, Mac Address, and WiFi. Follow the screen prompts.

#### Info

Press to access Service & Support, Store Demo Mode, Restore Factory, WiFi Terms and Conditions, and Software Terms and Conditions. Follow the screen prompts.

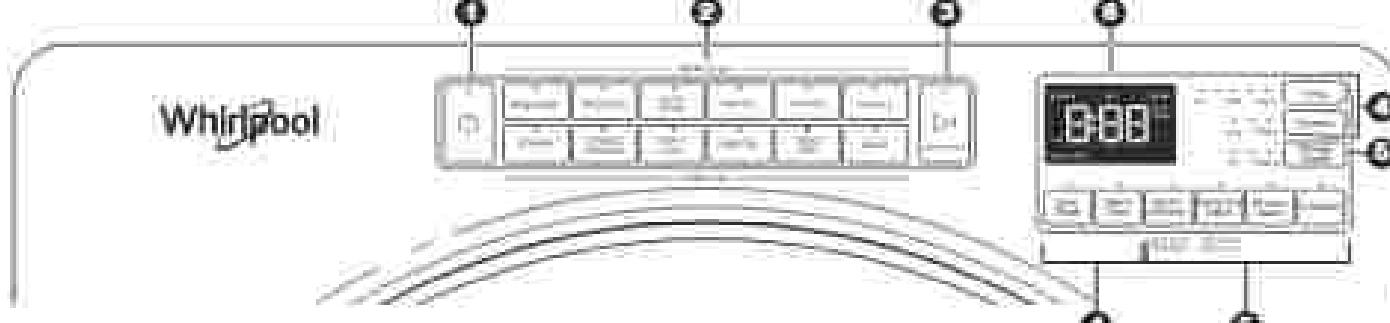
## GENERAL INFORMATION

# Whirlpool Control Panel & Features (Console)

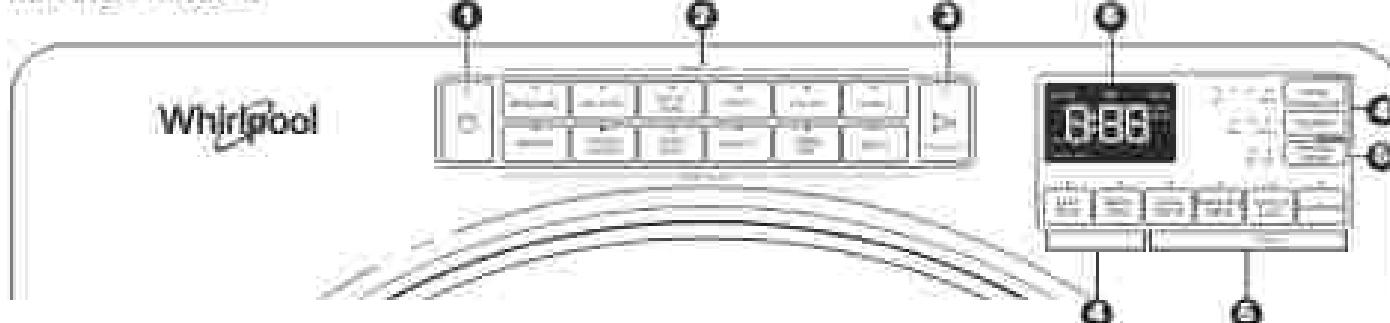
Not all features and cycles are available on all models.

**NOTE:** The control panel features a sensitive surface that responds to a light touch of your finger. To ensure your selections are registered, touch the control panel with your fingertip, not your fingernail. When selecting a setting or option, simply touch the appropriate button.

### STEAM MODELS



### NON-STEAM MODELS



#### ① POWER

Touch to turn the dryer on and off. Touch to stop/cancel a cycle at any time.

#### ② WHAT TO DRY/HOW TO DRY

Once a "What to Dry" is selected, the dryer automatically selects the recommended or last-used "How to Dry" option, as well as the recommended/last used modifiers. Both the "How to Dry" and modifiers can be changed if desired. See the "Cycle Guide" for details.

#### ③ START/PAUSE

Touch and hold until LED counts down "3-2-1" and the dryer starts, then let go to start a cycle, or touch once while a cycle is in process to pause it.

#### ④ MODIFIERS

Use to select available modifiers for your dryer. Not all cycles and options are available on all models.

##### Temp

When using Timed Dry/Quick Cycle, you may select a dry temperature based on the type of load you are drying. Use the warmest setting that is safe for the garments in the load. Follow garment label instructions.

**NOTE:** Automatic Cycles will give you up to four opportunities to adjust, depending on the model and the "What to Dry" or "How to Dry" selection that have been made.

##### Dryness

You may adjust the Dryness on Automatic Cycles (except for the Sanitize cycle), if desired.

**NOTE:** Dryness is for use with Automatic Cycles only.

#### More Time/Less Time/Timed Dry Adjust

Touch MORE TIME or LESS TIME with the Timed Dry/Cycle button to increase or decrease the length of the cycle.

#### ⑤ OPTIONS

Use to select available options for your dryer. Not all cycles and options are available on all models.

##### Wrinkle Shield™ Option

If you will be unable to remove a load immediately, touch WRINKLE SHIELD™ to add up to 150 minutes of periodic tumbling to help reduce wrinkling. You may select the "x" button (on some models) to add a short instant cycle after 30 minutes to help smooth out wrinkles.

**NOTE:** If you open the dryer door prior to the end of the Wrinkle Shield™ option, the dryer will go into standby.

##### Steam Refresh (steam models only)

This cycle is best for reducing wrinkles and odors from dry items. Cycle time will increase, depending on number of items. This is an independent cycle that cannot be combined with any other cycle.

##### Cycle Signal

Use this option to turn the signal indicating the end of a drying cycle to low, medium, high, or off. The volume you select here will also be applied to the Damp Dry signal.

**NOTE:** You may also turn off the tones that sound when a feature, setting, or option is touched. Touch and hold CYCLE SIGNAL for about 3 seconds to turn sounds to low, medium, high, or off.

## Whirlpool Control Panel & Features (Console) continued

### Damp Dry Signal

Touch to turn the Damp Dry Signal on or off. When selected, a series of beeps will sound when the load is damp, but not completely dry. This will allow you to take clothes out of the load that do not need to dry completely. This option is available on some cycles. The Damp Dry signal is selected as a default for the Heavy Duty/Normal, Bulky Items/Whirlpool Control, and Bulky Items/Heavy Duty cycles, as a reminder to manually remove bulky loads midway through the cycle.

### Reduce Static (on some models)

Touch to add the Reduce Static option to selected Automatic cycles. The dryer will automatically pause, and introduce a small amount of moisture into the load to help reduce static. This option adds approximately 2 minutes to the total cycle time.

### Control Lock

Use this option to lock the controls of the dryer and avoid an accidental change in cycle options or preferences during a drying cycle.

Touch and hold CONTROL LOCK or DAMP DRY SIGNAL, depending on the model, for 3 seconds to lock or unlock the controls of the dryer. During the test, the LED Display will count down "2-2-1." Once the controls are locked, the LED Display will display "LOC."

**NOTE:** The Control Lock function may be enabled when recovering from a power failure. To unlock the controls, touch and hold CONTROL LOCK or DAMP DRY SIGNAL, depending on the model, for at least 3 seconds.

### EcoBoost™ Option

The EcoBoost™ option will default on only for the Regular/Hot/Cool cycle and is only available on that cycle. This option allows you to increase your energy savings by using a slightly lower heat level. The EcoBoost™ option will increase drying times by approximately 40 minutes, which will be reflected in the LED Display. If optimal time is desired, touch ECOBOOST to turn off this option.

### LED DISPLAY

When you select a cycle, its default settings will light up and the Estimated Time Remaining (for Automatic Cycles) will vary depending on "What to Dry" and "How to Dry" selections, or actual time remaining for Timed Dry Cycles (for Manual Cycles) will be displayed.

### CYCLE STATUS INDICATORS



The Cycle Status indicators show the progress of a cycle. Not all indicators are present on all models.

### Sensing

The Sensing Indicator will light periodically during Sensor Cycles to indicate that the moisture sensor on the dryer is operating. This indicator will not light during Timed Cycles or options such as Whirlpool Smart™.

### Wet

The load is still wet and/or the cycle just started.

### Damp

This indicator shows that the load is partially dried and lets you know when to hang up or iron while the damp may be removed.

### Cool Down

The dryer has finished drying with heat and is now tumbling the load without heat to cool it down.

### Check Vent

The Check Vent Indicator is a feature available for Automatic cycles only. This indicator will show the status of airflow through the dryer and the dryer vent system for the dryer. If, during the sensing phase at the beginning of the cycle, the Check Vent light will come on if a blocked vent or low airflow issue is detected. This light will stay on for the entire cycle. Should the Check Vent light illuminate, refer to the "Troubleshooting" section for potential solutions to the issue.

The light will be cleared upon completion of the cycle, turning off Power, or opening the door. The Check Vent light will continue to illuminate during the cycle unless the fault cause is resolved.

**REMEMBER:** The dryer will continue to operate even while the indicator is lit, but poor airflow can impact dry times and overall performance. For more information on maintaining good airflow, see "Check Your Vent System for Good Airflow."

**NOTE:** If there are other error issues during a cycle, the Check Vent indicator will not light up. See the "Troubleshooting" section.

### End

This will indicate that the selected cycle has ended and the load may be removed from the dryer. If Whirlpool Smart™ has been selected, the dryer may continue to tumble the load, even if "End" is displayed.

### Control Lock

This will illuminate once the controls are locked.

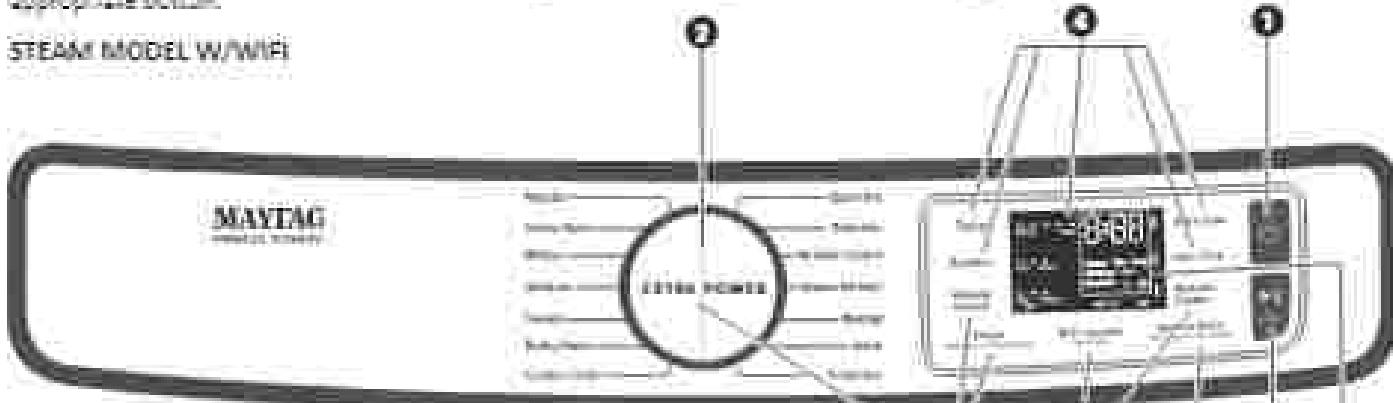
## GENERAL INFORMATION

### Maytag Control Panel & Features (Console)

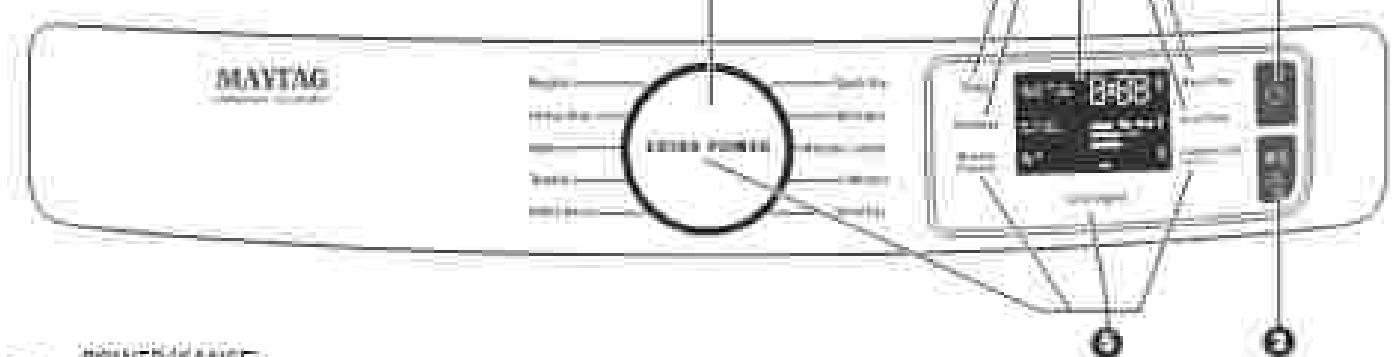
Not all features and cycles are available on all models.

**NOTE:** The control panel features a sensitive surface that responds to a light touch of your finger. To ensure your selections are registered, touch the control panel with your fingers, not your fingernails. When selecting a setting or option, simply touch the appropriate button.

#### STEAM MODEL W/MFG



#### NON-STEAM MODELS



##### ① POWER/CANCEL

Touch to turn the dryer on and off. Touch to stop/cancel a cycle at any time.

See "Cycle Guide" for available settings on each cycle. Not all settings are available with all cycles.

##### More Time/Less Time

Touch MORE TIME or LESS TIME with Times Cycles to increase or decrease the length of a Timed Dry or Quick Dry cycle.

##### Temp

When using any cycle except Sanitize, you may select a dry temperature based on the type of load you are drying. Use the warmest setting safe for the garments in the load. Follow garment care instructions.

##### Dryness

When using Sensor Cycles (except for the Sanitize cycle), you may select a Dryness level based on the type of load you are drying.

**NOTE:** Dryness is for use with Sensor Cycles only.

##### ② CYCLE CONTROL KNOB

Turn the knob to select a cycle for your laundry load. Sensor Cycles are Custom Cycle, Baby Items, Towels, Sanitize, Whites, Heavy Duty, Regular, Delicates, Wrinkle Control, Normal, and Jeans. Timed Cycles are Timed Dry and Quick Dry. The Steam Cycle (on some models) is Steam Refresh. See "Cycle Guide" for detailed descriptions of cycles. The Cycle Control Knob can also be pressed to activate the Extra Power option for harder-to-dry loads. See the "Options" section for more information.

##### ③ START/PAUSE

Touch and hold until the LED counts down "3-2-1" and the dryer starts, or touch once while a cycle is in process to pause it.

##### ④ LED DISPLAY AND SETTINGS

When you select a cycle, its settings will light up and the Estimated Cycle Time (for Sensor Cycles) or actual time remaining (for Timed Cycles) will be displayed.

##### ⑤ OPTIONS

Use to select available options for your dryer. Not all cycles and options are available on all models.

##### Wrinkle Prevent

(See Whirlpool Control Panel Options, "Wrinkle Shield Option" on page 1-4.)

## Maytag Control Panel & Features (Console) continued

### Secure Static

(See Whirlpool Control Panel Options on pages 2-4 & 5.)  
Steam (steam models only)

(See Whirlpool Control Panel Options on pages 2-4 & 5.)  
Cycle Signal

Use this to turn the signal indicating the end of a drying cycle on or off. Touch CYCLE SIGNAL, or touch and hold REHEAT/STEAM for 3 seconds to turn sounds on or off.

### Control Lock

Use to lock the controls of the dryer and avoid an accidental change in cycle options or preferences during a drying cycle. Touch and Hold CONTROL LOCK or STEAM for 3 seconds to lock or unlock the controls of the dryer. During this time, the LED Display will count down "3-2-1." Once the controls are locked, the Control Lock icon will illuminate. NOTE: The Control Lock function may be enabled when recovering from a power failure. To unlock the control, touch and hold CONTROL LOCK or STEAM for at least 3 seconds.

### Extra Power

The Extra Power option can be used with both Sensor and Timed Dry Cycles. Press the Cycle Control Knob to activate the Extra Power option, which provides an additional 10 minutes of cycle time (including additional heat and tumbling, where applicable). When Extra Power is activated, the Cycle Control Knob will illuminate and the estimated time remaining on the display will show an additional 30 minutes.

### CONNECTIVITY

Use to select available connectivity options for your dryer. Not all cycles and options are available on all models. Download the Whirlpool® app and follow the instructions to connect your dryer to your home WiFi network. You may also visit [www.whirlpool.com/connect](#).

### WiFi Connect

Touch and hold WiFi CONNECT for 5 seconds during the initial connection of the dryer to your home WiFi network. If the dryer is in a Smart Delay, touch WiFi CONNECT to override the delay and begin a dry cycle immediately.

### Remote Enable

To start a dryer cycle remotely from the Whirlpool® app, touch REMOTE ENABLE. The Remote Enable status indicator will begin blinking. Select the desired cycle, cycle settings, and options. Touch and hold START/Pause to cancel the Remote Enable. The Remote Enable status indicator will be solidly lit.

**NOTE:** Any interaction with the dryer while a Remote Enable has been set will cause the Remote Enable to cancel.

### CYCLE AND CONNECTED STATUS INDICATORS



The Cycle Status Indicators show the progress of a cycle. The Connected Status Indicators show the connected status. Not all indicators are available on all models.

### Sensor

The Sensor indicator will light during Sensor Cycles to indicate that the moisture sensor on the dryer is operating. This indicator will not light during Timed Cycles or options such as Wrinkle Prevent.

### Wet

The load is still wet and/or the cycle just started.

### Damp

The load still has moisture remaining, a good point in the cycle to remove a garment to air dry or iron.

### Cool Down

The dryer has finished drying with heat and is now tumbling the load without heat to cool it down and reduce wrinkling.

### Check Vent

The Check Vent Indicator is a feature available for Sensor Cycles only. This indicator will show the status of airflow through the dryer and the dryer vent system for the dryer's life. This feature is available during Sensor and Steam Cycles only. During the sensing phase at the beginning of the cycle, the Check Vent light will come on if a blocked vent or low airflow issue is detected. This light will stay on for the entire cycle. Should the Check Vent light illuminate, refer to the "Troubleshooting" section for potential solutions to the issue.

The light will be cleared upon completion of the cycle, touching Power/Cancel, or opening the door after the cycle has completed. Although the light will be cleared at the beginning of a cycle, it will continue to illuminate during the cycle unless the root cause is resolved.

**NOTE:** The dryer will continue to operate even while the indicator is lit, but poor airflow can impact dry times and overall performance. For more information on maintaining good airflow, see "Check Your Vent System for Good Airflow." If there are other error issues during a cycle, the Check Vent indicator will not light up. See the "Troubleshooting" section.

### End

This will indicate that the selected cycle has ended and the load may be removed from the dryer. If Wrinkle Prevent has been selected, the dryer may continue to tumble the load, even if "End" is showing in the display.

### Control Lock

This will illuminate when the controls are locked.

**NOTE:** The Control Lock function may be enabled when recovering from a power failure. To unlock the control, touch and hold STEAM for at least 3 seconds.

### Connected

This will illuminate when the dryer is connected to the internet.

### Smart Delay

This will illuminate when a smart delay is in effect—the operation of the dryer has been delayed to a time when lower utility rates are in effect.

## GENERAL INFORMATION

### Model & Serial Number Location

Model & Serial Number  
Label Location



Figure 3 - Model / Serial Number

### Wiring Diagram Location

Wiring Diagram located beneath top panel, behind Appliance Control Unit (ACU).

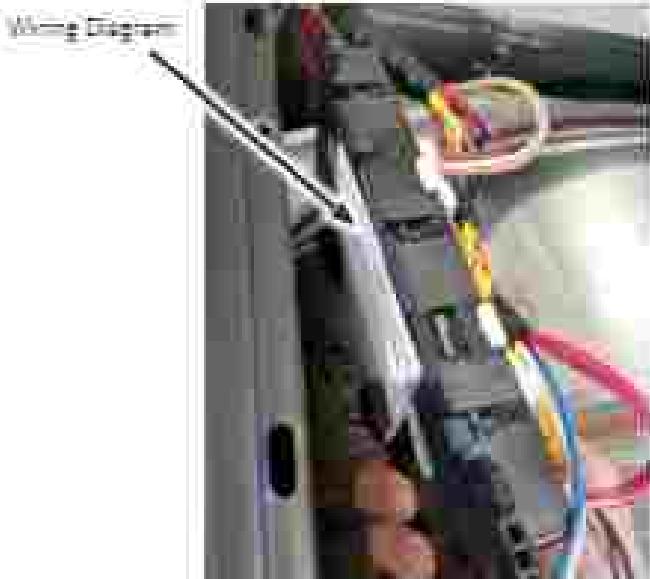


Figure 4 & 5 - Wiring Diagram Location

## Model & Serial Number Nomenclature

**MODEL NUMBER**

W E D 9620 H C 0

INTERNATIONAL SALES OR  
MARKETING CHANNEL**BRAND**

W = Whirlpool; M = Maytag

**ACCESS**

E = Electric Dryer; G = Gas Dryer; H = Heat Pump

**PRODUCT**

W = Washer; D = Dryer

**FEATURE SET**

Higher number represents higher feature set

**YEAR OF INTRODUCTION**

H = 2013

**COLOR CODE**

W = White; C = Chrome Shadow; B = Black

**ENGINEERING CHANGE**

0 = Basic Release; 1 = Firm Revision

**SERIAL NUMBER**

M 8 25 10000

**PRODUCTION SITE**

M = MARION, OH

**YEAR OF PRODUCTION**

B = 2013; S = 2013

**WEEK OF PRODUCTION****PRODUCT SEQUENCE NUMBER**

## GENERAL INFORMATION

## Product Specifications

<b>ELECTRICAL</b>	
Fuel Type (Electric):	240 VAC, 60 Hz, 30 Amp Service
Fuel Type (Gas):	120 VAC, 60 Hz, 15-20 Amp Service
<b>DIMENSIONS &amp; FEATURES</b>	
Capacity:	7.3 cu. ft. (Maytag) 7.4 cu. ft. (Whirlpool)
Control Panel:	(Whirlpool) Front Console / Capacitive Touch / Electronic (Whirlpool) Screen In Door / LCD Screen / Touch Screen (Maytag) Front Console / Indicator Lights / Cycle Select Knob
Drum Material:	Powder Coat / Stainless Steel
Drum Design:	Quad Ultra™
Door Style:	Side Swing, Reversible, Window
Interior Light:	Select Models
Energy Star® Qualified:	Yes
Steam:	Select Models
Cycles:	Varies depending on model
Temperatures:	Varies depending on model
Dryness Levels:	(3) Less, Normal, More
Check Vent Indicator:	Yes
EcoBoost™ Energy Saver:	Yes
Cycle Time Remaining:	Yes
Moisture Sensor:	Yes
Smart Appliance/Remote Control:	Select Models
<b>INSTALLATION CONSIDERATIONS</b>	
Pedestal Options:	Yes
Stackable:	Yes
Venting Direction:	4-Way (Left, Right, Bottom, Rear)
Maximum Vent Length:	64 ft.
<b>OPTIONS<sup>1</sup></b>	
Control Lock:	Locks the controls of the dryer.
Cycle Signal:	Sound when cycle is complete.
Damp Dry Signal:	Sound when load is damp, but not completely dry.
Eco-Boost™:	Use a slightly lower heat level to increase energy savings.
Reduce Static:	Introduces a small amount of moisture to reduce static.
Wrinkle Shield™/Prevent:	Adds up to 150 minutes of periodic tumbling to reduce wrinkling.
Wrinkle Shield™/Prevent with Steam:	Adds up to 150 minutes of periodic tumbling w/ steam to reduce wrinkling.
<b>DIMENSIONS</b>	
Height:	38 3/4" (98.4 cm)
Width:	27" (68.60 cm)
Depth:	31" (78.74 cm)
Gross Weight:	175 lbs. (79.37 kg)

\* Features and Options vary by brand and model.

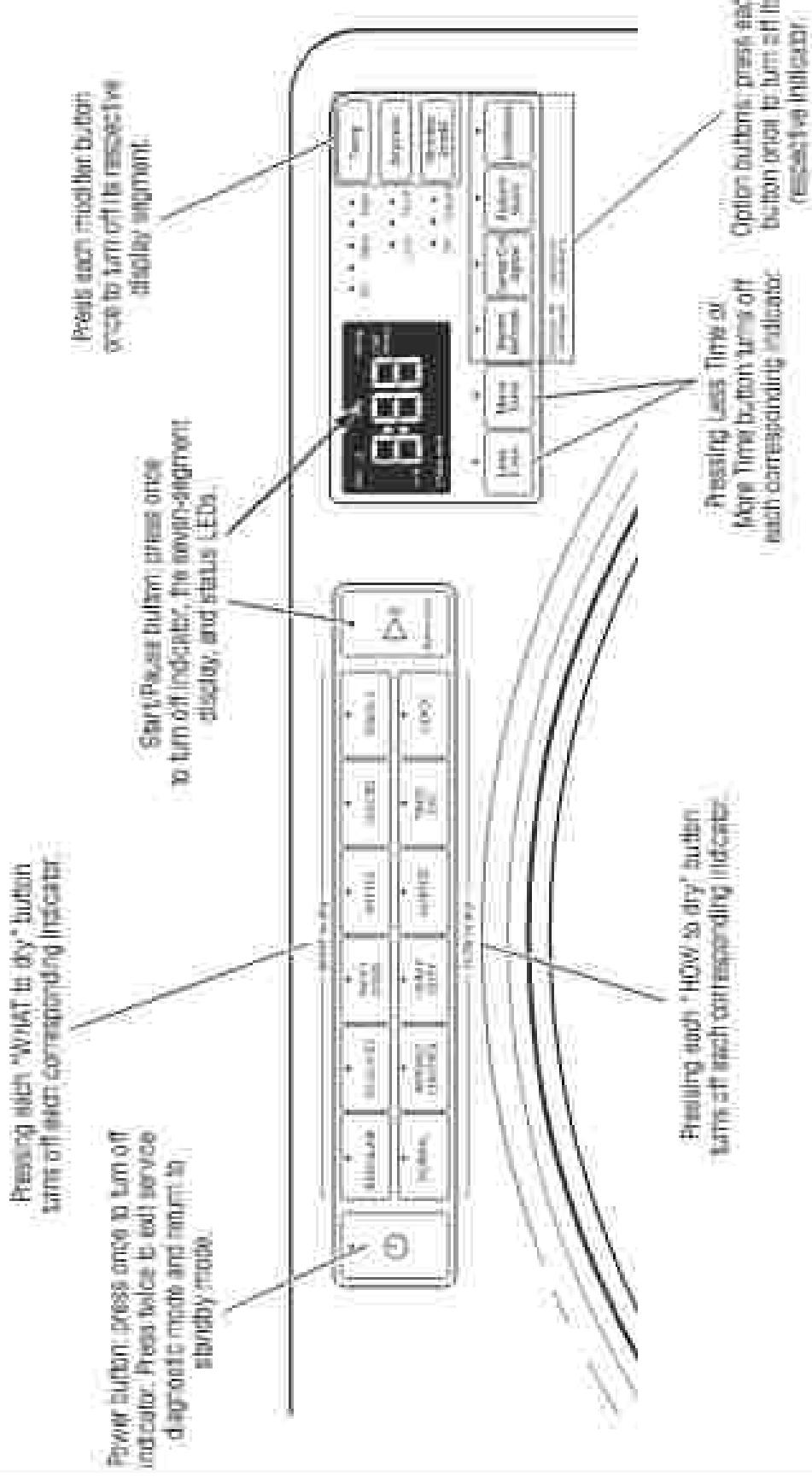
## Section 2: Diagnostics & Troubleshooting

This section provides diagnostic fault codes, and troubleshooting information for the Whirlpool & Maytag Front-Load Gas & Electric Dryers.

- Whirlpool Control Panel
- Maytag Control Panel
- LCO in Door Control Panel
- Accessories
- Diagnostic Guide
- Service Diagnostic Mode
- Activating Service Diagnostic Mode
- Key Activation & Encoder Test
- Service Test Mode
- Software Version Display
- Entering Service Diagnostic Mode
- Service Fault/Error Codes
- Customer Fault/Error Codes
- Troubleshooting Guide
- Voltage to Hexadecimal Codes

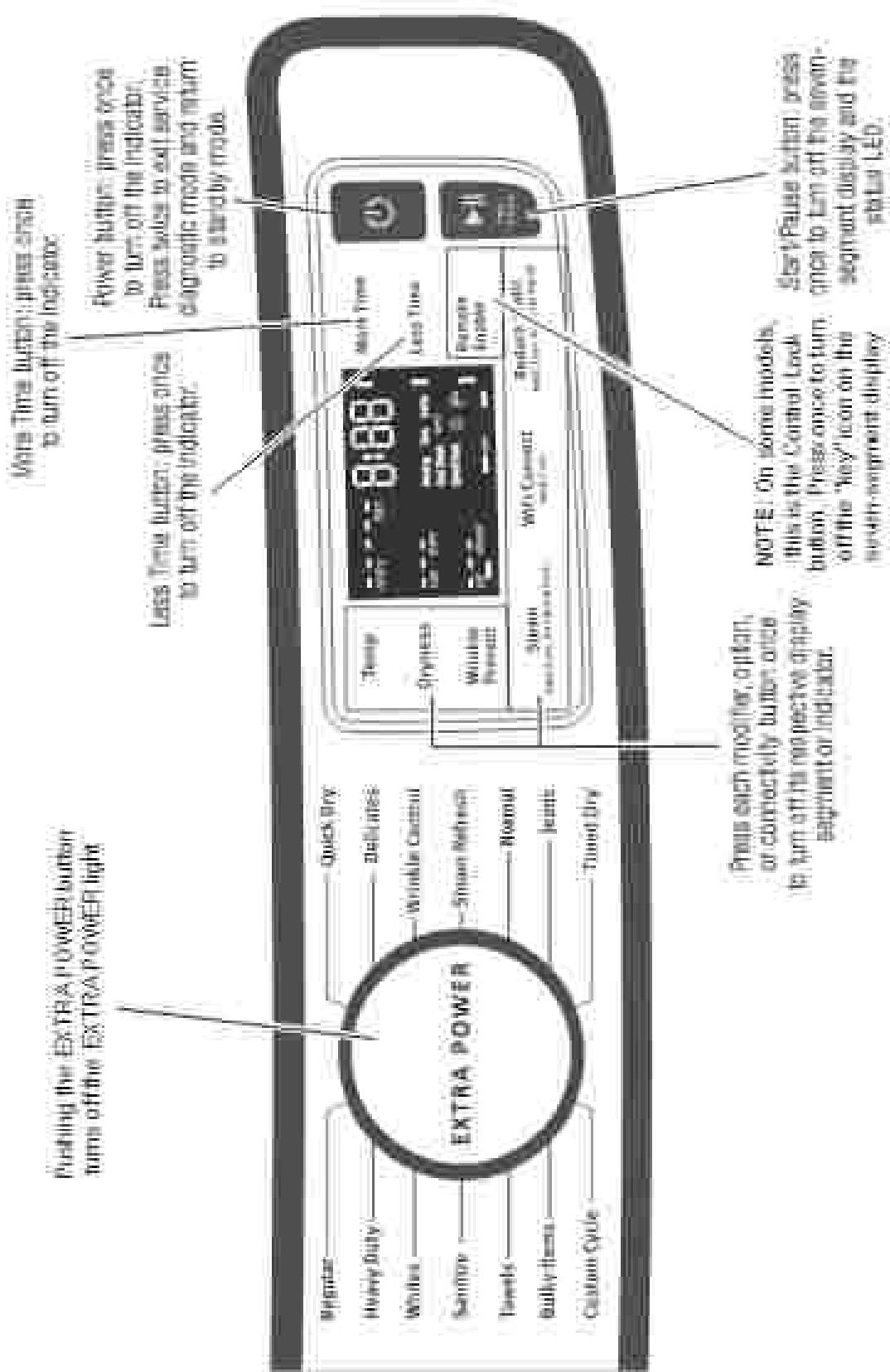
## Whirlpool & Maytag Console Diagnostics

**Whirlpool/Amana/Inglis Control panel (features and appearance vary by brand/model)**



## Whirlpool & Maytag Console Diagnostics

**Maytag Control Panel (Features and appearances may vary between models)**



## DIAGNOSTICS & TROUBLESHOOTING

# Whirlpool & Maytag Console Diagnostics

## Abbreviations

ACU: Appliance Control Unit

HMI: Human-Machine Interface

## Diagnostic Guide

Before servicing, check the following:

- Make sure there is power at the wall outlet.
- Has a household fuse blown or circuit breaker tripped? Was a regular fuse used? Inform customer that a time-delay fuse is required.
- Is dryer vent program installed and clear of lint or obstructions?
- All tests/checks should be made with a VOM (volt-ohm-milliammeter) or DVM (digital-voltmeter) having a sensitivity of 10,000Ω per volt DC or greater.
- Resistance checks must be made with dryer unplugged or power disconnected.
- **IMPORTANT:** Avoid using large diameter probes when checking harness connectors as the probes may damage the connectors upon insertion.
- Check all harnesses and connections before replacing components. Look for connectors not fully seated, broken or loose wires and terminals, pin insertion, or wires not pressed into connectors far enough to engage metal berms.
- A potential cause of a control not functioning is corrosion or contamination on connections. Use an ohmmeter to check for continuity across suspected connections.

## Service Diagnostic Mode

These tests allow service personnel to see and verify all inputs to the machine control electronics. You may want to do a quick and overall checkup of the dryer with these tests before going to specific troubleshooting tests.

## Activating Service Diagnostic Mode

1. Ensure the dryer is in standby mode (plugged in with all indicators off).
2. Select any three (3) buttons (except POWER and START) and follow the steps below. Using the same buttons (remember the buttons and the order that the buttons were pressed):

Within 8 seconds:

- Press and Release the 1st selected button.
- Press and Release the 2nd selected button.
- Press and Release the 3rd selected button.

- Repeat this 3 button sequence 2 more times.
- 3. If this test mode has been entered successfully, all indicators on the console will be illuminated for 5 seconds with "333" showing in the three-digit display and a tone will sound. If there are no saved fault codes, all indicators on the console will momentarily turn off, and then only the seven-segment display will come back on and display "333".

**NOTE:** The Service Diagnostic mode will time out after 10 minutes of user inactivity, or shut down if AC power is removed from the dryer.

### Unsuccessful Activation

If entry into diagnostic mode is unsuccessful, refer to the following indications and actions.

**Indication 1:** None of the indicators on display turn on.

**Action:** Select any cycle.

- > If indicators come on, try to change the function for the three buttons used to activate the diagnostic test mode. If any button is unable to change the function, something is faulty with the button, and it will not be possible to enter the diagnostic mode using that button. Replace the HMI and housing assembly.
- > If no indicators come on after selecting the cycle, go to TEST #1, ACU Power/Check, page 3-8.

**Indication 2:** Console indicators begin flashing immediately.

**Action:** If console indicators begin flashing on and off immediately, replace the HMI.

### Activation with Saved Fault Codes

If there is a saved fault code, it will be flashing in the display. Refer to the Fault/Error Codes table on page 2-11 for the recommended procedure. If there is no saved fault code, "333" will be displayed.

## SERVICE DIAGNOSTIC MENU

	BUTTON PRESS	FUNCTION BEHAVIOR
1st Button	<ul style="list-style-type: none"><li>• Momentary press</li><li>• Press and hold for 5 seconds</li></ul>	<ul style="list-style-type: none"><li>• Activates Key Activation &amp; Encoder Test</li><li>• Exits Service Diagnostic</li></ul>
	<ul style="list-style-type: none"><li>• Momentary press</li><li>• Press and hold for 5 seconds</li></ul>	<ul style="list-style-type: none"><li>• Activates Service Test Mode</li><li>• Software Version Display</li></ul>
2nd Button	<ul style="list-style-type: none"><li>• Momentary press</li><li>• Press and hold for 5 seconds</li></ul>	<ul style="list-style-type: none"><li>• Displays Next Error Code</li><li>• Clears the Error Codes</li></ul>
	<ul style="list-style-type: none"><li>• Momentary press</li><li>• Press and hold for 5 seconds</li></ul>	

\* See "Activating Service Diagnostic Mode" to activate these functions. Make sure all of step 3 is complete before activation.

## Whirlpool & Maytag Console Diagnostics

### KEY ACTIVATION & ENCODER TEST

**NOTE:** The Service Diagnostic mode must be activated before entering the Key Activation & Encoder Test; see procedure on page 2-4.

#### Active Fault Code Display in Key Activation & Encoder Test

If the display begins flashing while in the Key Activation & Encoder test, it is displaying an active fault code. Active fault codes are codes that are currently detected. Only one active fault code can be displayed at a time.

#### Entry Procedure

Press and release the 1st button used to activate Service Diagnostic mode. The following test will be available:

#### DIAGNOSTIC: Key Activation & Encoder Test

Pressing each button will turn off its corresponding indicator or display segment and sound a beep (see figures 1 or 2, pages 2-4 and 2-5).

On some models, rotating the cycle selector knob turns off the Extra Power light.

**NOTE:** A second press of the POWER button while in Key Activation & Encoder Test mode exits the Service Diagnostic mode and returns the dryer to standby mode.

> If indicators do not turn off and beep after pressing buttons and, on some models, rotating the cycle selector knob, go to TEST PG: Buttons and Indicators, page 2-23.

#### Exit Procedure

To exit Key Activation & Encoder Test, press the POWER button once or twice (depending on diagnostic procedure) or press and hold the 1st button used to activate Service Diagnostic mode.

### SERVICE TEST MODE CHART

**NOTE:** The Water Valve (if available) will be activated during steps 2 through 8. This will leave some water in the drum. After the test has been completed, be sure to wipe up any water remaining in the drum.

Step #	Action	Component	User Interface Response
1	User enters Service Test Mode through Service Diagnostics.	Door must be closed	All LEDs are OFF and dryer is waiting for "START" button to be pressed.
2	Press and release the "START" button to begin the test.	Motor ON Heater/Gas Valve ON Water Valve ON (Steam models only)	Last 3 digits of serial number will display for 2 seconds (only Connected models).
3	All LED's ON; test starts automatically.	Motor ON Heater/Gas Valve ON Water Valve ON (Steam models only)	1. All LEDs are ON for 2 seconds. 2. After 2 seconds, the word "End" will be displayed. (Only Maytag Models).
4	Encoder Test starts automatically (Only Maytag models). 1. Rotate encoder one position. 2. Press and release the "EXTRA POWER" button.	Motor ON Heater/Gas Valve ON Water Valve ON (Steam models only)	Only Maytag models: 1. Display shows "Enc". User should rotate encoder at least 1 position in any direction. 2. After encoder is rotated, the encoder LED will turn OFF. 3. User must press and release the "EXTRA POWER" button in the encoder. 4. After the "EXTRA POWER" button is pressed, the LED illuminating the button will turn OFF.

Continue on following page.

## DIAGNOSTICS & TROUBLESHOOTING

### Whirlpool & Maytag Console Diagnostics

Step #	Action	Component	User Interface Response
5.	Button Test starts automatically: 1. Press and release "TEMP" button.	Motor On Heater/Gas Valve On Water Valve On (Steam models only)	1. Display shows "Door" and dryer is waiting for "TEMP" button to be pressed. 2. After the "TEMP" button is pressed, all LEDs on the HMI are turned OFF.
6.	Model Number is displayed automatically.	Motor On Heater/Gas Valve On Water Valve On (Steam models only)	1. First three digits of the model number are displayed for 2 seconds. 2. Next three digits of the model number are displayed for 2 seconds. If Model number has less than 6 digits, “-” will be displayed for each digit missing.
7.	Heater/Gas Valve Test starts automatically: 1. Press and release "TEMP" button. 2. After "TEMP" button is pressed, the heater or gas valve will be turned OFF.	Motor On Heater/Gas Valve On Water Valve On (Steam models only)	Display shows "Door" and dryer is waiting for "TEMP" button to be pressed.
8.	Door Test starts automatically: 1. Open the door. 2. After door is opened, air vents will be turned OFF. Drum Light will be turned ON.	Motor On Water Valve On (Steam models only)	Display shows "Door" and dryer is waiting for the door to be opened.
9.	Front Moisture Strips Test starts automatically: 1. User touches the front moisture strips for 5 seconds.		1. Display shows "STP" or "STL" for Quad Sensing models. 2. Dryer is waiting for the user to touch the front moisture strips.
10.	Rear Moisture Strips Test starts automatically (Only Quad Sensing models): 1. User touches the rear moisture strips for 5 seconds.		Only Quad Sensing Models 1. Display shows "STL". 2. Dryer is waiting for the user to touch the rear moisture strips.
11.	Machine Fuel Type is automatically displayed.		Display shows "ELEC" for Electric dryers or "GAS" for Gas dryers for 2 seconds.
12.	Service Test Finished		If all sequences are completed, the HMI will display "END" and the End of Cycle sound is played.

#### IMPORTANT:

Turn-on Water Valve if it was turned off for the Service Test Mode. Wipe up any remaining water in drum.

#### NOTES:

- Service Test Mode has a timeout of 2 minutes.
- If an error is discovered at any time during the test, Service Test Mode will stop and display the corresponding error code in the 7-segment display. The error sound will be played.

## Whirlpool & Maytag Console Diagnostics

### SOFTWARE VERSION DISPLAY

**NOTE:** The Software Version Display mode will time out after 10 minutes of user inactivity and return to standby mode.

#### Entry Procedure

To enter Software Version Display, press and hold the 2nd button used to activate the Service Diagnostic mode for 3 seconds. Upon entry, the display will automatically cycle through the following information:

- ACU Firmware revision code (C: major revision number; C: minor revision number; C: test revision number)
- ACU Settings File revision code (L: flashes 4 times, each time showing 2 digits of the 8-digit number)
- HWI Application Firmware revision code (U: major revision number; U: minor revision number; U: test revision number)
- HWI Touch Firmware revision code (T: major revision number; T: minor revision number; T: test revision number)
- HWI Audio Firmware revision code (A: major revision number; A: minor revision number; A: test revision number)

#### Exit Procedure

Pressing the POWER button will exit Software Version Display and return driver to standby mode.

### FAULT/ERROR CODES

Refer to customer diagnosed codes and service fault/error codes on page 2-11.

#### Fault/Error Code Display Method

Fault codes are displayed by alternately showing FF and EE. All fault codes have an FF and an EE. The FF indicates the suspect System Category. The EE indicates the suspect Component System.

Up to five Fault/Error codes may be stored. When the oldest fault code is displayed, additional presses of the 3rd button will result in a single beep, then display of the most recent fault code. If each press of the 3rd button results in a triple beep, and the display shows "EEF", no saved fault codes are present.

#### Advancing Through Saved Fault/Error Codes

Procedure for advancing through saved fault codes:

Press and release the 3rd button used to activate Service Diagnostic	⇒ beep tone ⇒ most recent fault code is displayed
Report	⇒ beep tone ⇒ second most recent fault code is displayed
Report	⇒ beep tone ⇒ third most recent fault code is displayed
Report	⇒ beep tone ⇒ forth most recent fault code is displayed
Report	⇒ beep tone ⇒ fifth most recent fault code is displayed
Report	⇒ triple beep ⇒ back to the most recent fault code

#### Clearing Fault Codes

To clear stored fault codes, enter Service Diagnostic mode. Then press and hold the 3rd button used to enter Service Diagnostic mode for 5 seconds. Once the stored fault codes are successfully erased, the seven segment display will show "EEF" and a beep will sound.

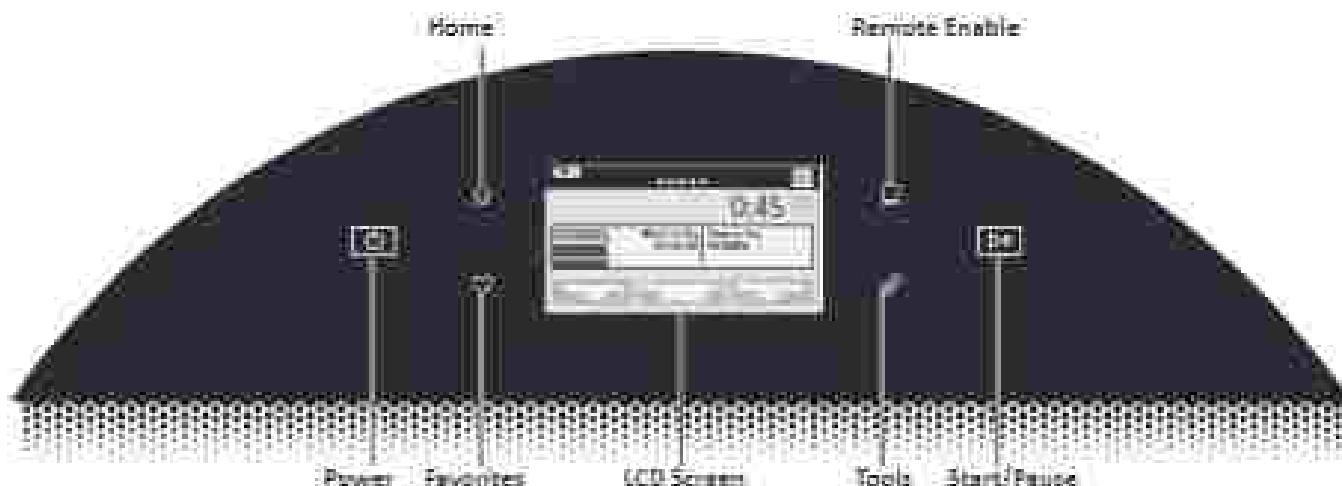
### EXITING SERVICE DIAGNOSTIC MODE

Use either of the two methods below to exit diagnostic mode:

- Pressing and holding the 1st button used to activate the Service Diagnostic mode for 5 seconds.
- Pressing the POWER button once or twice, depending on diagnostic procedure.

## DIAGNOSTICS & TROUBLESHOOTING

### Whirlpool LCD in Door Diagnostics



## ABBREVIATIONS

ACU: Appliance Control Unit

HMI: Human-Machine Interface

## DIAGNOSTIC GUIDE

Before servicing, check the following:

- Make sure there is power at the wall outlet.
- Has a household fuse blown or circuit breaker tripped? Use a regular fuse unless informed otherwise that a time-delay fuse is required.
- Is dryer vent properly installed and clear of lint or obstructions?
- All tests/checks should be made with a VOM (volt-ohm-milliammeter) or DVM (digital-voltmeter) having a sensitivity of 20 GΩ per volt DC or greater.
- Resistance checks must be made with dryer unplugged or power disconnected.
- **IMPORTANT:** Avoid using large diameter probes when checking harness connectors as the probes may damage the connectors upon insertion.
- Check all harnesses and connectors before replacing component. Look for connectors not fully seated, broken or loose wires and terminals, pin insertion, or wires not pressed into connectors far enough to engage metal bars.
- A potential cause of a control not functioning is corrosion or contamination on connections. Use an ohmmeter to check for continuity across suspected connections.

## SERVICE DIAGNOSTIC MODE

These tests allow service personnel to test and verify all inputs to the machine control electronics. You may want to do a quick and overall checkup of the dryer with these tests before going to specific troubleshooting tests.

## ACTIVATING SERVICE DIAGNOSTIC MODE

**IMPORTANT:** Use Service Diagnostic Mode without laundry in the dryer.

1. Be sure the dryer is in standby mode (plugged in with all indicators off).
2. Open and close the dryer door.
3. Press the POWER until the dryer display turns on. After a few seconds, the home screen will display.
4. Press the TOOLS button -
5. From the TOOLS menu, scroll down to "INFO".
6. From the INFO menu, select "SERVICE & SUPPORT".
7. From the SERVICE INFO screen, press and hold the DIAGNOSTICS button until the "ENTER PASSWORD" screen is displayed.
8. From the ENTER PASSWORD screen, input "123-123-123" and press "ENTER".
9. The WASHING-DIAGNOSTIC MODE screen will display. Press ENTER to enter diagnostic mode. The DIAGNOSTIC HOME screen will be displayed. To continue with the tests in Service Diagnostic Mode, see page 2-9.

### Activation with Saved Fault Codes

If there is a saved fault code, the F number will be shown in the display. Review the Fault/Error Codes beginning on page 2-11 for the recommended procedure and how to display saved error codes.

### Exit Procedure

To exit the Service Diagnostic Mode Tests, scroll to the top of the DIAGNOSTICS HOME screen, press the "<" button in the top left corner of the screen twice, and then press the HOME button.

**NOTE:** Service Diagnostic Mode times out after 3 minutes of user inactivity.

## Whirlpool LCD in Door Diagnostics

### **A DANGER**



#### **Electrical Shock Hazard**

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

### **A 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.

### Voltage Measurement Safety Information

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

### SERVICE DIAGNOSTIC MODE TESTS

**NOTE:** The Service Diagnostic Mode must be activated before performing the tests; see procedure on this page.

The following section describes components that may be turned on and off to help with troubleshooting certain issues.

**IMPORTANT:** Turn off power or disconnect dryer before attaching test leads. Be sure test leads are attached prior to component activation.

To check voltage measurements, the following steps must be followed:

1. Unplug dryer or disconnect power.
2. Connect voltage measurement equipment to applicable connectors.
3. Plug in dryer or reconnect power and confirm voltage reading.
4. After performing voltage measurements, unplug dryer or disconnect power.

### Active Fault Code Display in Quick Service Cycle

If the display begins flashing while running a Quick Service Cycle, it's displaying an active fault code. Active fault codes are codes that are currently being detected. Only one active fault code can be displayed at a time.

From the DIAGNOSTICS HOME screen:



Figure 1

Scroll down and select "Component Activation".

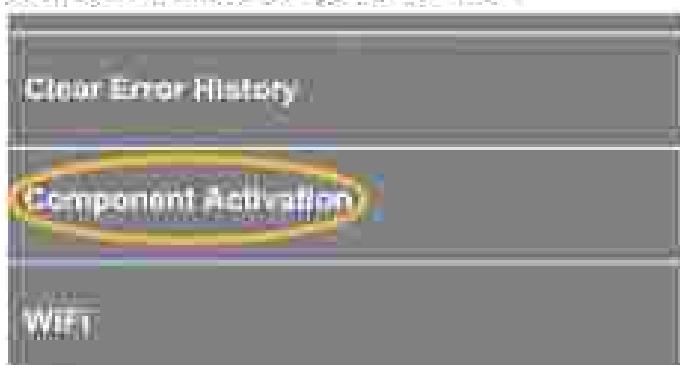


Figure 2

## DIAGNOSTICS & TROUBLESHOOTING

### Whirlpool LCD in Door Diagnostics

#### SERVICE DIAGNOSTIC MODE TESTS (Continued)

##### Component Activation

To enter the Service Test Mode from the Component Activation menu, press "START" to begin the diagnostic test (see Figure 3). Perform the "Actions" listed in the chart below to advance through each step in the Service Test Mode.



Figure 3

NOTE: If, at any point, the user presses the POWER button during the Service Test Mode, the dryer exits to standby mode.

**PERFORM ALL TESTS:** Complete all tests listed in the Service Test Mode chart below. At the completion of all the tests, the Human-Machine Interface (HMI) will record an overall status of PASSED or FAILED.

##### Exit Procedure

When the test cycle is complete, press the POWER button to exit Service Test Mode and return to standby mode.

#### Service Test Mode

The Service Test Mode will run as described in the table below. NOTE: The drum must be empty during this test.

Step	Action	Component	Human-Machine Interface Response
1	User enters "Component Activation" through Service Diagnostics		Display shows "START - On"
2	Touch START to begin "Quick Service Cycle" test	"Motor On", "Water Valve On"	Display shows "DRYER - FACTORY TESTING" Model Number: Serial Number: "Advance Phase" button prompts
3	Touching the "Advance Phase" button begins the heater test	"Motor On", "Water Valve On", "Heater On"	Display shows "DRYER - FACTORY TESTING" Test Heater "Advance Phase" button prompts
4	Touching the "Advance Phase" button stops the heater test	"Motor On", "Water Valve On", "Heater Off"	Display shows "START - On"
5	Open door to test the door switch	"Motor Off", "Water Valve Off", "Door Switch"	Display shows "DRYER - FACTORY TESTING" Test Door Switch If the Door Switch FAILED, the diagnostic test will not continue or timeout. If the Door Switch test PASSED, the message advances to: Test: Moisture Sensor
6	Touch your fingers across the two front moisture sensor strips	Moisture Sensor	Display shows "DRYER - FACTORY TESTING" Test: Moisture Sensor If the Moisture Sensor FAILED, the diagnostic test will not continue or timeout. If the Moisture Sensor test PASSED, the message advances to: Overall Status: PASSED/FAILED
7			If all test PASSED = Overall Status: PASSED If any test FAIL = Overall Status: FAILED

NOTE: The steam valve will be activated during steps 1 - 4. Wipe up any excess water in drum after diagnostic test has completed.

## Console and LCD Fault Error Codes

### **A 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.

### Service Fault/Error Codes

#### Fault/Error Code Display Method

Fault codes are displayed by showing **PF#**. The **PF** indicates the suspect System/Category. The **#** indicates the suspect Component/system.

The fault codes below may be indicated under various conditions and can be accessed through Service Diagnostics.

Code	Description	Explanation and Recommended Procedure
PF01	Moisture or Heater Failure or Connector Problem	Indicates no voltage detected at the heater relay. <ul style="list-style-type: none"> <li>Unplug dryer and disconnect power and check that the wires are plugged into the heater element(s) and the relay(s) on the ACU.</li> <li>For more check, see Test #3: Main Circuit, page 3-13.</li> </ul>
PF02	Exhaust Thermistor Open/Shorted	Indicates that the exhaust thermistor is open or shorted. If the temperature drops below 130° F (< 50° celsius), the exhaust thermistor is open. If the temperature is above 250° F (> 300° celsius), the exhaust thermistor has shorted. May occur if the J14 connector is not plugged into the ACU. See TEST #4a: Thermistors, page 3-16.
PF03	Moisture Sensor 1 Open/Shorted	Indicates the moisture sensor strip is open or shorted. This fault code will only appear when in the service diagnostic mode. See TEST #5: Moisture Sensor, page 3-18.
PF04	Inlet Thermistor Open/Shorted	Indicates that the inlet thermistor is open or shorted. If the temperature drops below 130° F (< 50° celsius), the inlet thermistor is open. If the temperature is above 250° F (> 300° celsius), the inlet thermistor has shorted. May occur if the J14 connector is not plugged into the ACU. See TEST #4a: Thermistors, page 3-16.
PF05	Moisture Sensor 2 Open/Shorted (only Quad Sense models)	Indicates the second moisture sensor strip is open or shorted. This fault code will only appear when in the service diagnostic mode. See TEST #5: Moisture Sensor, page 3-18.
PF06	ACU - HMI Communication Error	Indicates that the ACU and HMI have not communicated for a specified amount of time. <ul style="list-style-type: none"> <li>Unplug dryer or disconnect power.</li> <li>Check the harness continuity and connections between the ACU and HMI.</li> <li>Check AC and DC supplies. See TEST #1: ACU Power Check, page 3-8.</li> <li>Replace the HMI.</li> <li>Replace the ACU.</li> </ul>
PF07	WiFi Module Communications Lost	Indicates that the WiFi Module has not responded for a specified amount of time. <ul style="list-style-type: none"> <li>Unplug dryer or disconnect power.</li> <li>Check WiFi Module at HMI.</li> <li>Replace HMI.</li> </ul>

### Customer Diagnostic Codes

Code	Description	Explanation and Recommended Procedure
PF	Power Failure	PF indicates that a power failure occurred while the dryer was running. Press START to continue the cycle, or press POWER to clear the display.

## DIAGNOSTICS & TROUBLESHOOTING

# Console and LCD Troubleshooting Guide

## Troubleshooting Guide

**NOTE:** Always check for error codes first (page 2-11).

Problem	Possible Cause	Checks & Tests
Wont Power Up	No power to dryer.	Check power at outlet; check circuit breaker/fuses, or junction box connections.
No operation No keypad response No LEDs or display	Connection problem between AC plug and dryer.	See Test #2: Supply Connections, page 3-12.
	Connection problem between ACU and HMI.	Check connections and harness continuity between ACU and HMI.
	Power supplies not present at machine electronics.	See Test #1: ACU Power Check, page 3-8.
	HMI problem.	See Test #5: Buttons & Indicators, page 3-10.
WILL Not Start Cycle (no response when START button is pressed)	Door not fully closed or striking the door limit.	Be sure the door is completely closed, then open and hold the START button.
	Door switch problem.	See Test #7: Door Switch, page 3-21.
	Drive belt/belt switch (gas only) problem.	See Test #3: Motor Circuit, page 3-11.
	Thermal fuse / Motor Problem.	See Test #3: Motor Circuit, page 3-11.
	HMI problem.	See Test #5: Buttons & Indicators, page 3-10.
	ACU problem.	See Test #1: ACU Power Check, page 3-8.
WILL Not Shut Off When Expected	Fan airflow.	Check int screen and exhaust vent. Clean if necessary.
	Check the Start/Pause button.	Perform Key Activation & Encoder Test.
	Moisture sensor problem.	See Test #3: Moisture Sensor, page 3-13.
	Thermistor problem.	See Test #4: Thermistors, page 3-16.
	HMI problem.	See Test #5: Buttons & Indicators, page 3-10.
	ACU problem.	See Test #1: ACU Power Check, page 3-8.
Console Won't Accept Selections	User selected invalid option.	Refer customer to "Use and Care Guide."
	HMI problem.	See Test #5: Buttons & Indicators, page 3-10.
Drum WILL Not Spin	Drive belt/belt switch (gas only) problem.	See Test #3: Motor Circuit, page 3-11.
	Thermal fuse (elect. only).	See Test #4b: Thermal Fuse, page 3-17.
	Door switch problem.	See Test #7: Door Switch, page 3-21.
	Motor problem.	See Test #3: Motor Circuit, page 3-11.
	ACU problem.	See Test #1: ACU Power Check, page 3-8.
WILL Not Heat	Check installation.	Verify proper dryer installation.
	Check for LL and LE.	Perform ACULC and CL tests under Service Test Mode.
	Heater system malfunction, or open heating coil.	See Test #4: Heat System, page 3-14.
	ACU problem.	See Test #1: ACU Power Check, page 3-8.

Continued on following page

## Console and LCD Troubleshooting Guide

### Troubleshooting Guide

Continued from page 2-6.

Problem	Possible Cause	Checks & Tests
Heats in Air Cycle	Heater coil shorted.	See Test #1: Heat System, page 3-14.
	Heater relay shorted.	See Test #1: Heat System, page 3-14.
	Heater system problem.	See Test #2: Heat System, page 3-14.
Shuts OFF Before Clothes Are Dry	Dryness setting for auto cycles.	Increase Dryness setting for one or more auto cycles.
	Lint screens full.	Clear if necessary. Refer customer to "Use and Care Guide."
	Heater vent plugged.	Clear if necessary. Refer customer to "Use and Care Guide."
	Moisture Sensor problem.	See Test #3: Moisture Sensor, page 3-18.
Water Valve Not Dispensing (on some models) (Water valve isactus intermittently during the steam cycle.)	Steam cycle not selected.	Refer customer to "Use and Care Guide."
	No water to valve.	Verify water supply is turned on.
	No water from valve.	See Test #5: Water Valve, page 3-25.
Water Leaking From Dryer (on some models) (Too much water being dispensed during steam cycles.)	Residue buildup on water nozzle opening.	Uncover nozzle and clean if necessary. Refer customer to "Use and Care Guide."

## Voltage to Hexadecimal Codes

Voltage is displayed in hexadecimal (Hex) format on models with a 2-digit 7-segment display. If the calculated voltage is greater than 255 volts, FF will be displayed. See the table below for the voltage to hex codes.

HEX Display	Voltage						
5A	90	55	133	60	176	6F	210
5B	91	56	134	61	177	70	220
5C	92	57	135	62	178	71	221
5D	93	58	136	63	179	72	222
5E	94	59	137	64	180	73	223
5F	95	5A	138	65	181	74	224
60	96	5B	139	66	182	75	225
61	97	5C	140	67	183	76	226
62	98	5D	141	68	184	77	227
63	99	5E	142	69	185	78	228
64	100	5F	143	6A	186	79	229
65	101	60	144	6B	187	7A	230
66	102	61	145	6C	188	7B	231
67	103	62	146	6D	189	7C	232
68	104	63	147	6E	190	7D	233
69	105	64	148	6F	191	7E	234
6A	106	65	149	70	192	7F	235
6B	107	66	150	71	193	80	236
6C	108	67	151	72	194	81	237
6D	109	68	152	73	195	82	238
6E	110	69	153	74	196	83	239
6F	111	6A	154	75	197	84	240
70	112	6B	155	76	198	85	241
71	113	6C	156	77	199	86	242
72	114	6D	157	78	200	87	243
73	115	6E	158	79	201	88	244
74	116	6F	159	7A	202	89	245
75	117	70	160	7B	203	FA	246
76	118	71	161	7C	204	FB	247
77	119	72	162	7D	205	FC	248
78	120	73	163	7E	206	FD	249
79	121	74	164	7F	207	FE	250
7A	122	75	165	80	208	F0	251
7B	123	76	166	81	209	F1	252
7C	124	77	167	82	210	F2	253
7D	125	78	168	83	211	F3	254
7E	126	79	169	84	212	F4	255
7F	127	7A	170	85	213		
80	128	7B	171	86	214		
81	129	7C	172	87	215		
82	130	7D	173	88	216		
83	131	7E	174	89	217		
84	132	7F	175	90	218		

## Section 3: Component Testing

This section provides a wiring diagram, control board specifications, testing procedures and strip circuits for the Whirlpool & Maytag Front-Load Gas & Electric Dryers.

- Testing-Safety Information
- Component Locations
- Wiring Diagram - Whirlpool, Electric
- Wiring Diagram - Whirlpool, Gas
- Wiring Diagram - Maytag, Electric
- Wiring Diagram - Maytag, Gas
- Component Testing
- TEST #1: ACU Power Check
- TEST #2: Supply Connections
- TEST #3: Motor Circuit
- TEST #4: Heating System
- TEST #5: Thermistor
- TEST #6: Thermal Fuse
- TEST #8: Thermal Cut-off
- TEST #9: Gas Valve (Gas Dryer)
- TEST #10: Moisture Sensor
- TEST #11: Buttons and Indicators
- TEST #12: Door Switch
- TEST #13: Drum LED
- TEST #14: Water Valve

## For Service Technician Use Only

**DANGER****Electrical Shock Hazard**

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

**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.

**Voltage Measurement Safety Information**

When performing live voltage measurements, you must do the following:

- Verify the controls are in the off position so that the appliance does not start when energized.
- Allow enough space to perform the voltage measurements without obstructions.
- Keep other people a safe distance away from the appliance to prevent potential injury.
- Always use the proper testing equipment.
- After voltage measurements, always disconnect power before servicing.

**IMPORTANT: Electrostatic Discharge (ESD) Sensitive Electronics**

ESD problems are present everywhere. Most people begin to feel an ESD discharge at approximately 3000V. It takes as little as 10V to destroy, damage, or weaken the main control assembly. The new main control assembly may appear to work well after repair is finished, but a malfunction may occur at a later date due to ESD stress.

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

• OR •

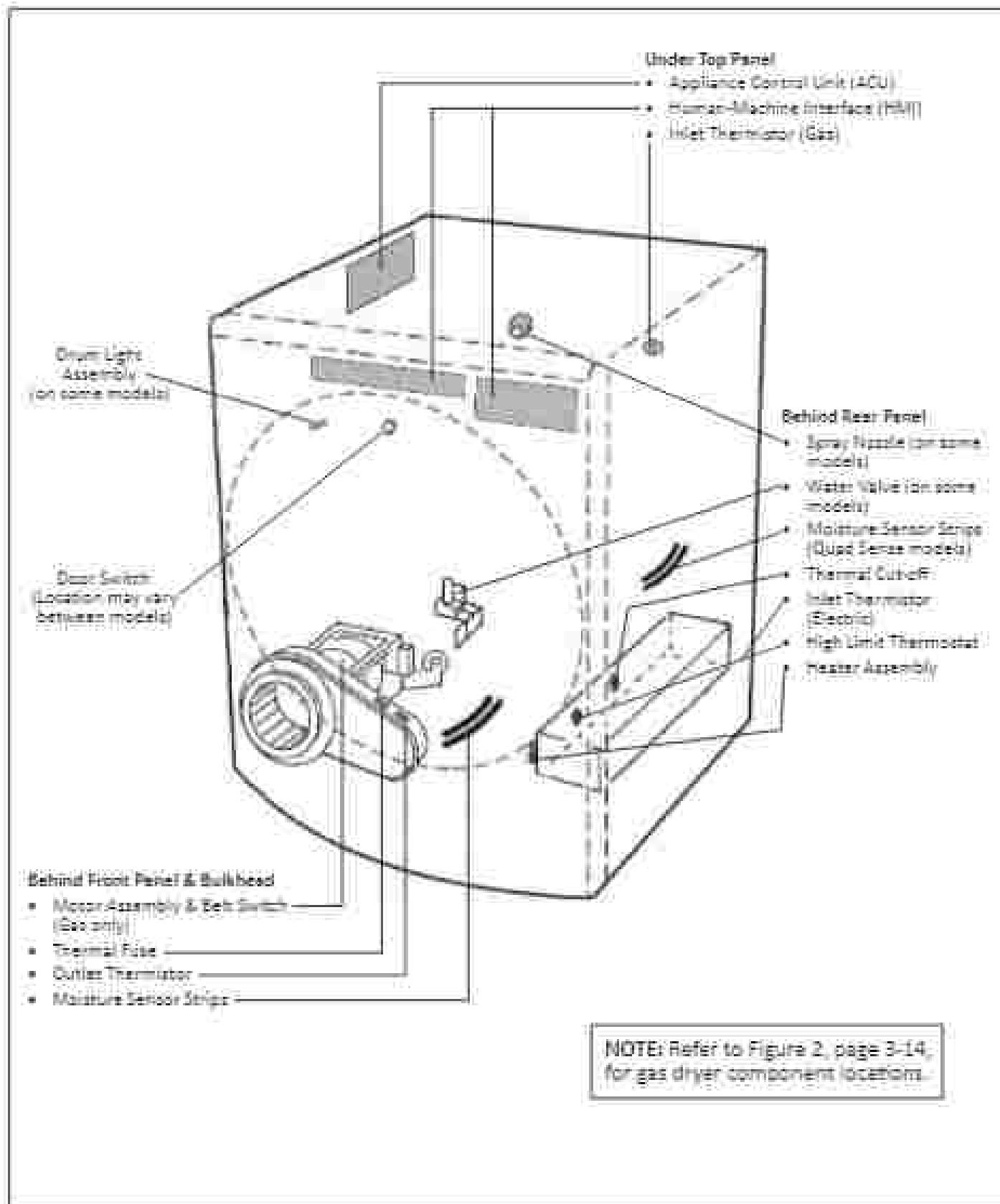
- Touch your finger repeatedly to a green ground connection point or unpainted metal in the appliance.
- Before removing the part from its package, touch the anti-static bag to a green ground connection point or unpainted metal in the appliance.
- Avoid touching electronic parts or terminal contacts;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

**IMPORTANT SAFETY NOTICE — "For Technicians only"**

This service data sheet is intended for use by persons having electrical, electronic, and mechanical experience and knowledge at a level generally considered acceptable in the appliance repair trade. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

## For Service Technician Use Only

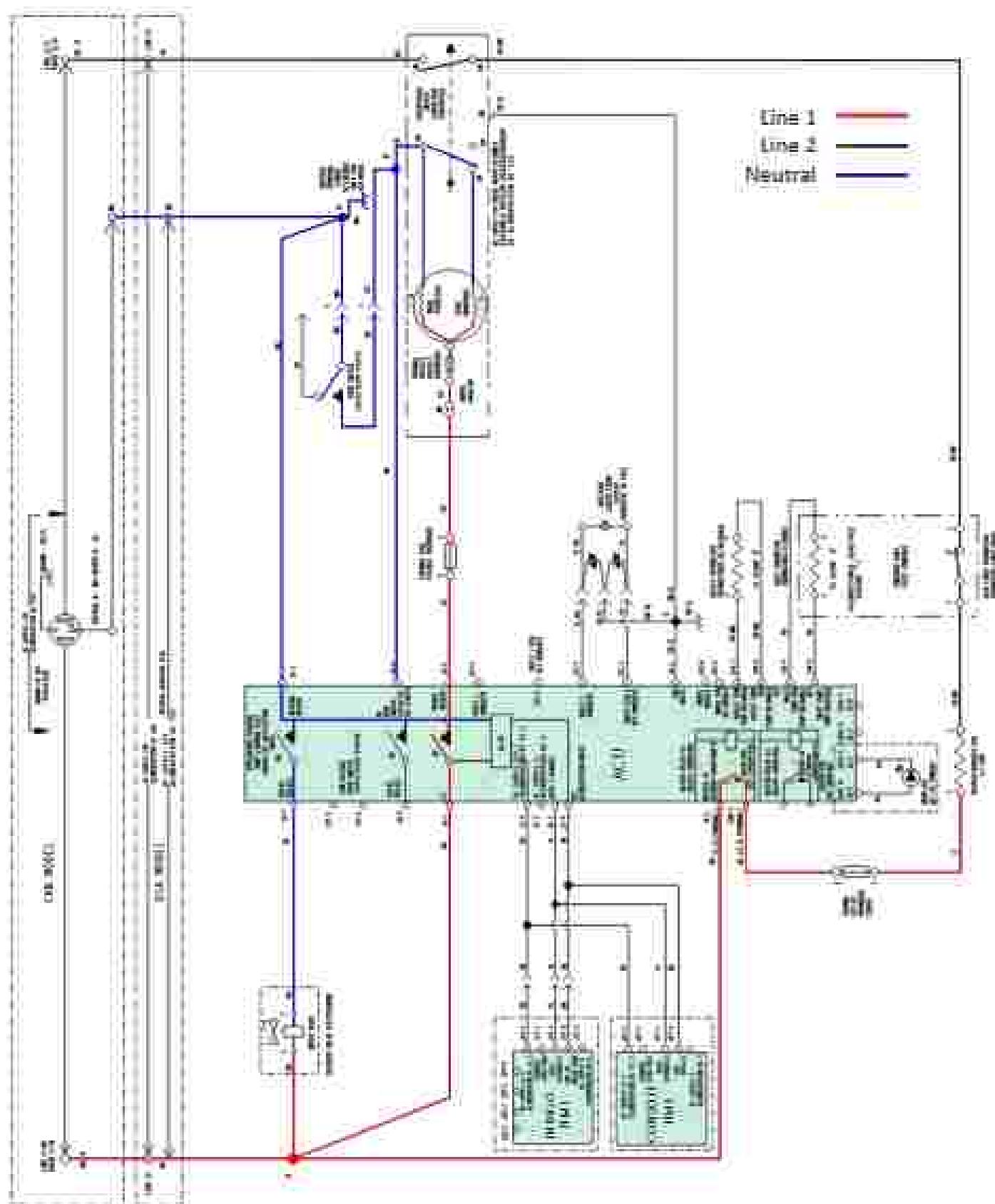
### COMPONENT LOCATIONS - WHIRLPOOL (FIGURE 1)



## COMPONENT TESTING

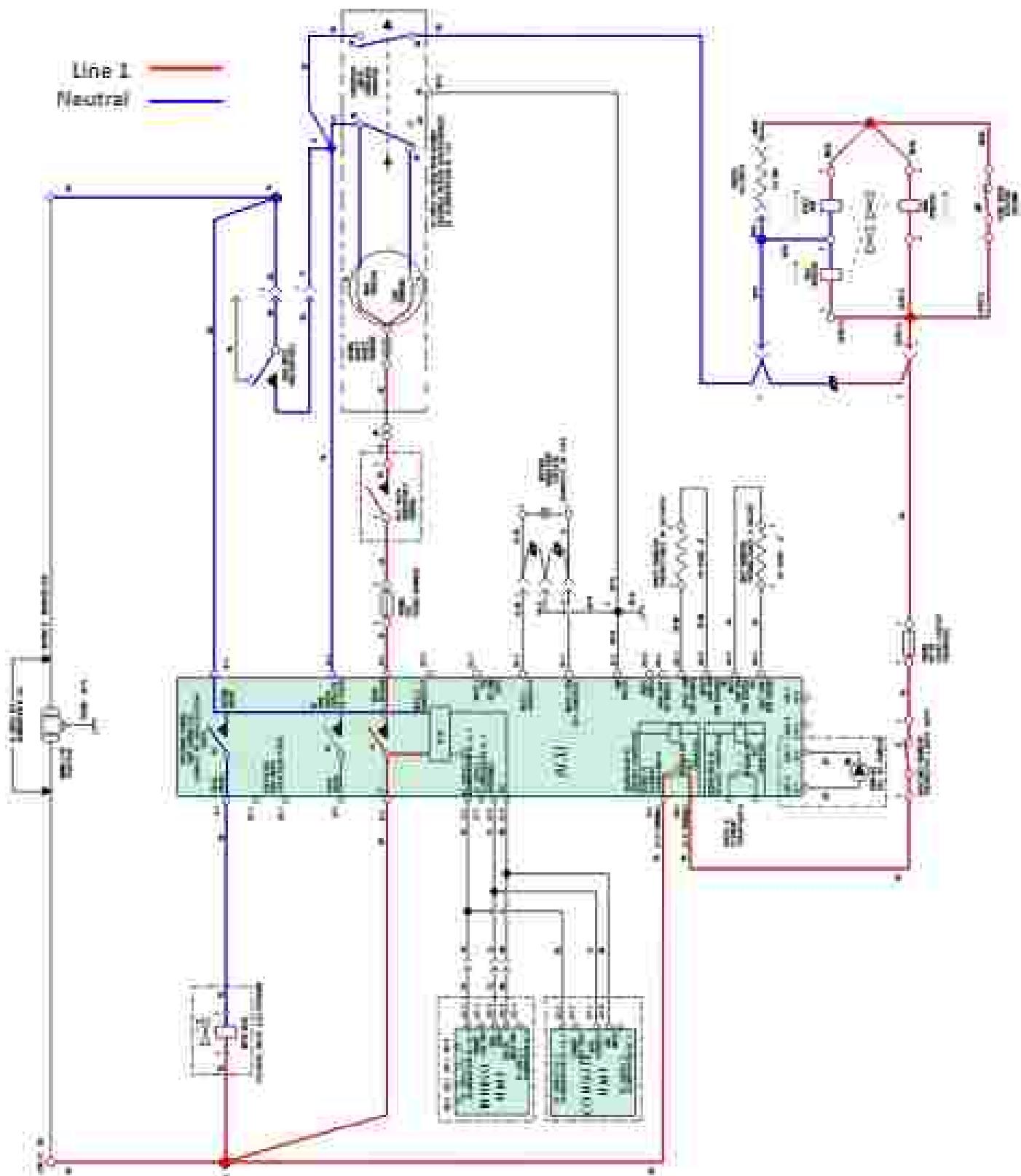
### For Service Technician Use Only

#### WIRING DIAGRAM - WHIRLPOOL ELECTRIC (240/208 VAC)



**For Service Technician Use Only**

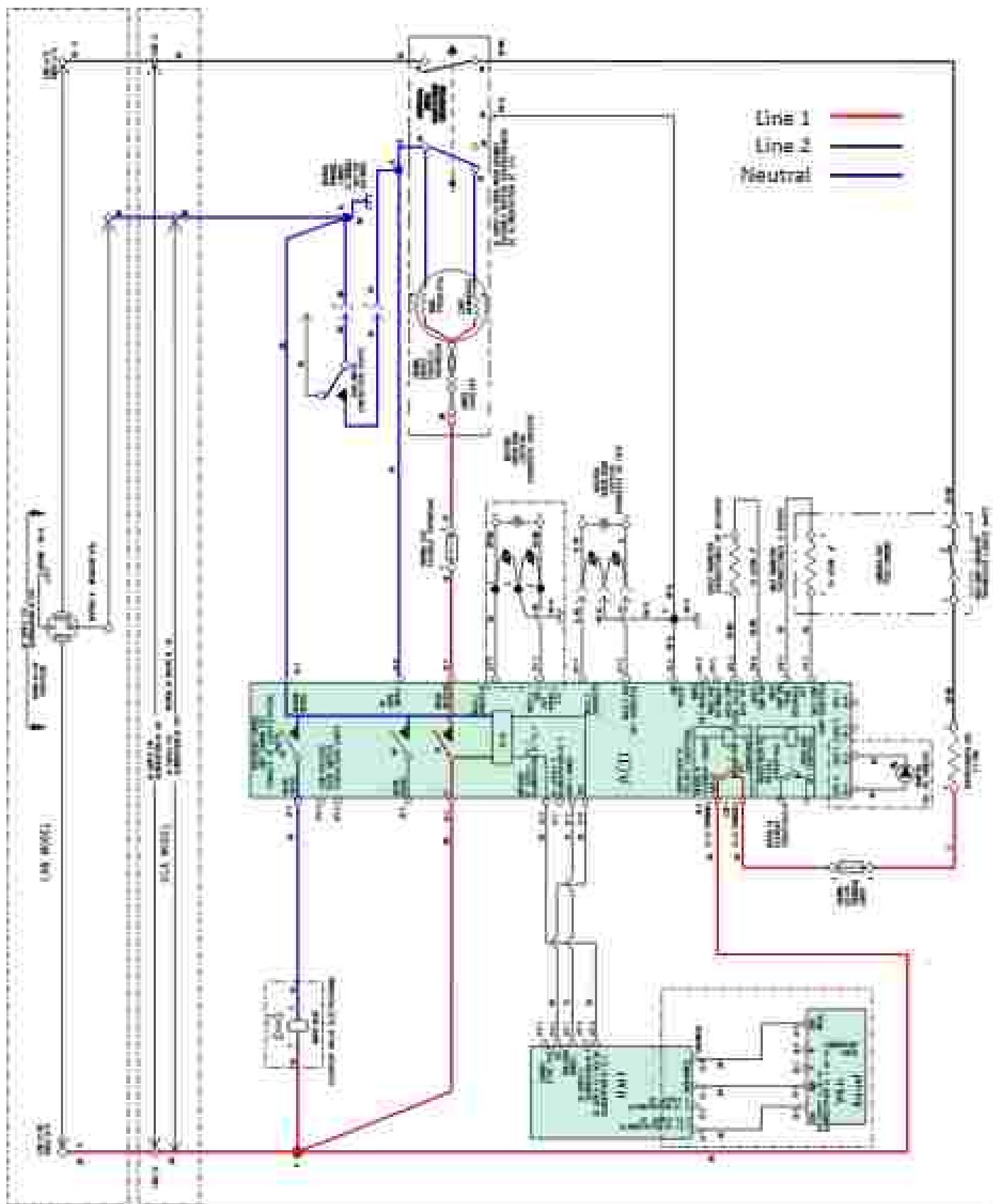
WIRING DIAGRAM - WHIRLPOOL GAS (120 VAC)



## COMPONENT TESTING

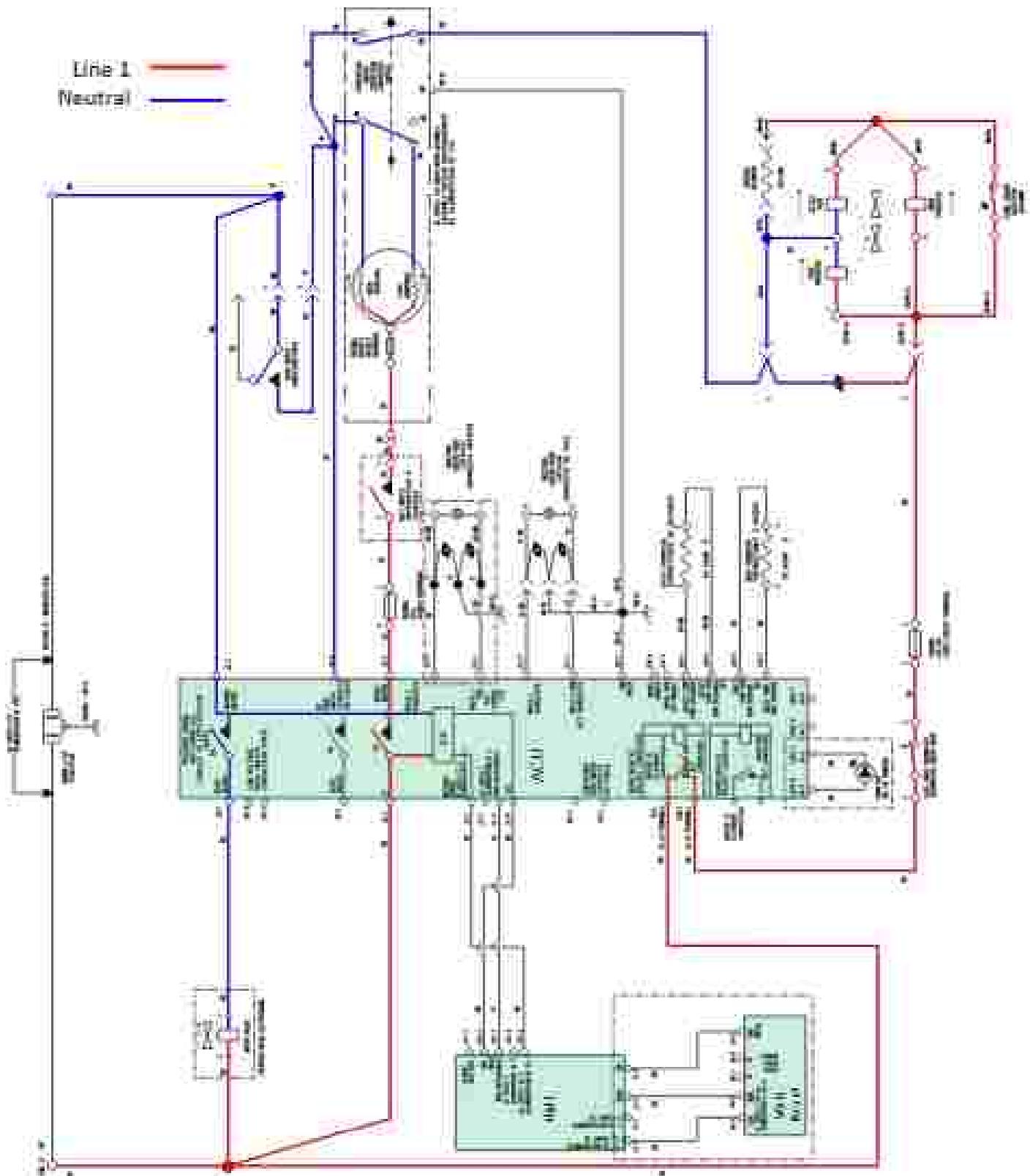
### For Service Technician Use Only

#### WIRING DIAGRAM - MAYTAG, ELECTRIC (240/208 VAC)



**For Service Technician Use Only**

WIRING DIAGRAM - MAYTAG, GAS (120 VAC)



## For Service Technician Use Only

**A DANGER****Electrical Shock Hazard**

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

**Component Testing****TESTING DRYER COMPONENTS FROM THE CONTROL**

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

- The most common cause for non-daginated control failure is poor connection. Therefore, disconnecting, inspecting and reconnecting wires will be necessary throughout test procedures.
- All tests/checks should be made with a DVM or VOM having a sensitivity of 20,000 ohms-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 firmly enough.
- Voltage checks must be made with all connectors attached to the boards.
- **IMPORTANT:** Resistance checks must be made with power cord unplugged or power disconnected, and with wiring harnesses or connectors disconnected from the control.

The testing procedures in this section may require the use of needle probes to measure voltage. Failure to use needle probes will damage the connections.

**TEST #1: ACU Power Check**

This test is used to determine if power is present at the Appliance Control Unit (ACU). This test assumes that proper voltage is present at the outlet.

1. Verify that the green LED on the ACU is lit when the dryer is turned on.

**NOTE:** It is important to verify that the ACU is not in "Low Power" mode. If the HMI is working correctly, it will "wake up" the system after powering up and pressing POWER. To verify, unplug dryer or disconnect power for 30 seconds. Plug in dryer or reconnect power. Press POWER. If the ACU comes up i.e., the green LED on the ACU flashes and

then stays lit after boot-up is completed, but the HMI does not, there may be a problem with the HMI.

## 2. Unplug dryer or disconnect power.

3. Check for appropriate line voltages at the outlet: 240 VAC (electric 2-phase), 120 VAC (electric 3-phase), or 220 VAC (gas).

- If line voltage is present, go to step 4.

- If line voltage is not present, check for tripped circuit breaker or blown household fuse. If GFI (circuit breaker) is not tripped, have customer check with qualified electrician.

## 4. Remove top panel to access the machine electronics.

5. ACU VAC – With voltmeter set to AC, connect black probe to ACU 18-3 (W) and red probe to 18-2 (L1). (See Figure 1, page 3-3.) Plug in dryer or reconnect power.

- If 120 VAC is present, unplug dryer or disconnect power and go to step 6.

- If 120 VAC is not present, unplug dryer or disconnect power and perform TEST #1: Supply Connections, page 3-3.

6. ACU +5VDC – With voltmeter set to DC, unplug connector J2 from the ACU and connect black probe to ACU 12-4 (ground) and red probe to J2-2 (+5VDC). Plug in/dryer or reconnect power.

- If +5VDC is present, go to step 9.

- If +5VDC is not present, go to step 7.

## 7. Unplug dryer or disconnect power. Unplug J14 from the ACU. Plug in/dryer or reconnect power and repeat step 6.

- If +5VDC returns, one of the thermistors has shorted. To diagnose thermistors, see TEST #4a, page 3-5.

- If +5VDC is not present, go to step 8.

8. Unplug dryer or disconnect power. Reconnect J14 to the ACU and unplug J2 from the ACU. Plug in/dryer or reconnect power and repeat step 6. Perform voltage check inside header J2 on ACU, between pins 1, 8, 9—DO NOT SHORT PINS TOGETHER.

- If +5VDC is still missing, unplug dryer or disconnect power and replace the ACU.

- If +5VDC returns, unplug dryer or disconnect power and check harnesses and connections between the ACU and HMI. If acceptable, replace the HMI.

9. ACU +12.7 VDC – With voltmeter set to DC, connect black probe to ACU 18-4 (ground) and red probe to 18-1(+12.7 VDC). Plug in/dryer or reconnect power.

- If +12.7 VDC is present, go to step 11.

- If +12.7 VDC is not present, go to step 10.

10. Unplug dryer or disconnect power. Unplug connector J2 from the ACU. Perform voltage check inside header J2 on ACU, between pins 1, 8, 9—DO NOT SHORT PINS TOGETHER.

- If +12.7 VDC is still missing, unplug dryer or disconnect power and replace the ACU.

- If +12.7 VDC returns, unplug dryer or disconnect power and check harnesses and connections between the ACU and HMI. If acceptable, replace the HMI.

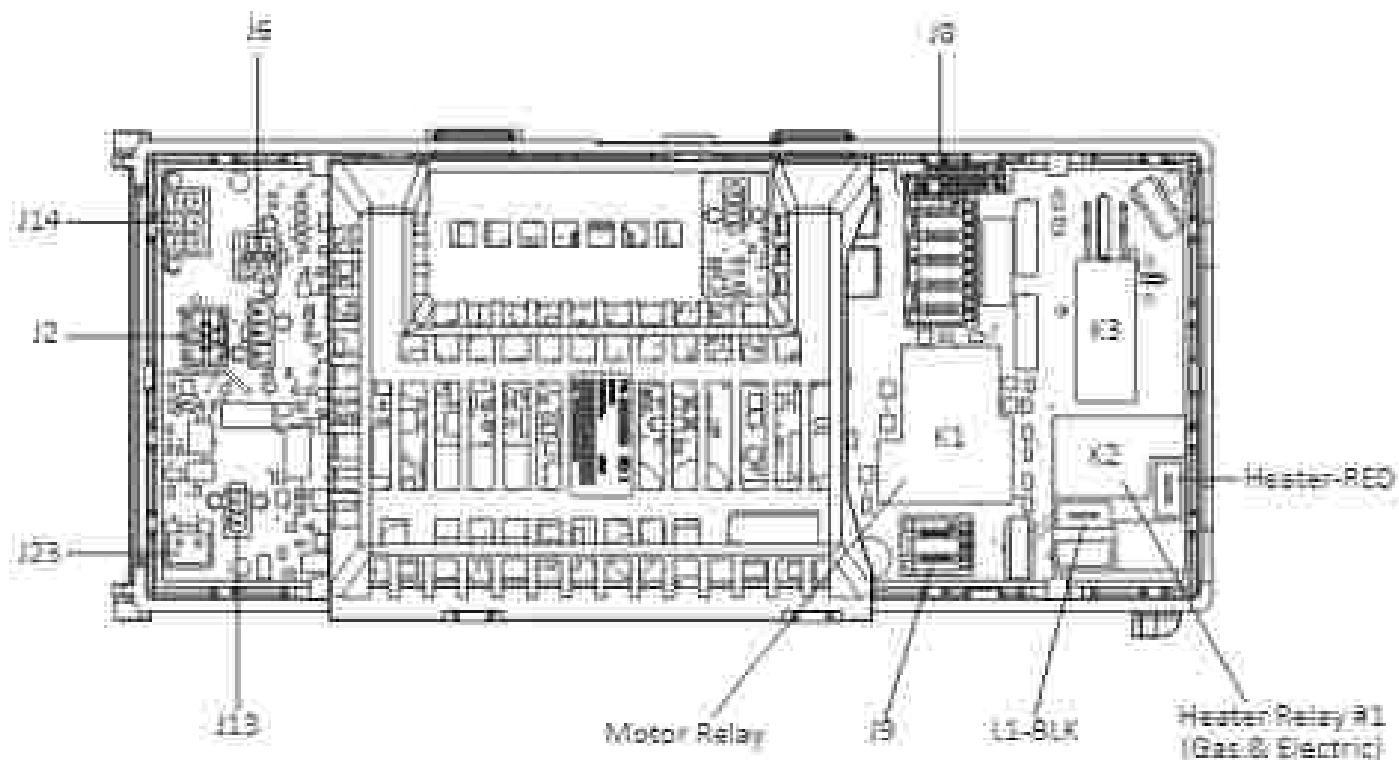
## 11. Unplug dryer or disconnect power.

## 12. Reassemble all parts and panels.

13. Perform steps under "Service Diagnostic Mode," page 2-4, to verify repair.

## For Service Technician Use Only

### ACU BOARD (FIGURE 1)



### ACU CONNECTORS (FIGURE 2)

#### J2 – WIN BUS (+5VDC and +12.7 VDC)

1	RED	+12.7 VDC
2	NE	+5VDC
3	YEL	DATA
4	BLK	GND

#### J8 – MYST VALVE/DOOR SWITCH

88-5	OPEN
88-4	TWN DOOR SWITCH
88-3	WHT NEUTRAL
88-2	GY CHASSIS GND
88-1	RED MYST VALVE (ON SOME MODELS)

#### J6 – DRUM LIGHT LED

A	2-1	RED LED ANODE
B	2-2	BLK LED CATHODE

#### J9 – MOTOR/L1

29-2	BLK	L1
29-1	LT-BLU	MOTOR

#### J13 – MOISTURE SENSOR

313-1	YEL	MOISTURE SENSOR
313-2	YEL	MOISTURE SENSOR

#### J23 – REAR MOISTURE SENSOR (on some models)

323-1	BLK	MOISTURE SENSOR
323-2	RED	MOISTURE SENSOR

#### J14 – THERMISTORS

J14-3	R/W	OUTLET THERMISTOR	J14-5	R/W	OUTLET THERMISTOR
J14-2	RED	INLET THERMISTOR	J14-6	OPEN	
J14-1	RED	INLET THERMISTOR	J14-7	OPEN	

## For Service Technician Use Only

**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.

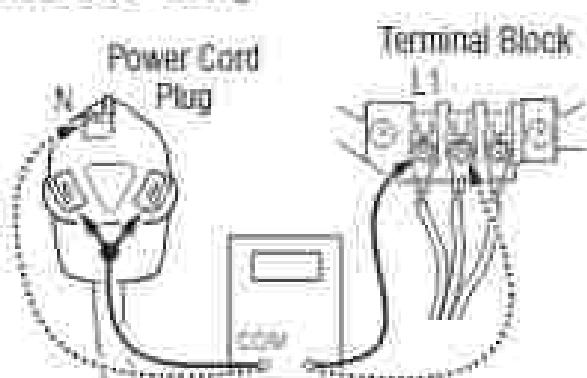


Figure 2 - Plug-to-Terminal connections for electric dryer.

**TEST #2: Supply Connections**

This test assumes that proper voltage is present at the outlet, and for U.S. installations, a visual inspection indicates that the power cord is securely fastened to the terminal block (electric dryer) or wire harness connection (gas dryer).

**ELECTRIC DRYER (U.S. Installations):**

1. Unplug dryer or disconnect power.
2. Remove the cover plate from the top right corner of the back of the dryer. See Figure 1.

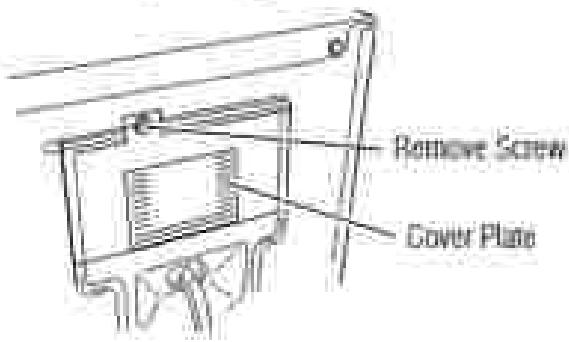


Figure 1 - Remove the cover plate (appearance may vary).

3. With an ohmmeter, check for continuity between the neutral (N) terminal of the plug and the center contact on the terminal block. See Figure 2.
  - > If there is no continuity, replace the power cord and test the dryer.
  - > If there is continuity, go to step 4.
4. In a similar way, check which terminal of the plug is connected to the left-most contact on the terminal block and make a note of it. This will be L1 (black wire) in the wiring diagram. See figure 2.
  - > When this is found, go to step 5.
  - > If neither of the plug terminals have continuity with the left-most contact of the terminal block, replace the power cord and retest dryer.

5. Remove top panel. Access the machine electronics without disconnecting any wiring to the ACU.
6. With an ohmmeter, check for continuity between the L1 terminal of the plug (found in step 4) and L1-2 (black wire) on the ACU.
  - > If there is continuity, go to step 7.
  - > If there is no continuity, check that wires to the terminal block are mechanically secure. If not, replace the main wire harness and test the dryer.
7. Check for continuity between the neutral (N) terminal of the plug and S1-3 (white wire) on the ACU.
  - > If there is continuity, go to step 8.
  - > If there is no continuity and the mechanical connections of the wire are secure, replace the main wire harness.
8. Visually check that all connectors are fully inserted into the ACU.
9. Visually check that all connectors are fully inserted into the HCU.
10. Reassemble all parts and panels.
11. Plug in dryer or reconnect power.
12. Perform steps under "Service Diagnostic Mode", page 2-4, to verify repair.

**ELECTRIC DRYER (Canadian installations):**

1. Unplug dryer or disconnect power.
2. Remove the cover plate from the top right corner of the back of the dryer. See Figure 1.
3. Remove top panel. Access the machine electronics without disconnecting any wiring to the ACU.
4. With an ohmmeter, check the continuity from L1 and N plug terminals of the power cord to the terminals for L1 and N on the ACU. See figure 3, page 3-11.
  - > If continuity exists for both connections, go to step 5.
  - > If an open circuit is found, check the integrity of the connections of the power cord to the harness to the dryer harness to the ACU, and the integrity of the power cord itself.

## For Service Technician Use Only

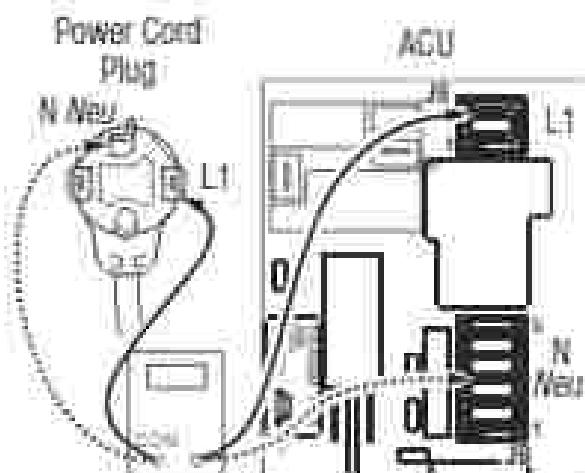


Figure 3 • Plug-to-terminal connections for electric dryer.

5. If it is necessary to replace the power cord, remove the retaining clip that secures the cord to the back panel. Disconnect the cord from the main harness and the ground wire from the rear panel. Then pull out the power cord.
6. Visually check that all connectors are fully inserted into the ACU.
7. Visually check that all connectors are fully inserted into the HMI.
8. Reassemble all parts and panels.
9. Plug in dryer or reconnect power.
10. Perform steps under "Service Diagnostic Mode", page 2-4, to verify repair.

### GAS DRYER (U.S. and Canadian installations):

1. Unplug dryer or disconnect power.
2. Remove the cover plate from the top right corner of the back of the dryer. See figure 4, page 2-10.
3. Check that the power cord is firmly connected to the dryer's wire harness. See Figure 4.

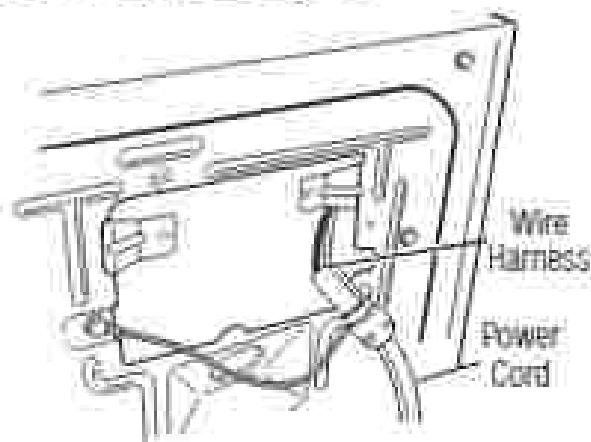


Figure 4 • Power cord-to-wire harness connection for gas dryer.

4. Remove top panel. Access the machine electronics without disconnecting anything to the ACU.
5. With an ohmmeter, check for continuity between the neutral (N) terminal of the plug and JS-3 (white wire) on the ACU. The left-hand side of figure 5 shows the position of the neutral terminal (N) on the power cord plug. Also see figure 1, page 3-4.
  - If there is continuity, go to step 6.
  - If there is no continuity, disconnect the white wire of the main harness from the power cord at the location illustrated in figure 4. Test the continuity of the power cord neutral wire as illustrated in figure 5. If an open circuit is found, replace the power cord. Otherwise, go to step 6.

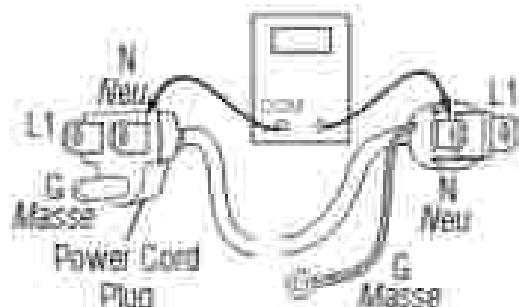


Figure 5 • Power cord terminals; gas dryer.

6. In a similar way, check for continuity between the L1 terminal of the plug and JS-2 (black wire) on the ACU.
  - If there is continuity, go to step 7.
  - If there is no continuity, check the continuity of the power cord in a similar way to that illustrated in figure 5, but for power cord's L1 wire.
  - If an open circuit is found, replace the power cord. Otherwise, replace the main harness.
7. Visually check that all connectors are fully inserted into the ACU.
8. Visually check that all connectors are fully inserted into the HMI.
9. Reassemble all parts and panels.
10. Plug in dryer or reconnect power.
11. Perform steps under "Service Diagnostic Mode", page 2-4, to verify repair.

## For Service Technician Use Only

**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.

- 3. Motor Circuit Check -** Access the AOU and measure the resistance across J8-4 and J8-1.

If resistance across J8-4 and J8-1 is in the range of 1 to 5  $\Omega$ , the motor circuit is acceptable. Replace the AOU.

Otherwise, continue to step 5.

- 4. Inspect the wiring and components in the path between these measurement points by referring to the appropriate wiring diagram (gas or electric) on pages 3-4 to 3-7).**  
**NOTE:** To access motor system components, slide the top back and remove the front panel.

**ALL DRYERS:** Check the thermal fuse. See TEST #4B: Thermal Fuse, page 3-17.

**ALL DRYERS:** Continue with step 7 below to test the remaining components in the motor circuit.

- 5. Check the drive motor and belt switch (gas dryer only).**  
 Gently remove the drum belt from the spring-loaded belt switch pulley, gently letting the pulley down. See figure 1.

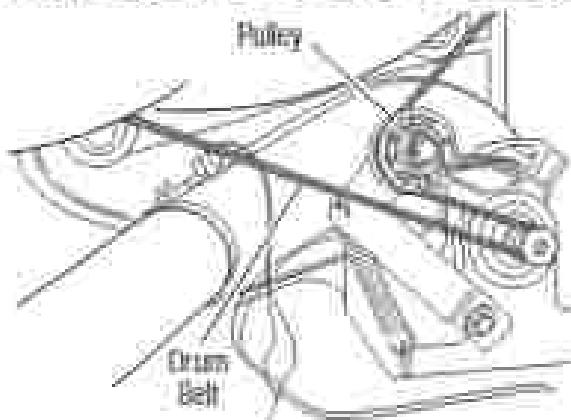


Figure 1 - Gently remove drum belt.

- 6. Remove the white connector from the drive motor switch.** See figure 2.

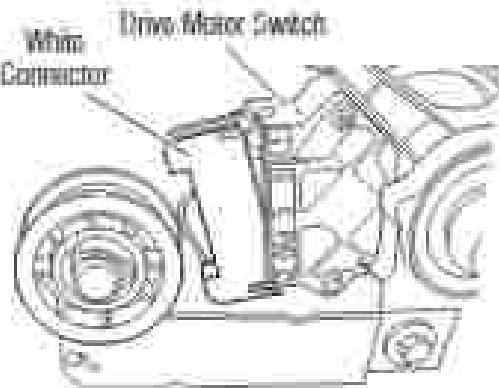


Figure 2 - Remove white connector.

**TEST #3: Motor Circuit**

This test will check the wiring to the motor and the motor itself. The following items are part of this motor system:

Part of Motor System	Gas Dryer	Electric Dryer
Drum belt	✓	✓
Door switch	✓	✓
Harness connector	✓	✓
Thermal fuse	✓	✓
Drive motor	✓	✓
Door switch	✓	✓
Centrifugal switch	✓	✓
AOU	✓	✓

**NOTE:** Refer to step circuit on page 3-18 to diagnose the drive motor.

1. Unplug dryer or disconnect power.
2. Remove top panel to access the machine electronics.
3. Check for loose, worn, or damaged drum belt—repair as necessary.
4. Door switch problems can be uncovered by following procedure under TEST #7: Door Switch, page 3-21; however, if this was not done, the following can be performed without applying power to the dryer. Connect an ohmmeter across AOU J8-3 (neutral, white wire) and J8-4 (load tan wire).
  - When the door properly closed, the ohmmeter should indicate a closed circuit (0–500).
  - If not, check harnesses and connections between AOU and door switch. If good, replace the door switch assembly.

## For Service Technician Use Only

9. Remove the bare copper wire terminal from pin 5 of black drive motor switch. See Figure 3.



Figure 3 - Main and start winding measure points

10. Using Figure 3 and the strip circuit below, check for the resistance values of the motor's Main and Start winding coils as shown in the following table.

**NOTE:** Main and Start winding coils must be checked at the motor.

Winding	Resistance in ohms	Connect Points of Measurements
(M4)(1)	3.5-3.8	Blue wire in back at pin 4 and bare copper wire terminal removed from pin 5 of black drive motor switch
ST4(2)	3.5-3.8	Blue wire in back at pin 4 and bare copper wire terminal on pin 3 of black drive motor switch

- If the resistance at the motor is correct, there is an open circuit between the motor and ACU. For gas models, check for a belt switch problem; see step 11. For electric motors, check and repair the main wiring harness.
- If the Main or Start winding resistance is much greater or less than the values listed in the table above, replace the motor.

### MOTOR STRIP CIRCUIT

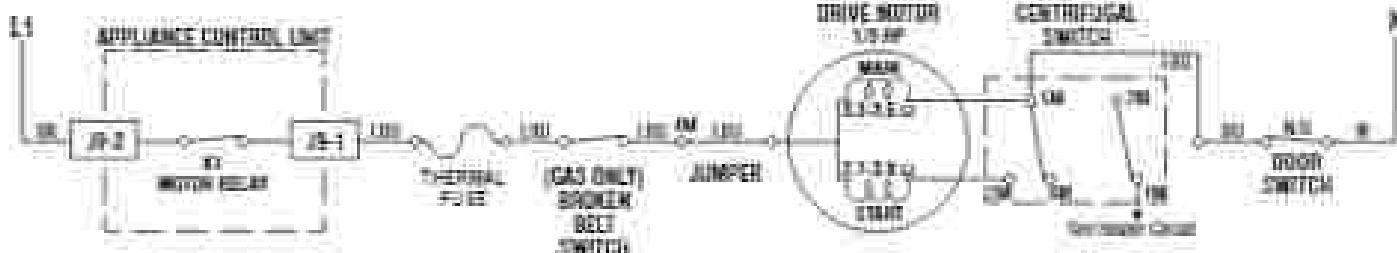


Figure 7 - Motor Strip Circuit

## For Service Technician Use Only

**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.

**ELECTRIC DRYER ONLY:**

- ✓ Quick Check: Perform steps under "Service Diagnostic Mode" page 2-4, to test for L1 and L2 line voltage.
  - If L1 is present, the heater relay is receiving L1 line voltage.
  - If L2 is present, the heater relay is receiving L2 line voltage, confirming that the centrifugal switch, heater, high limit thermostat, and the thermal switch are functional.
- 1. Unplug dryer or disconnect power.
- 2. Remove front panel to access thermal components.
- 3. Using an ohmmeter and referring to the strip circuit or wiring diagram, measure the resistance from the red/white terminal at the thermal cut-off to the red/white wire terminal at the heater.
- If the resistance is about 10Ω, go to step 5.
- If an open circuit is detected, go to step 4.

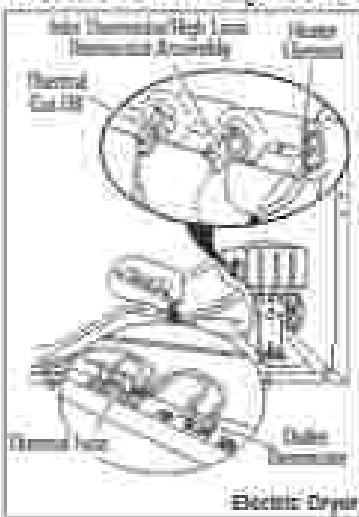


Figure 1 - Thermal components; electric dryer; viewed from front.

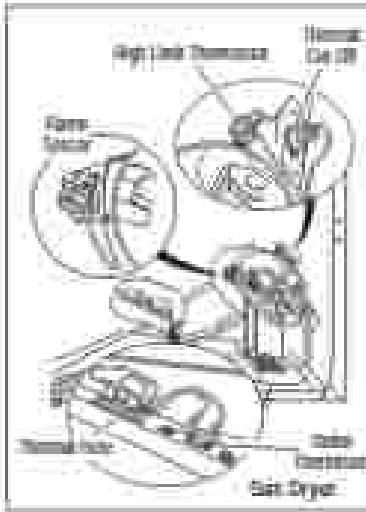


Figure 2 - Thermal components; gas dryer; viewed from front.

4. Visually check the wire connections to the thermal cut-off, high limit thermostat, and heater. If the connections look good, check for continuity across each of these components. Refer to strip circuit on page 3-15.

## For Service Technician Use Only

- Replace the heater if it is electrically open.
- Replace both the thermal cut-off and high limit thermostat if either the thermal cut-off or the high limit thermostat is electrically open.
- 3. If no open circuit is detected, remove the J14 connector from the ACU and measure the outlet thermistor resistance between J14-3 and J14-6 at the connector. Refer to "Outlet Thermistor Resistance" table on page 3-15 for temperatures and their associated values.
  - If the resistance corresponds to the temperature, the outlet thermistor is good. Go to step 6.
  - If the thermistor resistance does not agree with the table, replace the outlet thermistor.
- 4. If the preceding steps did not correct the problem and 11 and 12 were both detected, replace the ACU. If 12 was not detected, inspect the centrifugal switch before replacing the ACU.
- 5. Reassemble all parts and panels.
- 6. Plug in dryer or reconnect power.
- 7. Perform steps under "Service Diagnostic Mode," page 2-4, to verify repair.

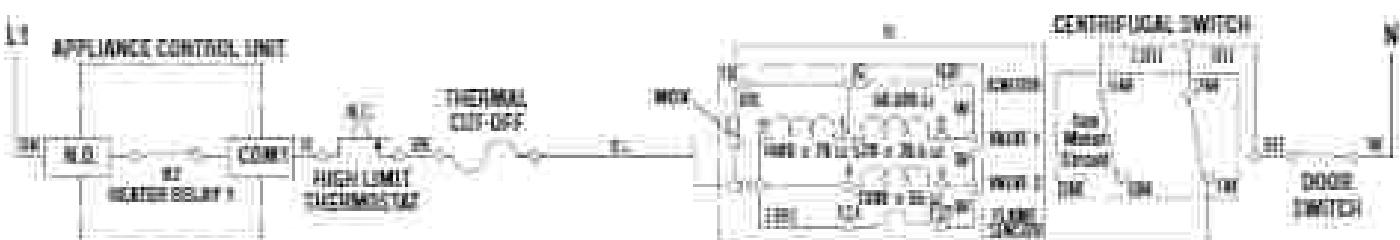
### GAS DRYER ONLY

1. Verify the gas supply to the dryer is turned on.
2. Unplug dryer or disconnect power.
3. Perform TEST #2a: Thermal Fuse on page 3-47. If the thermal fuse is OK, go to page 4.
4. Perform TEST #2c: Thermal Cut-Off on page 3-17. If the thermal cut-off is OK, go to step 5.
5. Locate the high limit thermostat (see figure 3, page 3-34). Measure the continuity through it by connecting the meter probes to the red and black measurement leads.
  - If there is an open circuit, replace both the high limit thermostat and the thermal cut-off.
  - Otherwise, go to step 6.
6. Perform TEST #2d: Gas Valve on page 3-48. If the gas valve is OK, go to step 7.

### HEATER (ELECTRIC) STRIP CIRCUIT (FIGURE 3)



### HEATER (GAS) STRIP CIRCUIT (FIGURE 4)



## For Service Technician Use Only

**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.

- If the resistance is OK, the outlet thermistor is good. Proceed to step 4.
- If the thermistor resistance does not agree with the table, replace the outlet thermistor.
- 4. Check J14-3 and J14-6 to dryer cabinet ground. If either pin indicates continuity to ground (short), replace wiring harness; otherwise, proceed to step 5.
- 5. If the preceding steps did not correct the problem, replace the ACU.

**Temperature Levels Incorrect** – If the error code is displayed and the connections to the thermistor are good, check the exhaust temperature values at any or all of the temperature levels in question, using the Timed Dry cycle.

1. Remove load from dryer and disconnect external vent.
2. Plug in dryer and reconnect power.
3. Run a TIMED DRY cycle of at least 2 minutes in duration. Select High, Medium-High, Medium, or Low 1 depending on model.
4. Using a calibrated temperature probe, take a temperature measurement in the center of the exhaust outlet. The correct exhaust temperatures are as follows:

**EXHAUST TEMPERATURES**

TEMPERATURE SETTING	HEAT TURN ON/OFF °F (°C)	HEAT TURN ON °F (°C)
High	107° ± 2° (42° ± 1°C)	107-117° (42-47°C)
Medium-High	140° ± 2° (60° ± 1°C)	above 107°
Medium	120° ± 2° (49° ± 1°C)	medium heat
Low	90° ± 2° (40° ± 1°C)	low heating

- If the temperature is not reached within 7 minutes, check voltage level and vent blockage, and then repeat.
- If the temperature probe does not agree with temperature setting, replace the outlet thermistor.
- If the temperature probe confirms the temperature setting, repeat at a different temperature setting.
- 5. If the preceding steps did not correct the problem, replace the ACU.

**Inlet Thermistor**

**NOTE:** On the electric dryer, the inlet thermistor is part of the high-thermistor assembly (see Figure 1, page 3-13). On the gas dryer, the inlet thermistor is located at the drum inlet duct (see Figure 1, page 3-3).

**OUTLET THERMISTOR RESISTANCE**

TENS °F (°C)	RES. RANGE kilohms	TENS °F (°C)	RES. RANGE kilohms
50° (10°)	18.5-22.6	80° (27°)	8.5-10.5
60° (15°)	14.0-16.8	90° (32°)	6.3-6.8
70° (22°)	11.0-13.2	100° (38°)	3.0-3.6

**THERMISTORS STRIP CIRCUIT**

Figure 2 - Thermistors Strip Circuit (Resistance values shown at relative room temp.)

## For Service Technician Use Only

The ACM monitors the inlet temperature using the inlet thermistor. The inlet thermistor (along with the outlet thermistor) is used to detect air flow and assists in calculating load size.

1. Unplug dryer or disconnect power.
2. Remove the top panel to access the machine electronics.
3. Remove connector 114 from the ACM and measure the resistance between 114-1 and 114-2 at the connector. The following tables (electric & gas) give temperatures and their associated resistance values.

**NOTE:** All thermistor resistance measurements must be made while dryer is unplugged and connector removed from ACM.

- If the resistance is 0Ω, the inlet thermistor is good. Proceed to step 4.
- If the thermistor resistance does not agree with the table, replace the inlet thermistor.

### **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.

#### ELECTRIC INLET THERMISTOR RESISTANCE

TEMP °F (°C)	RES. RANGE k ohms	TEMP °F (°C)	RES. RANGE k ohms
68° (20°)	61.2-63.7	123° (50°)	34.5-53.3
77° (25°)	48.0-51.0	148° (65°)	11.0-23.0
95° (35°)	39.5-41.1	149° (65°)	10.2-19.7
113° (45°)	32.0-33.3	158° (70°)	3.3-6.0
132° (50°)	26.0-27.2	167° (75°)	1.2-2.5
151° (55°)	21.9-22.3	176° (80°)	0.8-1.5
170° (60°)	17.4-18.5		

#### ACM-DRYER MOTOR RESISTANCE

TEMP °F (°C)	RES. RANGE k ohms	TEMP °F (°C)	RES. RANGE k ohms
68° (20°)	37.5-39.8	59.4° (15°)	34.0-53.0
77° (25°)	46.0-52.0	147° (65°)	11.0-23.0
95° (35°)	37.0-42.1	148° (65°)	4.3-10.8
113° (45°)	30.4-34.2	157° (70°)	3.0-6.0
132° (50°)	24.6-29.2	166° (75°)	1.2-2.5
151° (55°)	20.0-23.0	175° (80°)	0.8-1.5
170° (60°)	16.0-18.5		

4. Check 114-1 and 114-2 to driver, cabinet ground. If either pin indicates continuity to ground (short), replace wiring harness; otherwise, proceed to step 5.
5. If the preceding steps did not correct the problem, replace the ACM.

## TEST #4b: Thermal Fuse

**ALL DRYERS:** The thermal fuse is wired in series with the dryer drive motor.

1. Unplug dryer or disconnect power.
2. Remove top panel, front panel and bulkhead, and drum to access the thermal fuse.
3. Using an ohmmeter, check the continuity across the thermal fuse.
- If the ohmmeter indicates an open circuit, replace the thermal fuse.

## TEST #4c: Thermal Cut-Off

If the dryer does not produce heat, check the status of the thermal cut-off.

1. Unplug dryer or disconnect power.
2. Remove top panel, front panel and bulkhead, and drum to access the thermal cut-off.
3. Using an ohmmeter, check the continuity across the thermal cut-off. See Figures 1 and 2, page 5-14, for location.
4. If the ohmmeter indicates an open circuit, perform the following:

**ALL DRYERS:** Replace both the thermal cut-off and high limit thermostat. In addition, check for blocked or improper exhaust ducting, and, on electric dryers, for heat element malfunction.

## For Service Technician Use Only

**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.

**TEST #4d: Gas Valve (Gas Dryer)**

1. Unplug dryer or disconnect power.
2. Access the gas valve by removing top panel, front panel from bulkhead, and drum.
3. Use an ohmmeter to determine if a gas valve coil has malfunctioned. Remove harness plugs. Measure resistance across the terminals (see Figure 2). Readings should match those shown in the following chart. If not, replace coil.

GAS VALVE RESISTANCE	
Terminals	Resistance in ohms
1 to 2	1800 ± 30
1 to 3	570 ± 22
4 to 5	2300 ± 65

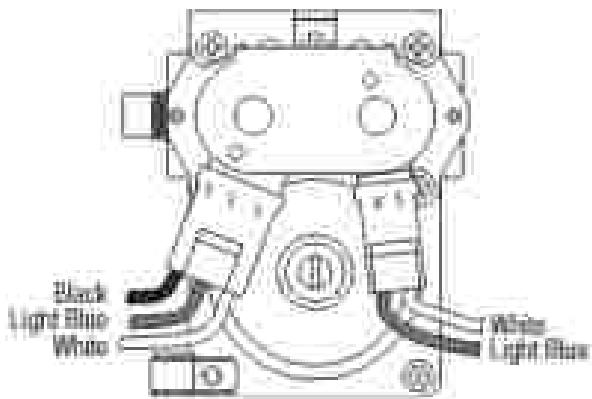


Figure 2 • Measuring gas valve resistance.

4. Disconnect the ignitor plug from the burner. Using an ohmmeter, measure the resistance across the ignitor's logic connector. Resistance should be 50-500 Ω.
    - If resistance readings are outside the range or open, replace the ignitor.
    - If resistance readings are within range, reconnect the ignitor plug and continue to step 5.
  5. Disconnect the wires going to the flame sensor terminals. Using an ohmmeter, measure across the two sensor terminals for continuity.
    - If there is continuity, reconnect the sensor wires and continue to step 6.
    - If the reading is open, the flame sensor needs replacing.
  6. Reassemble all parts and panels before reconnectiong power.
  7. Plug in dryer or reconnect power.
  8. Run a high-temp. TIMER DRY cycle of at least 2 minutes in duration.
  9. Watch the ignitor for a couple of minutes through the "peep window" in the side. If the ignitor stays red hot and the gas does not come out and ignite, the flame sensor needs replacing.
- NOTE:** If ignitor does not come on, line voltage may not be present at the gas burner. The motor centrifugal switch may be suspect.
- IMPORTANT:** To avoid damage to the gas burner wire harness, ensure the harness is routed exactly as it was prior to service.
10. Unplug dryer or disconnect power.
  11. Reassemble all parts and panels.
  12. Plug in dryer or reconnect power.
  13. Perform steps under "Service Diagnostic Mode", page 2-4, to verify repair.

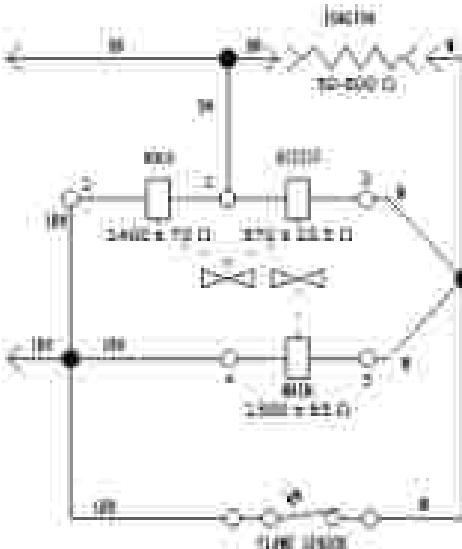
**Gas Valve Schematic**

Figure 2-1a • Gas Valve Schematic

## For Service Technician Use Only

**A 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: Overheating may be caused by a short circuit in the sensor system.

- E. Unplug dryer or disconnect power.
  - F. Remove top panel to access the ACU.
  - G. Access the moisture sensor wires by removing the console and front panel (see pages 4-9 & 4-13). Disconnect the 3-wire moisture sensor connector located below the door opening between the front panel and bulkhead.
  - H. Access the ACU and remove connector J13 from the ACU. Check the wire harness for continuity between J13 and the moisture sensor connector.
- If there is continuity, go to step 7.  
 ► If there is no continuity, replace the main harness.
- I. Measure the resistance across the outermost contacts of the connector that includes the two MOVs.

**TEST #5: Moisture Sensor**

This test is performed when an automatic cycle stops too soon, or runs much longer than expected.

NOTE: Dryer will shut down automatically after 24 hours.

The following items are part of this system:

Part of Moisture System	Electric Dryer	Gas
Harness connector	✓	✓
Moisture sensor strip	✓	✓
ACU	✓	✓

NOTE: Refer to ship/circuit below to diagnose moisture sensor.

1. Activate the Service Diagnostic Mode. See procedures in page 2-4.
2. Open the door. Using a wet cloth or one finger, jointly touch both sensor strips:
  - If a repeating beep tone is heard and an alphanumeric number is displayed on the control, the moisture sensor passes the test. Go to step 5.
  - If a beep tone is not heard, or a repeating beep tone is heard before touching both moisture strips, continue with step 3.

- If a small resistance is measured, clean the two metal moisture strips inside the drum. If small resistance is measured after cleaning, replace sensor harness.

- If a small resistance is not measured, go to step 3.
- J. Measure the resistance across each of the outermost contacts and the center terminal (ground connection).



- K. If a resistance less than infinity is measured, replace the sensor harness.
- L. If the moisture sensor diagnostic test passes, check the outlet thermometer TEST #4a (page 3-16).
- M. If the preceding steps did not correct the problem, replace the ACU.

NOTE: Some Maytag models have an additional set of moisture sensors located at the back of the drum. To test the rear moisture sensor, repeat steps E-I, using connector J13.

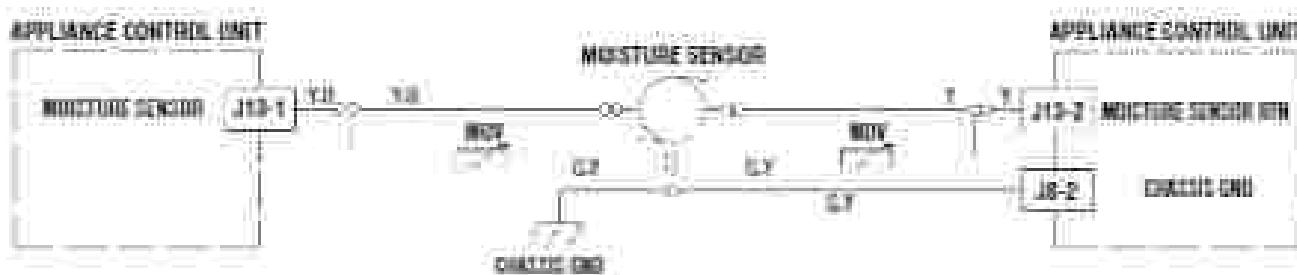
**MOISTURE SENSOR STRIP CIRCUIT**

Figure 3 - Moisture Sensor Strip Circuit

## For Service Technician Use Only

**A 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.

Some buttons do not light:

1. Unplug dryer or disconnect power.
2. Remove top panel to access the ACU and HMII.
3. Visually check that the HMII and housing assembly is properly inserted into the front console.
4. If visual check passes, replace the HMII and housing assembly.
5. Reassemble all parts and panels.
6. Plug in dryer or reconnect power.
7. Perform the "Key Activation & Encoder Test" (see page 2-5) to verify repair.

No beep sound is heard (on some models, only the Normal cycle beeps upon cycle selection):

1. On some models, verify that the "Cycle Signal" volume is turned on. (Procedure varies by model; refer to Use & Care Guide for specific instructions to adjust cycle signal.)
2. Unplug dryer or disconnect power.
3. Remove top panel to access the ACU and HMII.
4. Visually check that ALL ACU connectors are inserted all the way into the ACU.
5. Visually check that ALL HMII connectors are inserted all the way into the HMII.
6. If all visual checks pass, replace the HMII and housing assembly.
7. Reassemble all parts and panels.
8. Plug in dryer or reconnect power.
9. Perform the "Key Activation & Encoder Test" (see page 2-5) to verify repair.

**TEST #6: Buttons and Indicators**

This test is performed when any of the following situations occurs during the "Key Activation & Encoder Test" (see page 2-5):

- ✓ None of the indicators or display turn on.
- ✓ Some buttons do not light.
- ✓ No beep sound is heard.

**None of the indicators or display turn on:**

1. Unplug dryer or disconnect power.
2. Remove top panel to access the ACU and HMII.
3. Visually check that ALL ACU connectors are inserted all the way into the ACU.
4. Visually check that ALL HMII connectors are inserted all the way into the HMII.
5. Visually check that the HMII and housing assembly is properly inserted into the front console.
6. If all visual checks pass, perform TEST #1: ACU Power Check (page 2-8) to verify supply voltages.
  - > If supply voltages are present, replace the HMII and housing assembly.
  - > If supply voltages are not present, replace the ACU.
7. Reassemble all parts and panels.
8. Plug in dryer or reconnect power.
9. Perform the "Key Activation & Encoder Test" (see page 2-5) to verify repair.

## For Service Technician Use Only

**A 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.

**TEST #7: DOOR SWITCH**

**NOTE:** Refer to strip circuit below to diagnose the door switch. Functionality is verified when opening the door turns on the drum light. Closing the door should turn off the drum light.

If the preceding components are not present:

1. Unplug dryer or disconnect power.
2. Remove console to access the machine electronics.
3. Check that the wires between the door switch and ACU are connected. (Refer to wiring diagrams on pages 5-4 to 5-7.)
- If the connectors are good, replace the wire and door switch assembly and retest.
- If wire and door switch assembly have been replaced and dryer still does not start, replace the ACU.
4. Reassemble all parts and panels.
5. Plug in dryer and reconnect power.
6. Verify that the dryer will start with the door closed, and that it stops when the door opens.

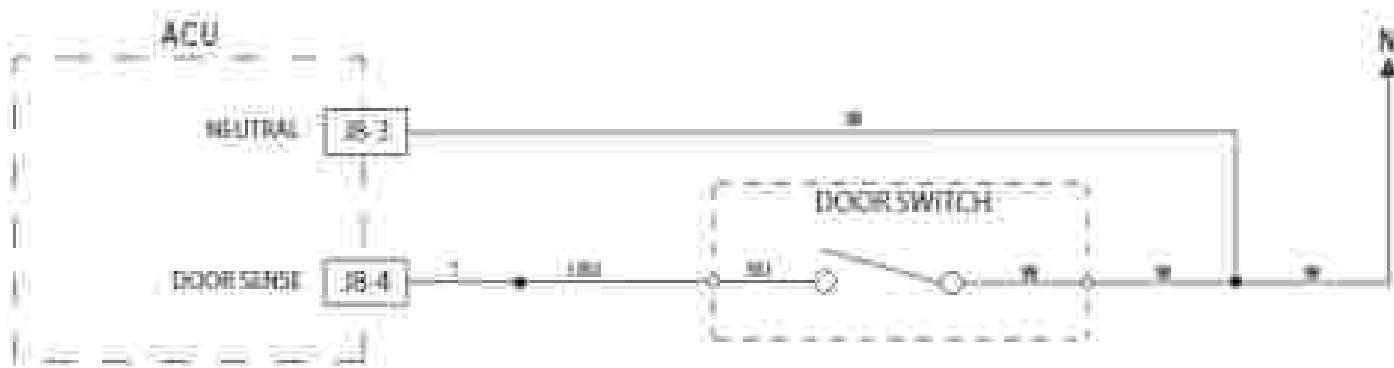
**DOOR SWITCH STRIP CIRCUIT**

Figure 2 - Door Switch Strip Circuit

## For Service Technician Use Only

**A DANGER****Electrical Shock Hazard**

Only authorized technicians should perform diagnostic voltage measurements.

After performing voltage measurements, disconnect power before servicing.

Failure to follow these instructions can result in death or electrical shock.

- If the harness and connections are good, go to step 5.
- If not, repair or replace as needed.
- 5. Unplug the drum LED connector J6 from the ACU.
- 6. With a multimeter set to ohms, connect multimeter to ACU connector J6, pins 2 and 3. Plug in dryer or reconnect power. Open the door. Measure the current across ACU connector J6, pins 1 and 3. If the drum LED driver is working properly there should be a measurement of 150-370 mA.
- If the current is present, unplug drum or disconnect power and replace the drum LED.
- If the current is not present, unplug drum or disconnect power and replace the ACU.
- 7. Reassemble all parts and panels.

## DRUM LED CIRCUIT

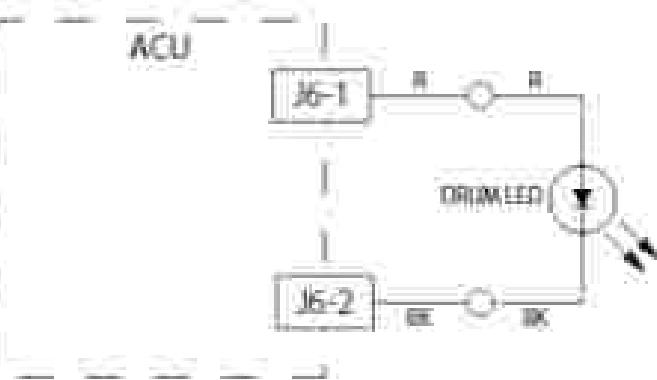


Figure 2 - Drum LED Test Circuit

## ACU BOARD

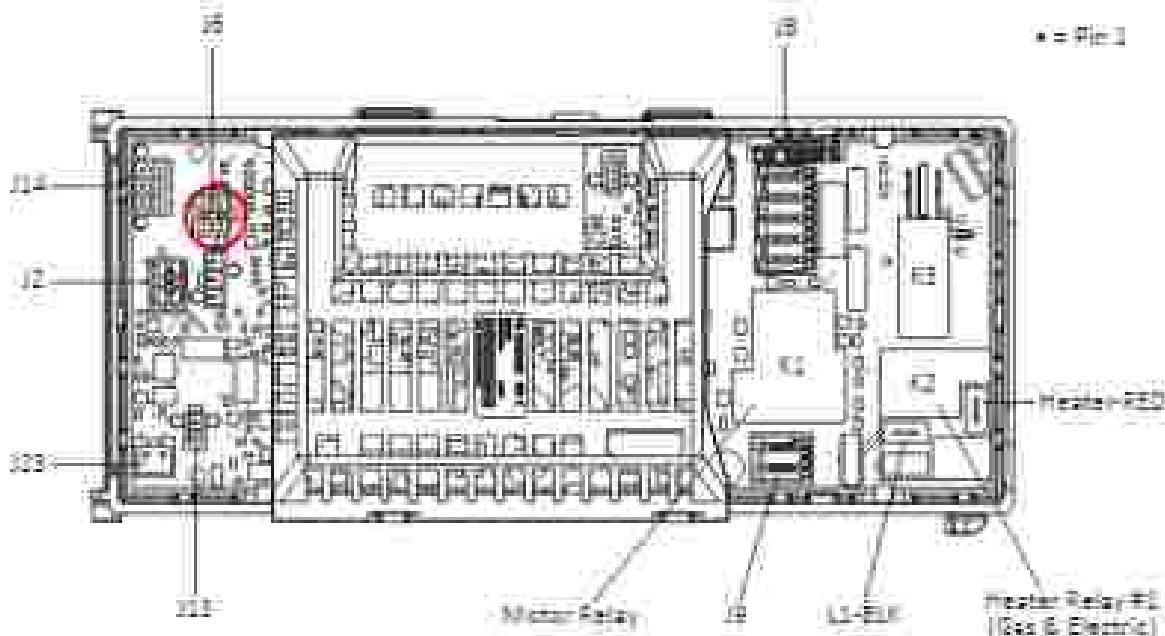


Figure 1 - Drum LED Connector

## For Service Technician Use Only

**A 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.

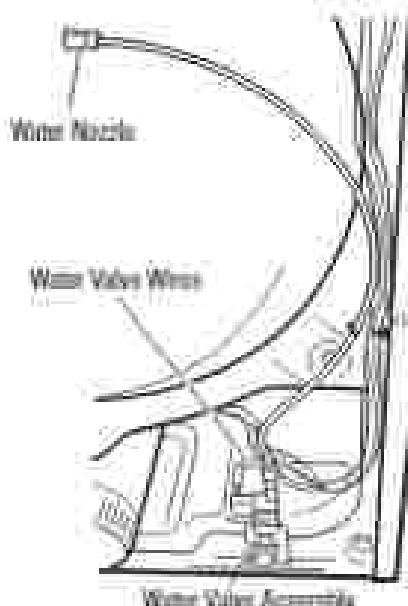


Figure 1 - Water System Components

**TEST #9: Water Valve (on some models)**

Activate Service Diagnostic Mode (see page 2-4). Perform Step 8 in Service Test Mode Chart (see page 2-8). Verify that water is being sprayed into the drum. See Figure 1.

**NOTE:** Refer to the strip circuit below (Figure 2) to diagnosis water valve.

If water leaks from the dryer/too much water being sprayed into the drum:

1. Inside the drum, unscrew the water nozzle.
2. Inspect nozzle opening for residue/boulders; clean or replace it.

If no water is sprayed in the drum:

1. Verify that water is hooked up and turned on.
2. Unplug dryer or disconnect power.
3. Remove top panel to access the ACM.
4. Verify that the red wire coming from the water valve is connected to the ACM J8-1. Refer to wiring diagrams on pages 3-8 to 3-7, or the strip circuit below.

5. Check Water Valve E Harness—using an ohmmeter, measure the resistance between the ACM J8-1 (red wire) and J8-2 (black wire).
  - If the resistance is 500-600 Ω, go to step 6. If not, replace the water valve.
  - If an open circuit is detected, go to step 7.
6. Inside the drum, unscrew and replace the water nozzle using a 7/16" wrench or socket. Retest water valve.
  - If water does not dispense, go to step 7.
7. Access the water valve by removing the back panel.
  - Check that the hose and wires are connected to the water valve assembly (see Figure 1).
  - Check that the water valve assembly hose is connected to the nozzle.
8. If everything is connected and the water still does not dispense:
  - Unplug dryer or disconnect power.
  - Replace the valve assembly and retest.
9. If the preceding steps did not correct the problem, replace the ACM.

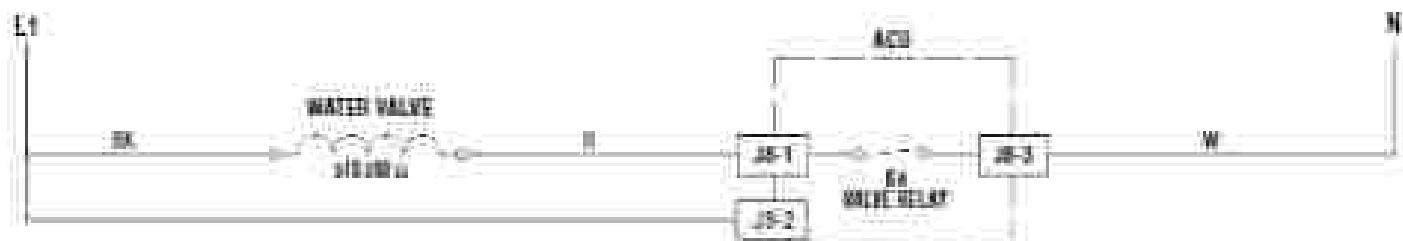
**WATER VALVE STRIP CIRCUIT**

Figure 2 - Water Valve Strip Circuit

## Notes

# Section 4:

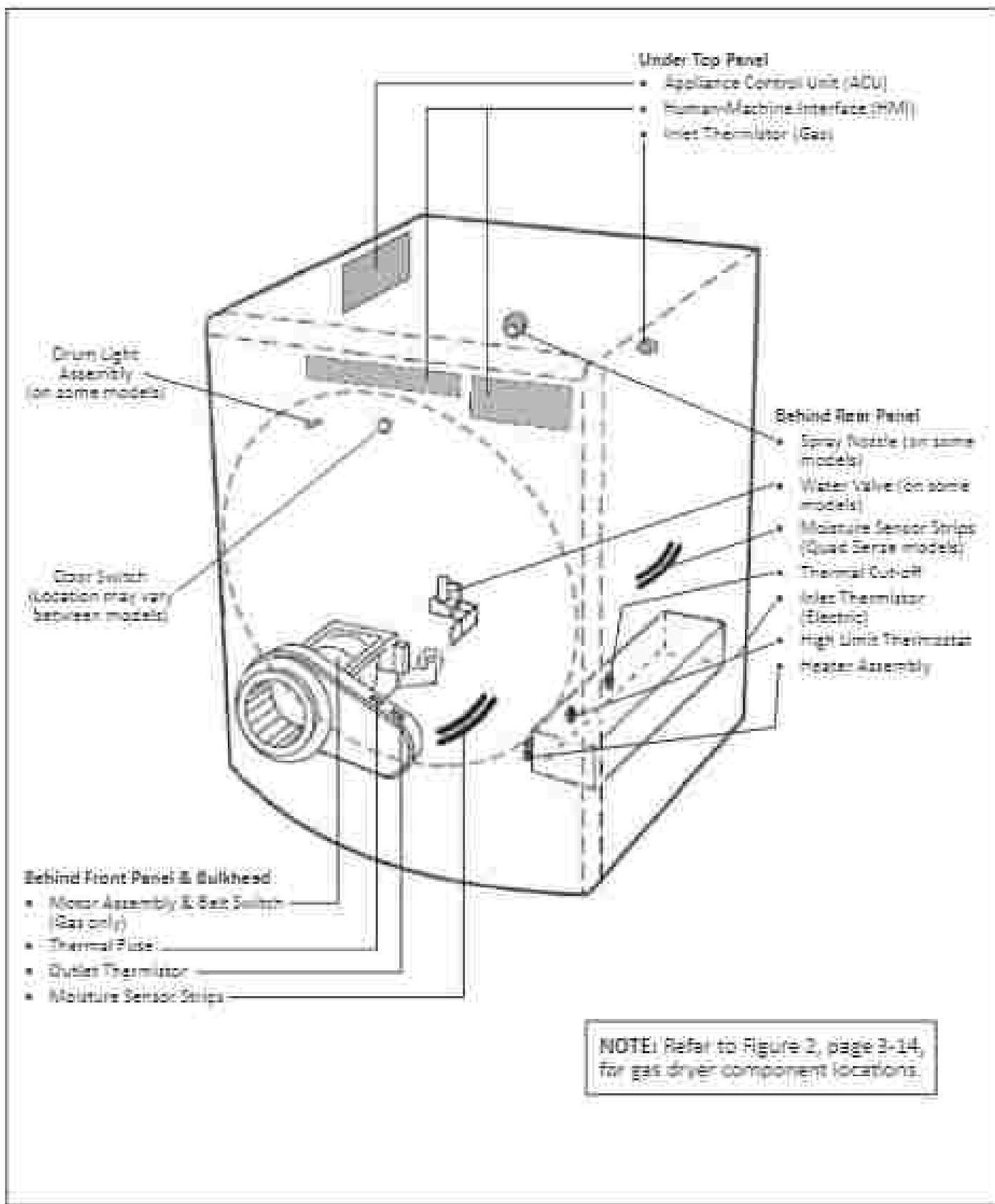
## Component Access

This section provides service parts access, removal, and installation instructions for the "Whirlpool & Maytag Front-Load Gas & Electric Dryers."

- Component Locations
- Door Removal — Round-Shaped Doors
- Door Removal — Square-Shaped Doors
- Removing the Top Panel
- Removing the Control/HMI
- Removing the Appliance Control Unit (ACU)
- Removing the Front Panel
- Removing the Door Switch
- Removing the Drum Light
- Removing the Moisture Sensor
- Removing the Belt, Drum, and Rollers
- Removing the Drive Motor
- Removing the Thermal Fuse, the Outlet Thermostat
- Removing the Heater Element
- Removing the PTC Thermostat (Electric Models)
- Removing the Thermal Cut-off (Electric Models)
- Removing the Ignitor & Flame Sensor (Gas Models)
- Removing the High-Limit Thermostat (Gas Models)
- Removing the Thermal Cut-off (Gas Models)
- Removing the Gas Burner Assembly/Coke
- Removing the Rear Panel
- Removing the Water Valve

## COMPONENT ACCESS

### COMPONENT LOCATIONS - WHIRLPOOL (FIGURE 1)



## Door Reversal — Round-Shaped Doors

### A 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.

#### ALL DOORS:

- Using a T25™ screwdriver, remove the four screws securing the door hinge to the dryer and lift the door up and out to remove. Place the door on a soft towel or other non-scratch surface.

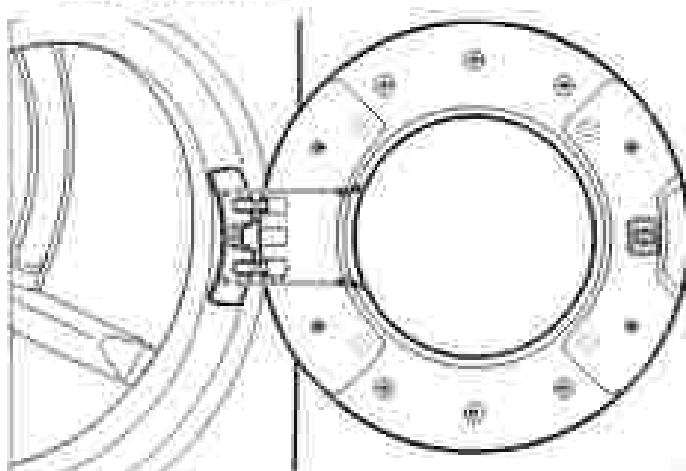


Figure 2 - Remove door from drye.

### Door Reversal

The following instructions are for models with round-shaped doors.

#### REVERSE DOOR SWING: ROUND-SHAPED DOOR DOORS WITH ELECTRICAL WIRING

- Using a Phillips screwdriver, remove middle screw in hinge. Disconnect wiring. Tuck wiring into opening.

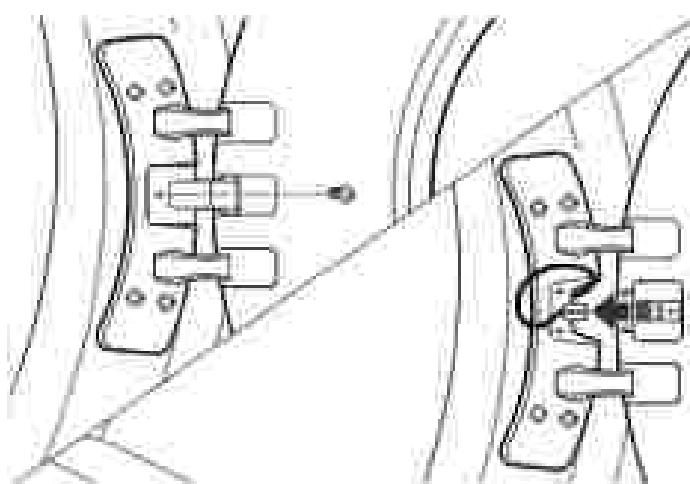


Figure 3 - Disconnect wiring from door.

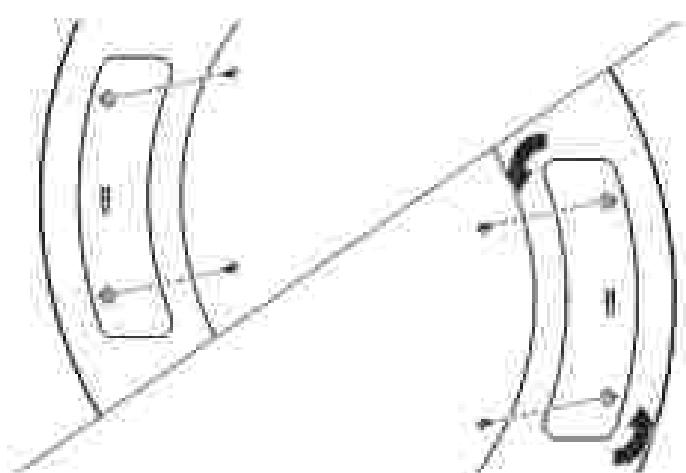


Figure 4 - Move the door strike.

## COMPONENT ACCESS

### Door Reversal — Round-Shaped Doors (continued)

4. Position the door with the inside of the door facing up. Using a Phillips screwdriver, remove the 10 screws securing the inner door to the outer door.

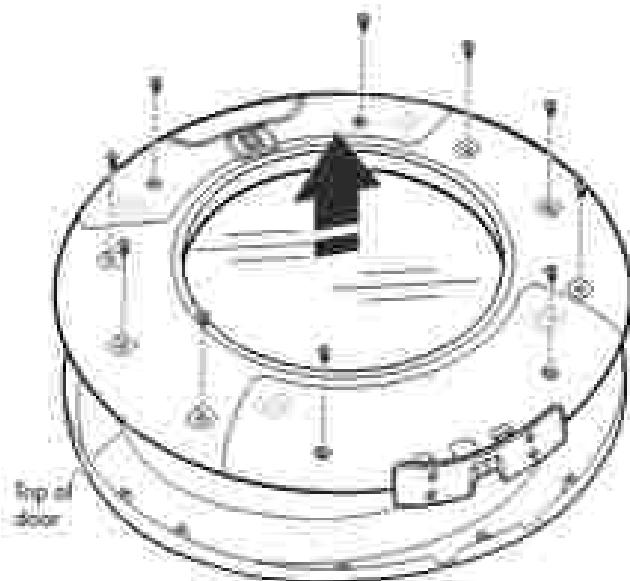


Figure 4 - Remove inner door from outer door.

5. Using a T20<sup>®</sup> screwdriver, remove the six screws holding the hinge assembly in place.

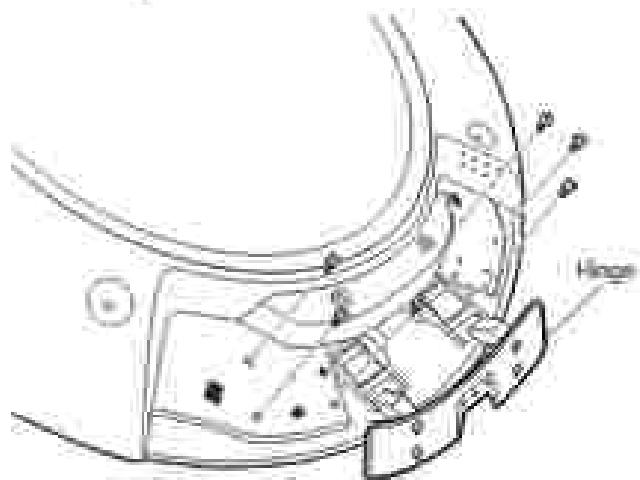


Figure 5 - Remove Hinge.

6. Flip and rotate the inner door 180° so that the thin section is at the top and the thick section is at the bottom. Using a T20<sup>®</sup> screwdriver, remove the four screws securing the latch plate in place.

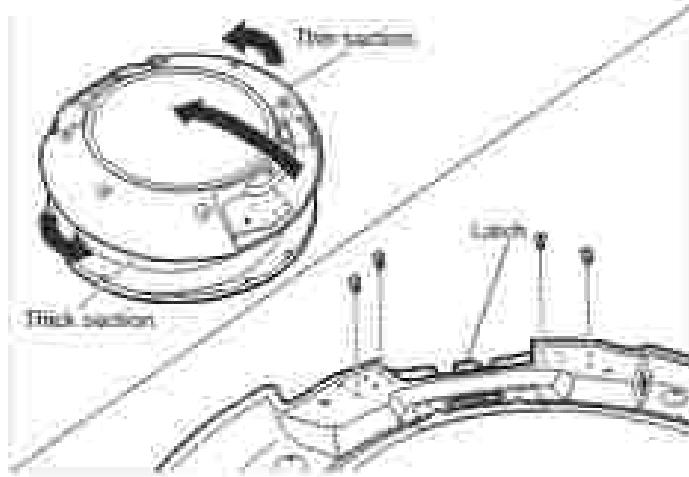


Figure 6 - Remove Latch.

7. Using a T20<sup>®</sup> screwdriver, reinstall the latch plate on the opposite side from which it was removed with the four screws removed earlier.

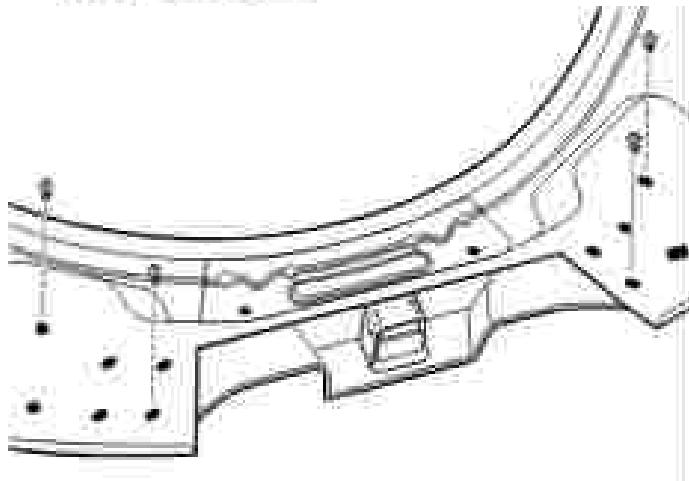


Figure 7 - Reinstall latch on opposite side.

## Door Reversal — Round-Shaped Doors (continued)

8. Flip over the inner door to the left. Using a T20<sup>®</sup> screwdriver, reseat the hinge assembly on the opposite side from which it was removed.

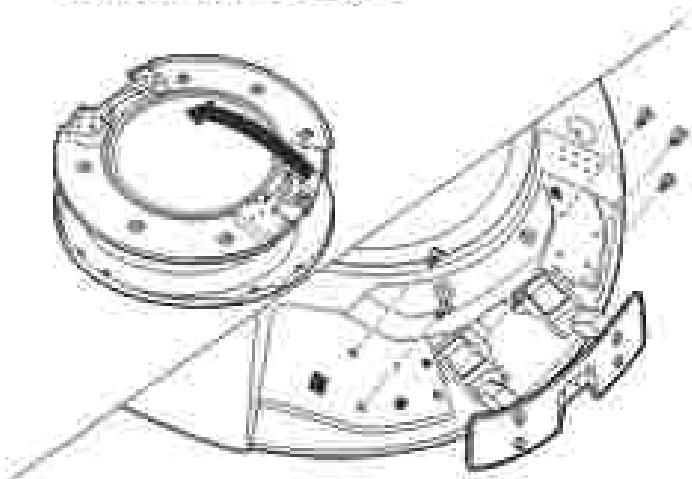


Figure 8 • Retained hinge assembly on opposite side

10. Reposition rotator assembly and tubing 180° to opposite side of the door.

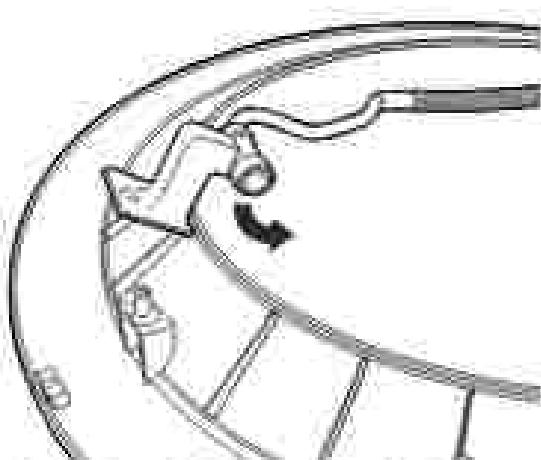


Figure 10 • Rotator rotating assembly and tubing

### DOORS WITH ELECTRICAL WIRING:

9. Lift off inner door assembly. Using a Phillips screwdriver, remove the two screws securing the rotating assembly to the door.

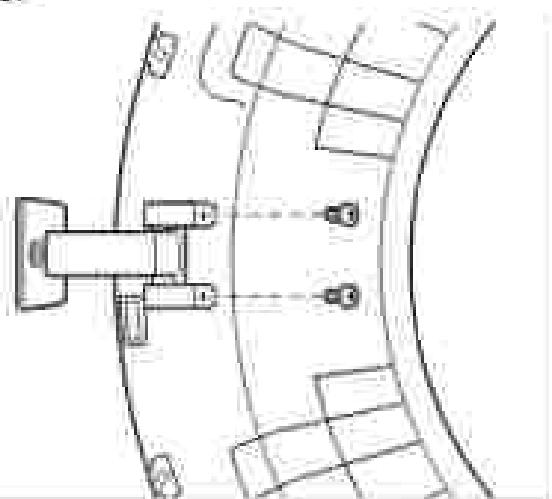


Figure 9 • Remove rotating assembly

11. Rotate bottom of assembly 180° towards you and secure assembly with the two screws removed earlier, using a Phillips screwdriver. Press tubing into indent.

**IMPORTANT:** Make sure to swing hinge down in front of rotating assembly (see Step 12).

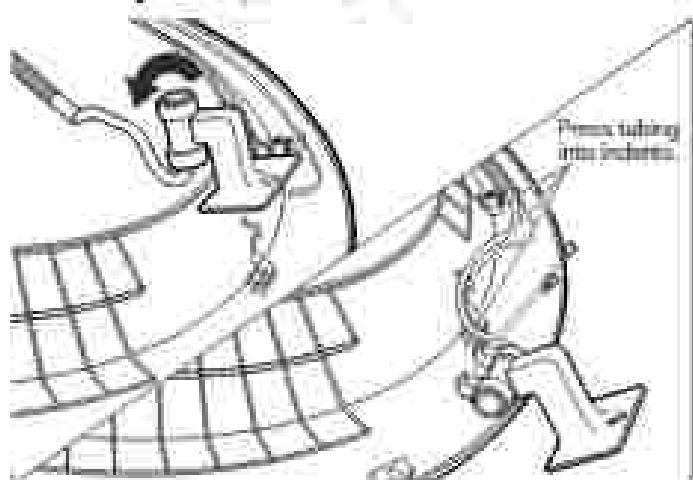


Figure 11 • Rotator assembly bottom end facing in plane

## COMPONENT ACCESS

### Door Reversal — Round-Shaped Doors (continued)

#### ALL DOORS

12. Position the door with the inside of the door facing up. Using a Phillips screwdriver, reinstall the 10 screws removed earlier securing the inner door to the outer door.

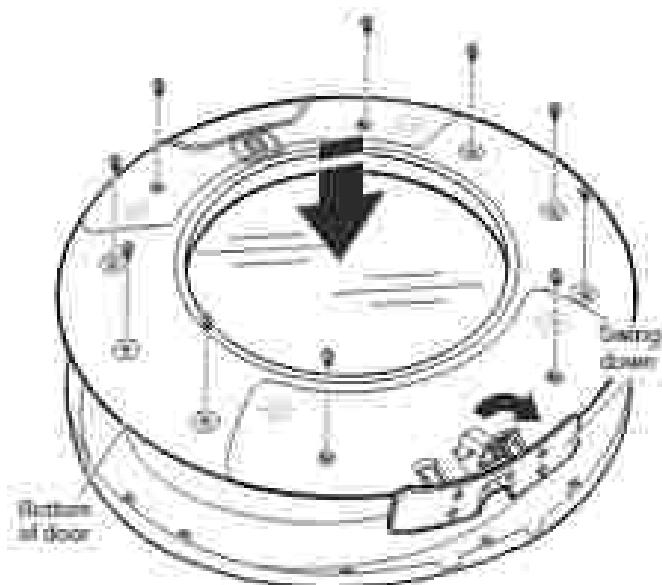


Figure 12 - Reinstall inner door assembly.

13. Doors with electrical wiring: Pull the wire through the front panel opening before installing the door. Insert the tabs on the hinge into the mounting slot and slide down to engage the top tab. Secure in place with the four T25<sup>®</sup> screws removed earlier.

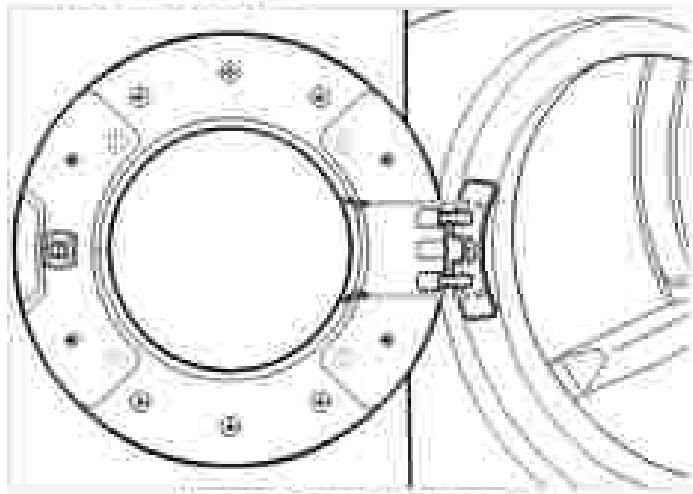


Figure 13 - Reinstall door on frame.

#### DOORS WITH ELECTRICAL WIRES

14. Plug in wires. Using a Phillips screwdriver, secure the rotating assembly to the hinge with the screw removed earlier.

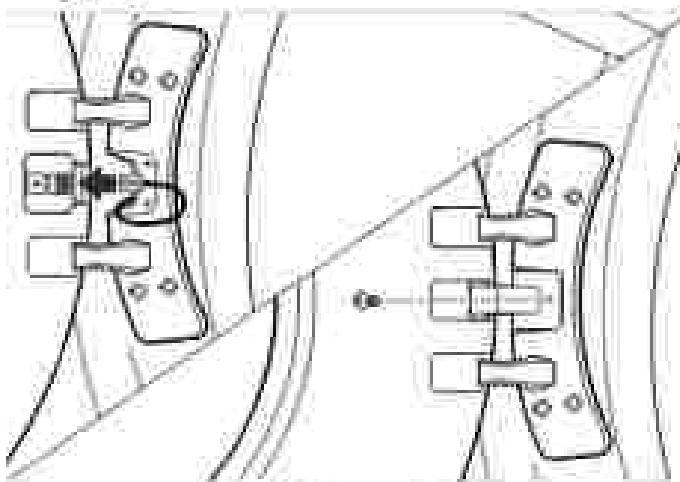


Figure 14 - Disconnect wiring.

## Door Reversal — Square-Shaped Doors

### **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 Reversal

The following instructions are for models with square-shaped doors.

#### REVERSE DOOR SWING: SQUARE-SHAPED DOOR

- Using a T25<sup>®</sup> screwdriver, remove the four screws securing the door hinge to the dryer and lift up and out to remove the door. Place the door on a soft towel or other non-scratch surface. Retain or set aside the four screws.

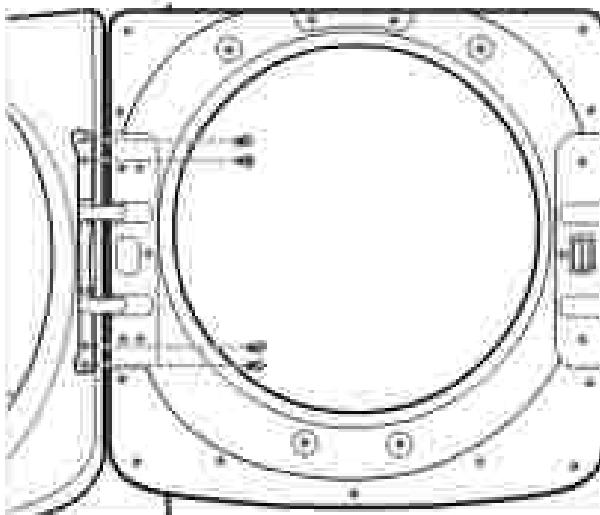


Figure 1 - Remove door from dryer.

- Using a T25<sup>®</sup> screwdriver, remove the two screws securing the door strike to the door frame of the dryer. Remove the four screws above and below the door strike and set aside for later use. Rotate the strike 180° and attach to the opposite side of dryer door frame, as shown.

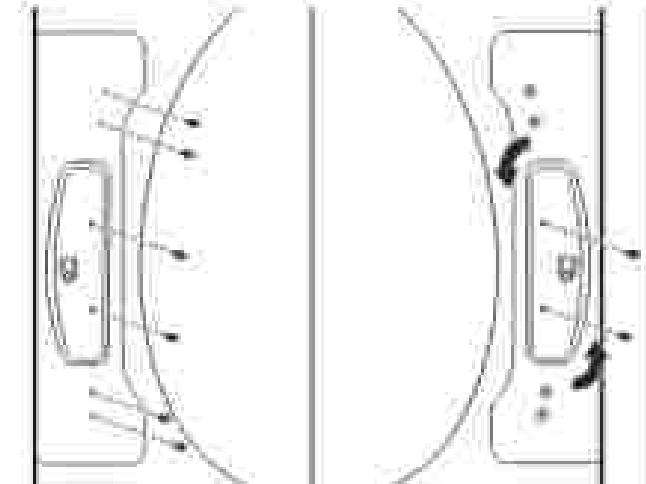


Figure 2 - Move the door strike.

- Position the door with the inside of the door facing up. Using a Phillips screwdriver, remove the 13 screws securing the inner door to the outer door. Lift off the outer door and set aside.

**NOTE:** There is a small release tab on each side of the door. If the inner and outer door do not separate easily, slide a credit card, putty knife, or similar flat object between the inner and outer doors at the locations shown to release the tab.

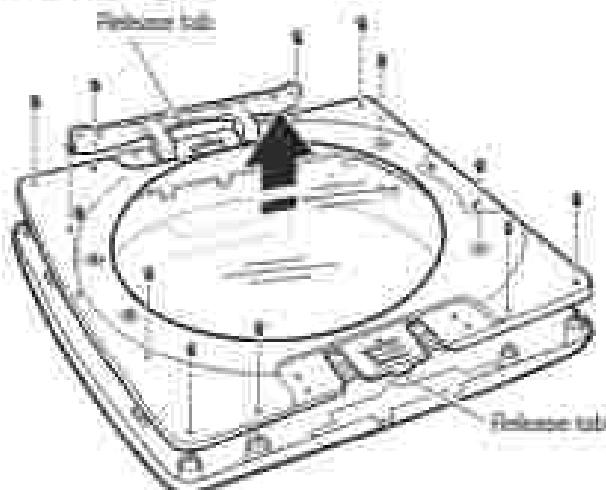


Figure 3 - Remove inner door from outer door.

## COMPONENT ACCESS

### Door Reversal — Square-Shaped Doors (continued)

4. Using a T25<sup>®</sup> screwdriver, remove the three screws securing the latch plate and the five screws holding the hinge assembly in place.

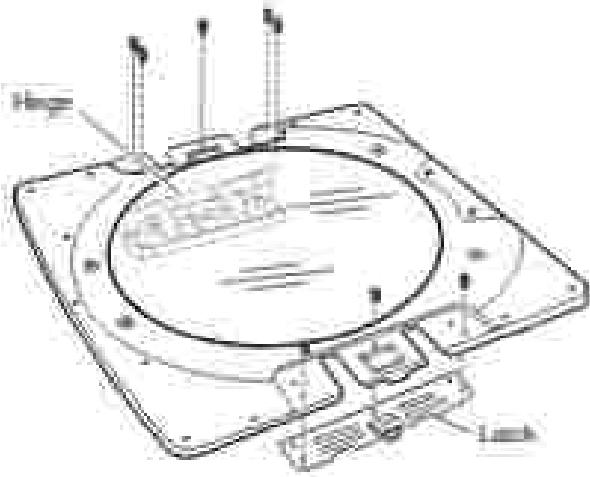


Figure 4 - Remove hinge and latch from inner door.

5. Using a T25<sup>®</sup> screwdriver, reinstall the latch plate and hinge assembly on the opposite sides from which they were removed.

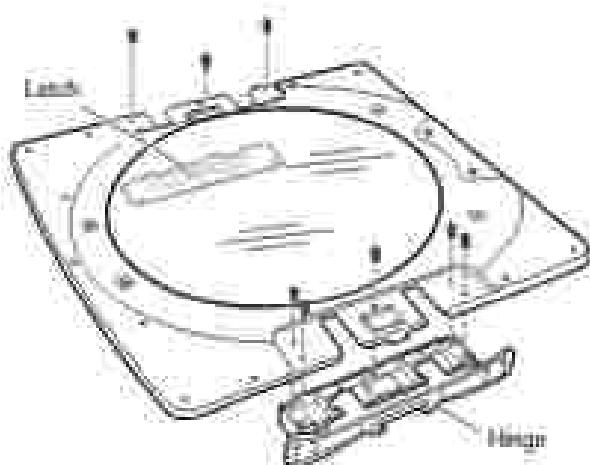


Figure 5 - Reinstall hinge and latch on opposite sides.

6. Position the inner door on the outer door assembly. Using a Phillips screwdriver, secure with the 13 screws removed earlier.

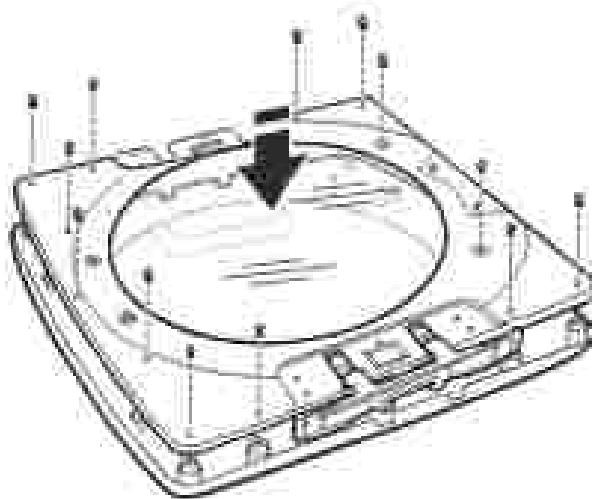


Figure 6 - Reattach inner door to outer door.

7. Using a T25<sup>®</sup> screwdriver, replace the four screws securing the door hinge to the dryer.

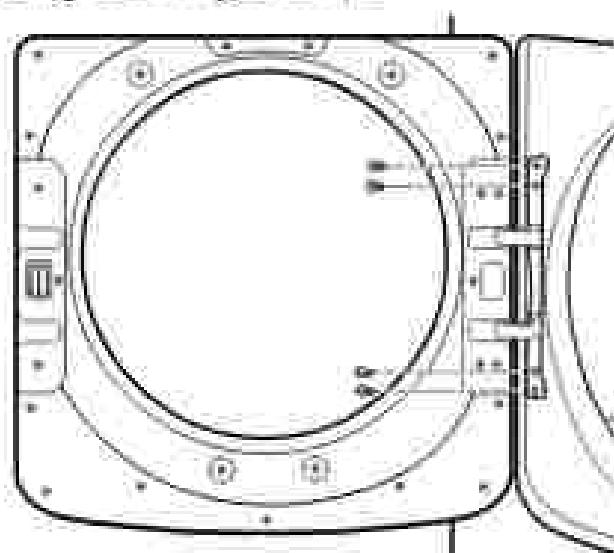


Figure 7 - Reattach door to dryer.

## Removing the Top Panel & Console/HMI

### **A 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.

#### To Remove the Top Panel

1. Unplug dryer or disconnect power.
2. Remove the two (2) 5/16" hexhead screws from the back of the top panel as illustrated in Figure 1.



Figure 1 - Top panel screws.

3. Use the rear of the top panel, pull back, and remove top panel from the dryer.

#### To Remove the Console/Human-Machine Interface

1. Unplug dryer or disconnect power.
2. Perform the procedures on page 4-2, "Removing the Top Panel," prior to performing the following steps.
3. Disconnect the Human-Machine Interface (HMI) connector from the Appliance Control Unit (ACU). See Figure 1.



Figure 1 - Human-Machine Interface (HMI) connector.

4. Detach one harness clip from the console bracket (see Figure 2).
5. Using a 1/4" nut driver, remove two (2) hex-head screws, one on each side of the console top as shown in Figure 1.



Figure 2 - Remove console screws and harness clip.

6. Gently lift up on the four (4) console tabs as shown in Figure 3. Separate console assembly from bracket while routing the S-Harness through the opening in the console bracket.



Figure 3 - Console Tabs.

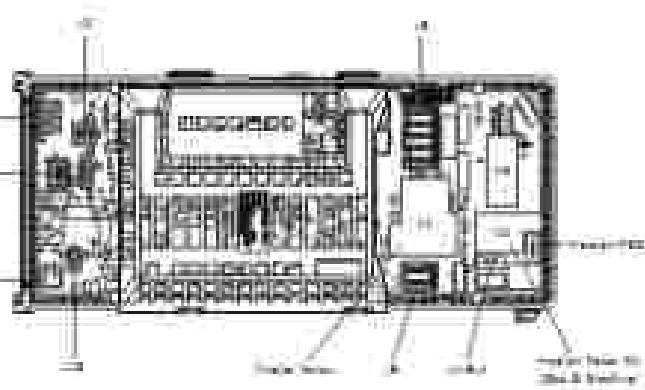
## Removing the Appliance Control Unit (ACU)

### **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.

Appliance Control Unit (Figure 1)



### To Remove the Appliance Control Unit (ACU)

**IMPORTANT:** Electrostatic Discharge (ESD) Sensitive Device. Failure to follow the ESD precautions outlined at the beginning of Section 3 "Testing" may destroy, damage, or weaken the main control assembly.

1. Unplug dryer or disconnect power.
2. Perform the procedures on page 4-9, "Removing the Top Panel," prior to performing the following steps.
3. Disconnect all connectors from the ACU (see Figure 1).
4. Using a 1/4" nut driver, remove the one (1) hex-head screw securing the ACU to the left-side panel (location circled in Figure 2).
5. Slide the ACU toward the rear of the dryer to disengage tube from the side panel. Remove Appliance Control Unit.

Connector	Component
K1	Dryer Motor
K2	Gas & Electric Heater
K3	Not Used
J1	User Interface
J6	Drum Light LED
J8	Water Valve Door Switch Neutral & GND
J9	L1 Neutral
JSS	Moisture Sensor
J14	Inlet Thermostat Outlet Thermostat
J23	Rear Moisture Sensor (some models)



Figure 2 - Appliance Control Board

## Removing the Front Panel & Door 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.

#### To Remove the Front Panel & Door Switch

1. Unplug dryer or disconnect power.
2. Perform the procedures on page 3-8, "Removing the Top Panel & Console/HMI" prior to performing the following steps.
3. Perform the procedures on page 4-3, "Removing the Door Assembly" prior to performing the following steps.
4. Disconnect the door switch "inline" connector as shown in Figure 1.



Figure 1 - Door Switch Connector

5. Remove four (4) 1/4" hex-head screws from the bottom of the front panel (see Figure 3).



Figure 3 - Remove 4 screws at bottom panel.

NOTE: Refer to Figure 3 for the following 2 steps.

6. Open dryer door and remove the tilt screen. Next, remove the two (2) Phillips screws below the dryer door (see Figure 3).
7. Remove three (3) 1/4" hex-head screws from the top of the front panel (see Figure 3).



Figure 3 - Remove mounting screws on front panel.

8. Lift the front panel assembly up off the tabs and away from the dryer. Route the door switch harness around the front console bracket.
9. Locate the door switch on the backside of the front panel, just above the door opening. Depress both tabs and push switch through the opening. (See Figure 4)



Figure 4 - Remove door switch.

## Removing the Drum Light & Moisture 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.

### To Remove the Moisture Sensor

1. Unplug dryer or disconnect power.
  2. Perform the procedures on page 4-8, "Removing the Top Panel & Console/HMI" prior to performing the following steps.
  3. Perform the procedures on page 4-11, "Removing the Front Panel" prior to performing the following steps.
  4. Open dryer door and remove the front screen.
- NOTE:** Refer to Figure 3 for the following 3 steps.
5. Disconnect Moisture Sensor connector (see Figure 3).
  6. From inside the drum, remove two (2) 1/4" hex-head screws securing the Outer Grill & Housing Assembly to the front bulkhead (see Figure 3).
  7. Lift up and remove the Outer Grill & Housing Assembly from the bulkhead (see Figure 3).

### To Remove the Drum Light

1. Unplug dryer or disconnect power.
2. Perform the procedures on page 4-8, "Removing the Top Panel & Console/HMI" prior to performing the following steps.
3. Perform the procedures on page 4-11, "Removing the Front Panel" prior to performing the following steps.
4. If not done already, unclip connector J5 from the ADU.
5. Unclip the harness clip shown in Figure 2.



Figure 2 - Harness clip location.

6. Decrease the tabs on both sides of the drum light to release from bulkhead. Route the light and harness assembly through the hole (see Figure 3).

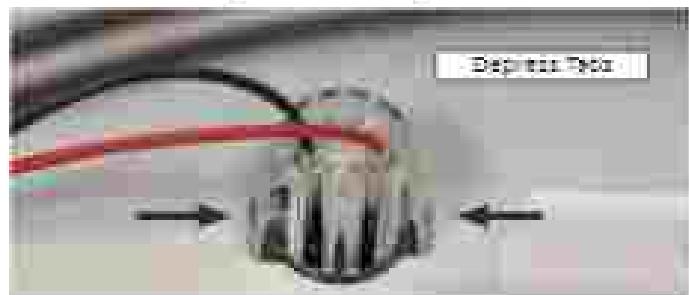


Figure 3 - Drum Light Tabs



Figure 3 - Connecting & Screws

8. Remove the harness from the moisture sensor strike (see Figure 4).



Figure 4 - Moisture Sensor Connector

9. Separate the Outer Grill & Housing Assembly to access and remove the moisture sensor strike. See Figure 5.



Figure 5 - Sensor Strike

## Removing the Belt, Drum, and Rollers

### **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.

#### 5. Disconnect Moisture Sensor connector (see Figure 2)



Figure 2 - Disconnect moisture sensor connector.

#### To Remove the Belt and Drum

1. Unplug dryer or disconnect power.
2. Perform the procedures on page 4-2, "Removing the Top Panel and Console/HMI" prior to performing the following steps.
3. Perform the procedures on page 4-11, "Removing the Front Panel" prior to performing the following steps.
4. Remove two (2) 1/4" hex-head screws from the top of the console bracket and two (2) from the front of the bracket. Remove console bracket and set aside for reinstallation (see Figure 1).



Figure 1 - Remove console bracket screws.

5. Remove the three (3) 1/4" hex-head screws from the lint duct as illustrated in Figure 3. Slide the lint duct down from the bulkhead and remove.

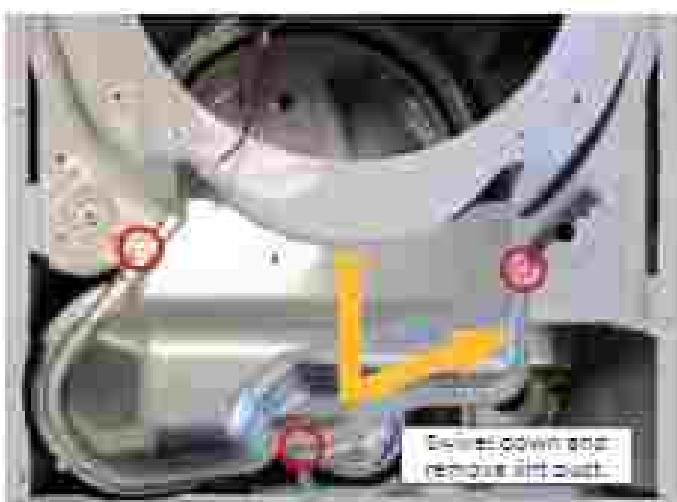


Figure 3 - Remove lint duct screws.

## COMPONENT ACCESS

### Removing the Belt, Drum, and Rollers (continued)

7. Remove the four (4) 1/4" hex-head screws securing the front bulkhead to the side panels as illustrated in Figure 4. Lift the bulkhead up off the side-panel tabs and remove.

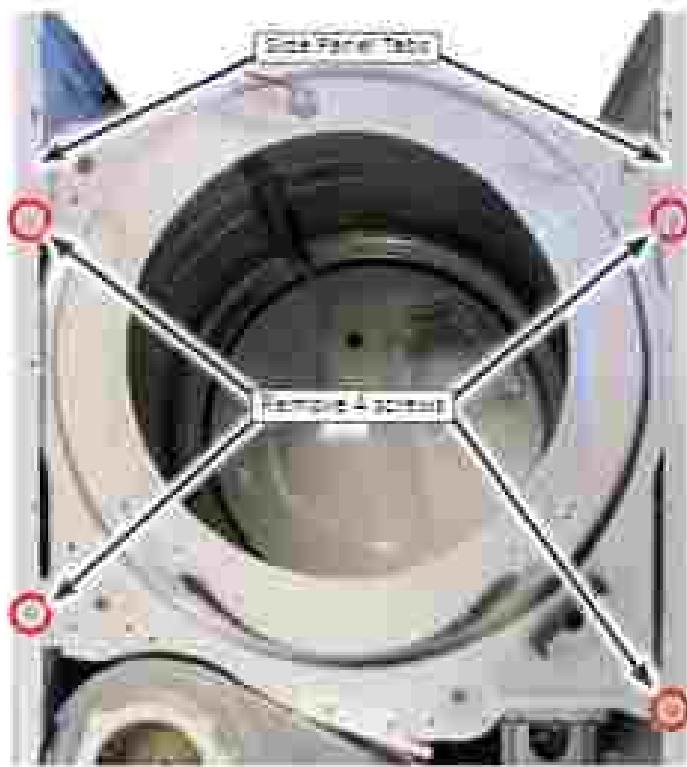


Figure 4 - Remove front bulkhead screws.

8. Reach under the drum, raise it as far as it will go, and push the idler pulley arm, on the back of the drive motor, to the left to relieve the tension on the belt, then remove the belt from the pulley.
9. Slide the belt off the front of the drum and remove belt.



Figure 5 - Remove drum belt.

10. Lift the drum and remove it from the dryer cabinet.

#### Reassembly Note - Belt Orientation on Pulley

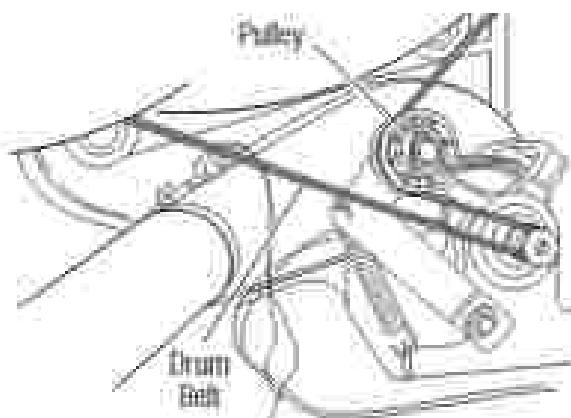


Figure 6 - Pulley Belt orientation.

#### To Remove a Roller

1. Pry the sides of the triangular ring out of the groove in the roller shaft with a small screwdriver (see Figure 7).



Figure 7 - Prolongate Arm.

2. Slide the roller off the roller shaft (see Figure 8).



Figure 8 - Remove roller from shaft.

3. To remove the roller shaft, remove the 3/8" nut and washer from the roller support, and remove the support and remaining triangular ring. See Figure 9.

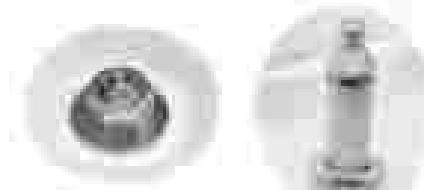


Figure 9 - Roller hardware.

## Removing the Drive 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.

### To Remove the Drive Motor

1. Unplug dryer or disconnect power.
2. Perform the procedures on page 4-6, "Removing the Top Panel and Control/HMI" prior to performing the following steps.
3. Perform the procedures on page 4-11, "Removing the Front Panel" prior to performing the following steps.
4. Perform the procedures on page 4-13, "Removing the Belt and Drum" prior to performing the following steps.
5. Using a 3/4" nut driver, remove the one (1) hex-head screw securing blower wheel shield to blower housing (see Figure 1).



Figure 1 - Blower wheel shield screw

NOTE: Refer to Figure 2 for the following 2 steps.

6. Reach around to the back of the blower housing and attach a 7/16" open-end wrench to the hex-end of the motor shaft. Insert a 3/8" ratchet drive into the blower wheel square hole (see Figure 2).
7. Turn the blower wheel clockwise (shown by the "CLOCKWISE" arrow that is embossed on the front of the wheel) and remove the wheel from the motor shaft (see Figure 2).

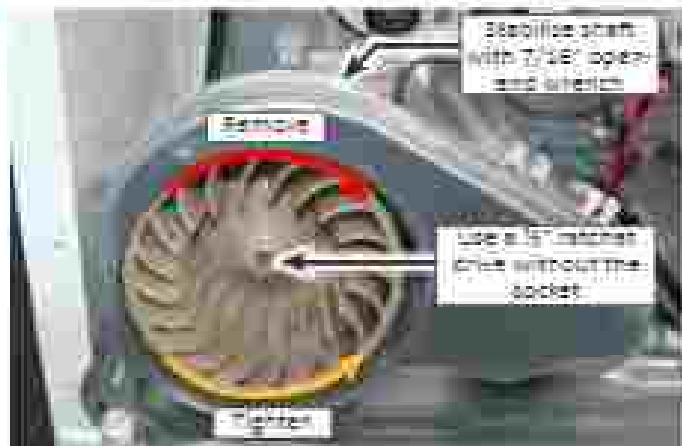


Figure 2 - Remove Blower Wheel

8. Lift the locking tabs on the top and bottom of the motor harness plug and disconnect the plug from the motor terminals. See Figure 3.



Figure 3 - Unplugging motor connector

9. Locate the front and rear motor clips as illustrated in Figure 4 below. Using a small flat blade screwdriver, insert the blade of the screwdriver into the pocket at the tip of the clip. Pry the clip off the tab and remove.

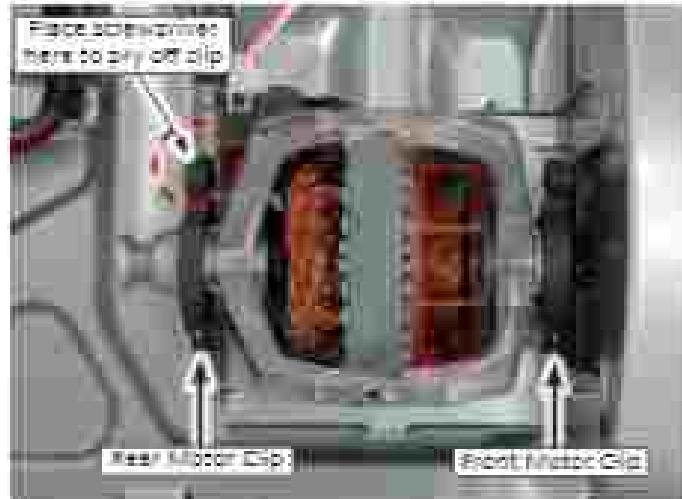


Figure 4 - Drive motor retaining clips

10. Lift motor from support brackets, slide shaft from blower wheel housing and remove motor from cabinet.

## Removing the Thermal Fuse & Outlet Thermistor

### **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.

3. Disconnect the two wire connectors from the thermal fuse or outlet thermistor terminals (see Figure 2).
4. Remove the screw(s) from the thermal fuse or outlet thermistor and remove the component from the blower housing (see Figure 2).

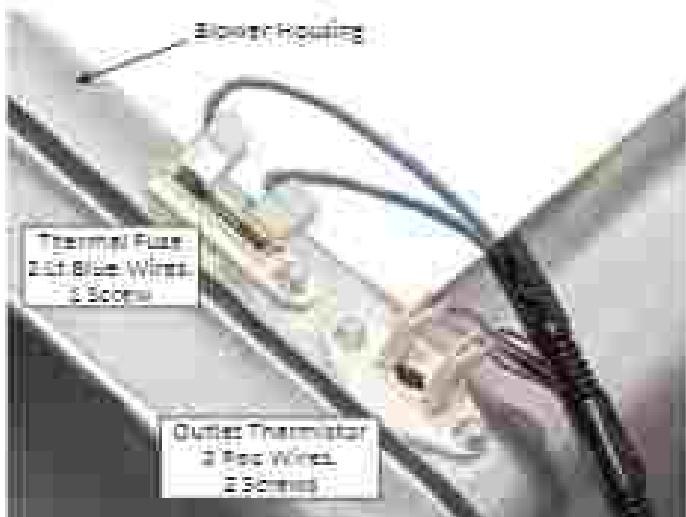


Figure 2 - Thermal Fuse & Outlet Thermistor

### To Remove the Thermal Fuse & Outlet Thermistor

1. Unplug dryer and disconnect power.
2. Perform the procedures on page 4-4: "Removing the Top Panel and Console/MINI" prior to performing the following steps.
3. Perform the procedures on page 4-11: "Removing the Front Panel" prior to performing the following steps.
4. Remove the three (3) 1/4" hex-head screws from the hot duct as illustrated in Figure 1. Set the hot duct down and remove.

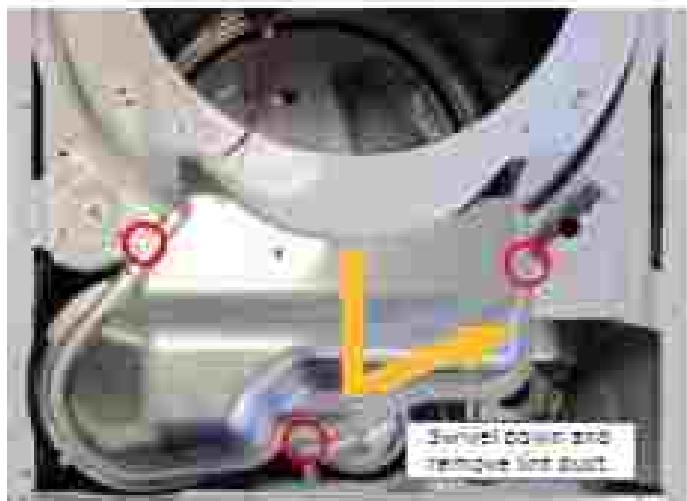


Figure 1 - Remove hot duct screws.

## Removing the Heater, High Limit Thermostat & Thermal Cutoff

### A 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.

- Remove the screw from the heater shield support and remove heat shield/support (see Figure 2).

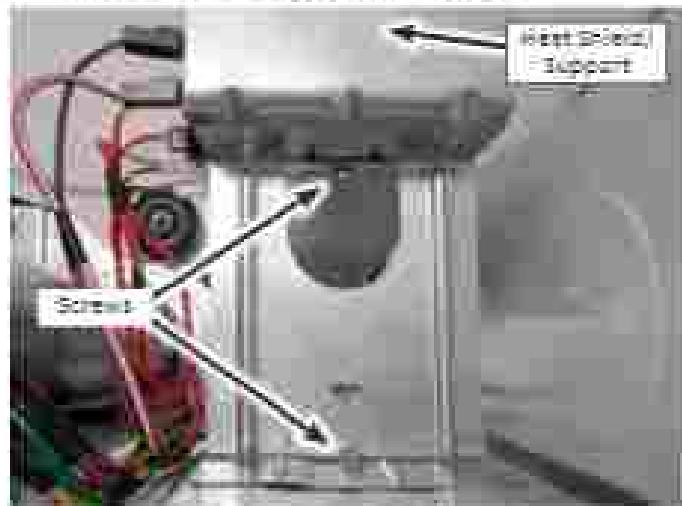


Figure 2 - Heater Shield/Support

### To Remove the Heater, High Limit Thermostat, & Thermal Cutoff (Electric Models Only)

- Unplug dryer or disconnect power.
- Perform the procedures on page 4-9, "Removing the Top Panel and Console (W/D)" prior to performing the following steps.
- Perform the procedures on page 4-11, "Removing the Front Panel" prior to performing the following steps.



Figure 3 - Heater Location

- To Remove the Heater (see Figure 3):
  - Remove the two (2) wires from the heater terminal ends.
  - Remove the 1/4" hex-head screw from the heater housing and slide the heatstrip of the heater out of the heater duct.
- To replace the High-Limit Thermostat or Thermal Cutoff (see Figure 3):
  - Disconnect the wires from the High-Limit Thermostat or Thermal Cutoff.
  - Remove the screw(s) from the High-Limit Thermostat or Thermal Cutoff and remove the component from the heater duct.



Figure 3 - Heater & Thermal

## COMPONENT ACCESS

### Removing the Ignitor, Flame Sensor, High-Limit Thermostat and Thermal Cutoff (Gas Models Only)



#### To Remove the Ignitor, Flame Sensor, High-Limit Thermostat and Thermal Cutoff

1. Unplug dryer or disconnect power.
2. Turn off gas supply to dryer.
3. Perform the procedures on page 4-8, "Removing the Top Panel and Console/Hull," prior to performing the following steps.
4. Perform the procedures on page 4-11, "Removing the Front Panel" prior to performing the following steps.



Figure 1 - Gas Burner Assembly

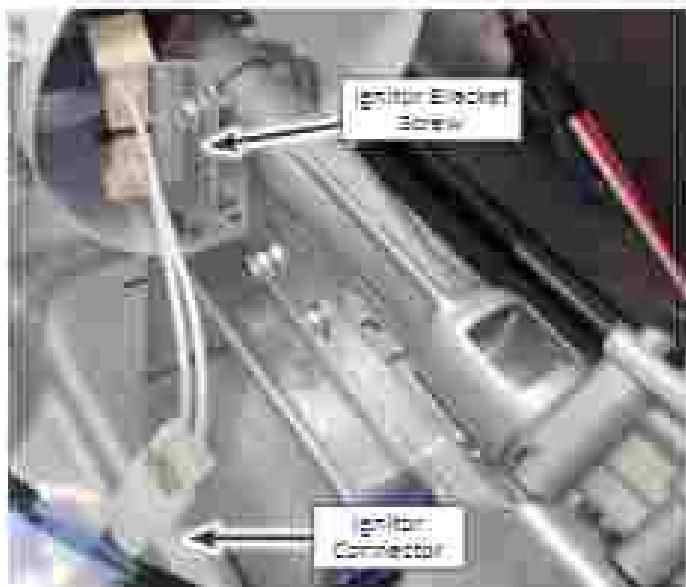


Figure 2 - Removed ignitor

- a) Remove the 5/16" hex-head ignitor screw and remove the ignitor from the bracket.



Figure 3 - Ignitor

- b) To remove the ignitor (see Figures 2 & 3):
  - a) Disconnect the ignitor wire connector from the main harness.
  - b) Remove the 5/16" hex-head ignitor bracket screw from the burner venturi and remove the ignitor and bracket.

## Removing the Ignitor, Flame Sensor, High-Limit Thermostat and Thermal Cutoff (continued)

6. To remove the Flame Sensor (see Figure 4):  
a) Disconnect the two (2) wire connectors from the flame sensor terminals.  
b) Remove the flame sensor screw from the burner venturi and remove the sensor.

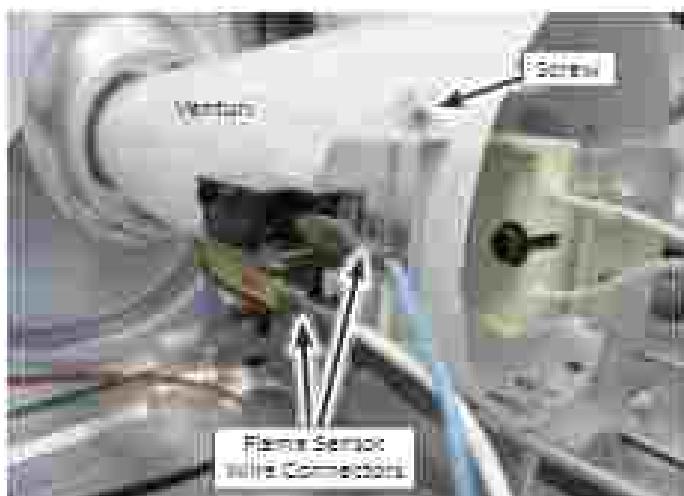


Figure 4 - Removing Flame Sensor

7. To remove the High-Limit Thermostat or the Thermal Cutoff (see Figure 5):  
a) Disconnect the two (2) wire connectors from the component terminals.  
b) Remove the two (2) screws from the High-Limit Thermostat, or the single screw from the Thermal Cutoff. Remove the component from the venturi.

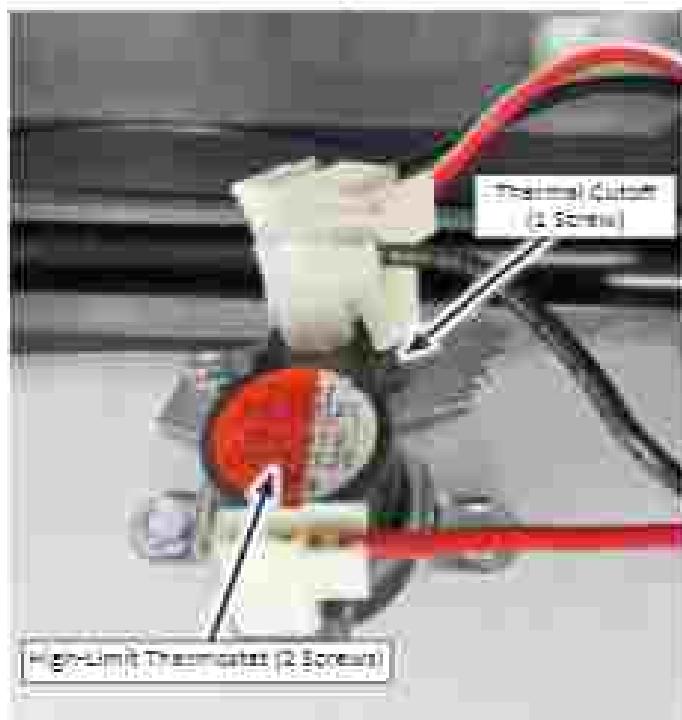


Figure 5 - Remove Thermostats

## COMPONENT ACCESS

### Removing the Gas Burner Assembly Coils (Gas Models Only)

#### **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.

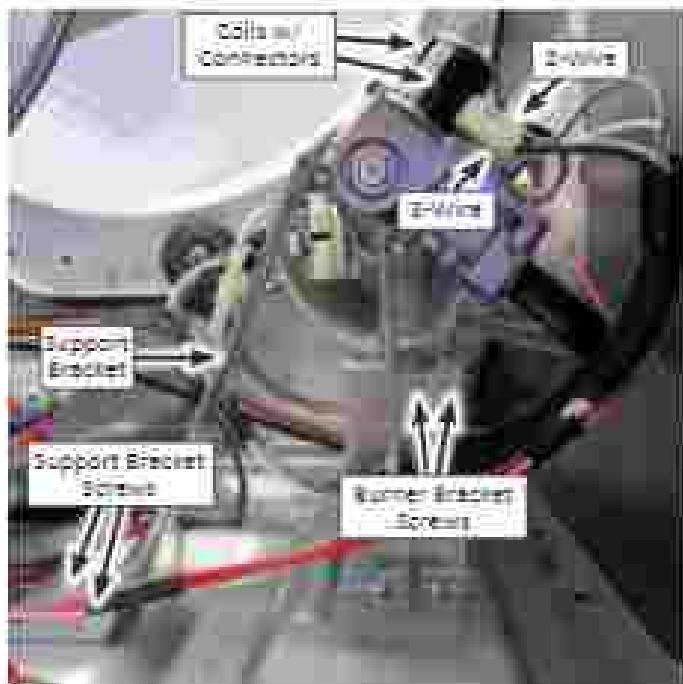


Figure 2 - Burner Screws and Connections

#### To Remove the Gas Burner Assembly Coils

1. Unplug dryer or disconnect power.
2. Turn off gas supply to dryer.
3. Perform the procedures on page 4-8 ("Removing the Top Panel and Console/HDL" prior to performing the following steps.
4. Perform the procedures on page 4-11 ("Removing the Front Panel" prior to performing the following steps.



Figure 1 - Gas Burner Assembly

5. Remove the sensor from the burner (see page 4-18 for the procedure).
6. Disconnect the 2-wire and 3-wire connectors from the burner coil assembly terminals (see Figure 3).
7. Remove the two screws from the burner support bracket and remove the bracket from the burner (see Figure 3).
8. Remove the two screws from the front of the burner bracket and remove the burner assembly from the dryer.



Figure 3 - Gas Burner Assembly



Figure 4 - Remove coil pack screw

9. Remove the one (1) Phillips screw, indicated in Figure 4, to release the coil pack.



Figure 5 - Lift and remove coil pack.

## Removing the Rear Panel

### **A 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.

#### To Remove the Rear Panel

1. Unplug dryer or disconnect power.
2. Perform the procedures on page 4-2, "Removing the Top Panel" prior to performing the following steps.
3. Using a 1/4" nut driver, remove the two (2) hex-head screws securing the rear brackets to the rear panel as indicated in Figure 3. Remove the rear bracket.



Figure 1

4. Remove the 8/32" hex-head screw securing the terminal block cover to the rear panel. Remove the cover (see Figure 2).



Figure 2

5. Remove the ten (10) 1/4" hex-head screws securing the rear panel to the dryer (see Figure 3).



Figure 3

6. Lift up rear panel slightly to disengage from base and remove from dryer.

## Removing the Water Valve (Steam Models Only)

### **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.

### To Remove the Water Valve

1. Unplug dryer or disconnect power.
2. Perform the procedures on page 4-21, "Removing the Rear Panel" prior to performing the following steps.
3. Disconnect the water valve harness connector (see Figures 1 & 2).
4. Remove the "O-Dip" from the water valve tube fitting and remove water tube from valve assembly (see Figures 1 & 2).
5. Remove the 1/4" hex-head screw securing the water valve bracket to the dryer base. Remove water valve and bracket assembly from dryer. See Figures 1 & 2.

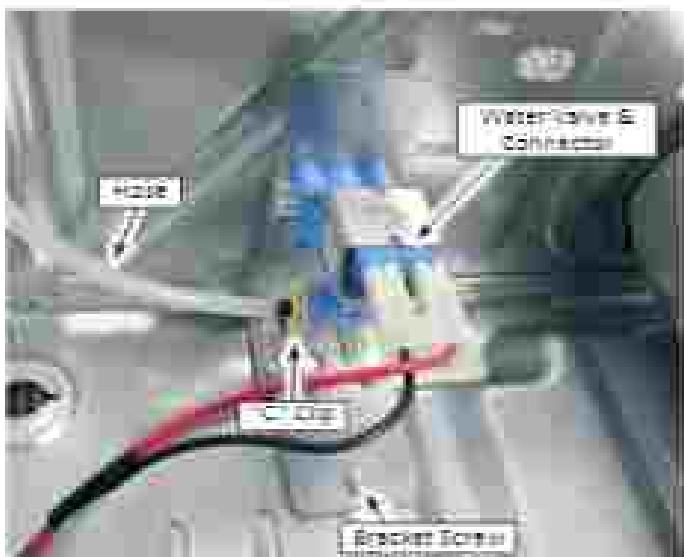


Figure 2 - Water valve viewed from left side.

### Water Valve Components

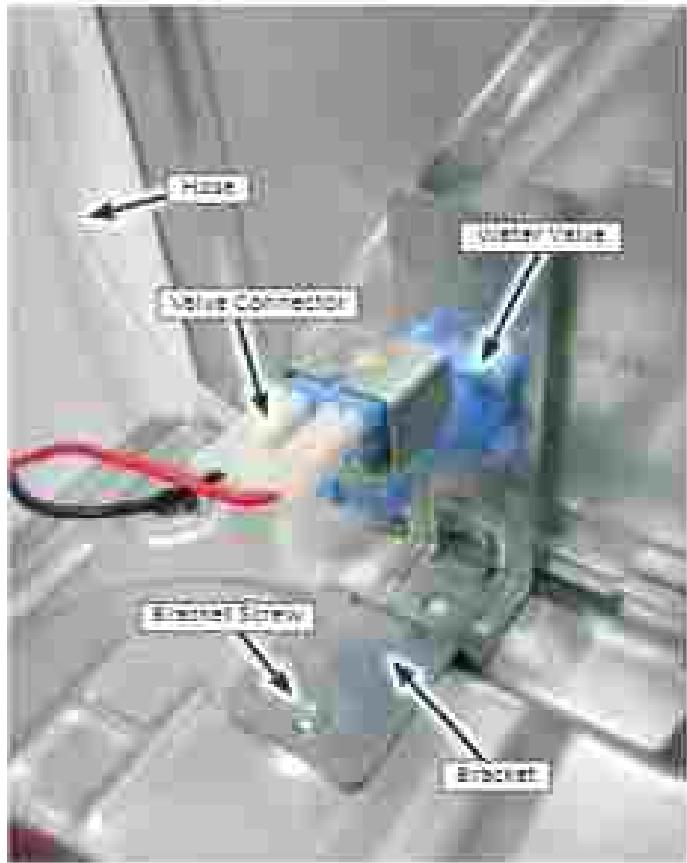


Figure 1 - Water valve viewed from right side.

## Section 5: Connectivity

This section provides connectivity setup, download installation, and troubleshooting for the Whirlpool & Maytag Front-Load Gas & Electric Dryers.

- Internet Connectivity Guide
- Connectivity Troubleshooting

## Internet Connectivity Guide

### Get the App and Get Connected

With your mobile device, get the app, connectivity setup instructions, terms of use, and privacy policy at: [www.whirlpool.com/connect](http://www.whirlpool.com/connect)

In Canada, visit:

[www.whirlpool.ca/connect](http://www.whirlpool.ca/connect)

and click on the Whirlpool® Connected Appliances link.

### INITIAL SET UP

**IMPORTANT:** Proper installation of the appliance prior to use is the customer responsibility. Be sure to read and follow the Installation Instructions that come with the appliance.

Connectivity requires WiFi and account creation. App features and functionality subject to change. Data rates may apply. If you have any problems or questions, call Whirlpool Corporation Connected Appliances at 1-866-333-4591.

#### You Will Need:

- A home wireless router supporting:
  - Frequency Band: 2.4GHz Band IEEE 802.11 b/g/n
  - Security: WiFi Protected Access WPA2
  - Network Support: IPv4 Minimum
- If you are unsure of the router's capabilities, refer to the manufacturer's instructions.
- The router to be O&I and have a live internet connection.
- The 12-character Smart Appliance ID (SAID) code for your appliance. The SAID code is either printed on a label on the appliance or can be found on the QCD screen. Refer to the Appliance Use & Care Guide for the location.

### Download and Install with Touch Screen

Perform the following steps to download and install the App. Once installed, launch the app. You will be guided through the steps to set up a user account and to connect the appliance. If you have any problems or questions, call Whirlpool Corporation Connected Appliances at 1-866-333-4591.

#### 1. Download the Mobile App

From your mobile device, smartphone, or tablet, go to [www.whirlpool.ca/connect](http://www.whirlpool.ca/connect) and follow the instructions to download and install the Whirlpool® app.



2. Create Your Own Account.
3. Select Add Appliance on the Mobile Application.
4. Scan the QR code from the Appliance WiFi settings touchscreen display.
5. Follow Mobile Application instructions to use the Appliance touchscreen to select your home router and enter your home router passphrase on the appliance touchscreen.
6. Select next on the Mobile Application instruction Screen.
7. On the Mobile application observe and wait for the Appliance to indicate that it is connected to the home router, Internet, and Cloud Service.
8. Upon Success name your appliance and start using its remote features.

### Download and Install with non-Touch Screen

Perform the following steps to download and install the App. Once installed, launch the app. You will be guided through the steps to set up a user account and to connect the appliance. If you have any problems or questions, call Whirlpool Corporation Connected Appliances at 1-866-333-4591.

#### 1. Download the Mobile App

From your mobile device, smartphone, or tablet, go to [www.whirlpool.ca/connect](http://www.whirlpool.ca/connect) and follow the instructions to download and install the Whirlpool® app.

2. Create Your Own Account.
3. Select Add Appliance on the Mobile Application.
4. Scan the QR code from the Appliance Label or manually enter the SAID and MAC.
5. On the Mobile Application enter your home router passphrase if your home router has a choice of frequency bands - be sure to use the 2.4GHz band router mode.
6. Select next on the Mobile Application instruction Screen.
7. On the Mobile application observe and wait for the Appliance to indicate that it is connected to the home router, Internet, and Cloud Service.
8. Upon Success name your appliance and start using its remote features.

#### NOTES:

- Once the dryer is connected to the consumer's home WiFi network, it will remain linked even if the power goes out, the appliance is moved, or it is put in storage for a while.
- If the consumer replaces their wireless router (or gets a different Smart Dryer), you will need to repeat the connectivity setup process.

# Connectivity Troubleshooting

## Troubleshooting Guide

Connection Status	Console Indicator Lights
Dryer is not connected	• Smart Grid (Connected) status indicator is OFF
Dryer is attempting to connect to home WiFi router	• Smart Grid (Connected) status indicator is blinking slowly
Dryer is connected to home WiFi router, but Whirlpool™ app or Smart Grid functions do not work	• Smart Grid (Connected) status indicator is solid
Dryer is connected to home WiFi router and the Whirlpool™ app works	• Smart Grid (Connected) status indicator is ON

If you experience	Possible Causes	Solution
Dryer is not connected to home WiFi router.	The dryer may be in standby mode.	Touch the POWER CANCEL button on the dryer.
	The dryer has never been connected to the home WiFi router.	See "Connectivity Guide" in this section, pages 5-6.
	Lost connection to home WiFi router.	Check whether the router is on and working with other computers or devices in the home. Able to access the internet?
	Weak signal strength or signal interference between the dryer and router.	Try to place the wireless router closer to the dryer. It may be necessary to install a WiFi range extender.
Dryer is connected to home WiFi router, but Whirlpool™ app or Smart Grid functions do not work.	User account has not been properly set up, or the dryer has not been registered in an account.	See "Connectivity Guide" in this section or the Whirlpool™ app directly for account setup and dryer registration instructions.
		Verify that the dryer is paired with the customer account in the app.
		Verify correct e-mail address, mobile number, and notification preferences.

## Notes

# **PRODUCT SPECIFICATIONS & WARRANTY INFORMATION SOURCES**

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***IN THE UNITED STATES:***

**FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:  
FOR WHIRLPOOL PRODUCTS: 1-800-253-1301**

**FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:  
THE TECHNICAL ASSISTANCE LINE: 1-800-832-7174**

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN  
AUTHORIZED IN-HOME SERVICE PROFESSIONAL**

**FOR LITERATURE ORDERS (CUSTOMER EXPERIENCE CENTER):  
PHONE: 1-800-851-4605**

**FOR TECHNICAL INFORMATION AND SERVICE POINTERS:  
[www.servicematters.com](http://www.servicematters.com)**

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***IN CANADA:***

**FOR PRODUCT SPECIFICATIONS AND WARRANTY INFORMATION CALL:  
PHONE: 1-800-461-5681**

**FOR TECHNICAL ASSISTANCE WHILE AT THE CUSTOMER'S HOME CALL:  
THE TECHNICAL ASSISTANCE LINE: 1-800-488-4791**

**HAVE YOUR STORE NUMBER READY TO IDENTIFY YOU AS AN  
AUTHORIZED IN-HOME SERVICE PROFESSIONAL**

**Whirlpool & Maytag  
Front-Load  
Gas & Electric Dryers**

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