GE HA Dryer Upgrade – GFDS350 Series

GE® 7.5 cu. ft. stainless steel capacity dryer with Steam Options



Models:

GFDS350ELWW
GFDS350GLWW
GFDS355ELMV
GFDS355GLMV
GFDS355ELMS
GFDS355GLMS

Service Guide

31-9209

imagination at work

GWS2011

GE HA Dryer Upgrade – GFDN240 Series

GE® 7.0 cu. ft. stainless steel capacity dryer



Models:

GFDN240ELWW
GFDN240GLWW
GFDN245ELMS
GFDN245GLMS
GFDN245ELMV
GFDN245GLMV

NOTE: 240 series is the same as the 350 series but without steam & a slightly smaller drum.

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IMPORTANT SAFETY NOTICE

The information in this presentation is intended for use by individuals possessing adequate backgrounds of electrical, electronic, & mechanical experience. Any attempt to repair a major appliance may result in personal injury & property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

WARNING

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

RECONNECT ALL GROUNDING DEVICES

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position & properly fastened.

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GE Factory Service Employees are required to use safety glasses with side shields, safety gloves & steel toe shoes for all repairs.



Dyneema® Cut Resistant Glove



Electrically Rated Glove and Dyneema® Cut Resistant Glove Keeper



Plano Type Safety Glasses

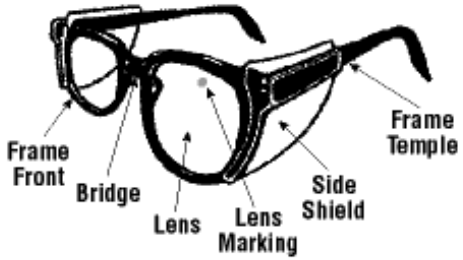


Steel Toe Work Boot





Brazing Glasses



Prescription Safety Glasses

Safety Glasses must be ANSI Z87.1-2003 compliant

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Warranty

For The Period Of:	We Will Replace:
One Year *From the date of the original purchase*	***Any part*** of the washer which fails due to a defect in materials or workmanship. During this ***limited one-year warranty,*** GE will also provide, ***free of charge,*** all labor and related service costs to replace the defective part.

What Is Not Covered (in the United States):

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Damage after delivery.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.
- Product not accessible to provide required service.

EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.

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Model / Serial



The full model / serial tag is located on the front panel inside the door opening.
There is also a barcode sticker that displays the model & serial and is located on the left, front of the top panel.

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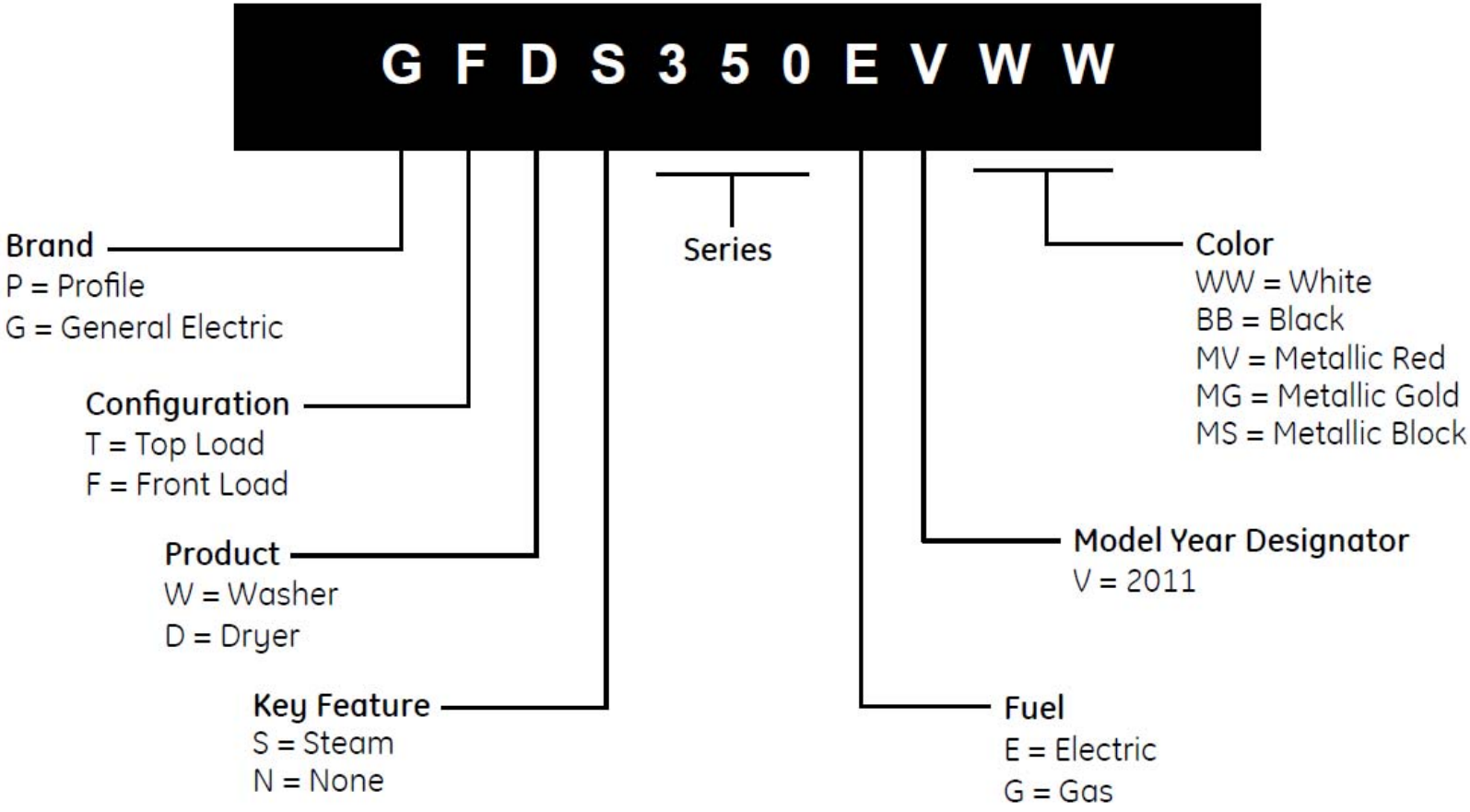
Mini-Manual



Mini-Manual is located inside control housing.

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Nomenclature



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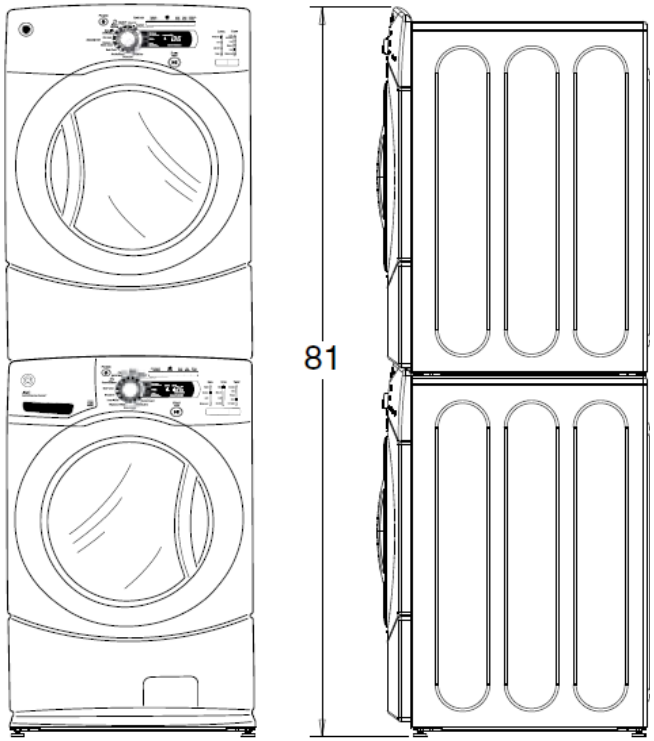
Installation

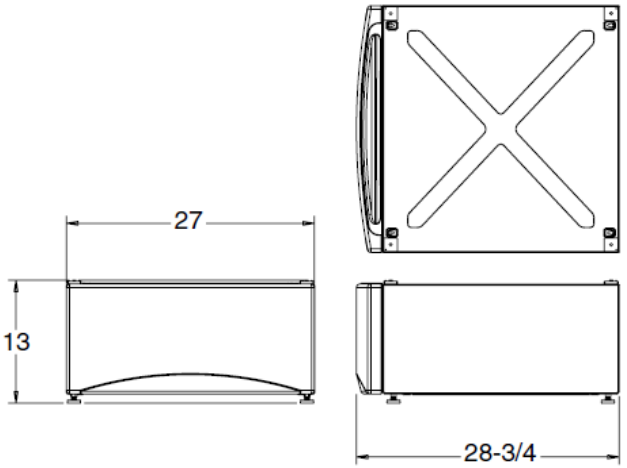
These Laundry products can be installed in several different configurations:

Undercounter	Side-by-Side.
Pedistal	Stacked

Dryer can be stacked on the washer.
Kit for stacking dryer over washer is not included with the washer.
Order **GEFLSTACK.**

Machines can be stacked on a pedestal. These can be ordered separately.
SPSD157JMV – Vermillion
SPSD157JMS - Silver
SPSD157JWW - White

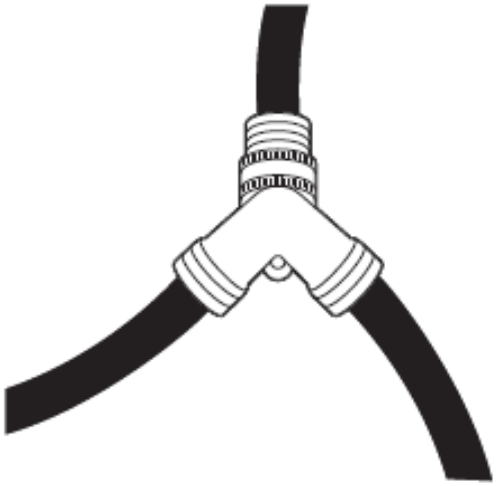


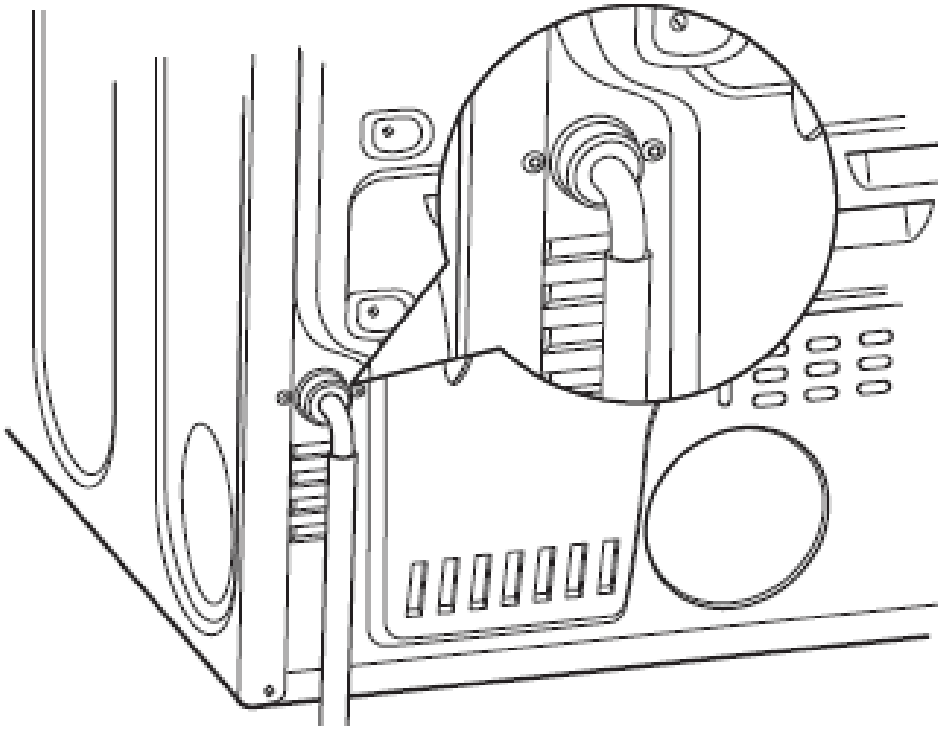


Stacking Instructions.
Open in “Normal View”.

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Installation – Water Line





To produce steam, the dryer must connect to the cold water supply. Since the washer must also connect to the cold water, a “Y” connector is inserted to allow both inlet hoses to make that connection at the same time.

NOTE: Use the new inlet hoses & “Y” connector provided; never use old hoses. (Hose kit - Long & short hoses, washers & “Y” connector - WE25M53)

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Installation - Venting

These dryer models can be vented through the rear, the side or the bottom of the cabinet.

STANDARD REAR EXHAUST
Dryer Exhaust to the rear of cabinet for Gas and Electric models.

SIDE VENTING:
Dryer Exhaust to right of cabinet for Electric models only.
Dryer Exhaust to left of cabinet for Gas and Electric models.

BOTTOM VENTING:
Dryer Exhaust to the bottom of cabinet for Gas and Electric models.

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Installation – Demo Mode

To enter demo mode:
Turn the unit off so the screen is blank.
Then unplug the unit, wait 10 seconds.
Plug the unit back in.
Within 30 seconds after plugging in the unit, press the **Start/Pause** button 4 times within 3 seconds with the door open.

To exit Demo Mode:
Repeat the above sequence.

Note: In the Demo Mode, the control will proceed through the selected cycle but will not actually activate any components.

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Features – Steam Cycles

Steam Refresh

For slightly wrinkled dry garments. Significantly reduces wrinkles on 1–5 garments.
Selecting a higher number of garments for the cycle (e.g., selecting 5-garment load for a 1-garment load) may result in excessive wetting of clothes. After the ***STEAM REFRESH*** Cycle, the unit will beep and display "Garments Ready" and "0:00." If the unit is not turned off or if the door is not opened, the dryer will continue to tumble for 30 minutes. At the end of 30 minutes, it will display "0:00" and "Cycle Complete."
NOTE: When STEAM REFRESH is selected, "EXTENDED TUMBLE" will automatically turn on and cannot be turned off.

A single extremely light fabric item may need to have an additional item included in the steam refresh cycle to
achieve optimum results.

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Features – Steam Cycles

Steam Dewrinkle

For use with larger loads than ***STEAM REFRESH***. Ideal for loads left in dryer for an extended time. Selecting a larger cycle than needed (e.g., selecting Large Load for a half-full dryer) may result in excessive wetting of clothes.

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Features – Lint Filter Message



"CLEAN LINT FILTER" (message) This message represents only a reminder and does ***not*** always appear when the filter needs cleaning. The filter should be cleaned after every drying cycle is complete.
This message will disappear after the ***START*** button is pressed. Message may appear even though you may have already cleaned the filter.

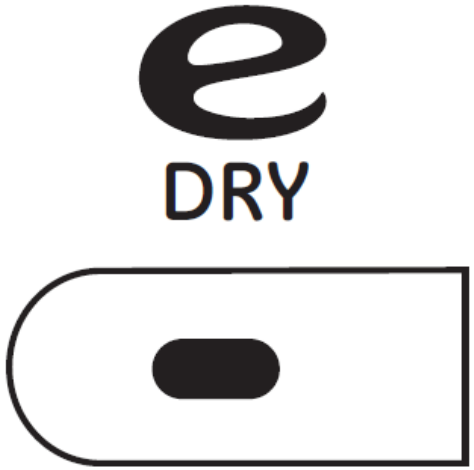
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Features – e Dry

Reduces the total energy consumption of specific dryer cycles by adjusting certain heat settings and extending dry times.

NOTE: Cycle times will change when e-Dry is selected.

This cycle can be used with ***DELICATES, ACTIVE WEAR, EASY CARE, NORMAL/MIXED LOADS*** and ***COTTONS.***



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Features – Drying Rack



- The drying rack is designed for use with the **TIMED DRY** cycles.
- Use with sensor cycles may result in damp items or extended cycle times.
- Do not use this drying rack when there are other clothes in the dryer that are not placed on the rack.

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Features – Drying Rack



- To install the drying rack, pull up the lint filter slightly.
- Insert the drying rack into the slots, then push the filter back into place.

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Features – Door Swing Reversal



Instructions for reversing door swing are included in the Use & Care.

- Read the instructions all the way through before starting.
- Handle parts carefully to avoid scratching the paint.
- Set screws down by their related parts to avoid using them in the wrong places.
- Provide a non-scratching work surface for the door.
- Normal completion time to reverse the door swing is 30-60 minutes.

Door Reversal Instructions.
Open in “Normal View”.

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Disassembly – Top Panel



1. Remove the Phillips-head screw that attaches the control panel rear trim. Pull the trim piece backward and remove.
Note: It may be helpful to place a putty knife along the top seam between the trim and the control panel, then tap lightly backward.

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Disassembly – Top Panel





2. Remove the 2 Phillips-head screws that attach the top panel to the cabinet.
3. Raise the front of the top panel approximately 3 inches, then pull forward to clear the rear tabs. Lift off top panel.

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Disassembly – Control Panel



Removal of the control panel provides access to the control board assembly.

To remove the control panel:

1. Remove the cycle selector knob by pulling outward.

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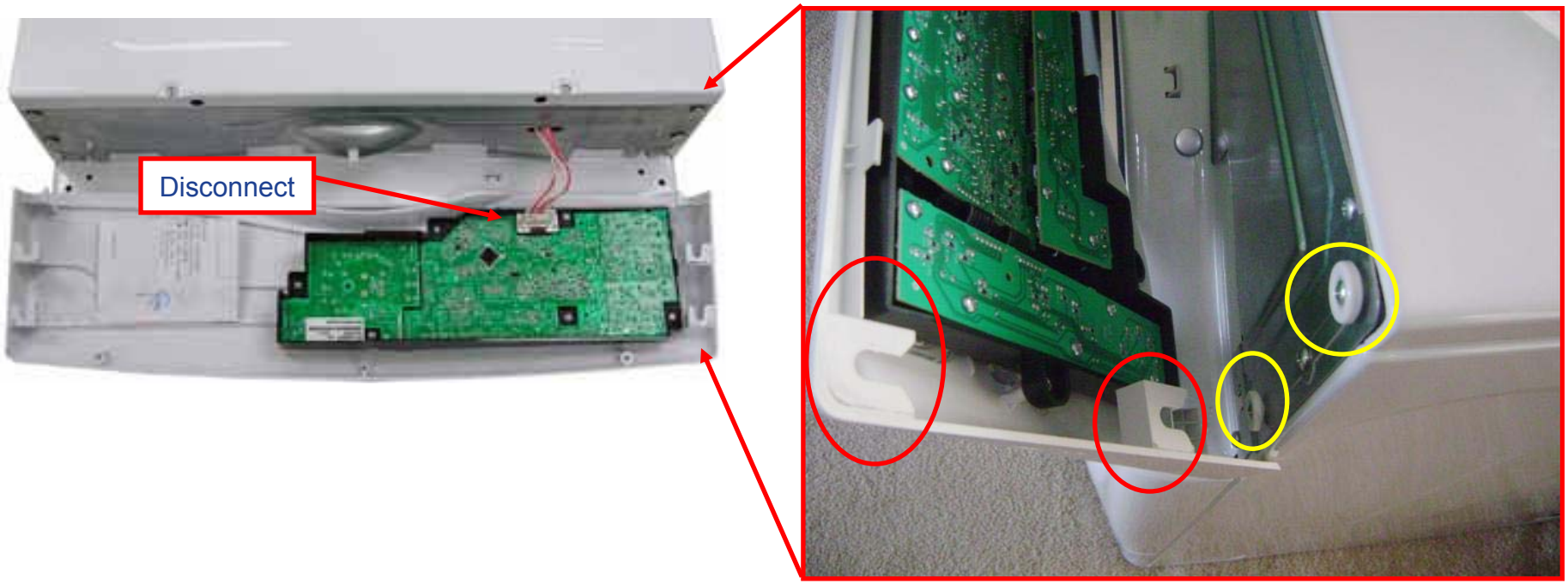
Disassembly – Control Panel



2. Remove the Phillips-head screw underneath the cycle select knob.

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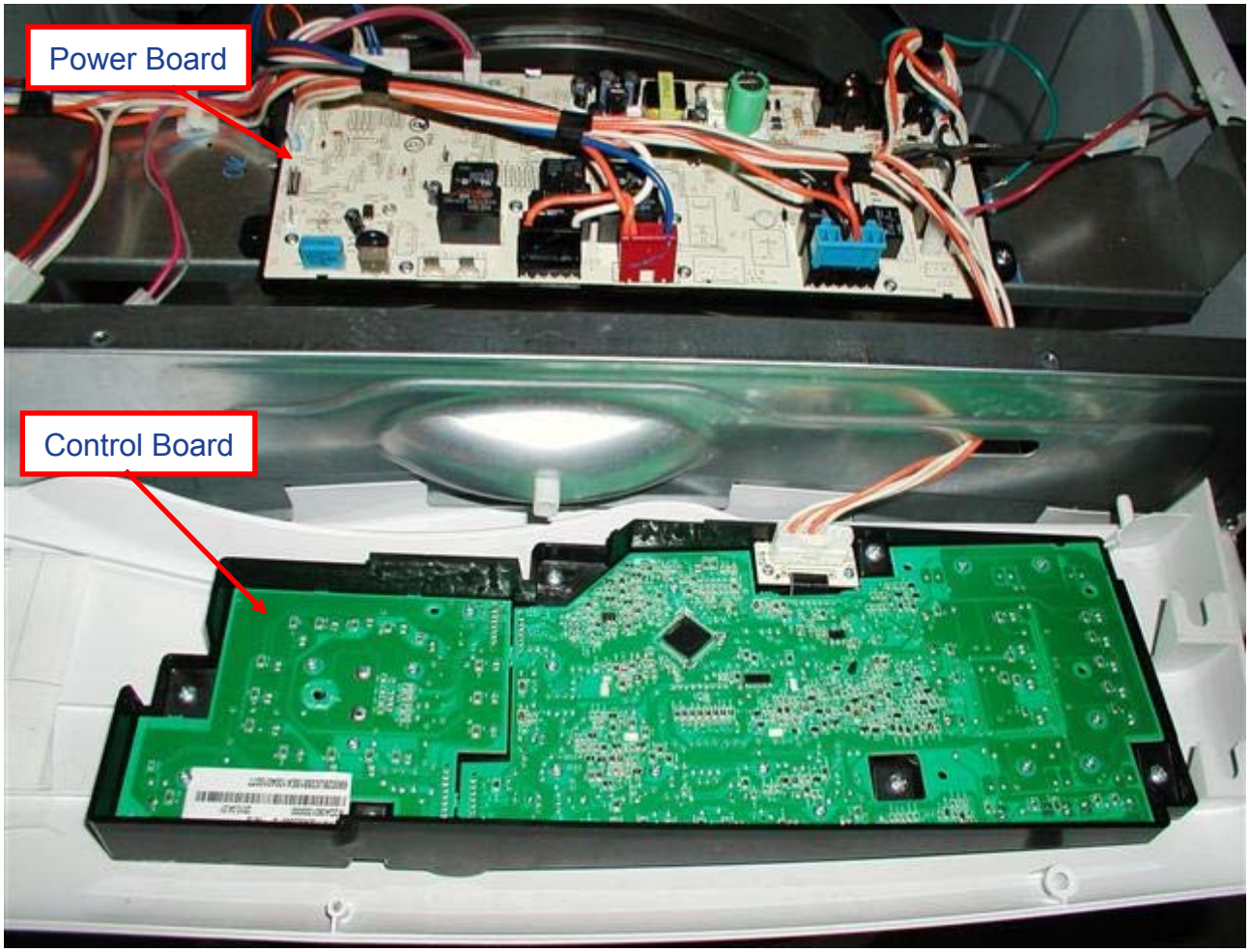
Disassembly – Control Panel



3. Lift the control panel off vertically to disengage hooks from grommets on washer front.
4. Disconnect the wire harness.

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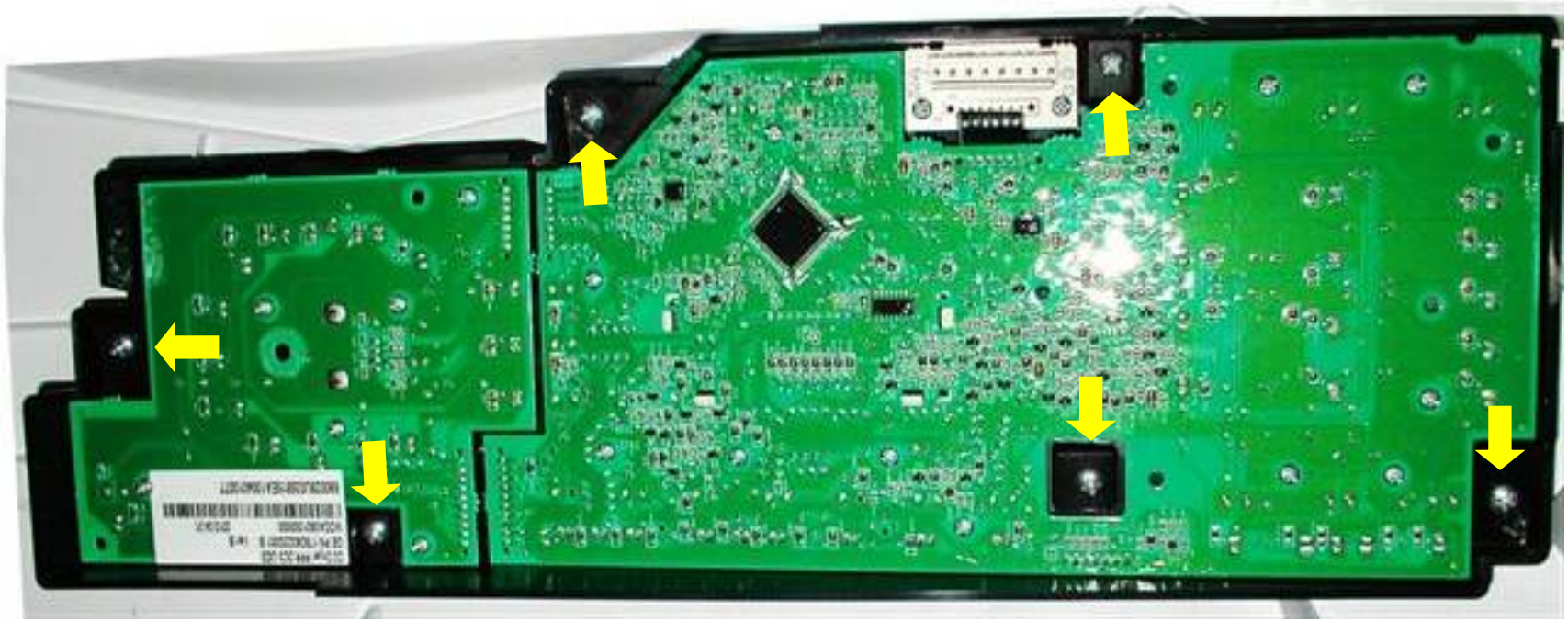
Electronic Control System



The electronic control consists of a control board (UI) and a power board.

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Electronic Control System



To remove the electronic control board:

1. Set the control panel in the service position.
2. Remove the 6 Phillips-head screws that attach the selector board to the control panel.

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Electronic Control System



To remove the electronic power board:

1. Remove the top panel.
2. Disconnect 11 wires and wiring harnesses from the power board.
3. Remove the 2 Phillips-head screws to release the power board from the power board bracket.

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Electronic Control System (Model Select plug)



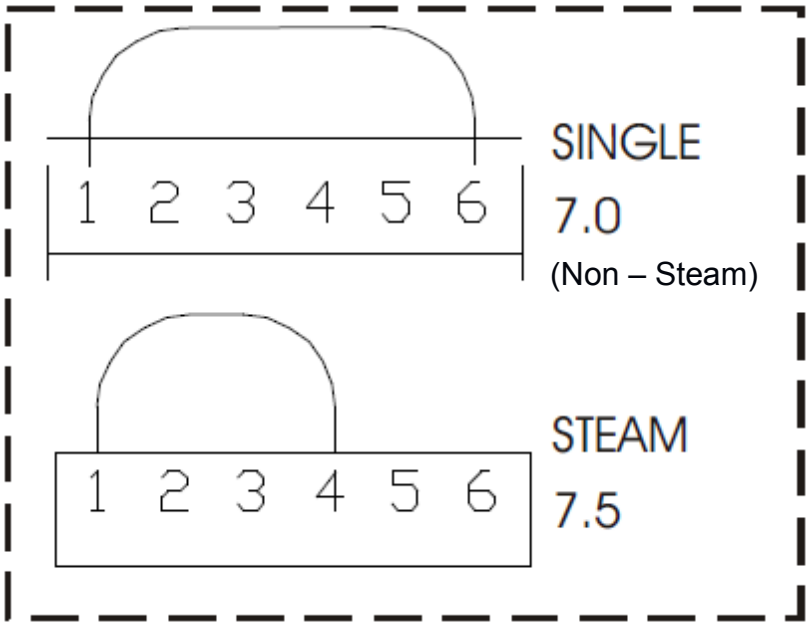
Note: If replacing the electronic control, transfer the model selector harness at J5, to the replacement control board in the same location as on the original.

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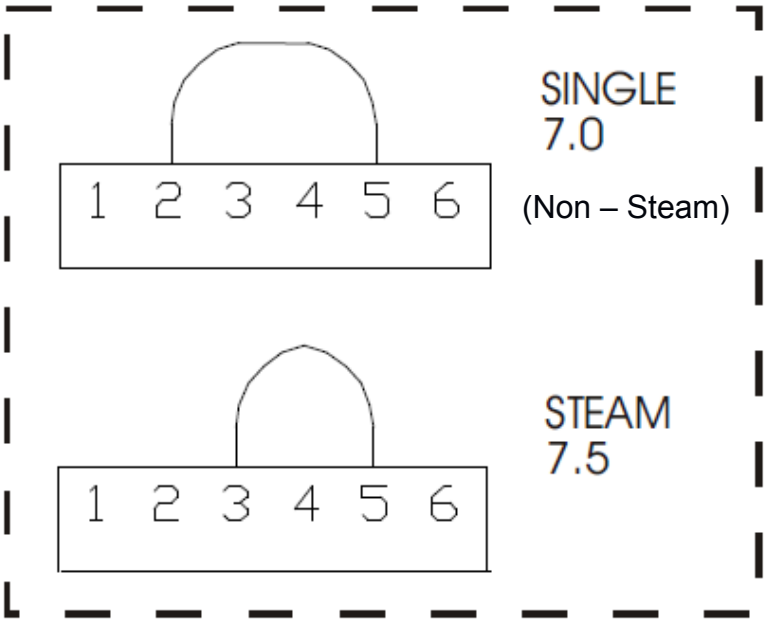
Electronic Control System (Model Select plug)

J5 Plug Configurations:

Electric Models

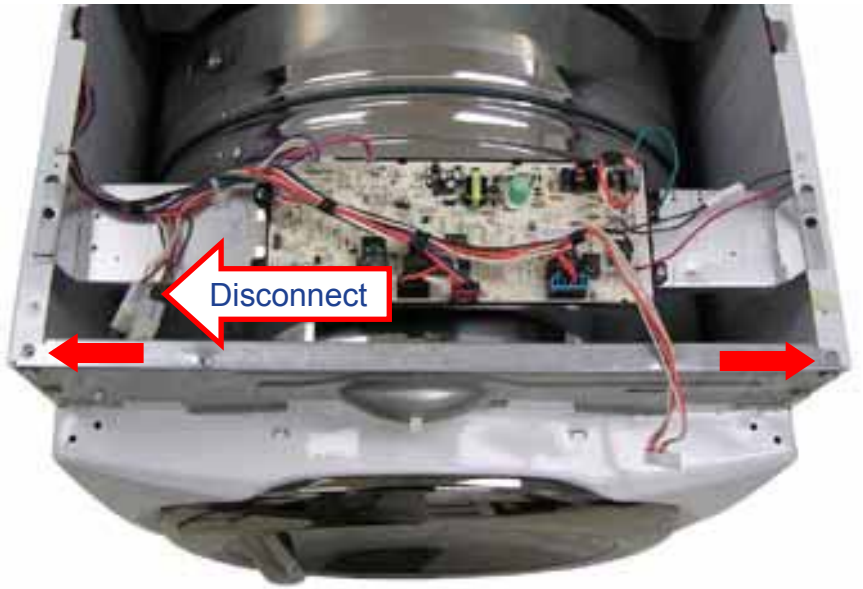


Gas Models



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Disassembly – Front Panel





To remove the front panel:

1. Remove the top panel and control panel.
2. Disconnect the drum lamp / door switch wire harness and the sensor rod wire harness connected to the power board.
3. Remove the 2 Phillips-head screws from the front panel bracket.
4. Remove 4 Phillips-head screws from the front panel bracket.
5. Lift the bracket out of the hinges and set aside.

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Disassembly – Front Panel



Bottom of Front Panel



6. Loosen several turns but do not remove the 2 Phillips head screws from the bottom of the front panel.

7. Remove 2 Phillips-head screws from the top of the front panel.

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Disassembly – Front Panel



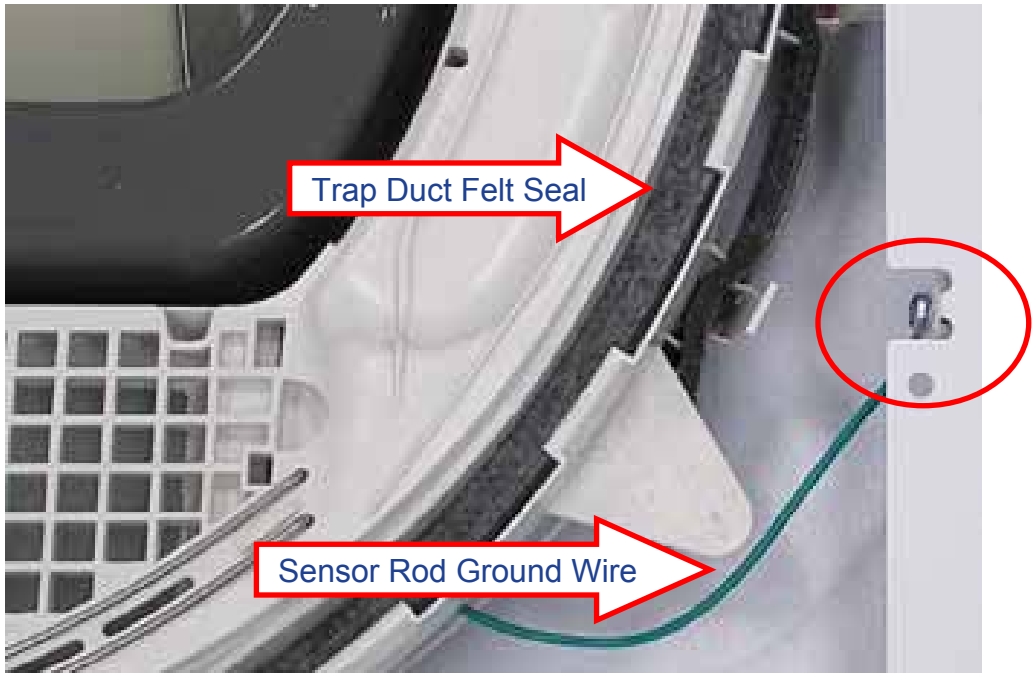


8. Tilt the top edge of the front panel out and press on the John Guest connector collar to release the water line.

9. Lift front panel from the bottom two screws and set aside.

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Disassembly – Air Duct Assembly



NOTE:
The trap duct felt seal can be replaced by extracting the seal from the channel located on the air duct assembly.

The air duct assembly houses the lint filter, steam nozzle, drum seal, and the 2 sensor rods. It is located on the back side of the front panel.

To remove the air duct assembly:

1. Remove the front panel.
2. Remove the single Phillips-head screw that attaches the sensor ground wire to the cabinet.

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Disassembly – Air Duct Assembly



3. Remove the 2 Phillips-head screws that attach the air duct assembly to the front panel.
4. Grasp each side of the air duct assembly and unsnap the air duct from the front panel.

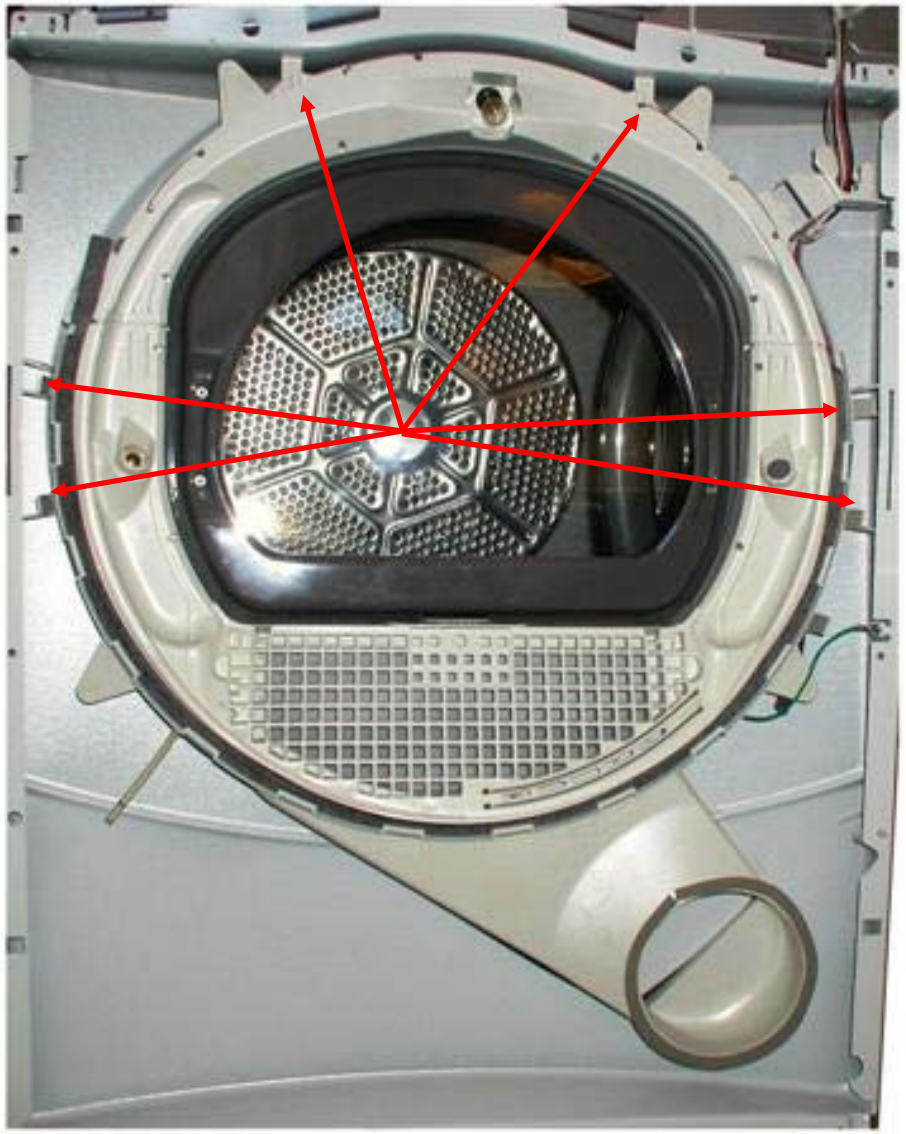
Caution: Upon reassembly, ensure that the door switch, drum light, and sensor wiring are retained and routed properly to avoid contact with the drum.

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Disassembly – Air Duct Assembly

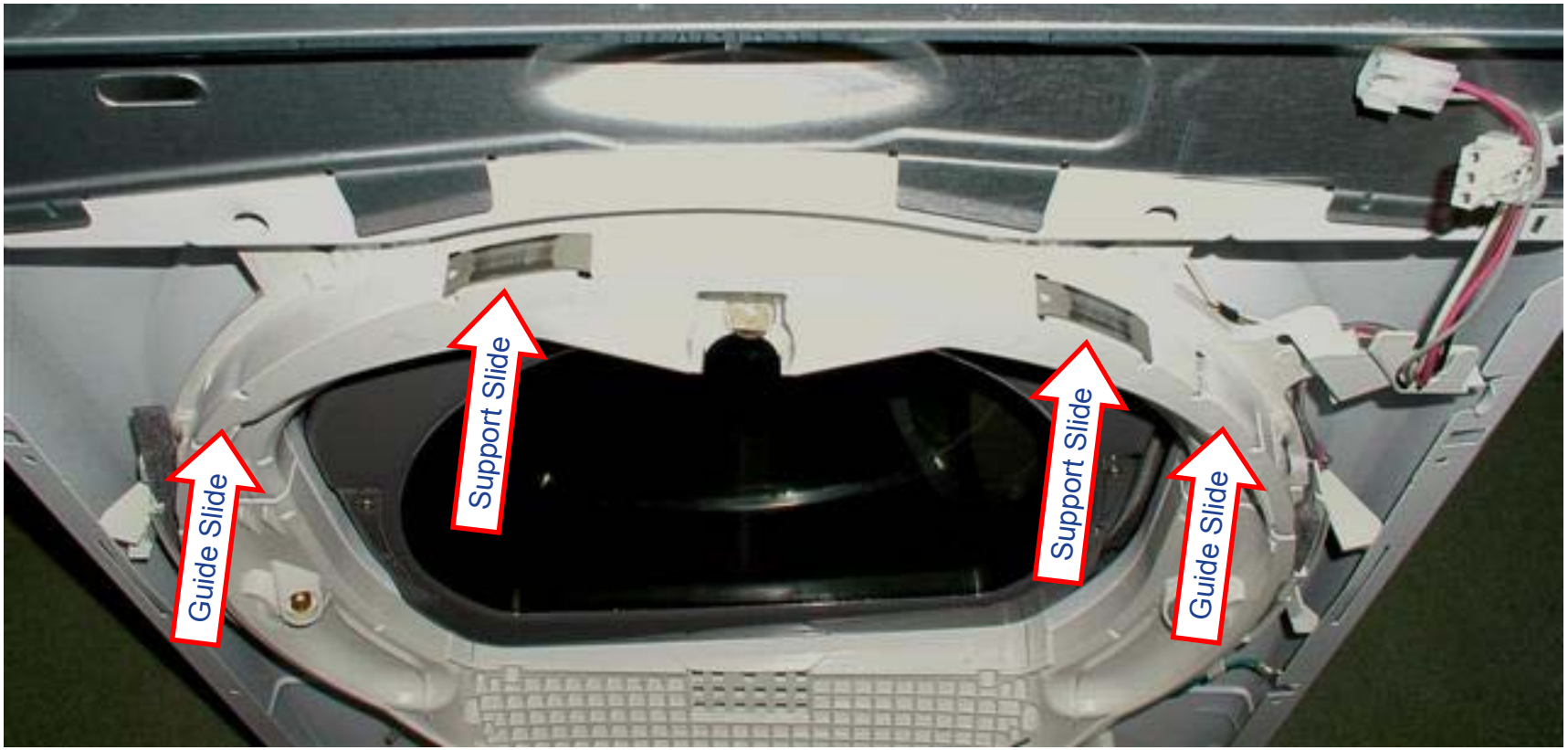
4. Grasp each side of the air duct assembly and unsnap the air duct from the front panel at the points indicated.

Caution: Upon reassembly, ensure that the door switch, drum light, and sensor wiring are retained and routed properly to avoid contact with the drum.



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Disassembly – Drum Slides



The drum slide assembly is located on the back side of the front panel and utilizes 4 drum slides. Two white outer slides are used as guides, and 2 dark color center (top) slides are used to support the weight of the drum. When replacing the slides, the dark-colored support slides must be used to replace the top support slides. Guide slides may also be replaced with support slides.

Caution: Do not replace the center (top) support slides with the white guide slides. Damage to the dryer will result.

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Disassembly – Drum Slides





To Remove Drum Slides: (Remove top panel, control panel then tilt the front panel outward.

1. Grasp individual slides at the non-tabbed end and pry up slide.
2. Release slide from tab on duct assembly and remove.

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Disassembly – Steam Nozzle

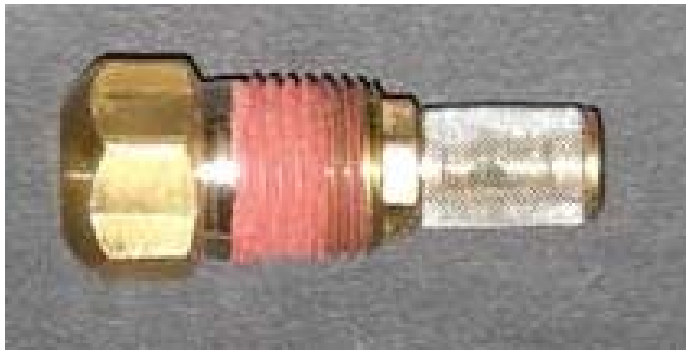


The steam nozzle is located inside the front of the dryer on the right side of the air duct assembly. The steam nozzle consists of a brass orifice and a fine filter screen. If the orifice should become plugged or restricted, it should not be cleaned. Replace a plugged or restricted steam nozzle.

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Disassembly – Steam Nozzle





Nozzle with Thread Lock Applied

The steam nozzle can be replaced without disassembly of the dryer. Replacement can be performed by opening the dryer door to access the steam nozzle. A 7/16” or 11-mm nut driver can be used to unscrew the nozzle from the air duct assembly.

Note: The replacement steam nozzle will have thread lock pre-applied to the screw threads.

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Disassembly – Steam Nozzle Connector

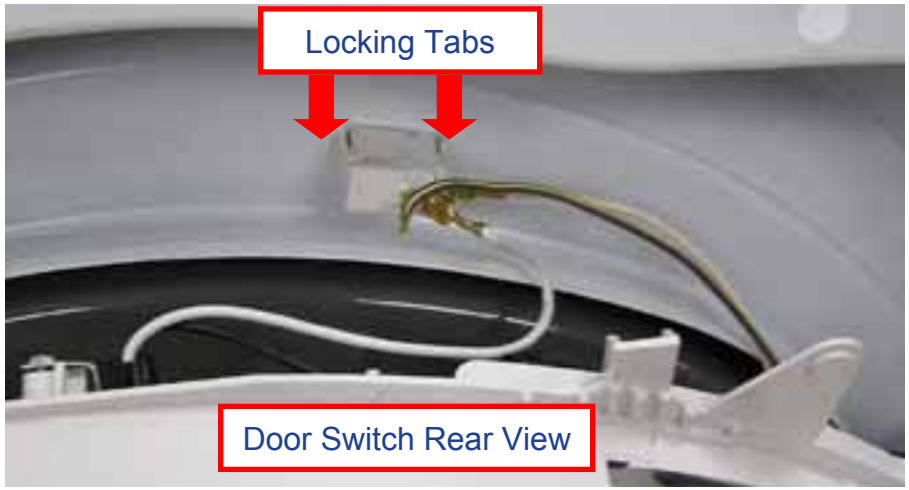
1. Remove the air duct assembly.
2. Press on the John Guest connector collar and release the water line from the steam nozzle connector.
3. Remove the Phillips-head screw that attaches the nozzle to the nozzle housing.
4. Pull the nozzle connector out of the housing.



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Disassembly – Door Switch





The door switch is fastened to the front panel by 2 locking tabs (1 on each side). When the dryer door is closed, the switch will complete the drum motor circuit, allowing dryer operation. When the door is open, the switch will open the drum motor circuit, interrupting dryer operation. Opening the dryer door will also cause the door switch to close the drum light circuit, allowing the drum light to be energized.

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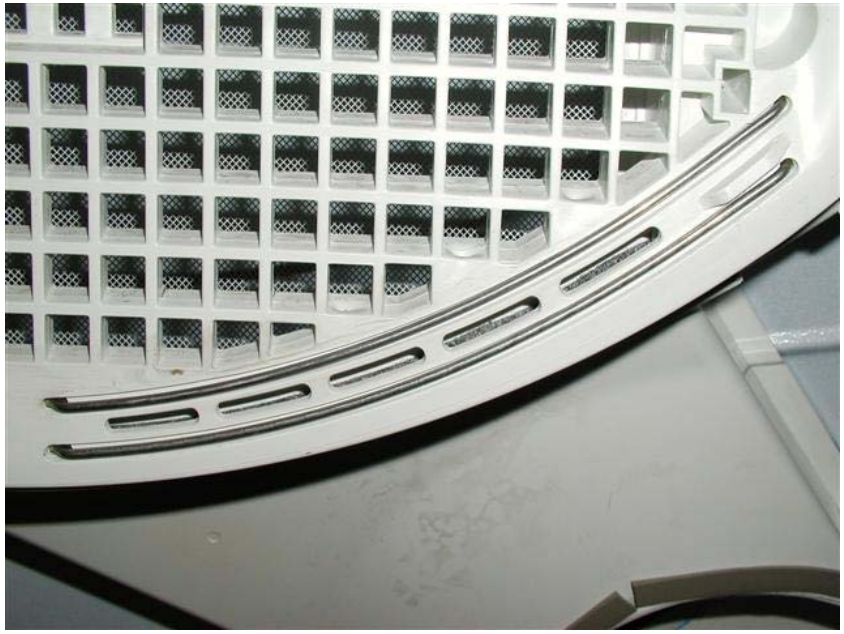
Disassembly – Moisture Sensor

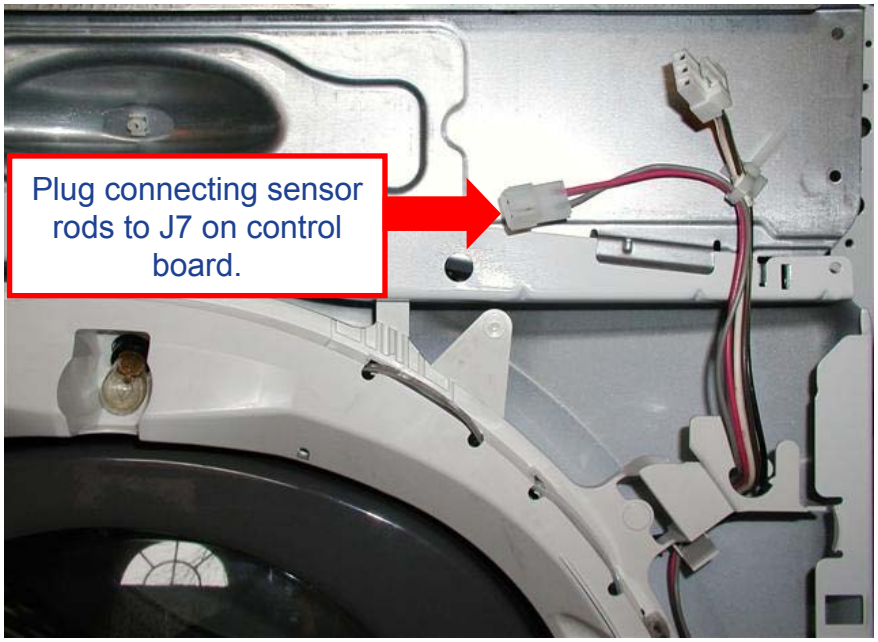


The moisture-sensing circuit consists of 2 sensor rods. They are mounted beneath the lint filter on the drum side of the air duct.
Operation of the moisture sensor can be checked by using service test mode T07.

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Disassembly – Moisture Sensor



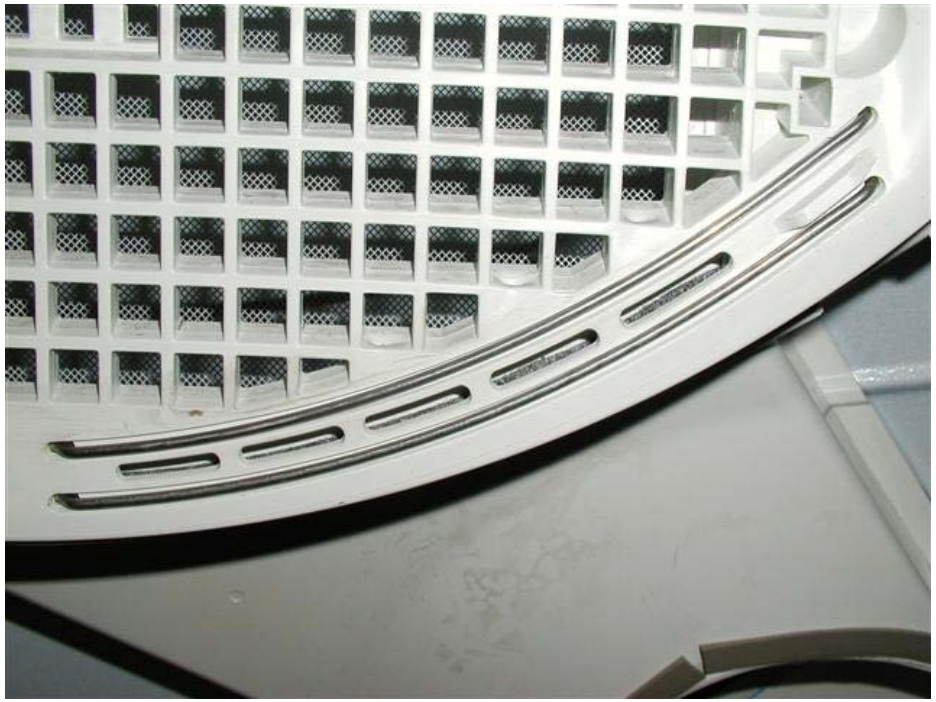


The dryer will signal when the clothes are at 17% moisture level if equipped with a damp signal that has been selected.
Approximate values for dryness level:
Damp = 17%
Less dry = 12%
Dry = 2-6%
More dry = <2%

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Disassembly – Moisture Sensor

The sensor rods are connected to the main control board. The rods are spaced approximately ½-in. apart, which creates an open circuit to the control.



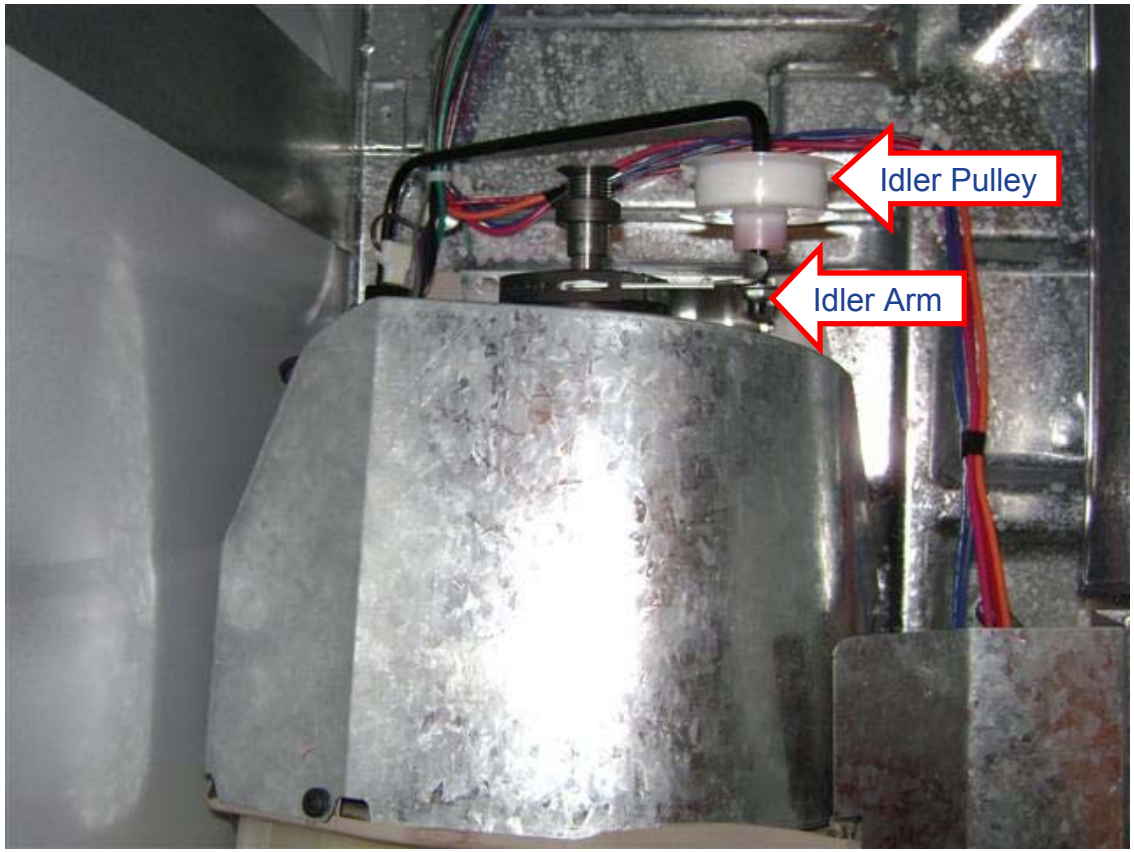
The control board utilizes a low-voltage capacitor that charges to approximately 5 VDC when the circuit is open and discharges to less than 1 VDC when the circuit is shorted.

When wet clothes tumble across the two rods, the clothes create a very low resistance between the rods, which discharges the capacitor. As the clothes become dry, their resistance value increases and the charge across the capacitor builds to approximately 5 VDC.

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Drive Belt

Pulley shown in locked position



The drive belt (Part #WE12M29) is a 4-rib belt and extends from under the motor pulley, over the top of the idler pulley, and around the perimeter of the dryer drum. (See belt diagram.) Belt tension is maintained by the idler pulley and driven by a pulley attached to the motor shaft.

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Drive Belt

Pulley shown in locked position with motor cover removed.

WARNING: The idler arm is under high tension. To prevent injury, do not let the idler arm snap back.



To remove the drive belt:

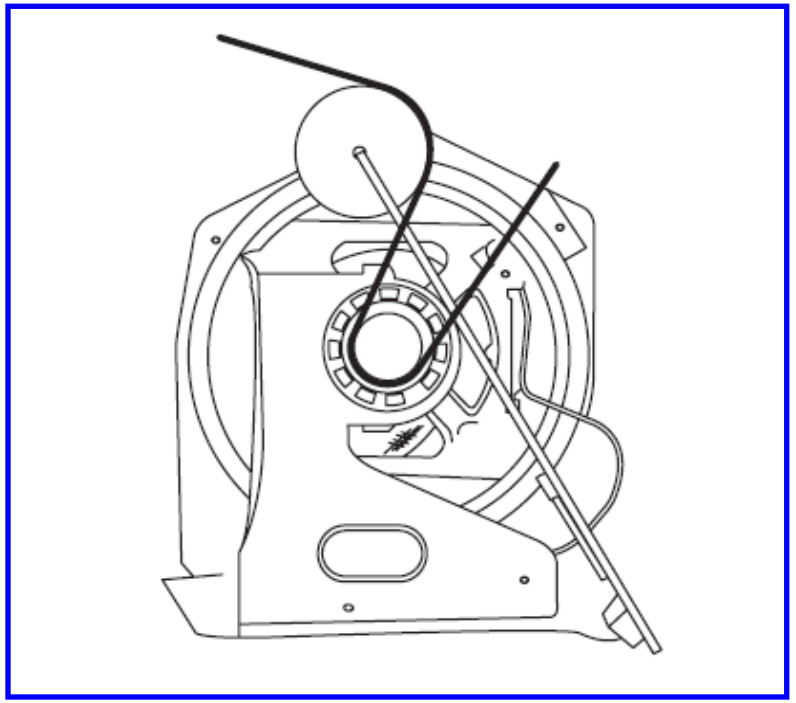
1. Remove the front panel.
2. Reach under the left-hand side of the drum, push the idler pulley down and to the right, and lock the idler arm on the top corner of the motor bracket to release belt tension.
3. Remove the belt from the motor pulley and remove through the front of the dryer.

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Installing the Drive Belt

1. Remove the front panel.
2. Reach under the left-hand side of the drum, push the idler pulley down and to the right, and lock the pulley shaft on the top corner of the motor bracket.
3. Place the belt in position around the center of the drum through the front of the dryer.
4. Place the belt in position around the motor pulley (see diagram), release the idler pulley from the motor bracket, and guide onto the belt.

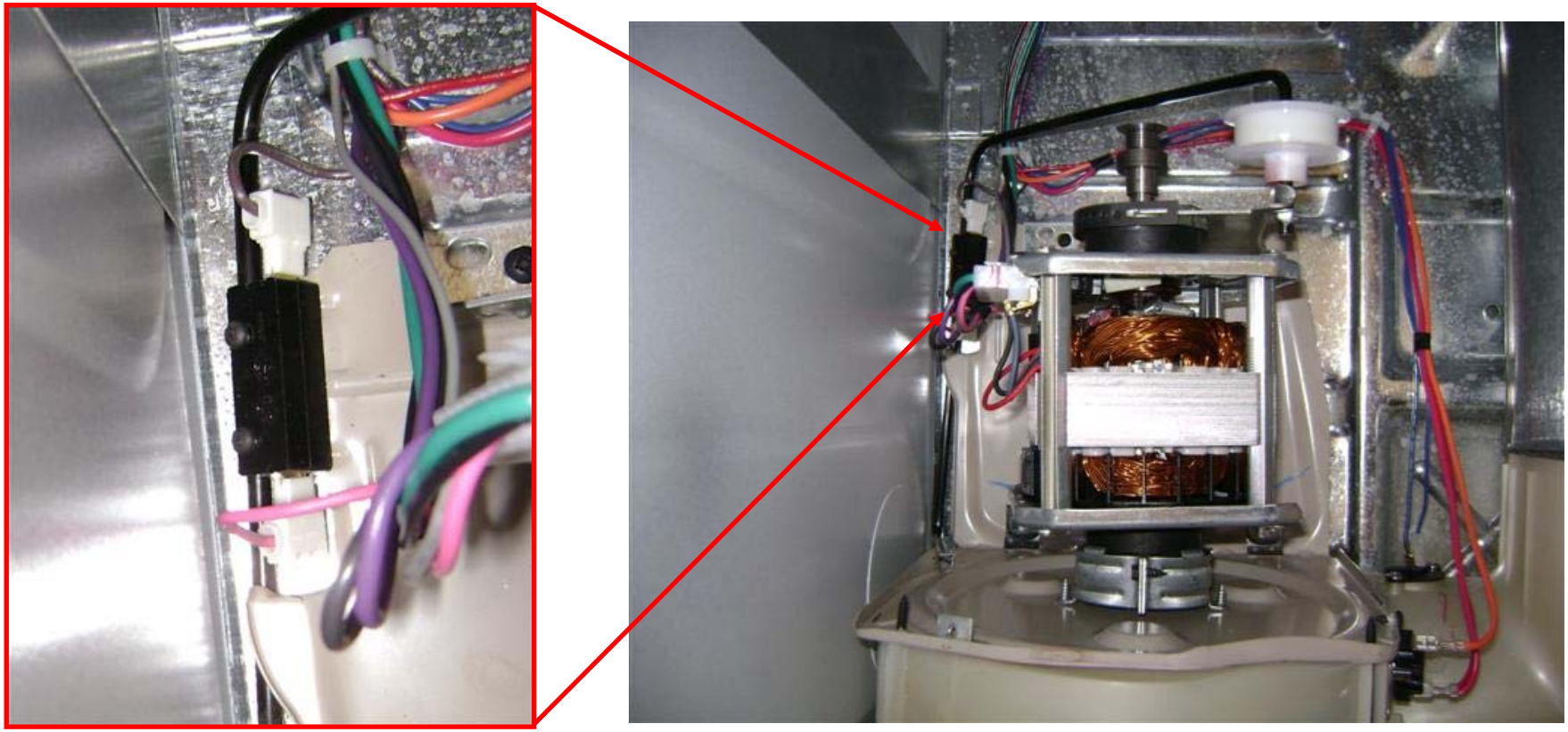
Note: Check to make sure the belt is in place and not twisted before installing the top and front panels.



View from rear of dryer

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Belt Switch (Idler Switch)

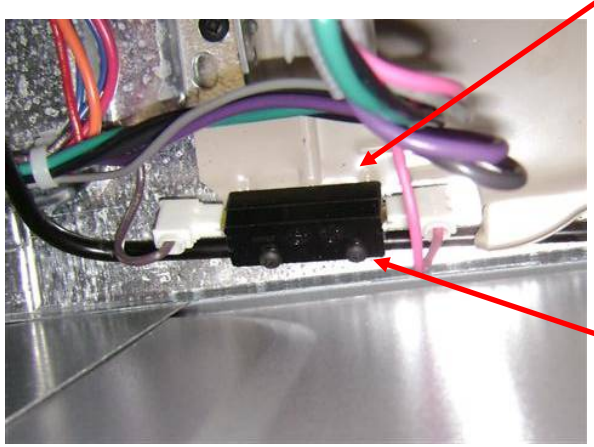


A belt switch, activated by the idler arm, is fastened to the motor bracket by 2 screws. Should the drive belt break, the belt switch will open the drive motor circuit, interrupting dryer operation.

Note: The drum lamp will operate with an open belt switch.

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Belt Switch





Switch shown in closed position

The belt switch is fastened to the motor base plate with 2 Phillips-head screws. The belt switch is activated by the movement of the idler arm. If the drive belt breaks or comes off the idler pulley, the belt switch opens power to the motor interrupting dryer operation. The drum lamp will operate with an open belt switch.

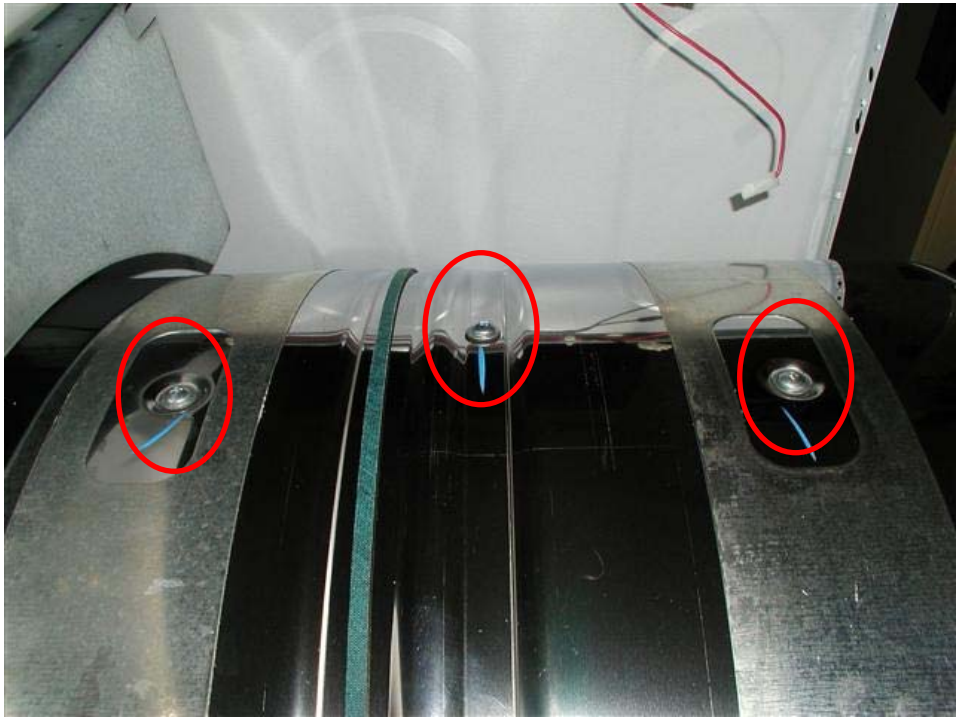
To remove the belt switch:

1. Remove the motor and blower wheel.
2. Remove the 2 Phillips-head screws that attach the belt switch to the motor base plate.

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Drum





Drum Baffle Screws

The drum is made of 304 stainless steel and has three replaceable baffles. The drum rotates counterclockwise, as viewed from the front, at a speed of 47 to 51 rpm.

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Drum

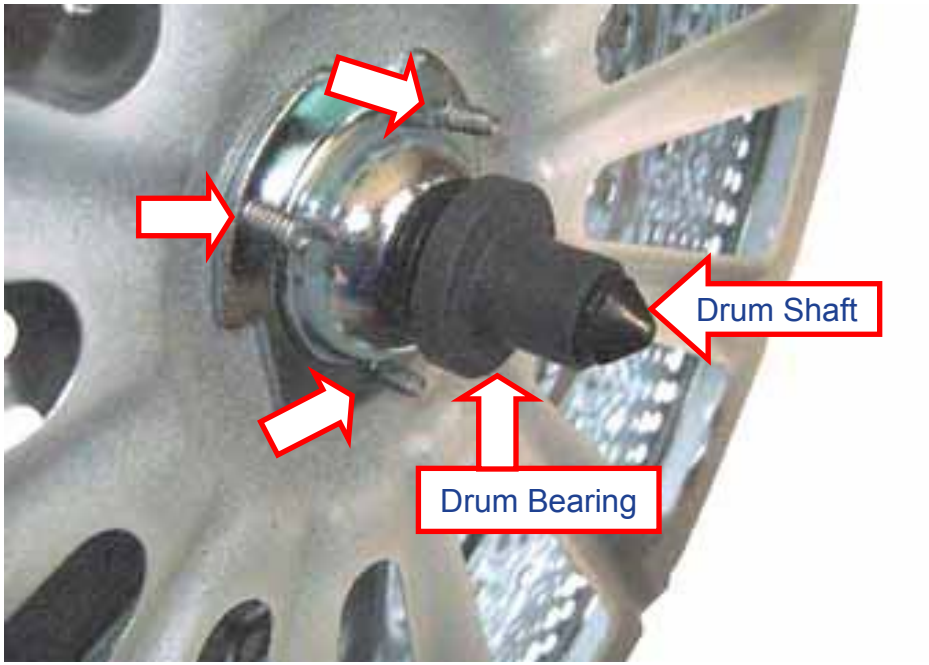


To remove the drum:

1. Remove the drive belt from the motor.
2. Using the belt as a handle, pull the drum forward and guide out of the cabinet.

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Drum Shaft & Bearing

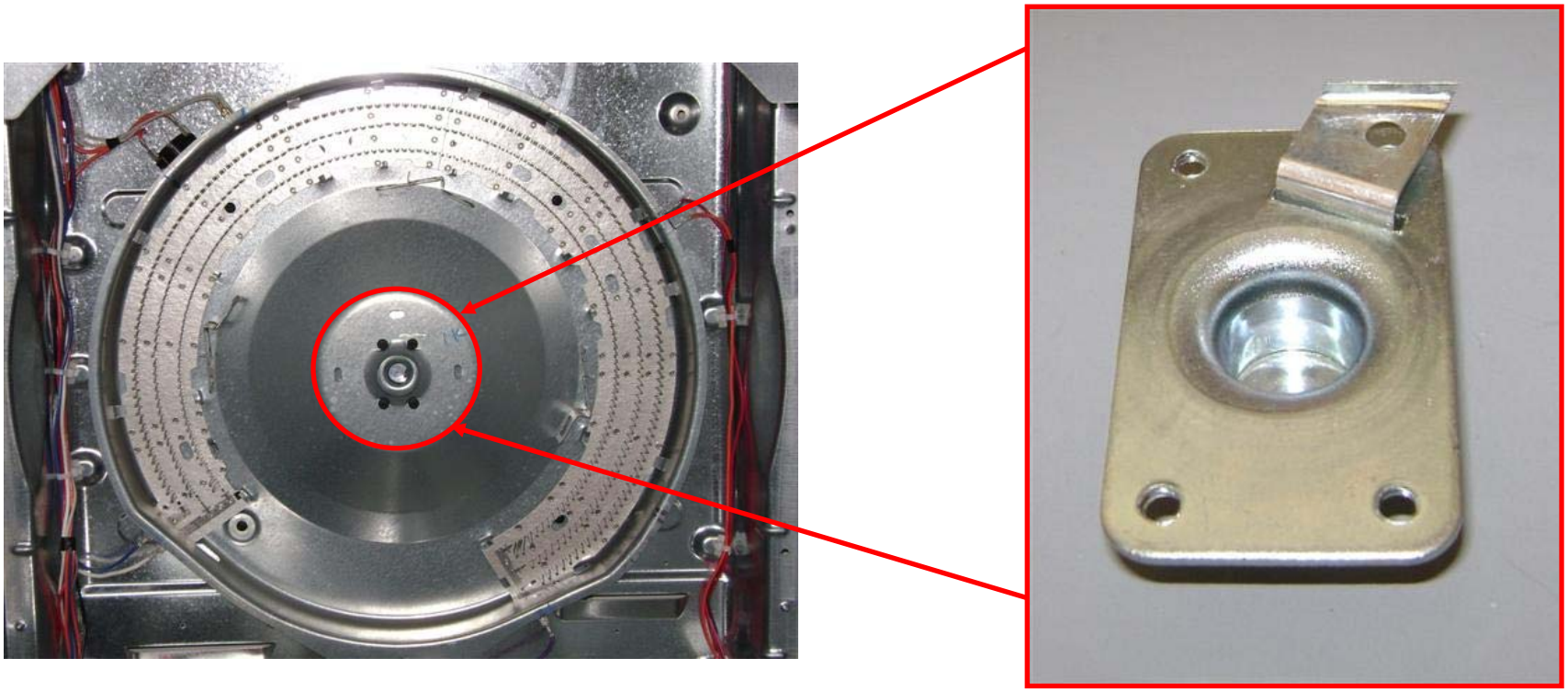




The drum shaft is attached to the rear of the drum with three T-20 Torx screws. The bearing can be removed by pulling it off the shaft. The drum shaft and bearing fit into the bearing retainer in the center of the heater assembly (electric models) or diffuser assembly (gas models).
To access the drum shaft and bearing, it is necessary to remove the drum.

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Drum Bearing Retainer & Ground Strap Assembly



The drum shaft and bearing fit into the bearing retainer in the center of the heater assembly (electric models) or diffuser assembly (gas models). The assembly is held to the back side of the heater housing or diffuser assembly by four screws.

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Idler Assembly

The idler arm is positioned on the chassis and inserted in a slot in the motor base plate.

The assembly is located to the left of the motor.



To remove the idler assembly:

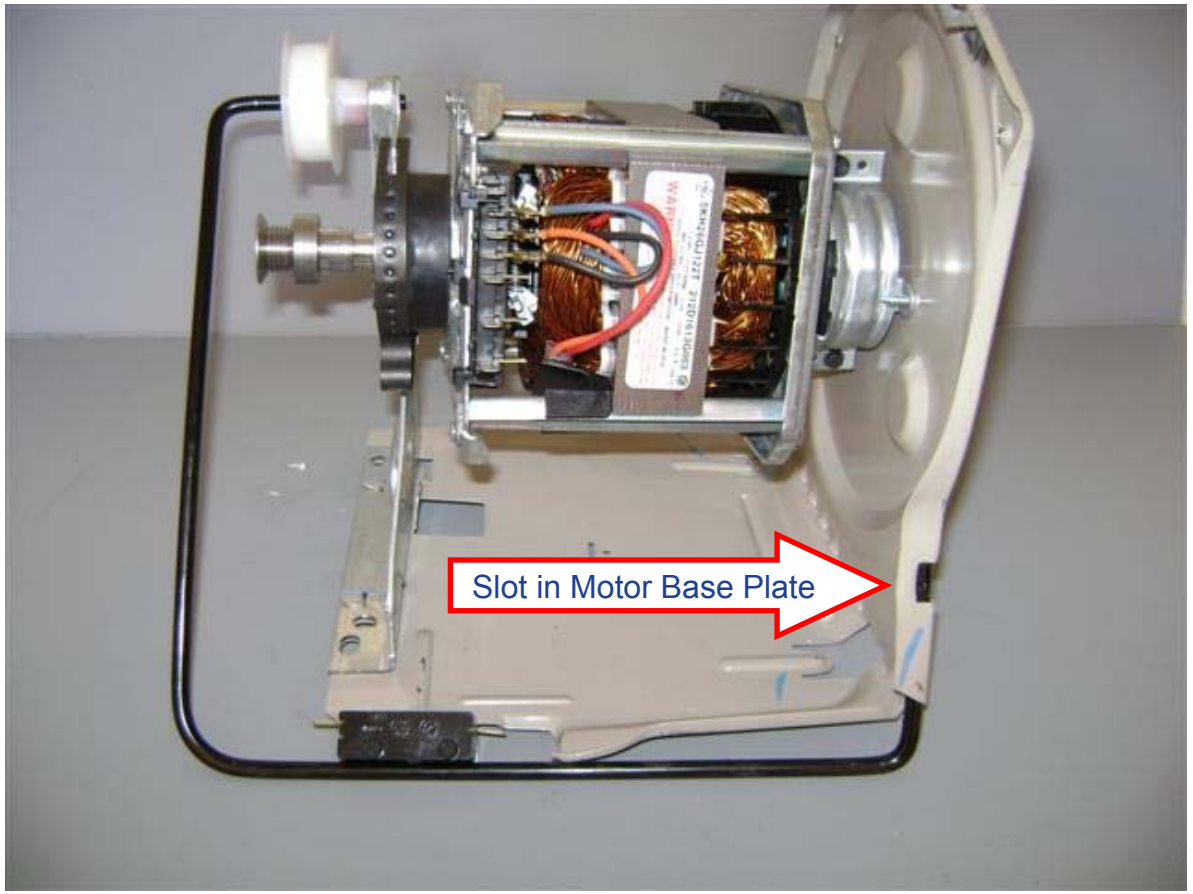
1. Remove the drum.

WARNING: The idler arm is under high tension. To prevent injury, do not let the idler arm snap back.

2. Release tension on the idler assembly by unlocking the idler arm from the top right corner of the motor support.

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Idler Assembly

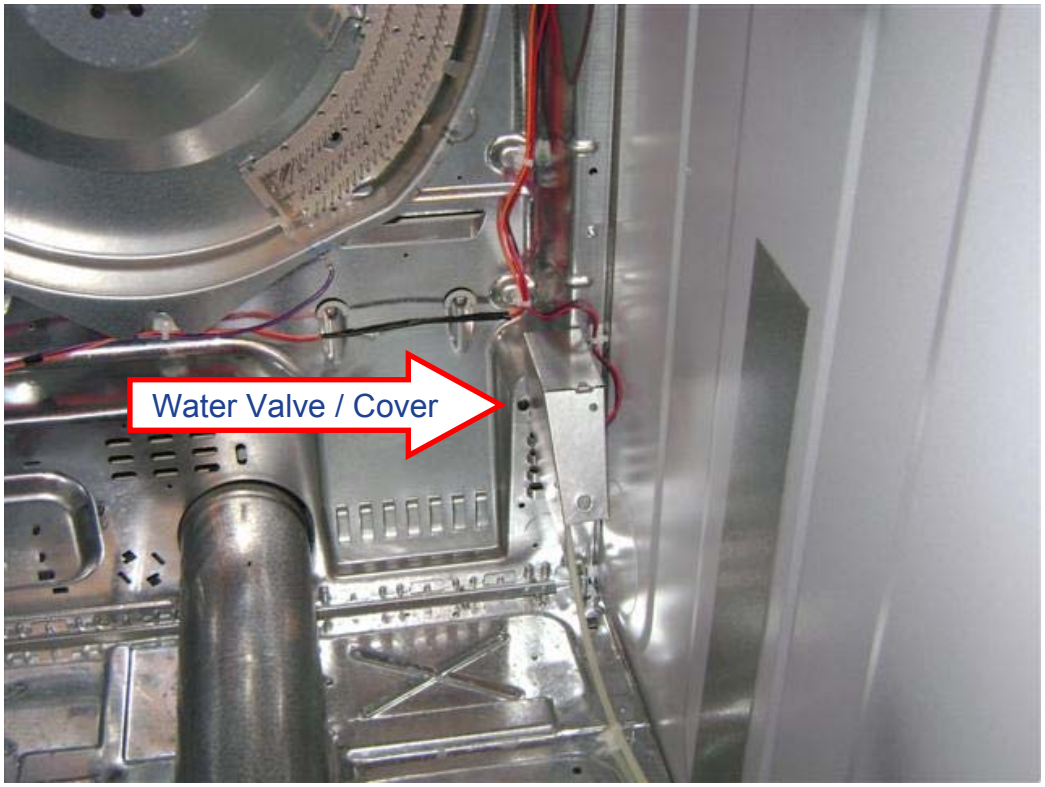


3. Remove the idler arm from the slot in the motor base plate.
4. Remove the idler assembly from the dryer.

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Water Valve

The water inlet valve is located inside the cabinet at the bottom right hand corner.
The water valve is enclosed under a metal cover.
The cover is attached to the dryer with a Phillips-head screw and a tab located at the bottom.



The valve has an approximate resistance value of 406 Ω.
Operation of the water inlet valve can be checked by using service test mode T07.

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Water Valve



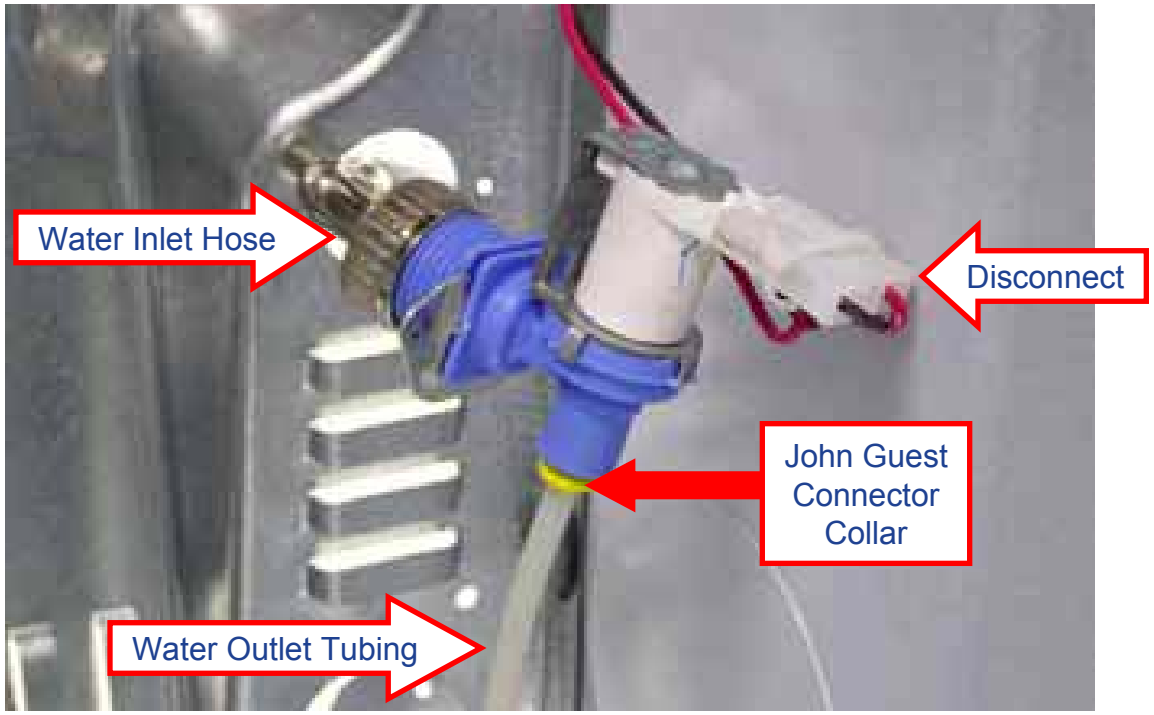


To replace the inlet water valve:

1. Remove the drum.
2. Remove the 2 Phillips-head screws that hold the cover to the cabinet and remove the cover by lifting up and out.

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Water Valve

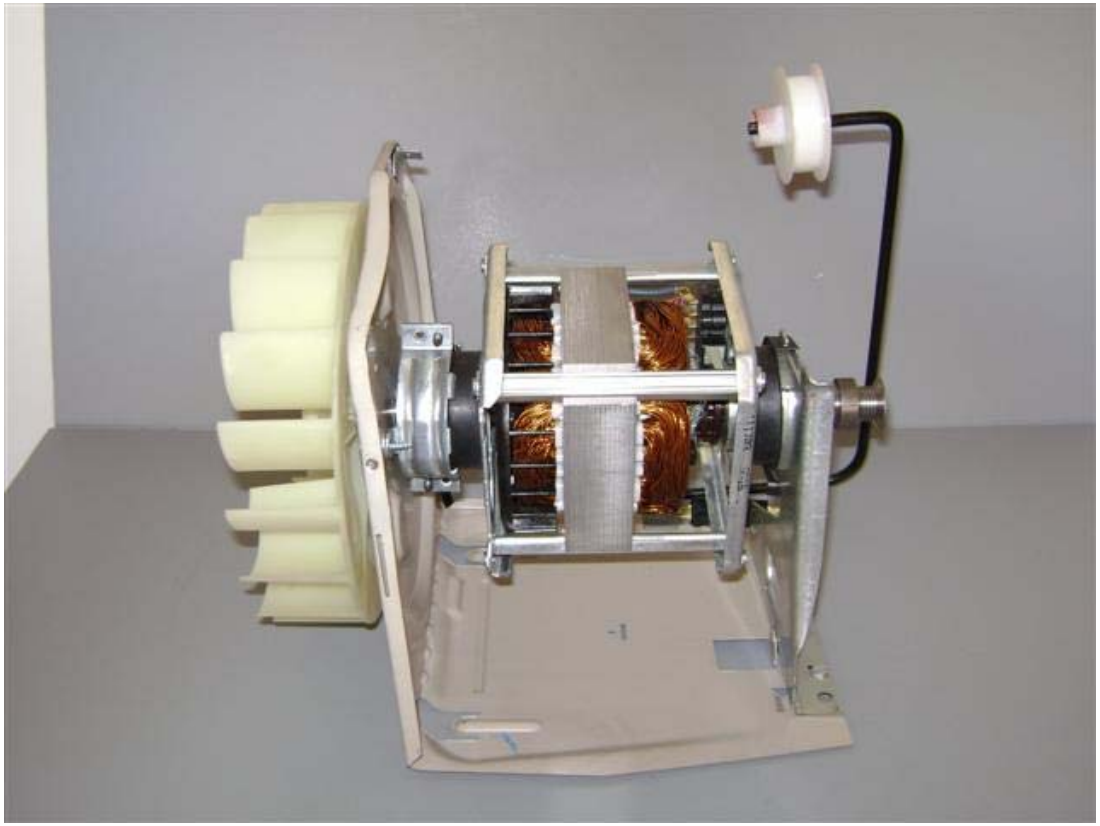


Note: In the following steps, capture any residual water that may escape from the valve, fill hose, and tubing.

3. Disconnect the water inlet hose.
4. Disconnect the coil wiring.
5. Press the John Guest connector collar and remove the water outlet tubing.

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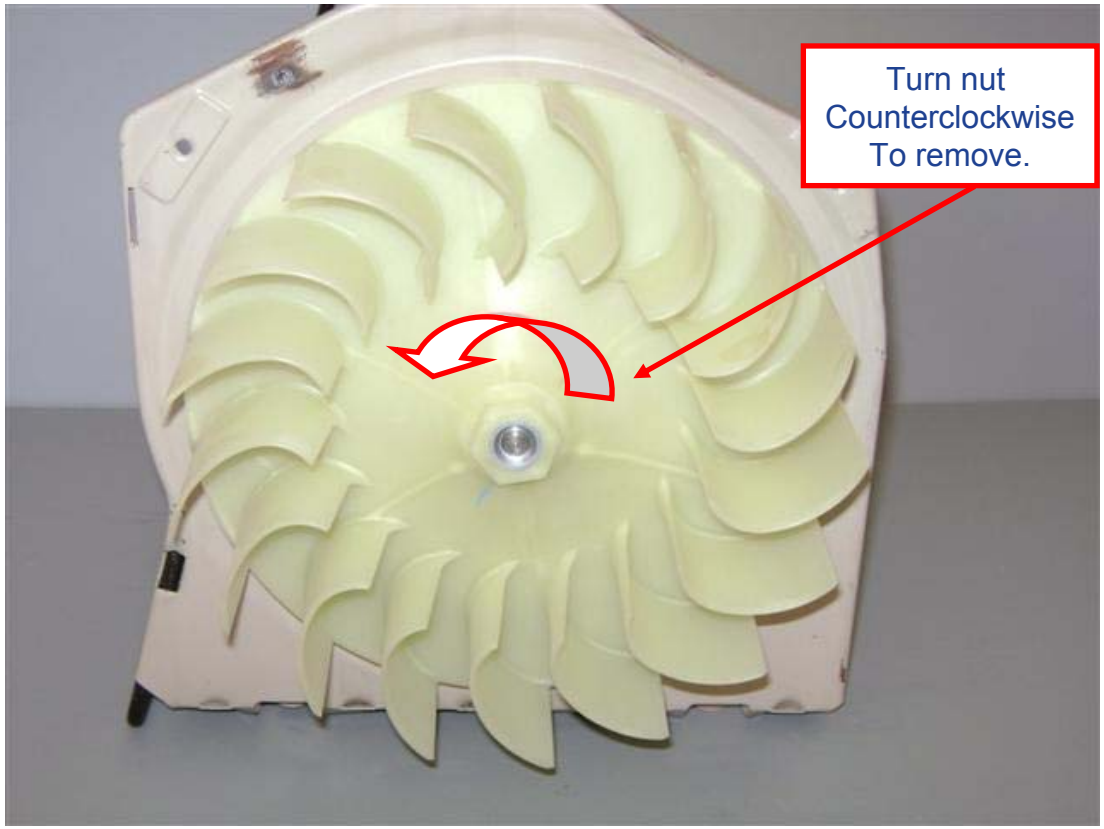
Motor & Blower Wheel



The motor is a single-speed, dual-shaft, 1/4-hp, 1725-rpm motor with an automatic reset overload protector. The overload protector is an internal component of the motor and cannot be replaced separately. The motor contains a centrifugal switch that serves three purposes: It disengages the motor start winding (6), engages the motor run winding (8), and closes the circuit contacts (1 to 3) for the heat source.

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Motor & Blower Wheel



The blower wheel is held to the motor shaft with a 15/16-in. (24-mm) molded nut.

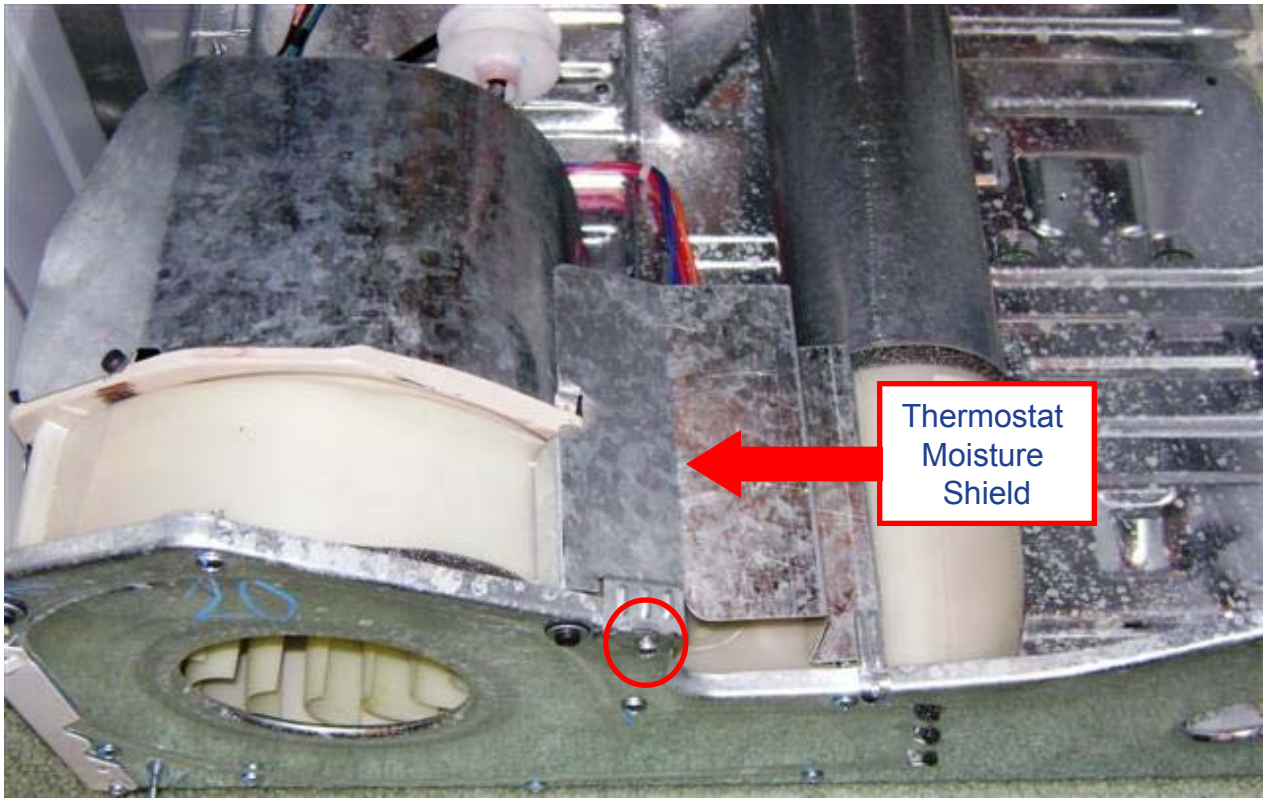
Motor resistance values:

Start winding = 2.3 ohms

Run winding = 2.3 ohms

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Motor & Blower Wheel

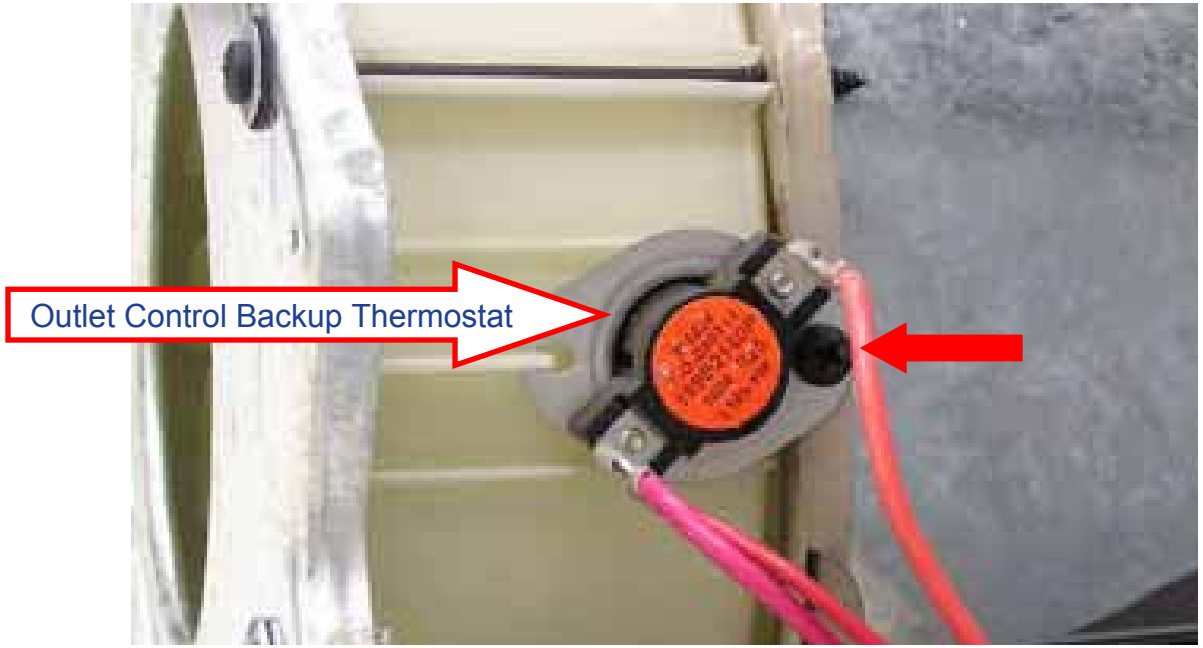


To remove the motor:

1. Disconnect power to the unit.
2. Remove the drum. (See ***Drum***.)
3. Remove the Phillips-head screw and the thermostat moisture shield from the front frame.

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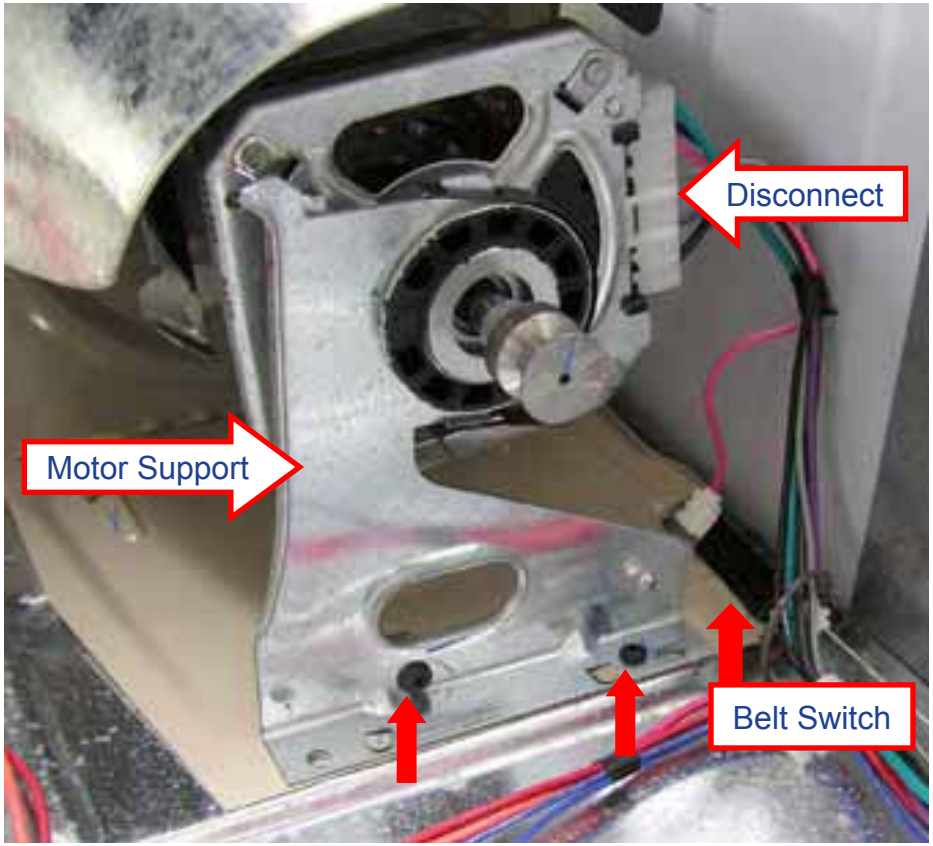
Motor & Blower Wheel



4. Remove the Phillips-head screw and the outlet control backup thermostat from the blower housing.

Copyright 2011

Motor & Blower Wheel



5. Remove the idler pulley assembly from the motor bracket.
6. Disconnect the motor wire harness.
7. Disconnect the wires attached to the belt switch.
8. Remove the single vertical and single horizontal Phillips-head screws that attach the motor bracket and motor support to the chassis.

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Motor & Blower Wheel



9. Remove the 2 Phillips-head screws and 2 washers that hold the top of the motor base plate to the blower housing.

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Motor & Blower Wheel



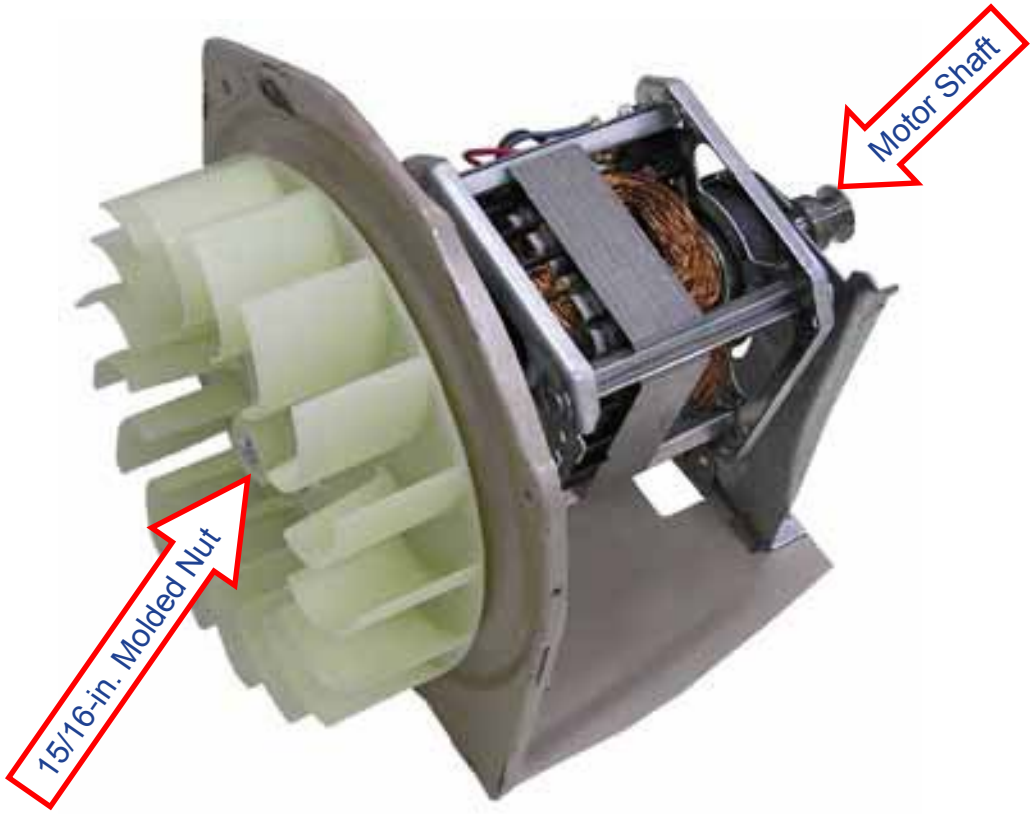
10. Remove the Phillips-head screw, then disengage the motor moisture shield from the motor bracket.

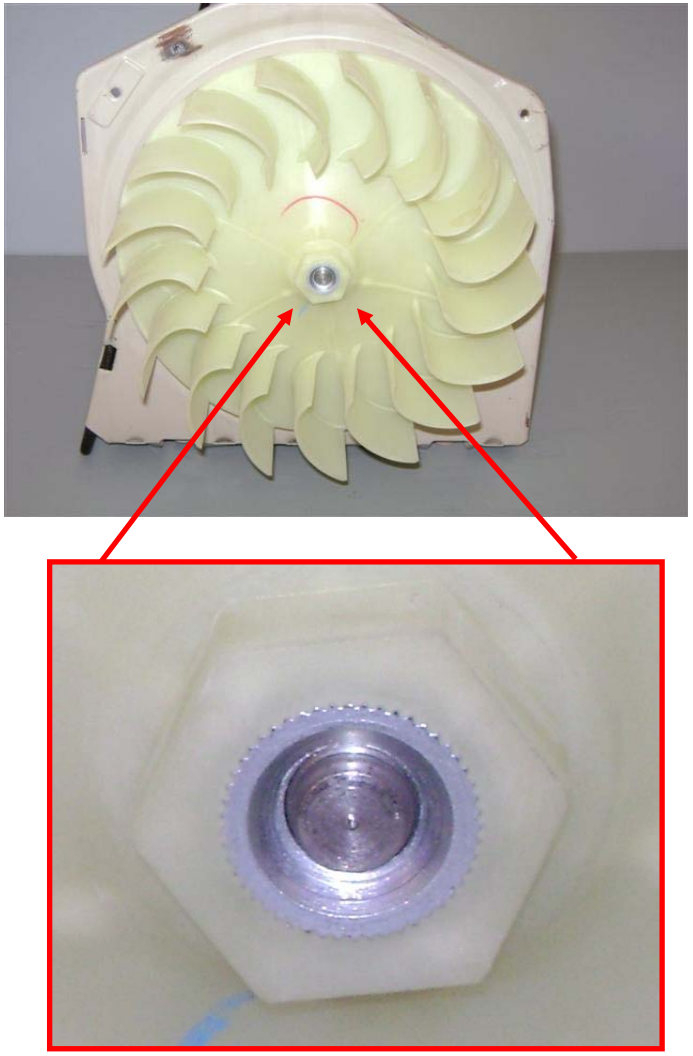
11. Raise the rear of the motor bracket to clear the tab protruding from the bottom of the chassis. Slide the motor bracket back until the bracket tabs clear the slots in the chassis. Remove the motor and blower wheel assembly from the chassis.

Note: When installing the motor and blower wheel assembly, ensure that the 2 rear tabs on the motor bracket are inserted into the slots in the motor support, and the 2 front tabs on the motor bracket are inserted into slots provided in the chassis.

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Motor & Blower Wheel





12. Hold the motor shaft from turning and use a 15/16-in. (24-mm) socket to remove the blower wheel from the motor shaft.

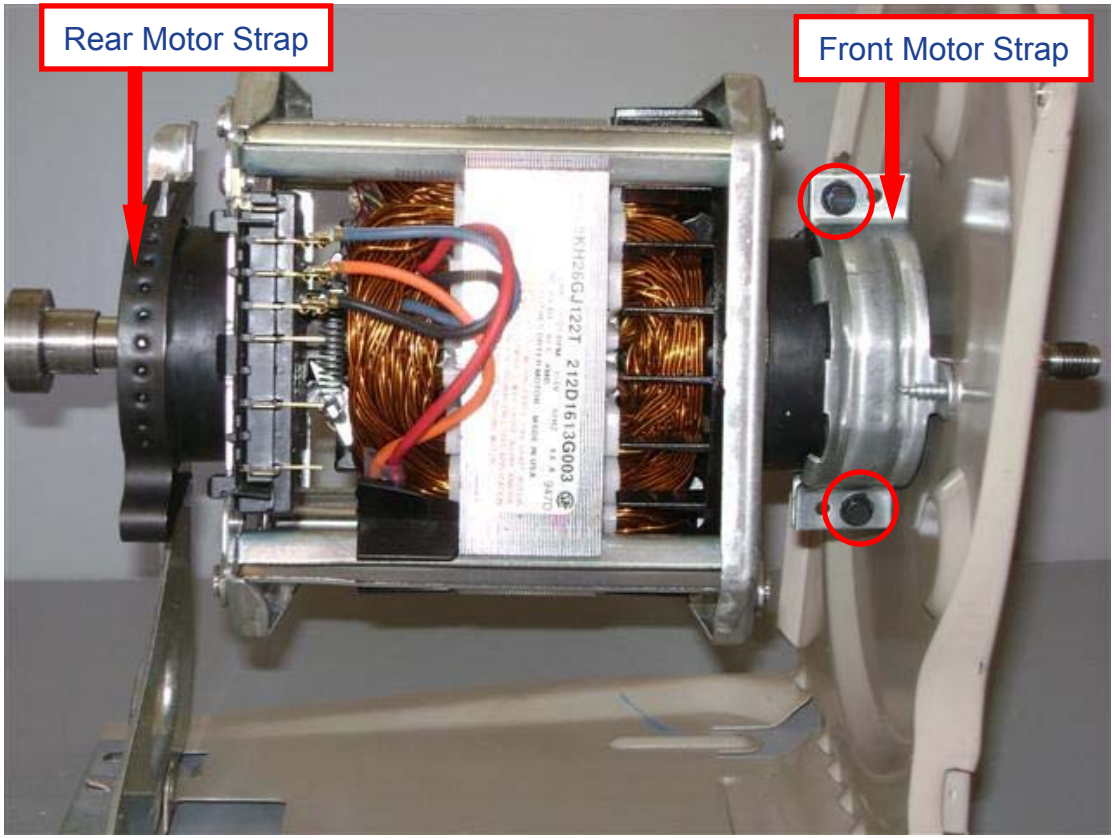
Copyright 2011

Motor & Blower Wheel

13. Compress and remove the rear motor strap from the motor support.

14. Loosen the two 1/4-in. hex-head screws on the front motor strap.

15. Lift and remove the motor from the motor bracket.

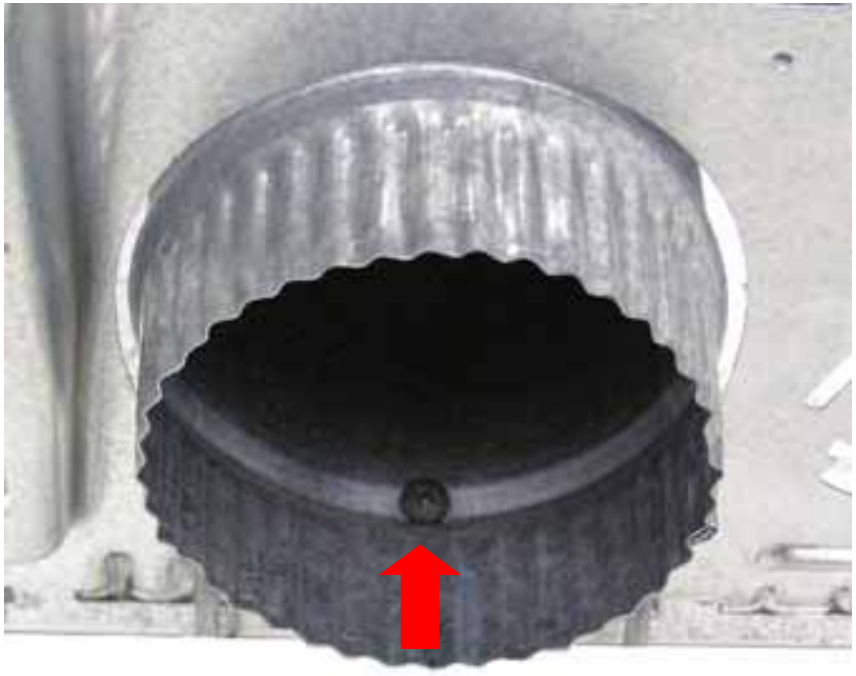


NOTES:

- When installing the motor to the motor bracket, install the motor with the motor harness terminals at the 9:30 o'clock position.
- After installing the motor, ensure both moisture shields are properly installed.

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Blower Housing



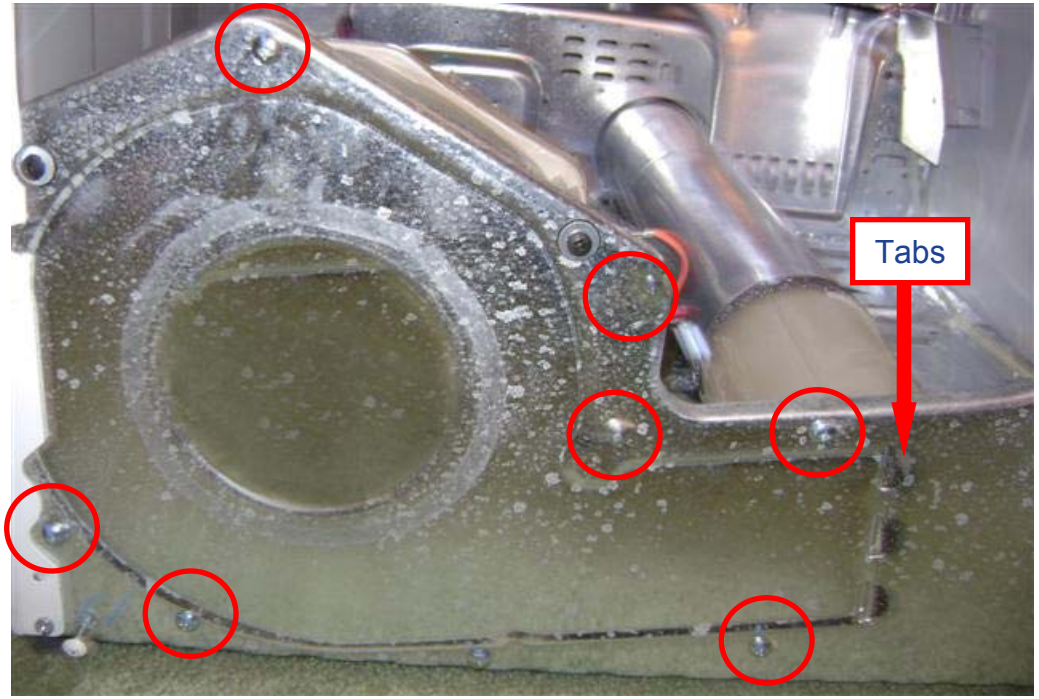
The blower housing is attached to the dryer with 7 screws and 3 tabs.

To remove the blower housing:

1. Remove the motor and blower wheel.
2. Remove the single Phillips-head screw located inside the outlet of the exhaust pipe. Remove the exhaust tube from the blower housing.

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Blower Housing

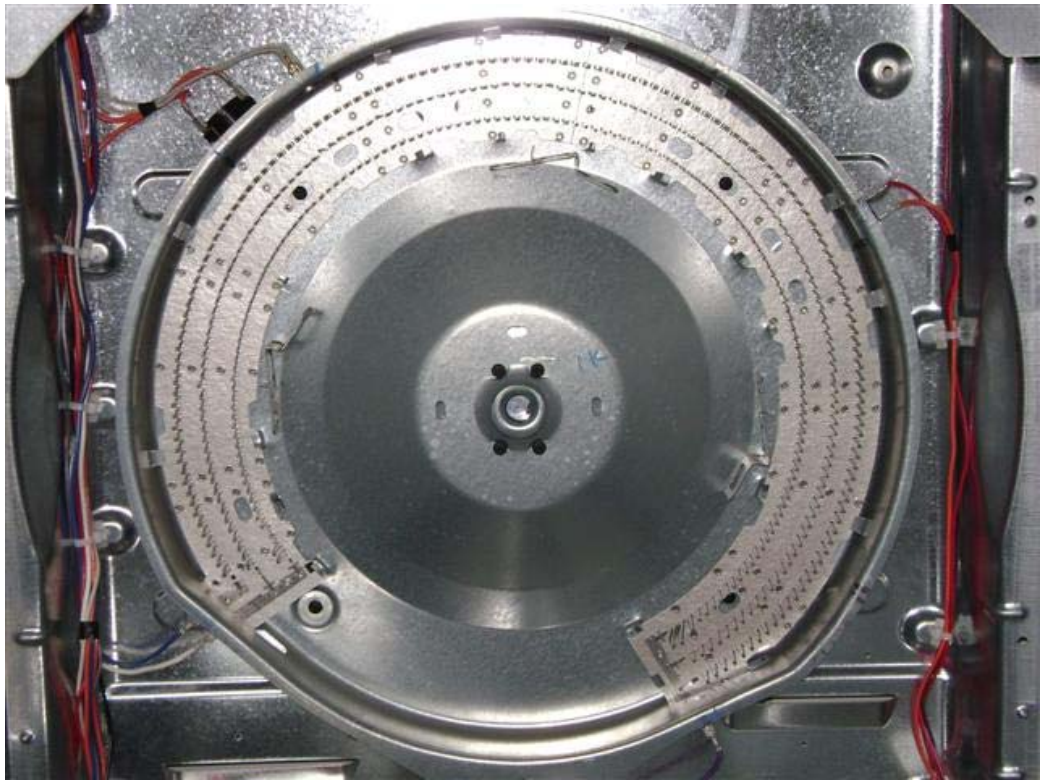


3. Remove the 7 Phillips-head screws that attach the blower housing to the base plate.
4. Slide the blower housing to the right.

Note: When reinstalling the blower housing, ensure the 3 tabs are inserted into the front base plate.

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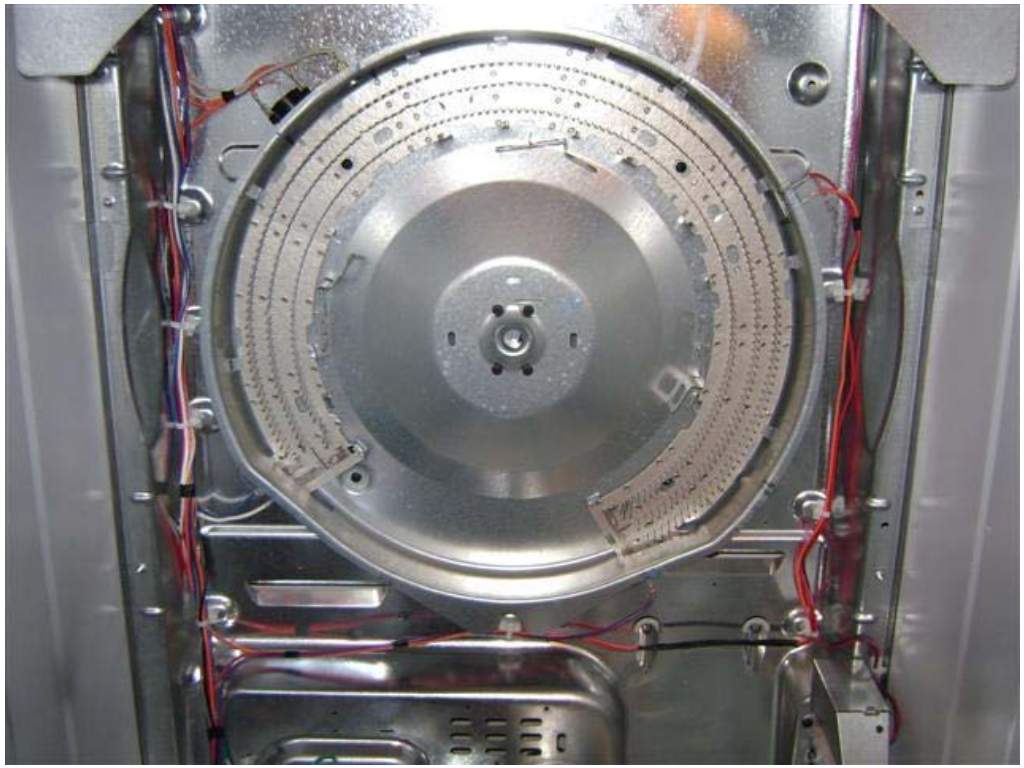
Heater Assembly



The heater assembly is located behind the drum. It consists of inner and outer open-wire elements, each formed in a zigzag pattern fastened to a single housing. The inner element consists of 2 elements wired in parallel with each. The inner element and the outer element are controlled by separate relays on the control board.

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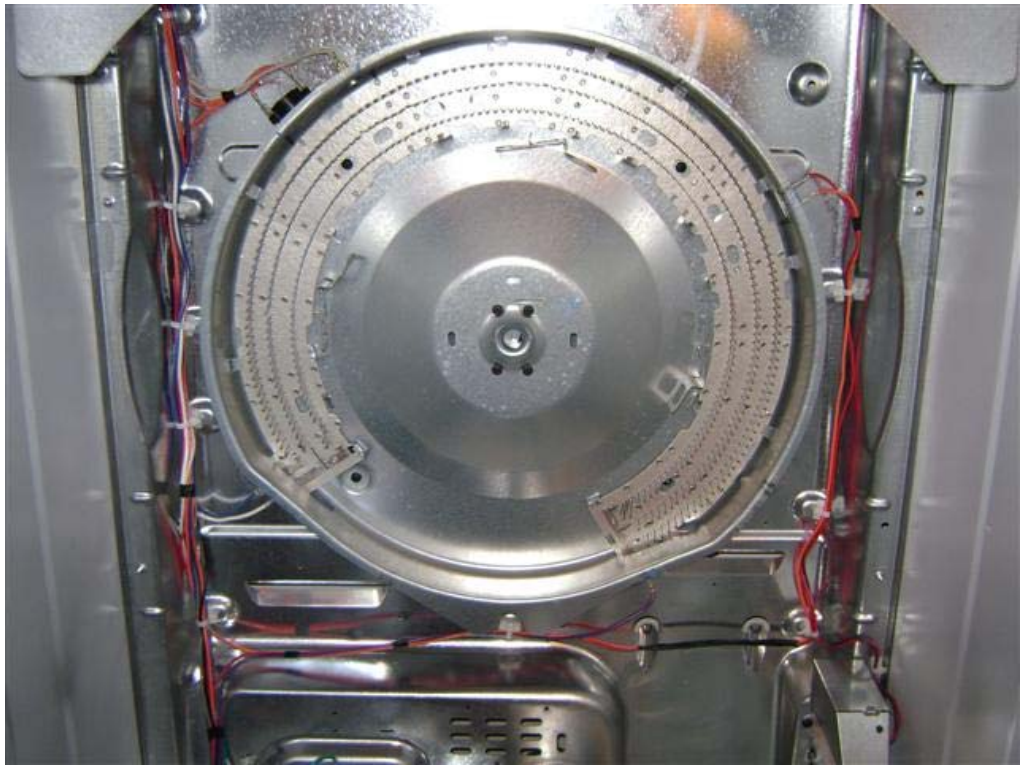
Heater Assembly



When energized, the outer element draws approximately 12.5 amps at 240 VAC. The outer element has a resistance value of 19.2 Ω. When energized, the 2 inner elements draw approximately 12.5 amps at 240 VAC. The 2 inner elements have a combined resistance value of 19.2 Ω.

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Heater Assembly



To access the heater assembly, it is necessary to remove the drum. Lead wires can then be removed from the elements, inlet safety thermostat, inlet control thermistor, and high limit thermostat. The heater assembly is attached to the cabinet with 4 Phillips-head screws.

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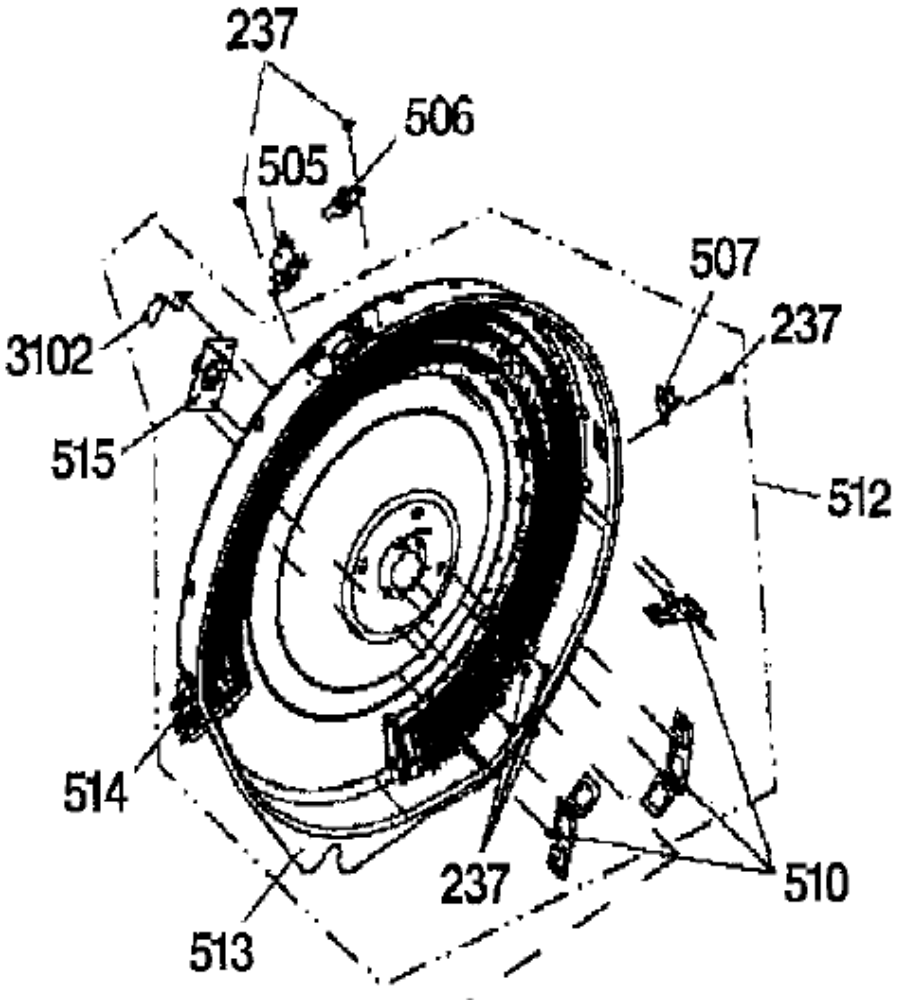
Heater Assembly

Heater is available in the following manners:

512 – Heater & housing asm (includes hi-limit and bearing retainer)
WE11M42

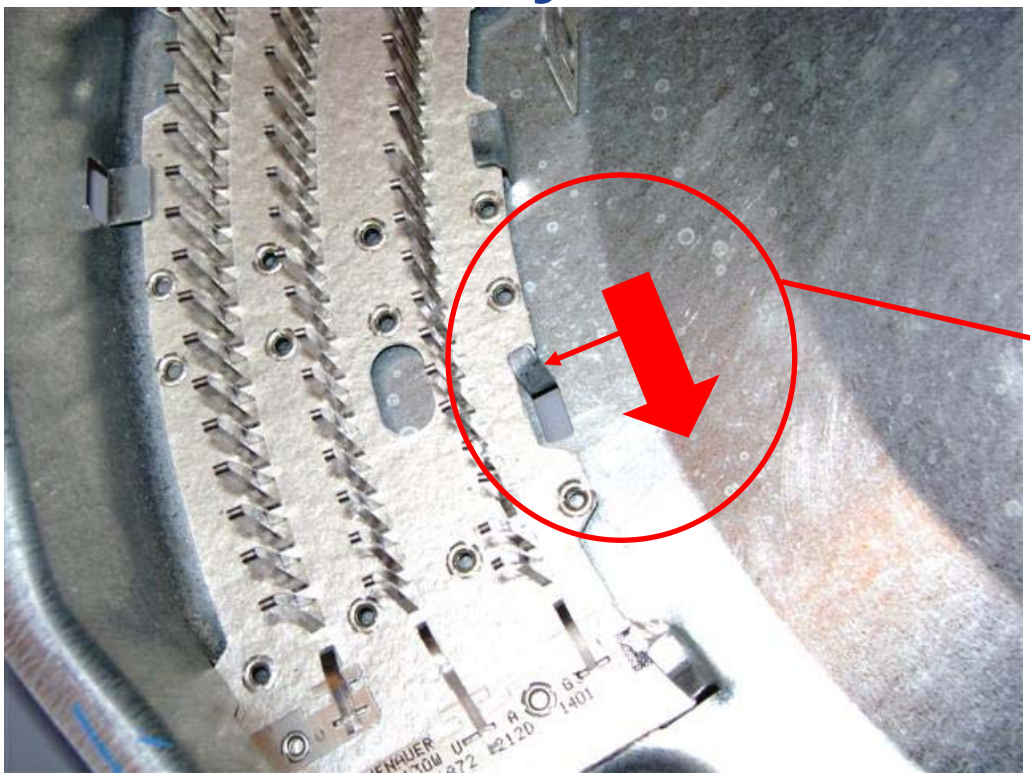
513 – Heater housing
WE11M43

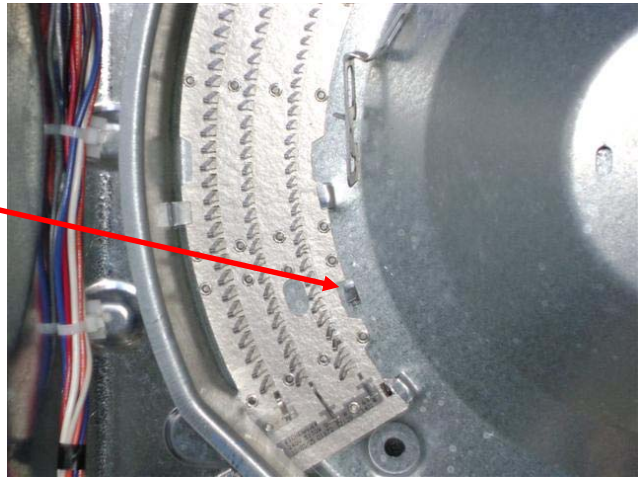
514 – Mica heater asm
WE11M32



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Heater Assembly



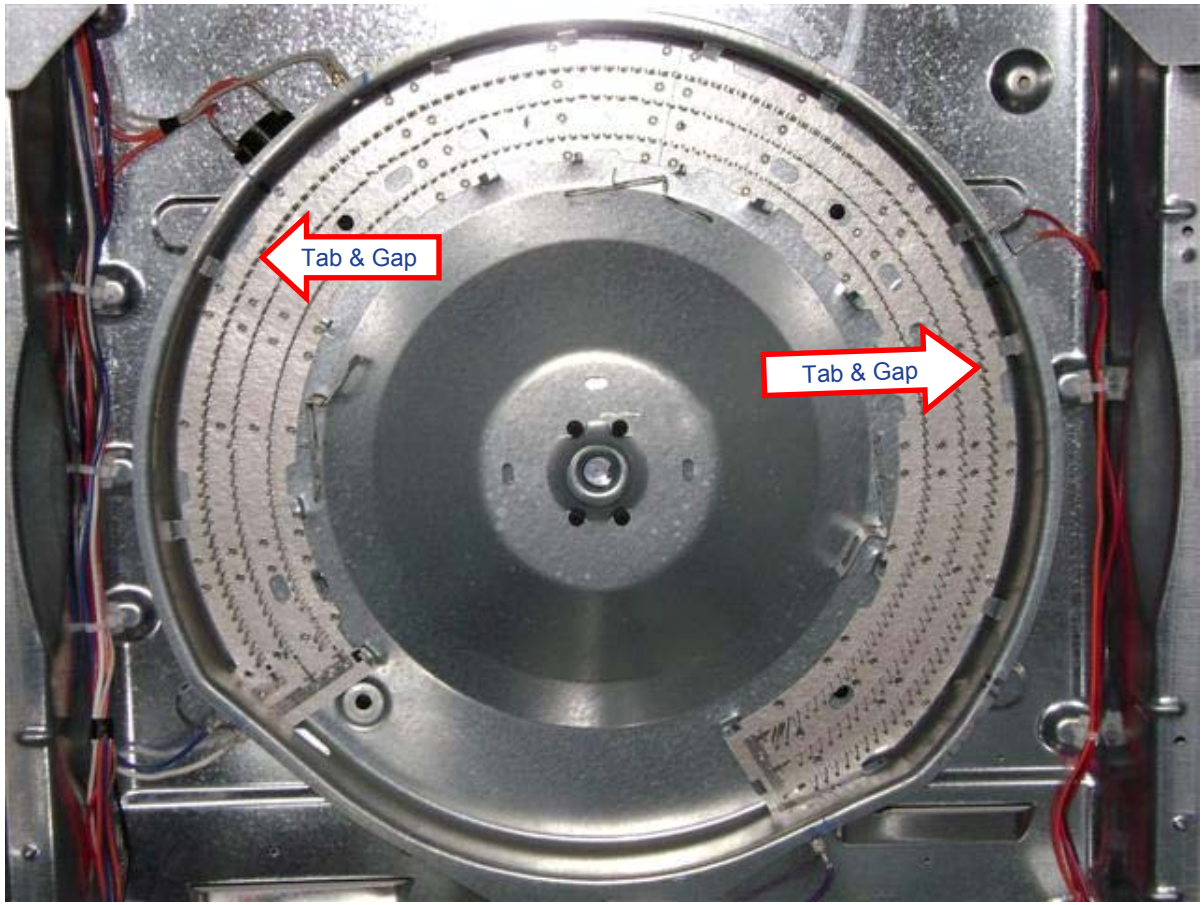


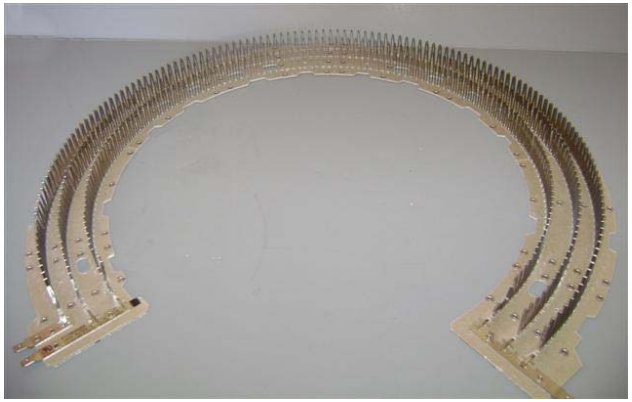
To Remove Mica Heater Assembly:

1. Remove leads from heater assembly.
2. Bend back single metal tab on housing holding heater in place.

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Heater Assembly





3. Rotate mica assembly slightly counterclockwise to align numerous gaps on mica surface with tabs on housing.
4. Lift mica heater assembly from housing.

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Burner Assembly & Conversion

The burner assembly consists of the gas valve coils, gas valve, burner, and inlet pipe

Burner assembly can be converted to LP gas by installing a WE25X217 Conversion Kit.

Burner assembly can be converted back to natural gas by installing a WE25X218 Conversion Kit.



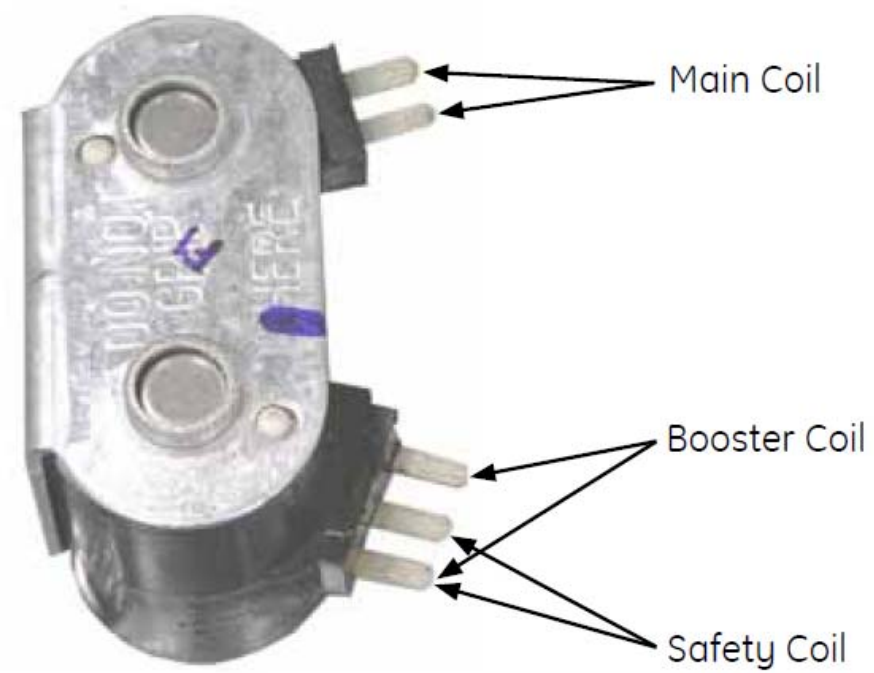
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Gas Valve Coils

The burner assembly has a gas valve that utilizes 3 coils.
A double coil (safety and booster coils combined) and a single main coil are located on top of the gas valve in front of the combustion chamber opening.

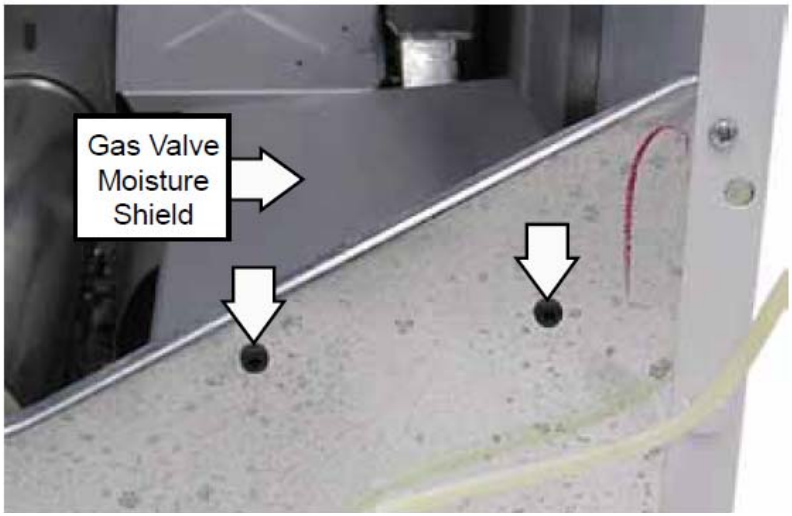
All coils can be replaced separately.

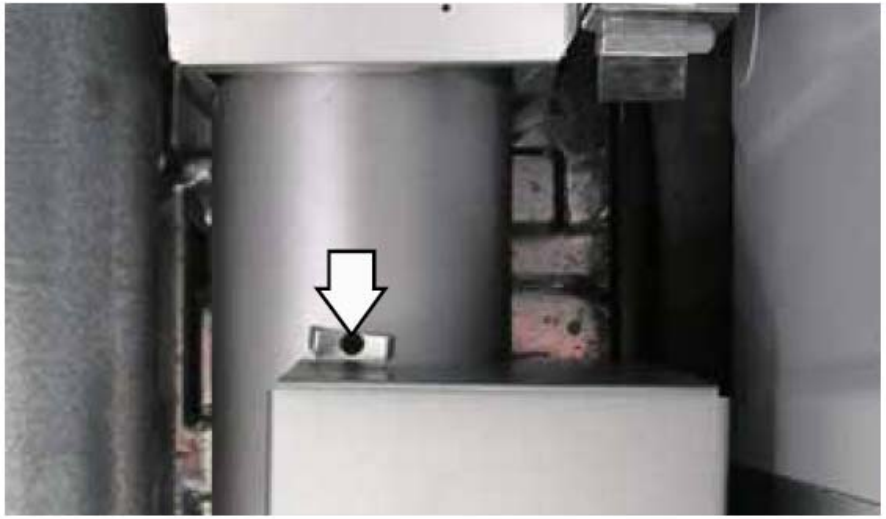
Gas valve coil assembly resistance values:
- Safety coil terminals - 1400 Ω
- Booster coil terminals - 580 Ω
- Main coil terminals - 1300 Ω



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Valve Coil Replacement

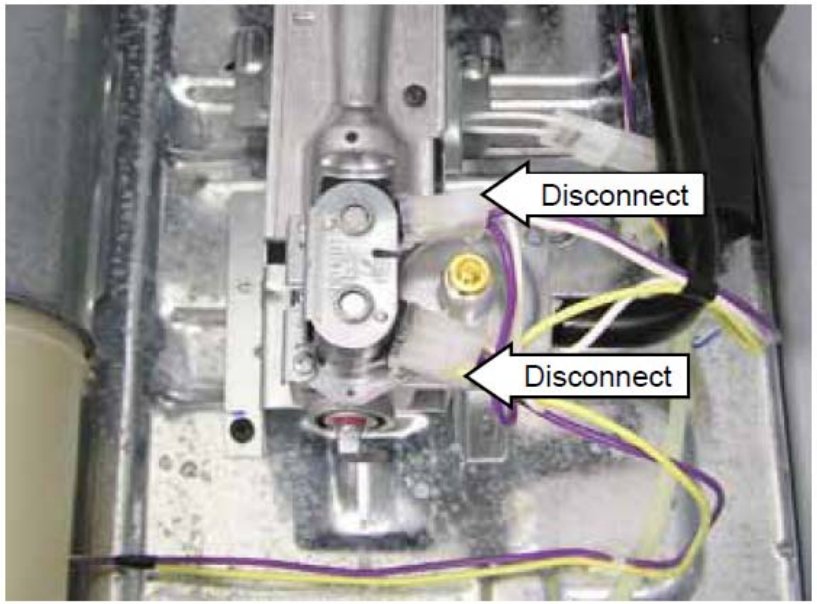


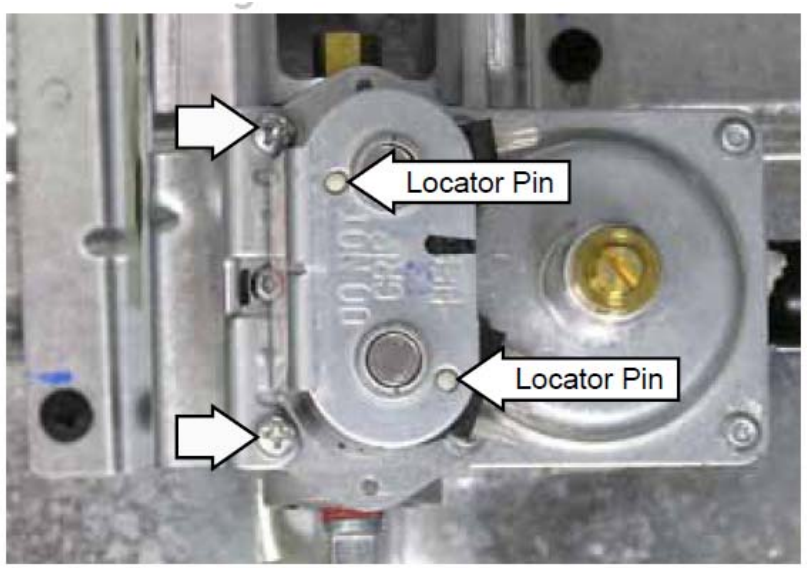


1. Remove the drum.
2. Remove 2 Phillips-head screws from the front frame and the Phillips-head screw from the rear of the gas valve cover.

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Valve Coil Replacement





3. Disconnect the wire harness from both coils.
4. Note the position of the locator pins inserted in the coil bracket.
5. Remove the 2 Phillips-head screws that attach the coil bracket to the valve body.
6. Lift the bracket vertically. Lift coils to remove.

Note: Upon reassembly, ensure the locator pins are inserted into the holes provided in the coil bracket.

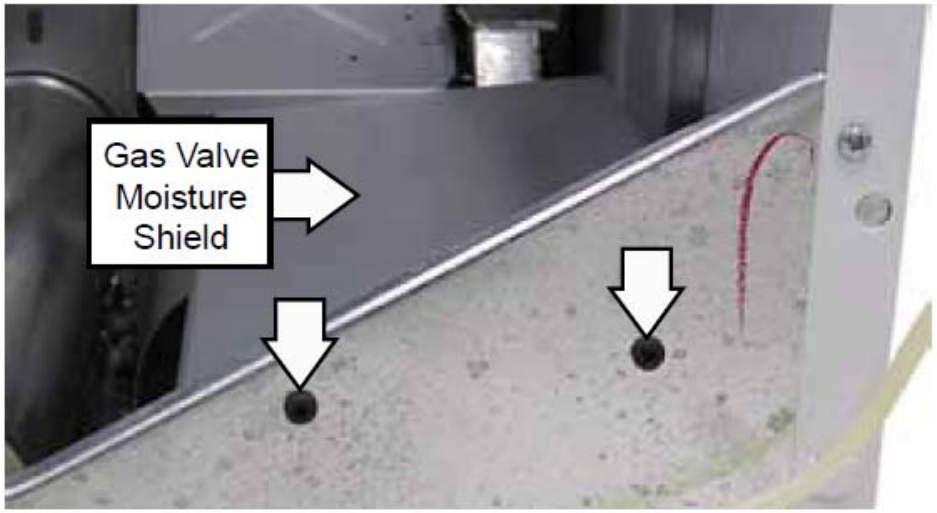
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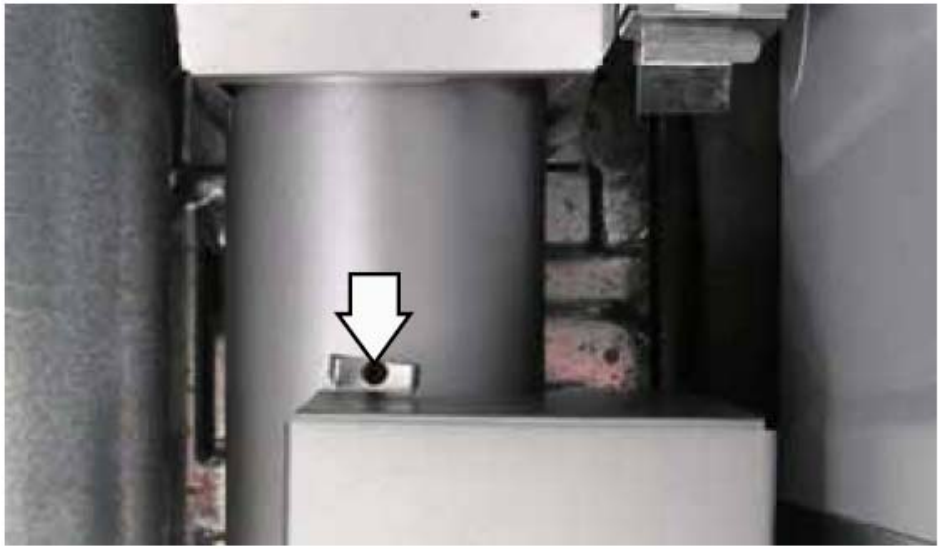
Gas Valve

The gas valve is attached to a bracket located in the bottom, right, front corner of the dryer cabinet.

To remove the gas valve:

1. Shut off the gas supply to the unit.
2. Disconnect gas supply from the burner inlet pipe.
3. Remove the drum.
4. Remove 2 Phillips-head screws from the front frame and the Phillips-head screw from the rear of the gas valve cover.

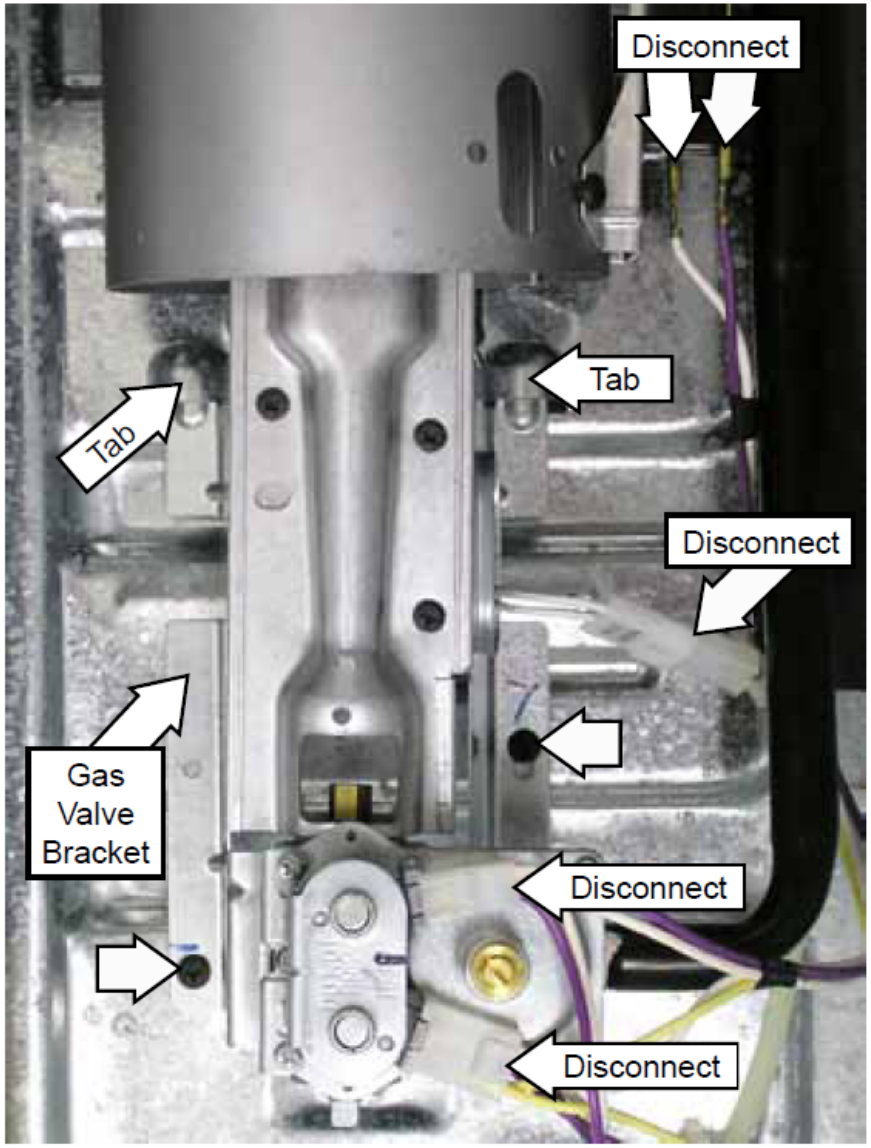




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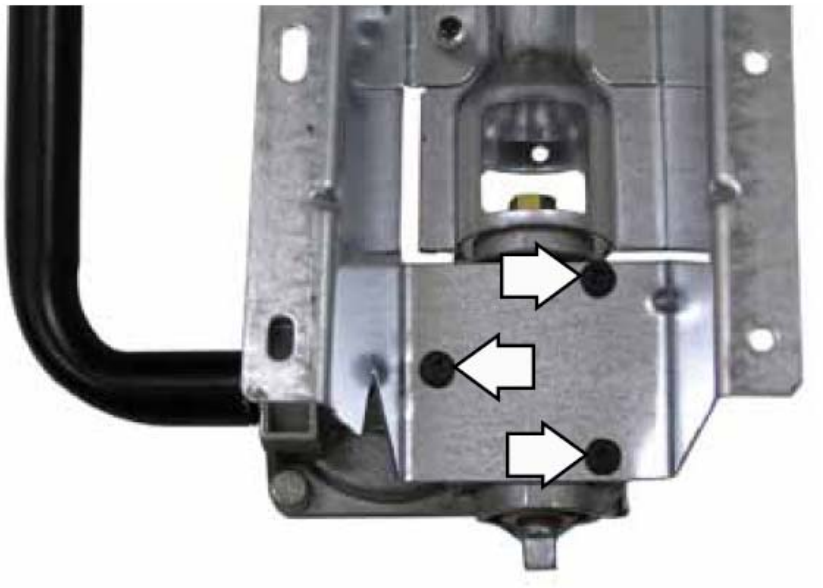
Gas Valve

5. Disconnect the ignitor wire harness and the 2 wires from the flame detector.
6. Disconnect the coil wire harness from each coil.
7. Remove the 2 Phillips-head screws that attach the gas valve bracket to the dryer floor.
8. Pull the bracket toward the front of the dryer to disengage tabs from dryer floor.



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Gas Valve



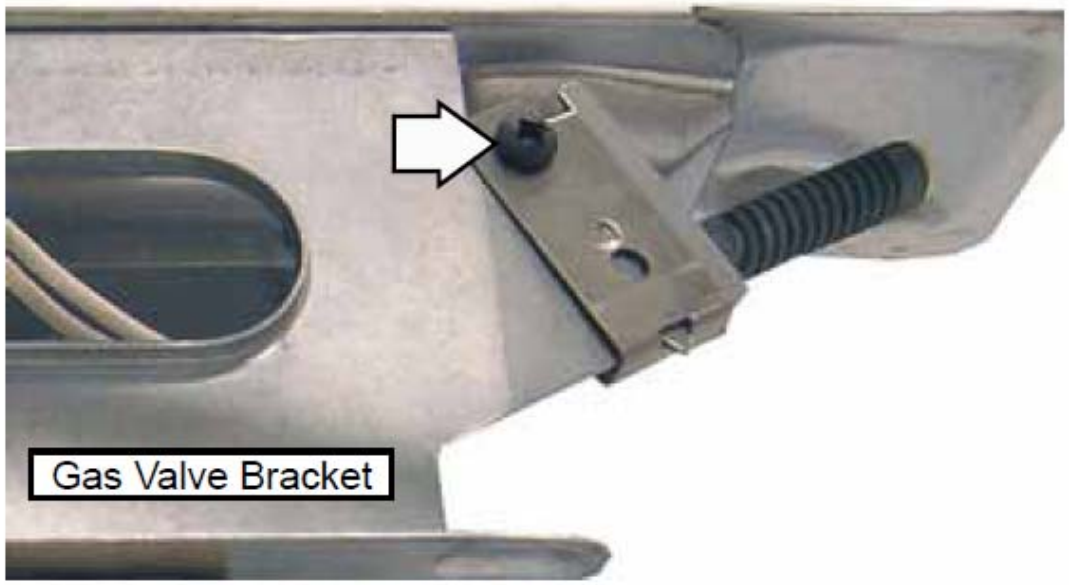
9. Remove the coils from the gas valve.
10. Turn the bracket over. Remove the 3 Phillips head screws that attach the gas valve to the gas valve bracket.

Caution: The ignitor is very fragile. To prevent breaking the ignitor, care must be taken when installing the gas valve.

Note: Upon reassembly, ensure the gas valve bracket is inserted under the 2 tabs located in the dryer floor.

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Ignitor



The ignitor is located at the end of the burner assembly in the combustion chamber opening and has a maximum rating of .4 amps. The ignitor has an approximate resistance value of 300 to 500 Ω.

The ignitor is attached to the gas valve bracket with a Phillips-head screw. To access the ignitor, it is necessary to remove the burner assembly. (See ***Gas Valve*** , steps 1 through 8.)

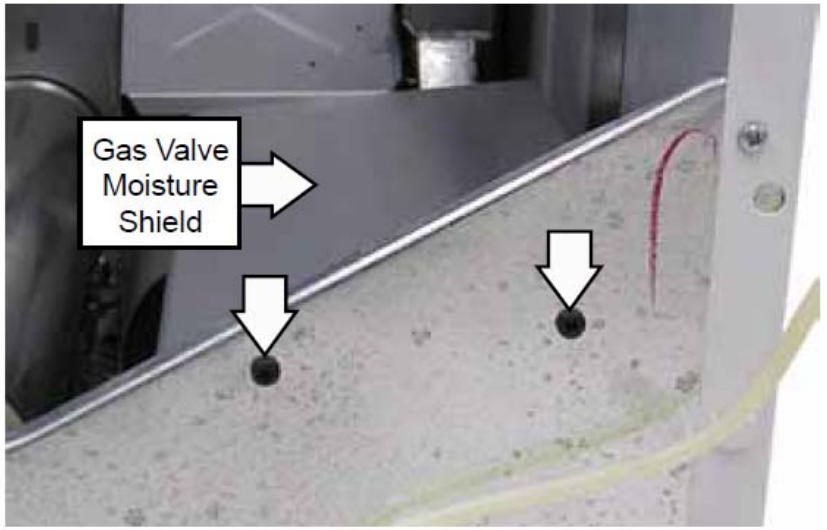
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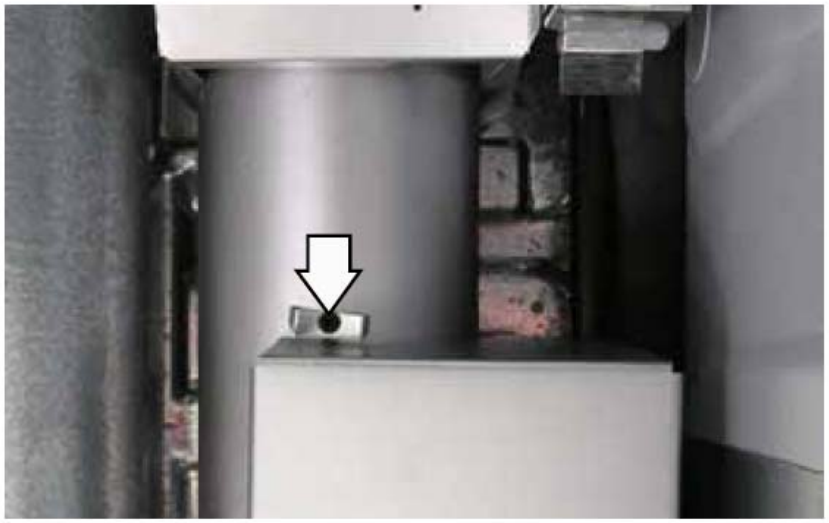
Flame Detector

The flame detector is attached to the right side of the combustion chamber. It is necessary to remove the flame detector moisture shield to remove the flame detector.

To remove the flame detector:

1. Remove the drum.
2. Remove 2 Phillips-head screws from the front frame and the Phillips-head screw from the rear of the gas valve cover.





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Flame Detector

3. Disconnect the 2 wires from the flame detector.
4. Remove the Phillips-head screw that holds the flame detector to the combustion chamber.
5. Remove the flame detector from the tab at the bottom.

Note: Upon reassembly, ensure the tab at the bottom of the flame detector is inserted into the slot located on the combustion chamber.



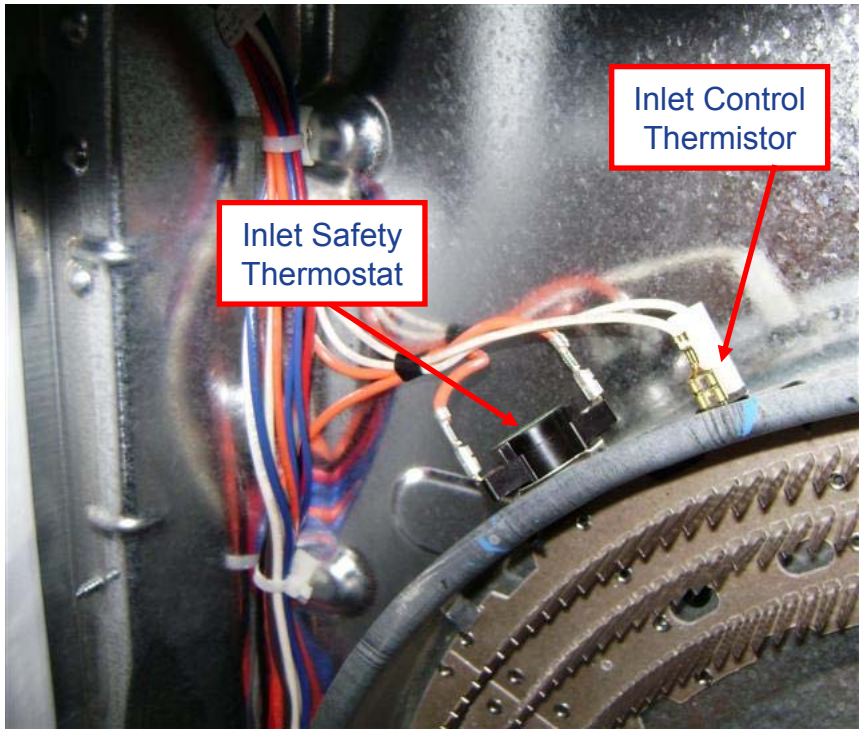
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Inlet Safety Thermostat

On electric models, the inlet safety thermostat is located on the top left area of the heater housing, to the left of the inlet control thermistor.

On gas models, the inlet safety thermostat is located on the right side of the diffuser, above the inlet control thermistor.

The thermostat monitors incoming air temperature.



Electric Model Shown

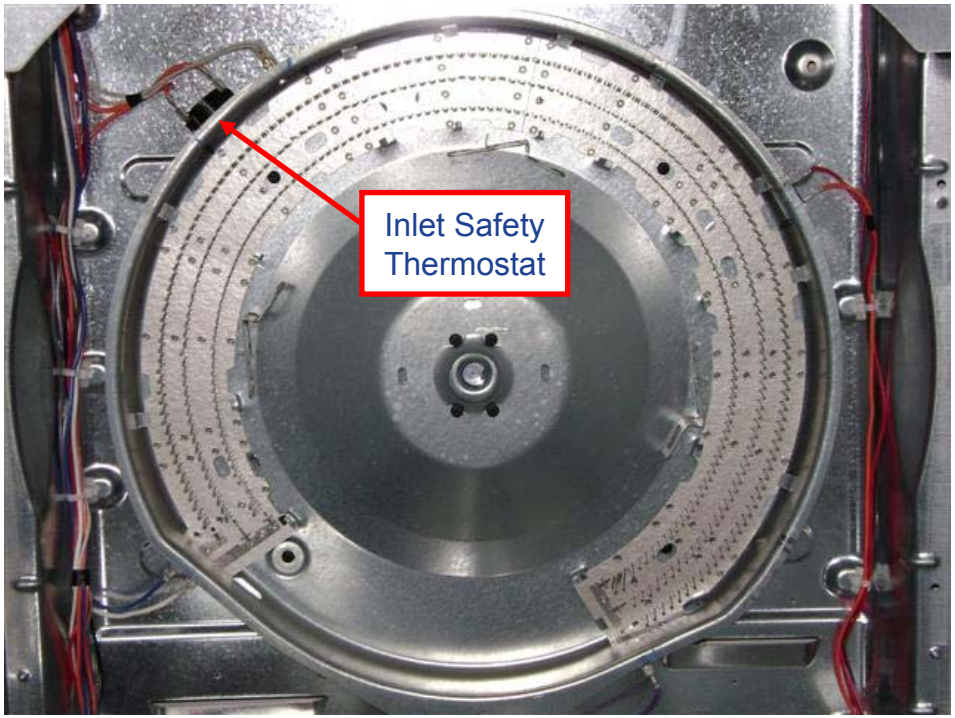
If the thermostat reaches a temperature beyond its maximum temperature rating, it will trip and disable power to the heating elements (electric models) or burner assembly (gas models).

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Inlet Safety Thermostat

On electric dryers, the inlet safety thermostat opens at 225°F (7.5cu ft) or 210°F (7.0 cu ft) and will automatically reset at 195°F or 180°F respectfully.

On gas dryers, the inlet safety thermostat opens at 300°F and will automatically reset at 260°F.



Electric Model Shown

To remove the inlet safety thermostat:

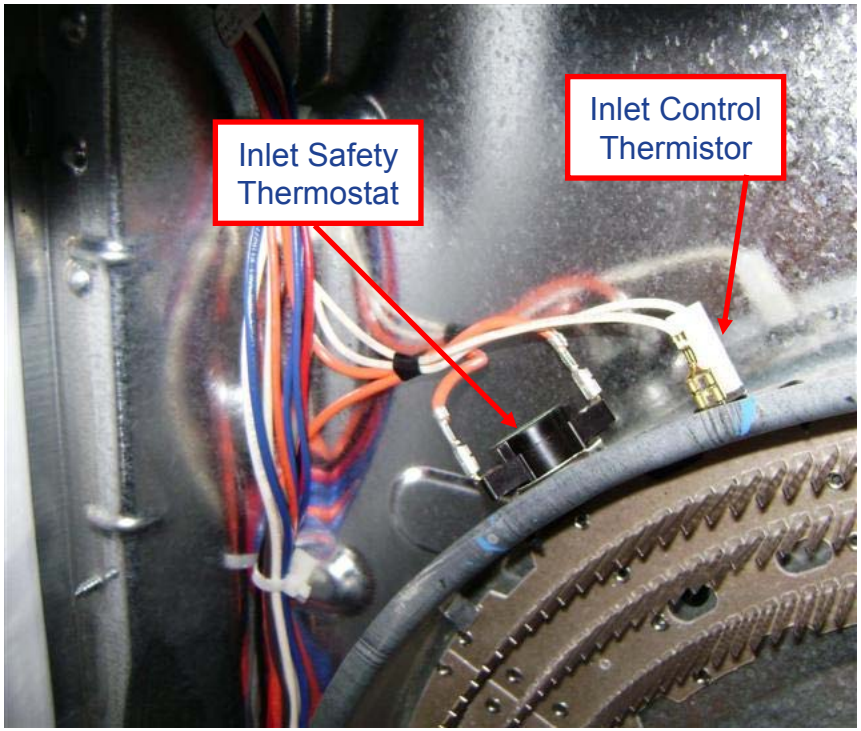
1. Remove the drum.
2. Disconnect the 2 wires from the inlet safety thermostat.
3. Remove the Phillips-head screw that attaches the inlet safety thermostat to the heater assembly or diffuser.
4. Lift and slide the thermostat from the heater assembly or diffuser.

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Inlet Control Thermistor

On electric models, the inlet control thermistor is located on the top left area of the heater housing, to the right of the inlet safety thermostat.

On gas models, the inlet control thermistor is located on the right side of the diffuser, below the inlet safety thermostat.



Electric Model Shown

The thermistor monitors incoming air temperature and will respond to temperature changes of 3 °F.

The thermistor relays this information to the control board.

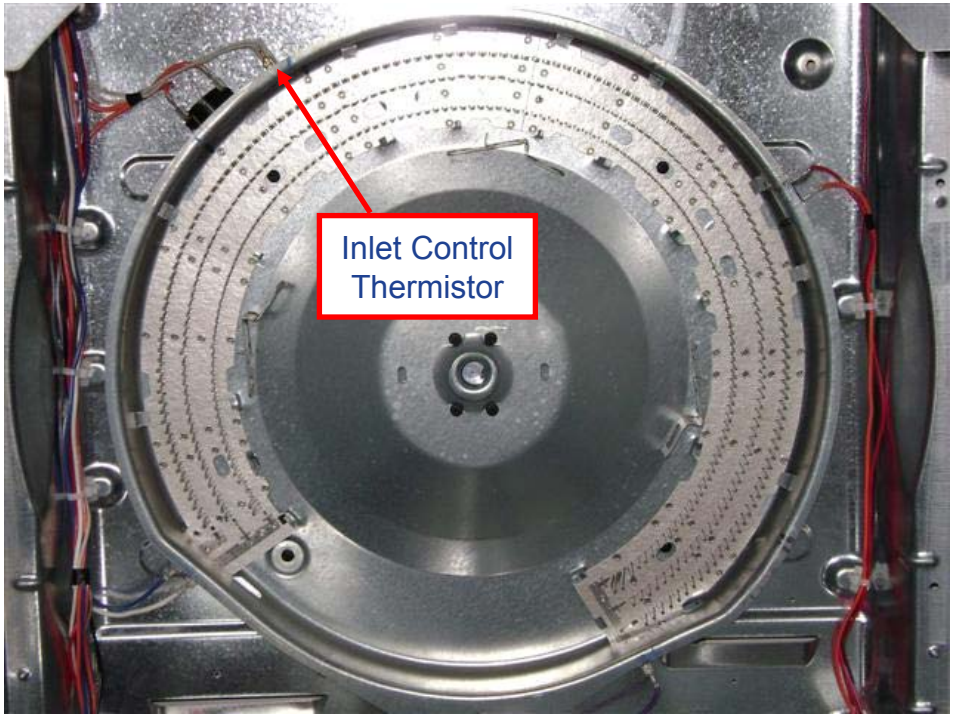
The thermistor has a negative coefficient. As the temperature increases, the thermistor's resistance decreases.

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Inlet Control Thermistor

To remove the inlet control thermistor:

1. Remove the drum.
2. Disconnect the 2 wires from the inlet control thermistor.
3. Remove the Phillips-head screw that attaches the inlet control thermistor to the heater assembly or diffuser.
4. Lift and slide the thermistor from the heater assembly or diffuser.



Operation of the inlet control thermistor can be checked by using service test mode T06.

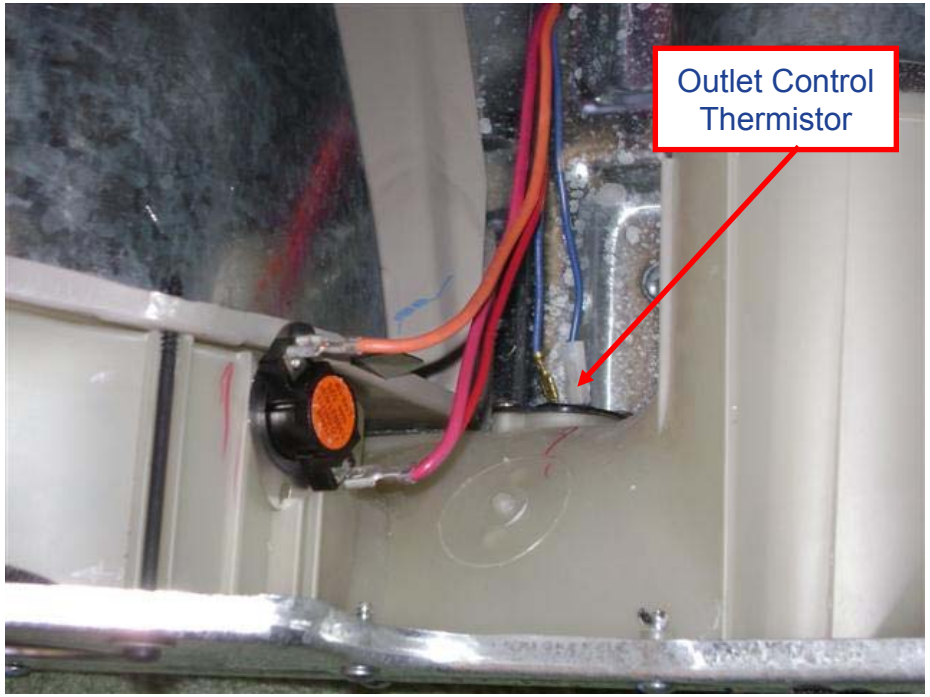
Specific failures associated with the inlet control thermistor can initiate error codes E3 and E4.

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Outlet Control Thermistor



Shield in Place



Shield Removed

The outlet control thermistor is located on the lower rear area of the blower housing. It is below the moisture shield and the outlet control backup thermostat.

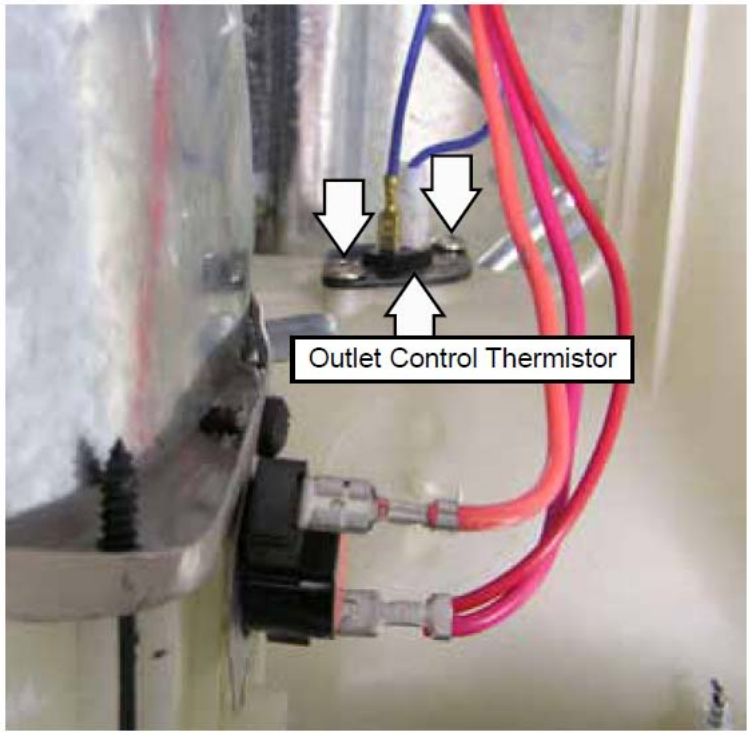
The outlet control thermistor measures outgoing air temperature and will respond to temperature changes of 3°F. The thermistor relays this information to the control board.

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Outlet Control Thermistor

Operation of the outlet control thermistor can be checked by using service test mode T05.

Specific failures associated with the outlet control thermistor can initiate error codes E5 and E6.



To remove the outlet control thermistor:

1. Remove the drum.
2. Remove the Phillips-head screw and the thermostat moisture shield from the front frame.
3. Disconnect the 2 wires from the outlet control thermistor.
4. Remove the 2 Phillips-head screws that attach the outlet control thermistor to the blower housing.

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Thermistor Characteristics

If the control reads a thermistor value too high or too low then it will log an error code, and switch to a setting where the heaters are on a duty cycle. The dryer then relies on the backup thermostats to control the heater.

Dryer goes into this fall back mode when it has determined that it can no longer rely on thermistor temperature to control applied heat. This can occurs when a thermistor cannot sense heat (failed open) or always read hot (failed closed).

Thermistor Resistance Values		
Temperature °C	Temperature °F	Resistance K-Ohms
10	50	202
16	60	151
21	70	120
25	77	100
32	90	74
38	100	57
49	120	37
57	135	27
66	150	19
93	200	8
121	250	3

The fall back mode consist of reducing the maximum heating power (typically 50%) so that thermostats are fast enough to shut down heater in case of overheating. On these GE Model Dryers, both heaters are cycled ON and OFF every minute.

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Outlet Control Backup Thermostat



Shield in Place



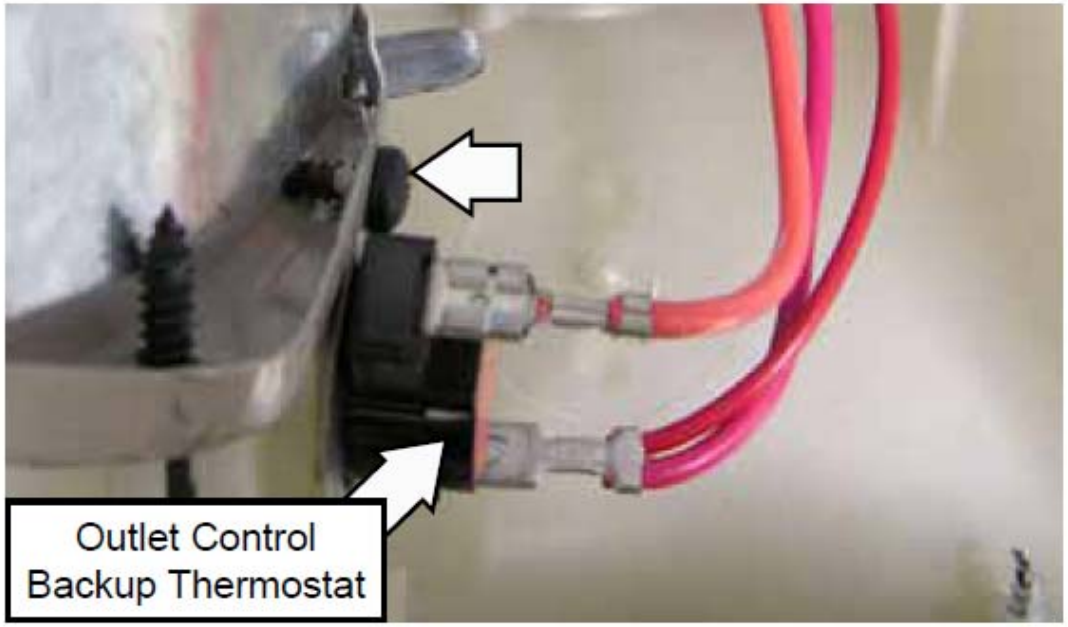
Shield Removed

The outlet control backup thermostat is located on the upper, rear area of the blower housing. It is below the moisture shield and above the outlet control thermistor. The outlet control backup thermostat monitors the outgoing air temperature. If the thermostat reaches a temperature beyond its maximum temperature rating, it will trip and disable power to the heating elements or burner assembly.

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Outlet Control Backup Thermostat

The outlet control backup thermostat opens at 165°F and will automatically reset at 155°F.



To remove the outlet control backup thermostat:

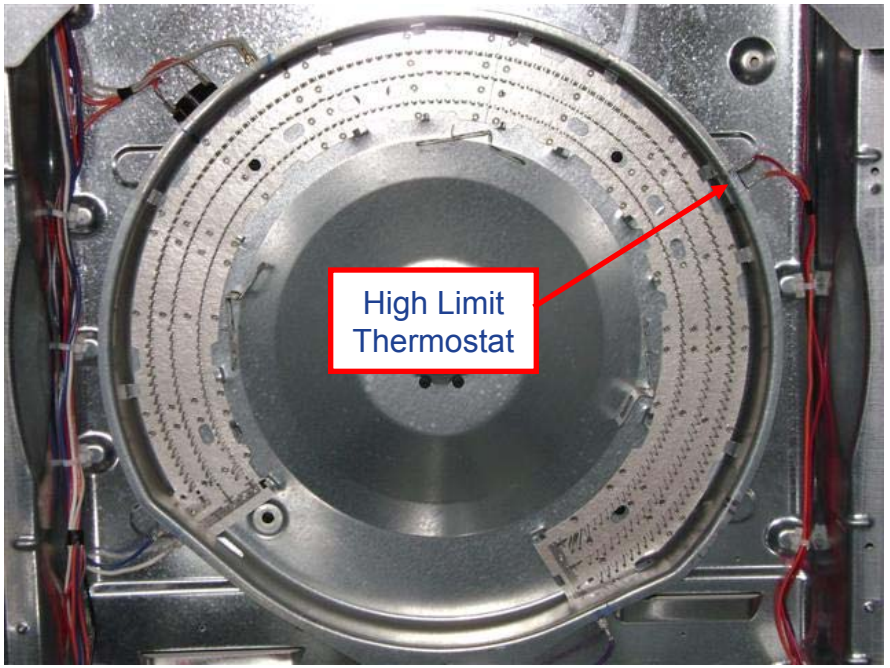
1. Remove the drum.
2. Remove the Phillips-head screw and the thermostat moisture shield from the front frame.
3. Disconnect the 2 wires from the outlet control backup thermostat.
4. Remove the Phillips-head screw that attaches the outlet control backup thermostat to the blower housing.

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High Limit Thermostat

On electric models, the high limit thermostat is located on the top right area of the heater housing.

On gas models, the high limit thermostat is located on the upper right side of the diffuser.



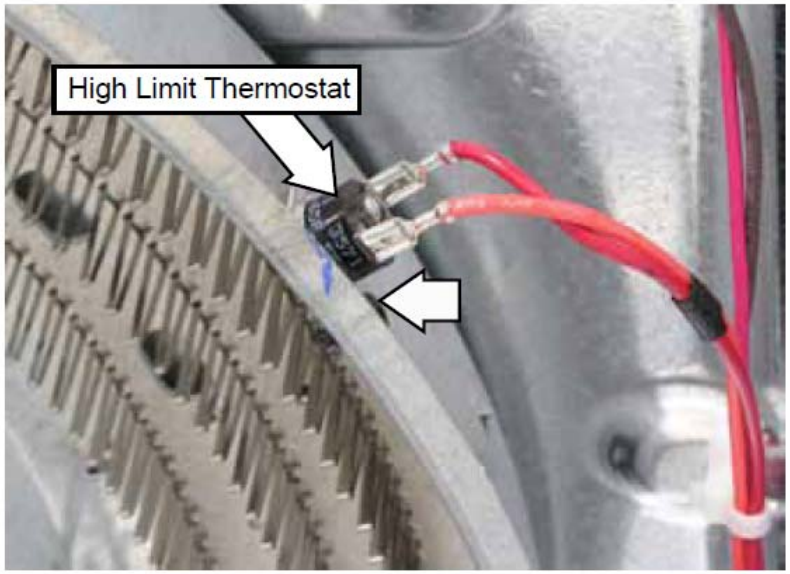
The high limit thermostat monitors incoming air temperature.

If the high limit thermostat trips it will take out the L1 circuit to the motor which, in turn, will disable the heat source.

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High Limit Thermostat

For both the electric and gas models, the high limit thermostat opens at 315°F and will automatically reset at 250°F.



Electric Model Shown

To remove the high limit thermostat:

1. Remove the drum.
2. Disconnect the 2 wires from the high limit thermostat.
3. Remove the Phillips-head screw that attaches the high limit thermostat to the heater assembly or diffuser.
4. Slide the thermostat from the heater assembly or diffuser.

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Service Mode Test

How to enter to service mode and navigate:
From idle state, press and alternate between the “My cycle” and “Delay Start” buttons twice to enter service mode.

Upon entering the service mode, the Control shall be in test selection mode and display the first test number (t01). Rotating the knob counter clockwise (CCW) shall decrement the test number in the display. Rotating the knob clockwise (CW) shall increment the test numbers in the display.

Once the test number is selected, pressing [Start/Pause] shall begin the selected test.

During a test, pressing power button shall terminate that test and bring the control to the test selection mode (test number is displayed on the display).

Pressing Power key during the test selection mode shall exit the Service mode.

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Service Mode Test Sequences

SERVICE MODE TEST		SEQUENCE	
T01	Error codes	Start/Pause	Display error codes
		Knob	The knob can be turned CCW and CW to see all logged error codes.
		Start/Pause	Clear highlighted error code from machine
		Power	Returns to service mode screen
T02	Version info	Start/Pause	Display the current version of software
		Knob	Turn the knob CW while the display shows the UI SW version - The display will alternate between "SPb" and the 3 digit MC SW version, displaying each for 1 second at a time
		Knob	Turn the knob CW while the display shows the MC SW version - The display will alternate between "EUI" and the 3 digit UI Eeprom version, displaying each for 1 second at a time
		Knob	Turn the knob CW while the display shows the UI Eeprom version The display will alternate between "EPb" and the 3 digit MC Eeprom version, displaying each for 1 second at a time
		Knob	Turn the knob CCW during each of the software versions - verify that the previous display is stored
		Power	Returns to service mode screen
T03	Eeprom check	Start/Pause	On Entry - The UI and MC board will test their respective Eeproms. When the UI and MC have finished, "UIP" will be displayed on the SSD if the UI passed, or "UIF" if the UI Eeprom test failed.
		Knob	Turn the knob - "PBP" will be displayed on the 7-segment LEDs if the MC passed, or "PBF" if the MC Eeprom test failed.
		Power	Returns to service mode screen

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Service Mode Test Sequences

T04	UI test	Start/Pause	The control shall turn on all LED's around the dial, the "Power", and "Start/Pause" button LED's, but not the SSD for a duration of 5 seconds. The control shall then turn off all LED's and then turn on the SSD.
		Any button but power	The control shall sound a Beep as long as a key is pressed.
		Power	Returns to service mode screen
T05	Outlet Thermistor	Start/Pause	The control shall display the Outlet Thermistor temperature in degrees Fahrenheit on the SSD during the test. The control shall start the drum motor and turn on the inner and outer coils for Electric models, and the gas valve for Gas models.
		Power	Returns to service mode screen
T06	Inlet Thermistor	Start/Pause	The control shall display the Inlet Thermistor temperature in degrees Fahrenheit on the SSD throughout the duration of the test. The control shall start the drum motor and turn on the inner coil for Electric models, and the gas valve for Gas models.
		Power	Returns to service mode screen
T07	Moisture Sensor		The control shall display the voltage read from the moisture sensor in volts on the SSD
		Power	Returns to service mode screen
T08	Steam test	Start/Pause	Upon entry, control shall display "STE" on the SSD during the steam test. The steam test shall rotate the drum with the standard profile. Five seconds after enabling the drum motor, the control shall enable power to the steam generator throughout the remainder of the test.
		Power	Returns to service mode screen

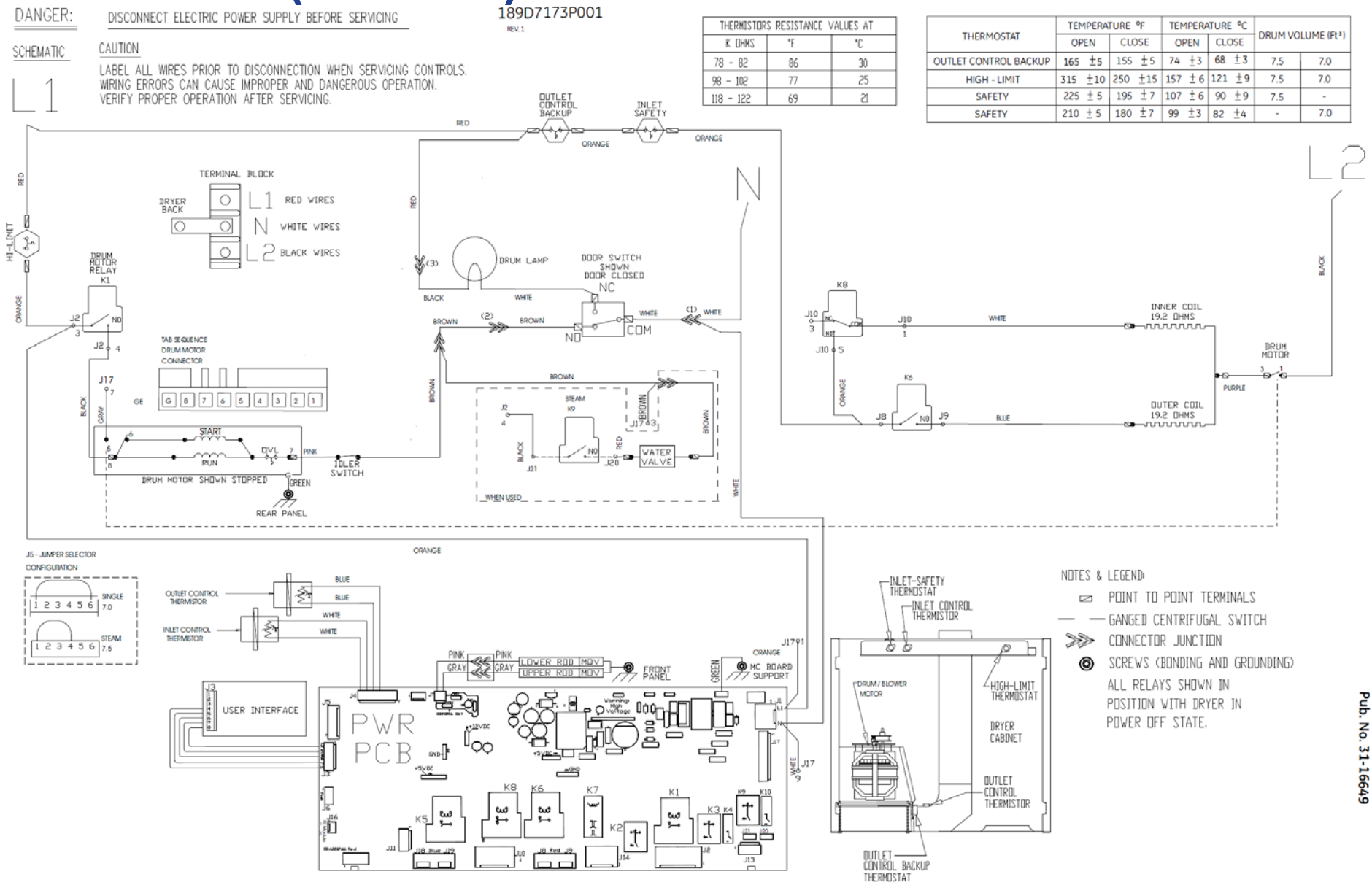
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Error Codes

Error Code	Description
E1-Interface EEPROM	Reading or writing improperly. Replace UI board.
E2-Power EEPROM	Reading or writing improperly. Replace power board.
E3-Inlet Short	Check and replace inlet thermistor if necessary.
E4-Inlet Open	Check and replace inlet thermistor if necessary.
E5-Outlet Short	Check and replace outlet thermistor if necessary.
E6-Outlet Open	Check and replace outlet thermistor if necessary.
E7- Check Electrical Connection	Please check power connections.
E8- Power Model	Check model selector on power board.
E11- Drum Motor	Motor is not rotating properly or centrifugal switch is bad. Please check.
E14- Stuck Button	Stuck keys. Please check

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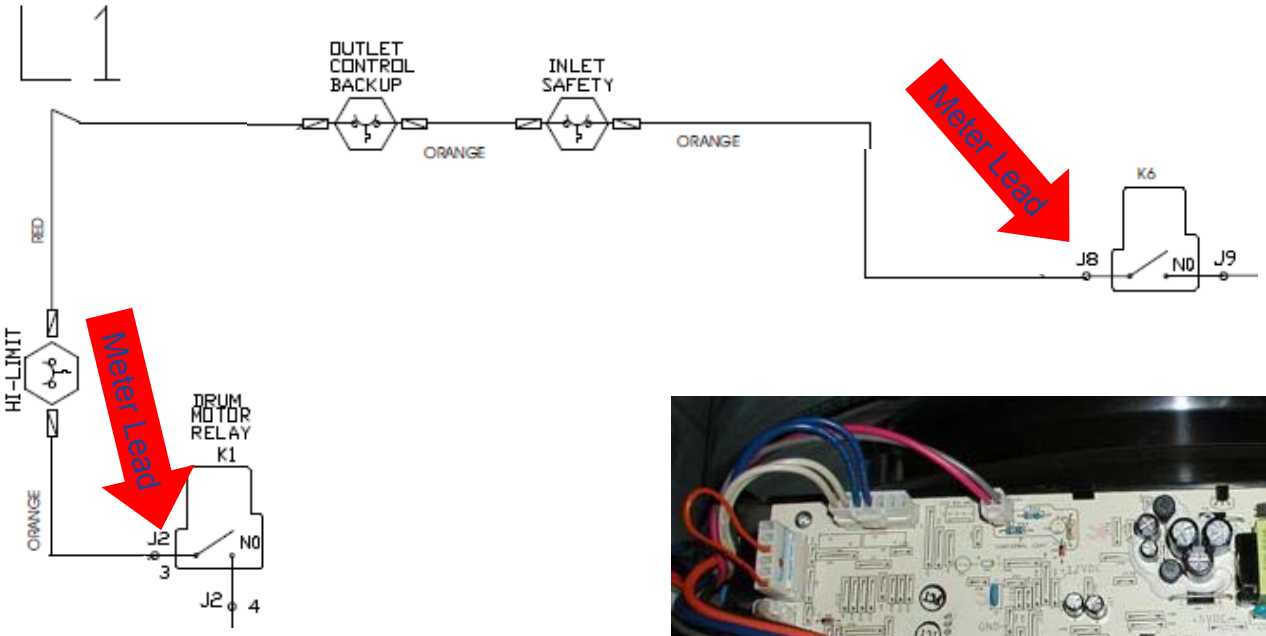
Schematic (Electric)

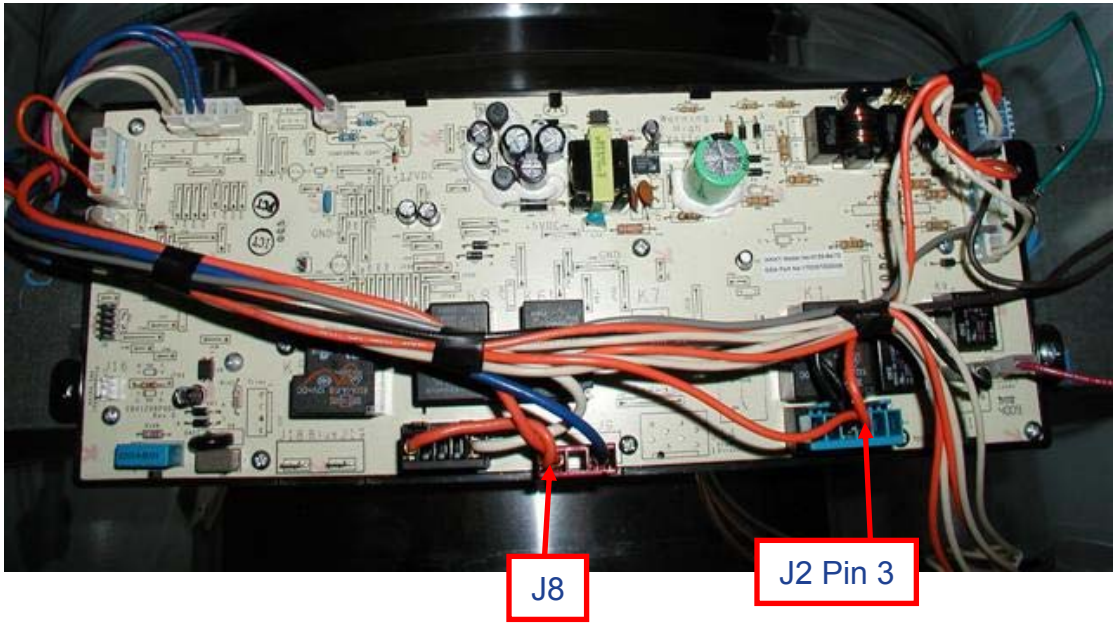


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Strip Circuit – Checking Thermostats



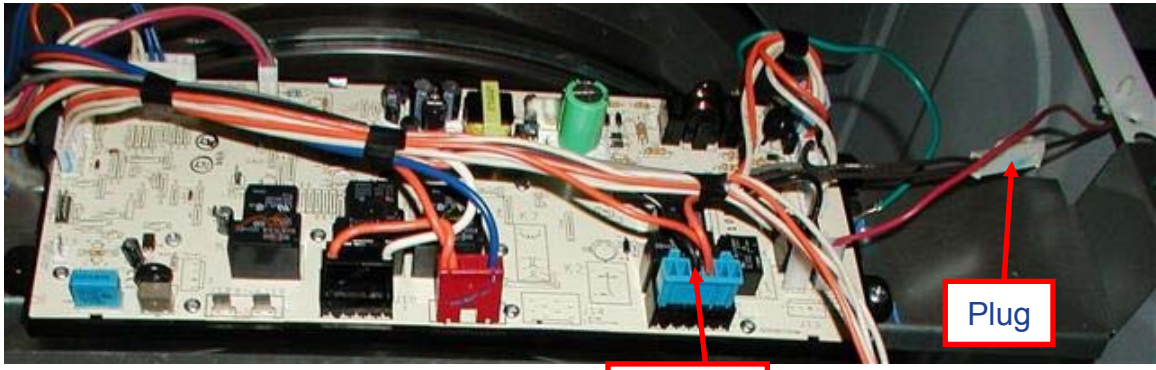


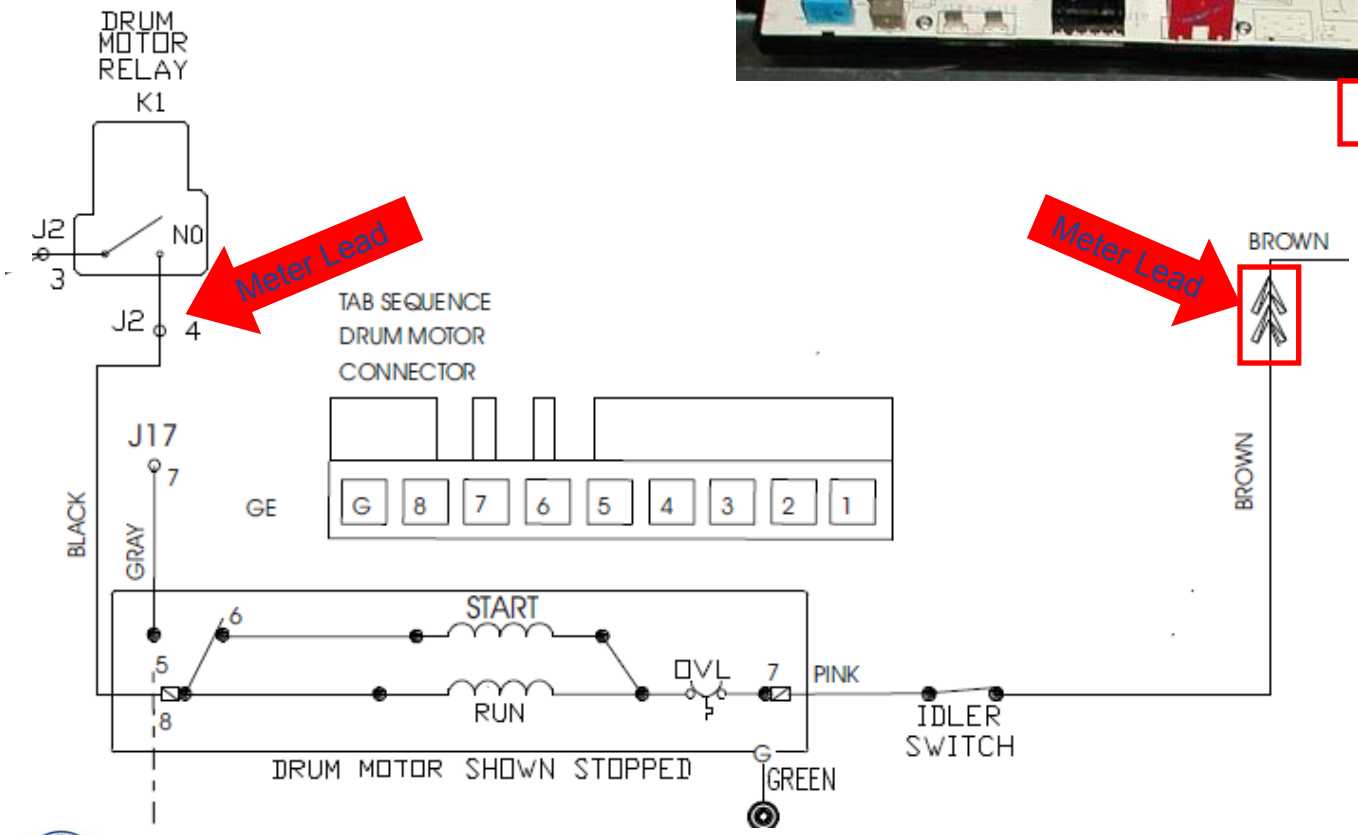
Remove Power.
Measure resistance between J2 Pin 3 & J8.
If all thermostats are intact, reading should be 0Ω.

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Strip Circuit – Belt Switch

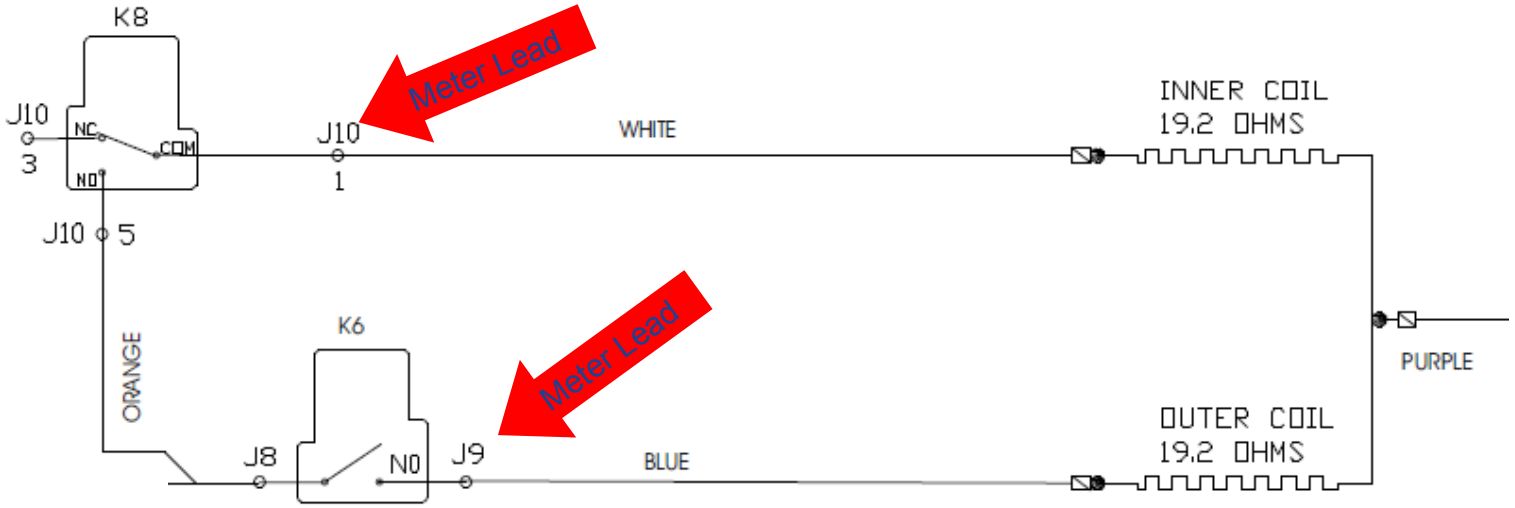
Remove Power.
Measure resistance between J2 Pin 4 & Plug. If belt switch & motor are intact, reading should be @ 3Ω.



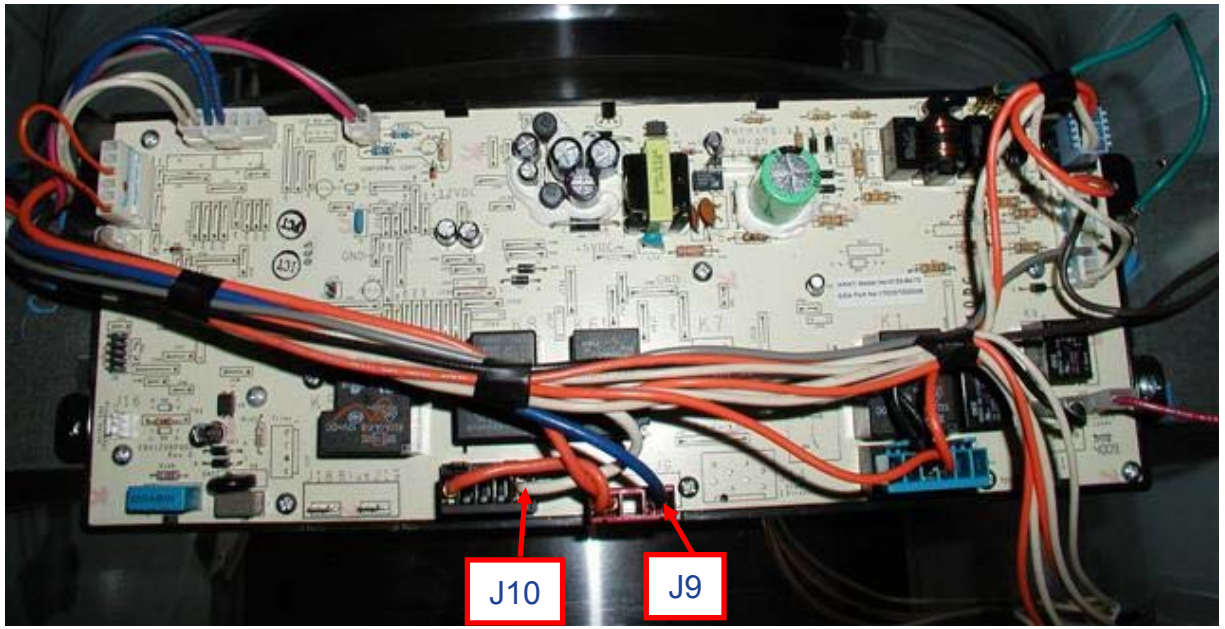


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Strip Circuit - Heaters

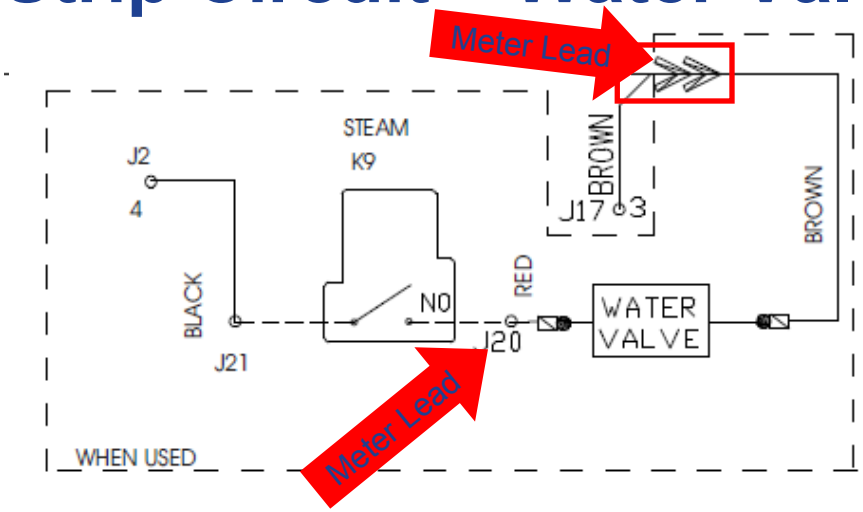


Remove Power.
Measure resistance between J9 & J10.
If both heaters are intact, reading should be @ 40Ω.

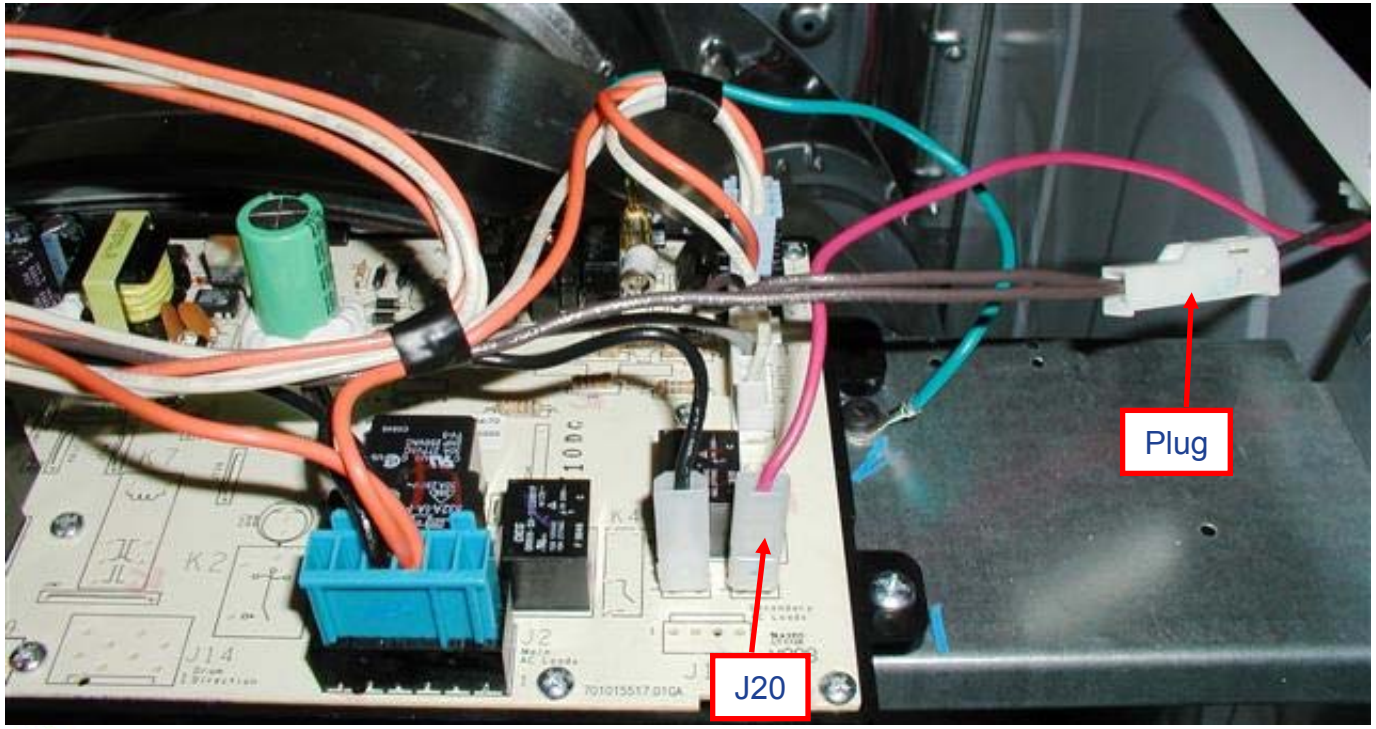


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Strip Circuit – Water Valve

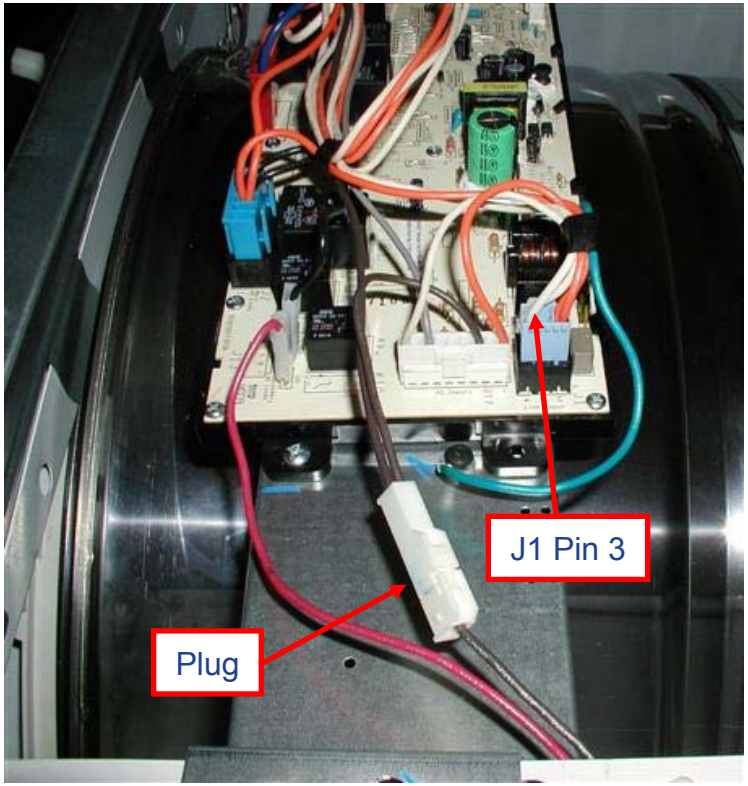


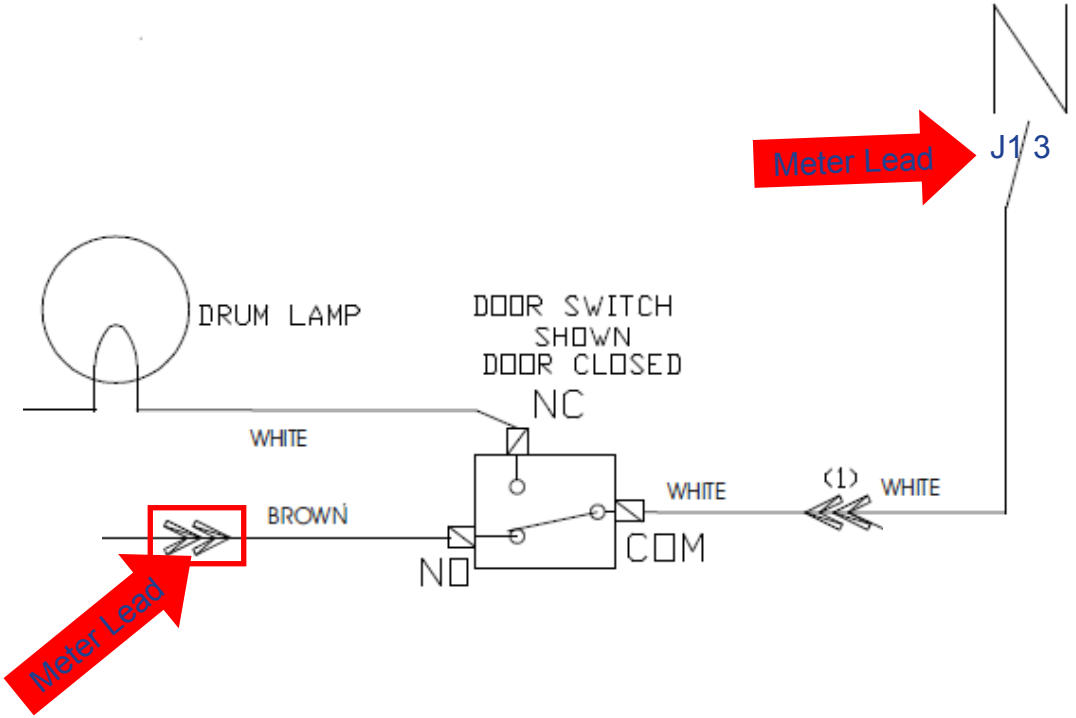
Remove Power.
Measure resistance between J20 & Plug.
The resistance of the valve coil, should read @ 400Ω.



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Strip Circuit – Door Switch

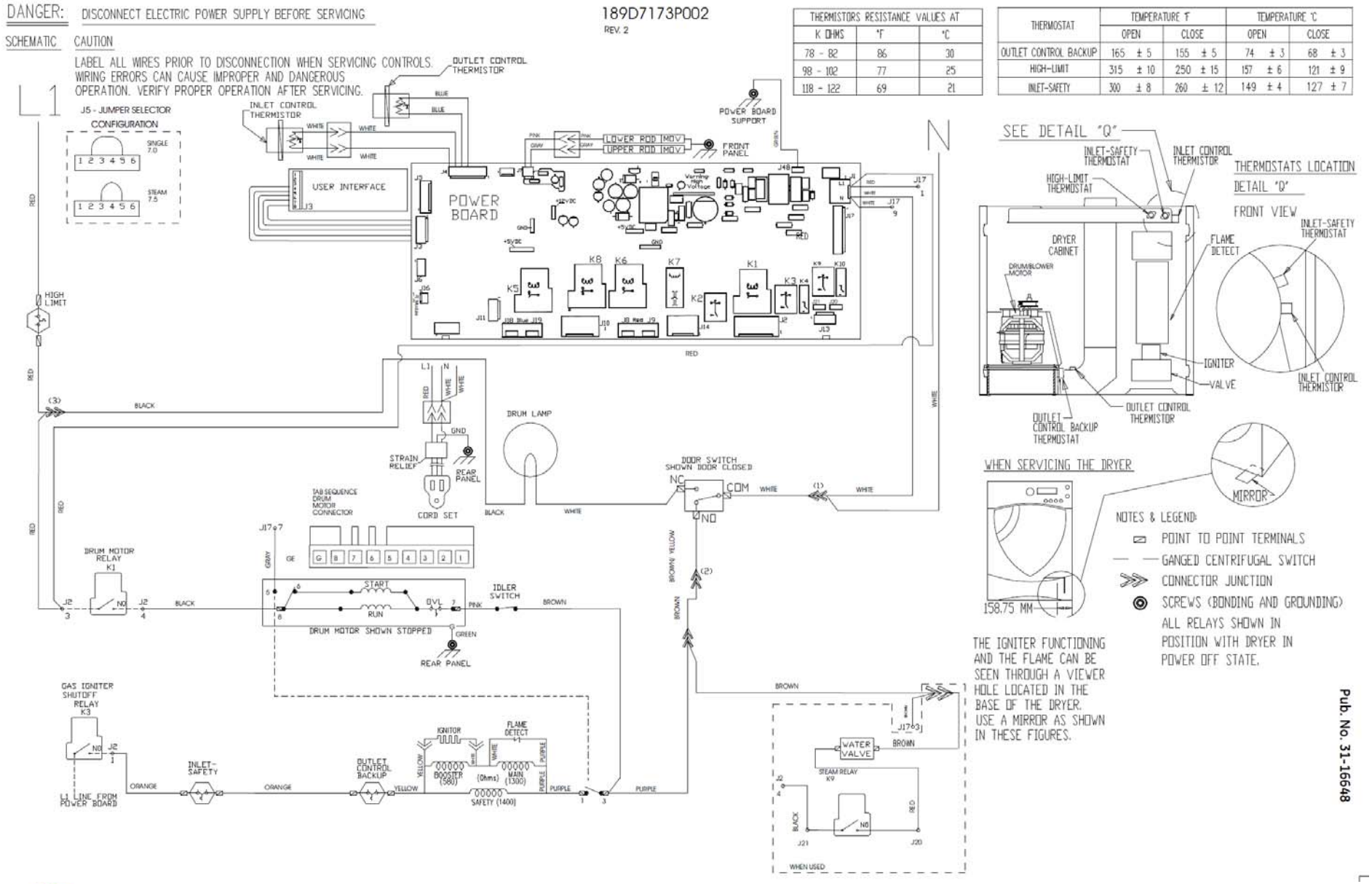




Remove Power.
Measure resistance between J1 Pin 3 (Neutral) & Plug.
The resistance should read 0Ω with the door closed and ∞Ω with the door open.

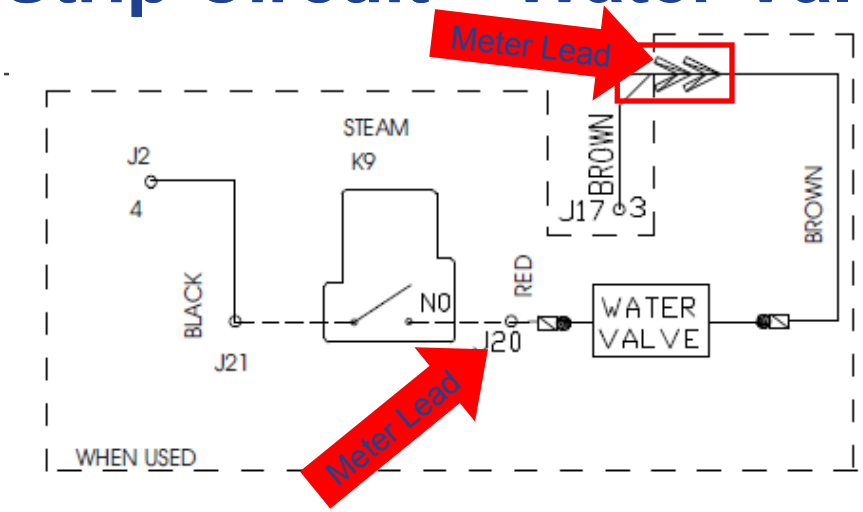
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Schematic (Gas)

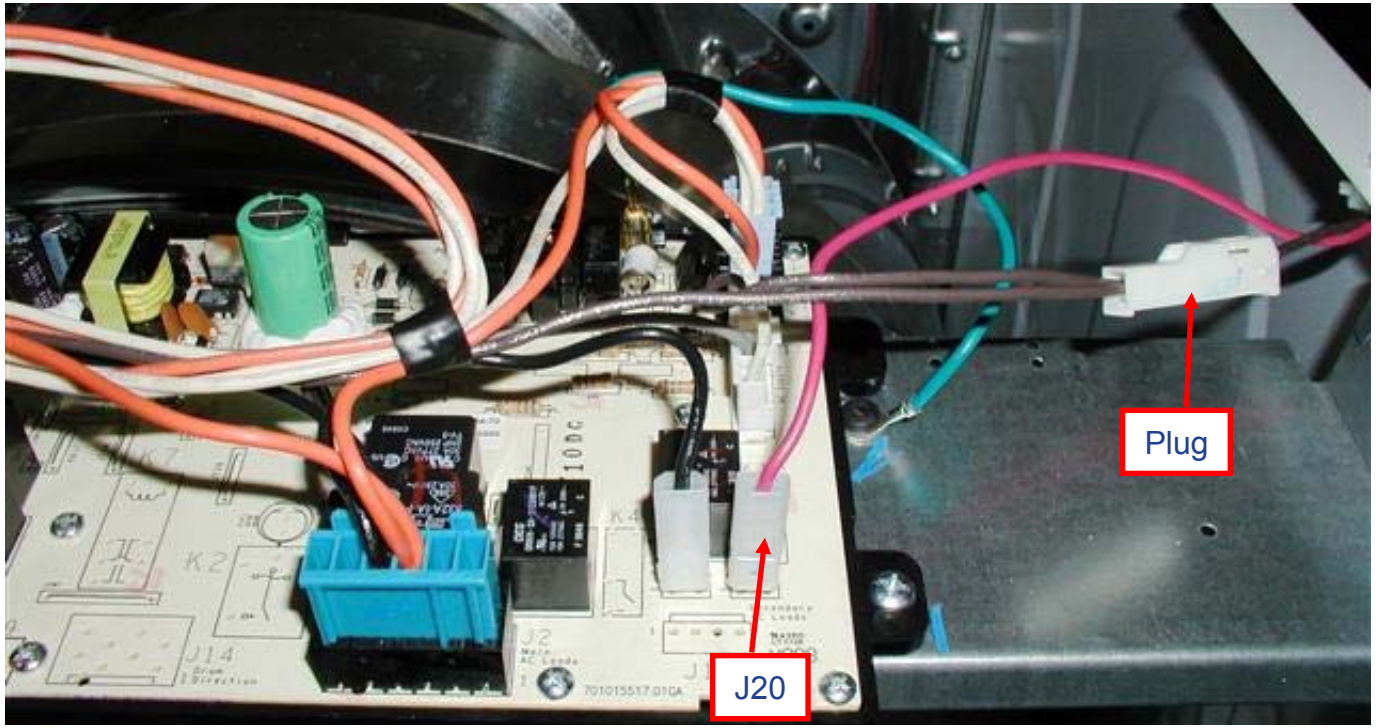


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Strip Circuit – Water Valve

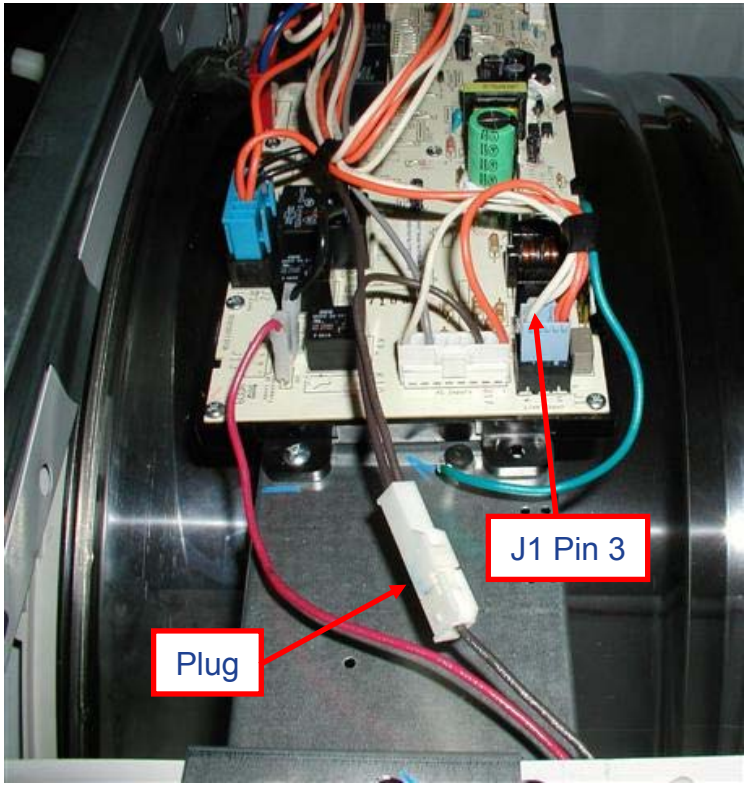


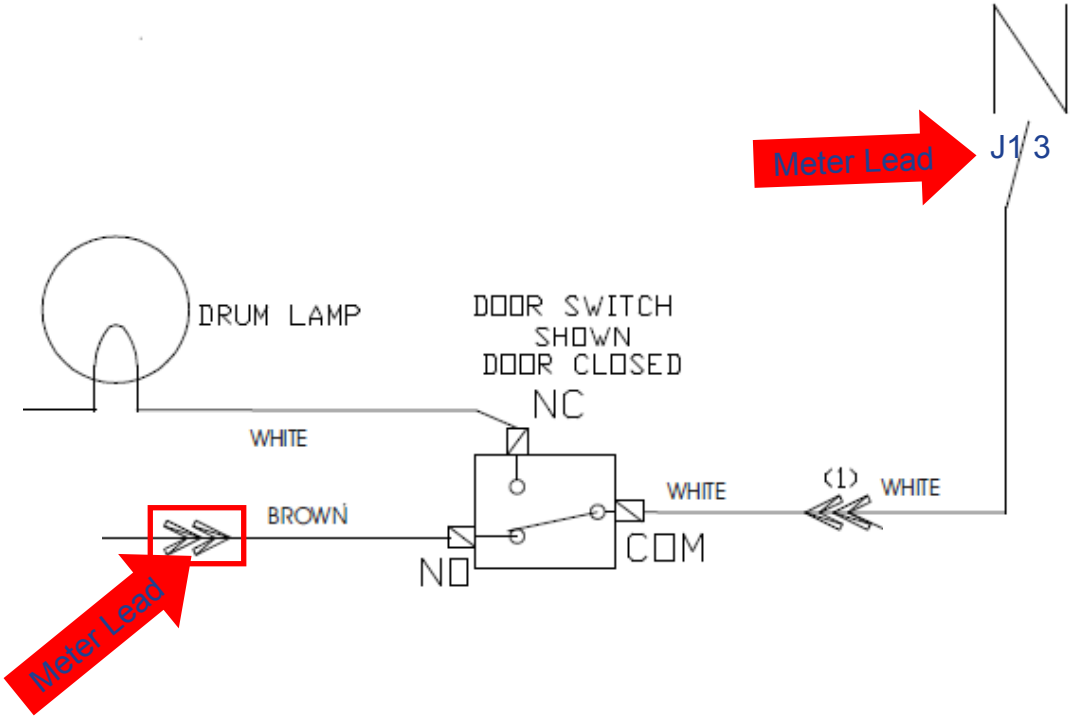
Remove Power.
Measure resistance between J20 & Plug.
The resistance of the valve coil, should read @ 400Ω.



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Strip Circuit – Door Switch



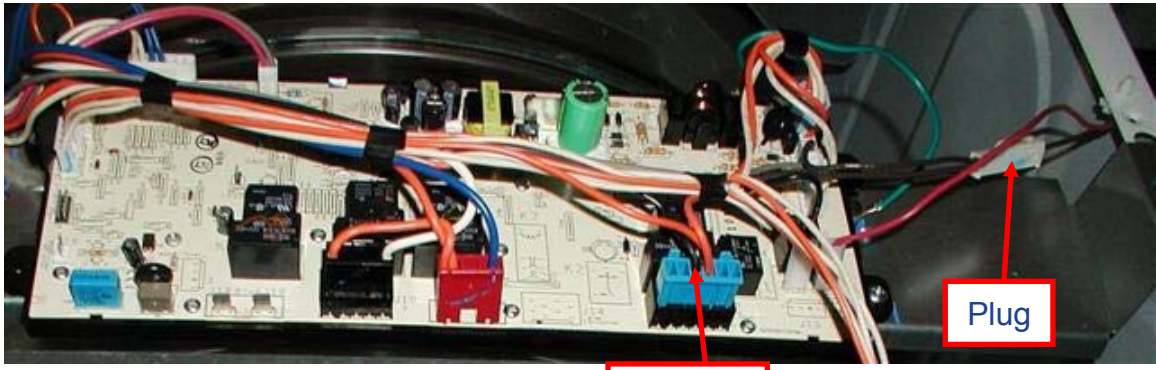


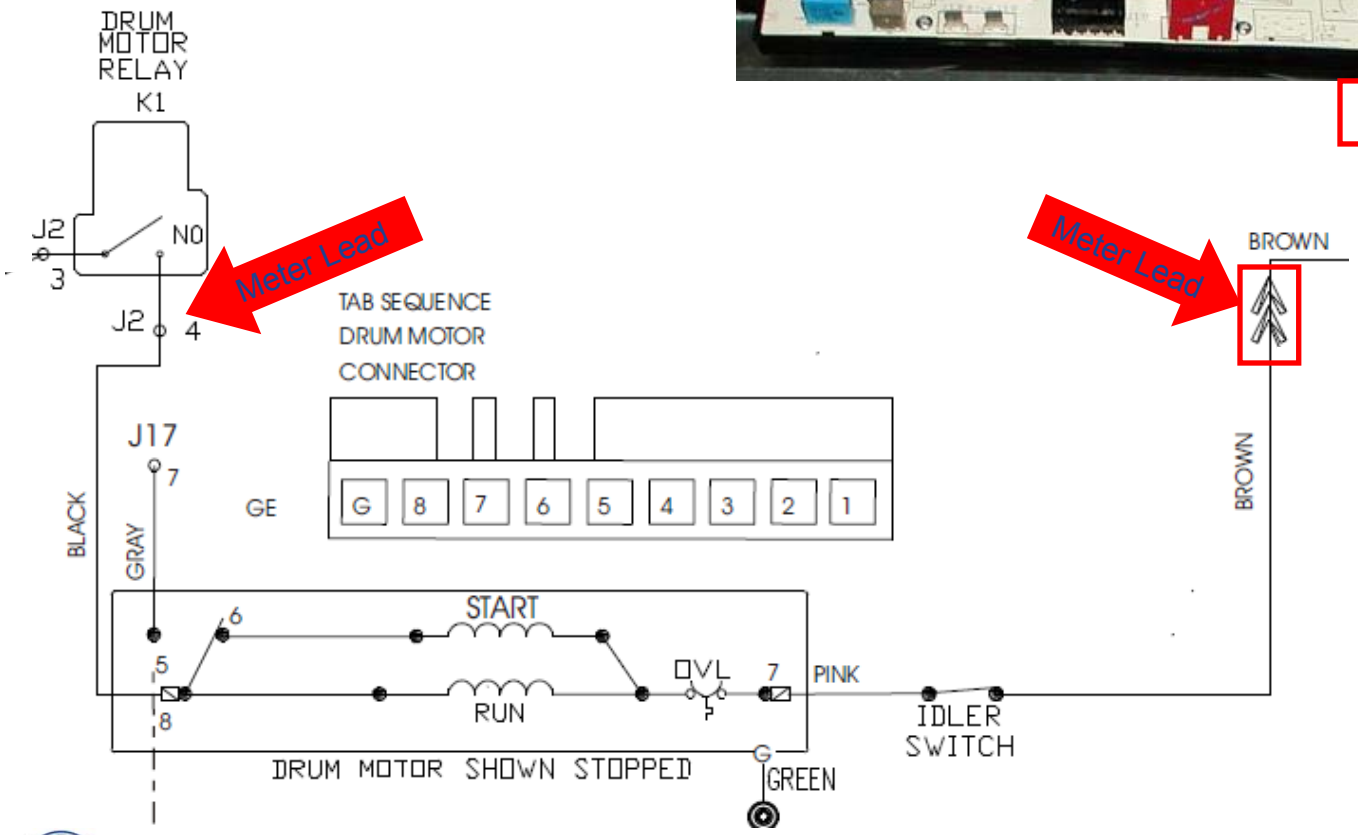
Remove Power.
Measure resistance between J1 Pin 3 (Neutral) & Plug.
The resistance should read 0Ω with the door closed and ∞Ω with the door open.

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Strip Circuit – Belt Switch

Remove Power.
Measure resistance between J2 Pin 4 & Plug.
If belt switch is intact, reading should be @ 3Ω.





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END OF PRESENTATION

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