

Profile HA Dryer Upgrade – PFDS450/455 Series

GE Profile 7.5 cu. ft. stainless steel capacity frontload dryer with Steam

Models:

PFDS450ELWW

PFDS450GLWW

PFDS455ELMG

PFDS455GLMG

Training Bulletin

TB05-11



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.

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



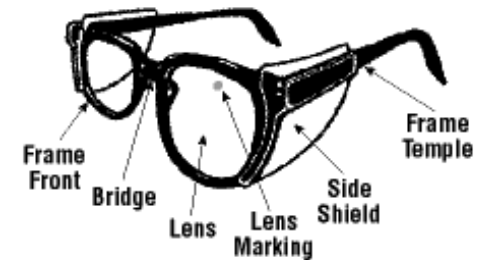
Plano Type Safety Glasses



Steel Toe Work Boot



Brazing Glasses



Prescription Safety Glasses

Safety Glasses must be ANSI Z87.1-2003 compliant

Warranty

<i>For The Period Of:</i>	<i>We Will Replace:</i>
One Year <i>From the date of the original purchase</i>	<i>Any part</i> of the dryer which fails due to a defect in materials or workmanship. During this limited one-year warranty , GE will also provide, free of charge , all labor and related service costs to replace the defective part.
Second Year <i>From the date of the original purchase</i>	<i>Any part</i> of the dryer which fails due to a defect in materials or workmanship. During this additional one-year limited warranty , you will be responsible for any labor or related service costs.
Second through Fifth Year <i>From the date of the original purchase</i>	<i>The extra-large or super-capacity dryer drum and main electronic control board</i> if any of these parts should fail due to a defect in materials or workmanship. During this additional three-year limited warranty , you will be responsible for any labor or related service costs.

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.
- Replacement of the light bulb after its expected useful life.
- 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.
- Damage caused after delivery.
- 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.

Installation

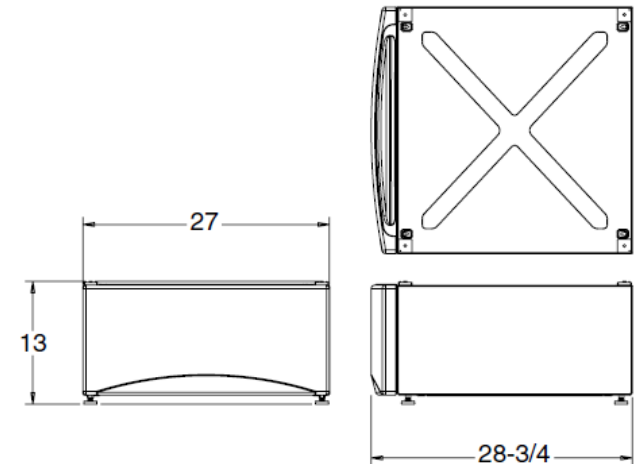
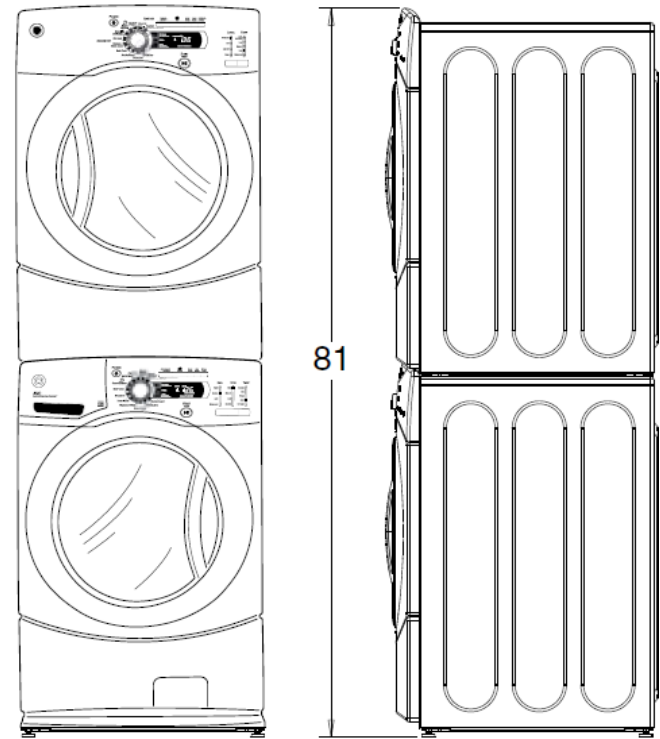
These Laundry products can be installed in several different configurations:

Undercounter Side-by-Side.

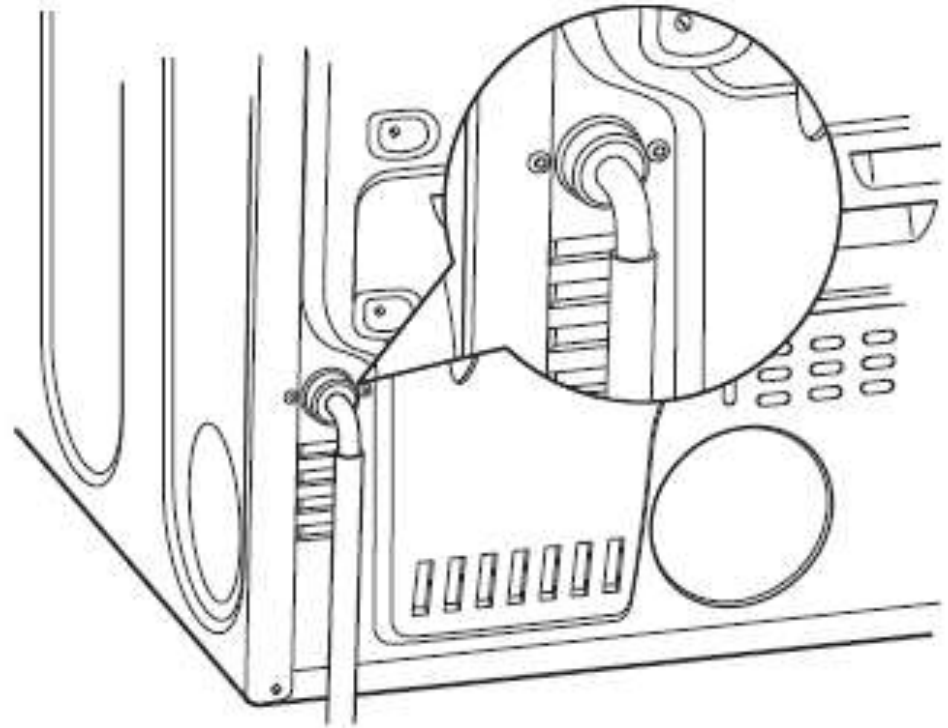
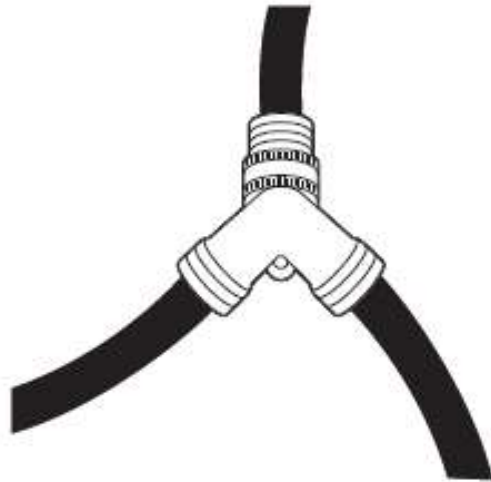
Pedestal Stacked

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.
SPSD157JMG - Champagne
SPSD157JWW - White



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 provided; never use old hoses.

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:

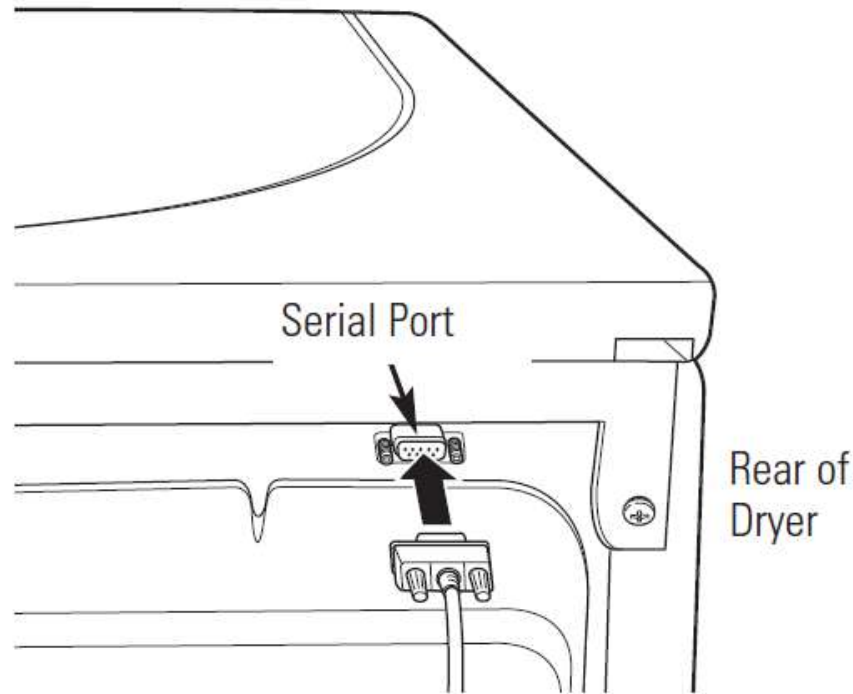
Dryer Exhaust to the bottom of cabinet for Gas and Electric models.

Installation – Communication

Attach the serial cable for washer and dryer connection to the serial port on the back of the dryer.

Attach the other end of the cable to the washer before pushing the washer into its final position.

Cable comes packed with dryer.



Installation – Communication

Washer Communicated Cycles

To turn on communication, press the **SETTINGS** button on the washer control panel. When “DRYER LINK” appears in the display, press **ENTER**. Using the arrow keys, select ON; then press **ENTER**.

When the washer cycle is completed, the washer will communicate with the dryer when any button on the control panel is touched or the door is opened.

The washer will display, “TRANSFERRING CYCLE INFORMATION TO THE DRYER” and the dryer will display, “RECEIVING CYCLE INFORMATION TO THE DRYER”.

The dryer will only communicate with the washer if the dryer is not running a cycle.

If the washer starts a new cycle before the dryer has a chance to communicate with it, the information will be lost.

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.

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.

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.

Features – Rack Dry



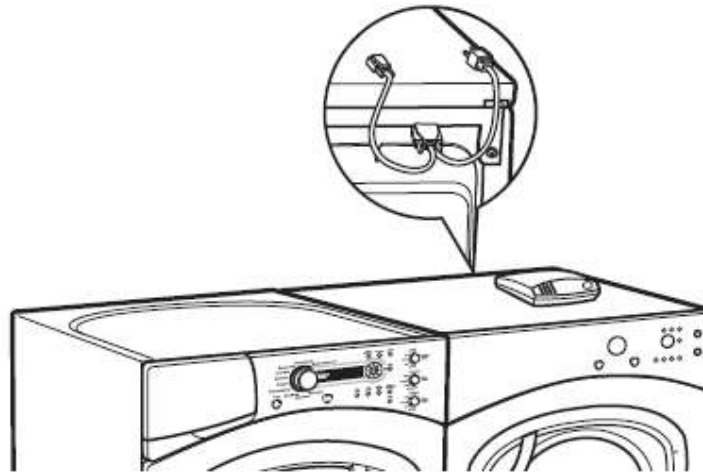
- Make sure the drum of the dryer is oriented so the rack drying system is on the left side of the dryer.
- Pull the drying rack screen out from the left side and engage the handle “posts” in the opposite baffle slots.
- Rack dry operates without the drum turning

Features – Smart Appliance

Models PFDS450, PFDS455, PFDN440, PFDN445 are compatible with the GE Smart Appliance Module (SAM) which can be purchased separately.

Contact your local utility or visit www.GEAppliances.com/smart-appliances to see if your area is using Demand Response (DR) technology.

Consult Use & Care manual for installation instructions.



Features – Lint Filter Message



“CLEAN LINT FILTER” (message)

This message appears periodically. It is only a reminder.

Features – “Settings”

Under the **SETTINGS** option, you can adjust the volume or the brightness of the display.

VOLUME

End of Cycle (signal) volume can be set from **HIGH**, **MED**, **LOW** or **OFF**.
Control Sounds volume can be set from **HIGH**, **MED**, **LOW** or **OFF**.

DISPLAY BRIGHTNESS can be set from **HIGH**, **MED** or **LOW**.

After you have made your selection, press **ENTER**.

NOTE: To access the SETTINGS menu, hold down the DRUM LIGHT button for 3 seconds.



Features – Specialty Cycles



1. Turn the **CYCLE** knob to **SPECIALTY CYCLES**. A list of cycle options will appear in the display.
2. Using the cursor buttons, select a **CATEGORY**.
3. Using the cursor buttons, select a **CYCLE**. Press the **BACK** button to take you back to the **CATEGORIES**.
4. Press **ENTER** to select.
5. Press the **START/PAUSE** button.

Features – Specialty Cycles

SPECIALTY CYCLES include:

Garment

- coats
- Hosiery/Bras (use mesh bag)
- Jeans
- Khakis

Bed and Bath

- Blankets (Cotton)
- Comforters
- Sheets
- Towels

Specialty Cycles

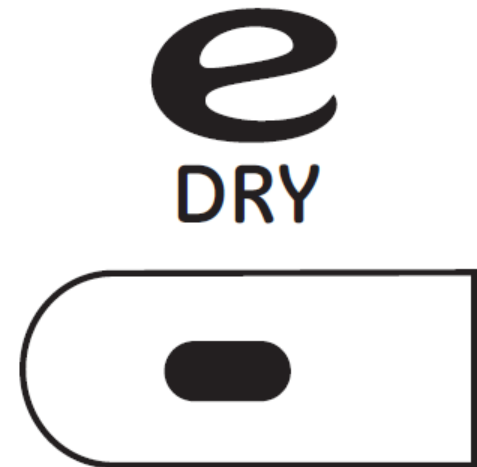
- Air Fluff
- Dryel
- Fleece
- Fragile Cottons
- Performance Fabrics
- Pet Bedding
- Play Clothes
- Rack Dry
- Sleeping Bag
- Throw Rugs

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***.



Model / Serial Plate



Model / Serial bar code sticker is located on the top, left, front corner of the cabinet and the main Model / Serial plate is located behind the door.

Mini-Manual



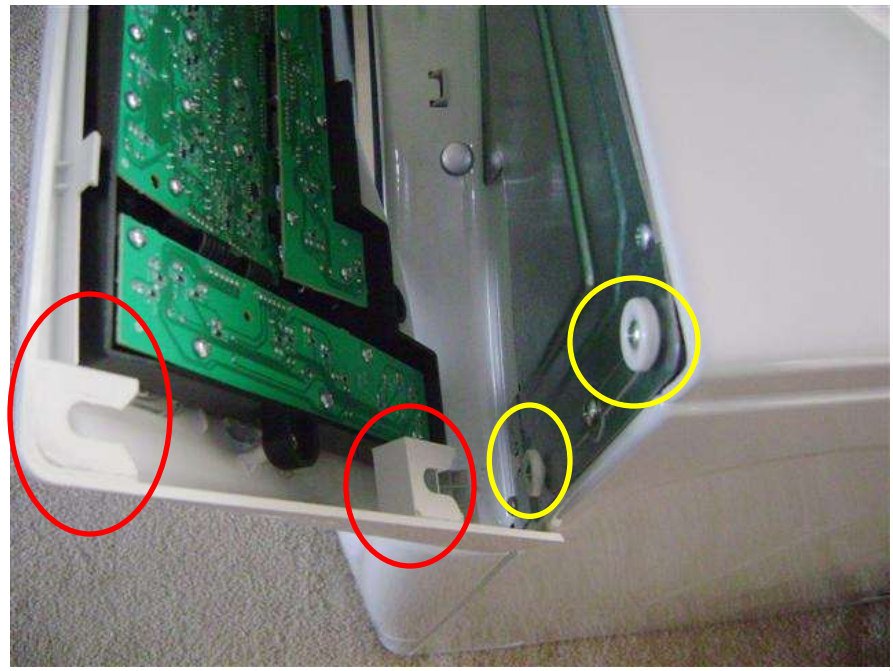
Mini-Manual is located on the back side of the control housing.

Disassembly



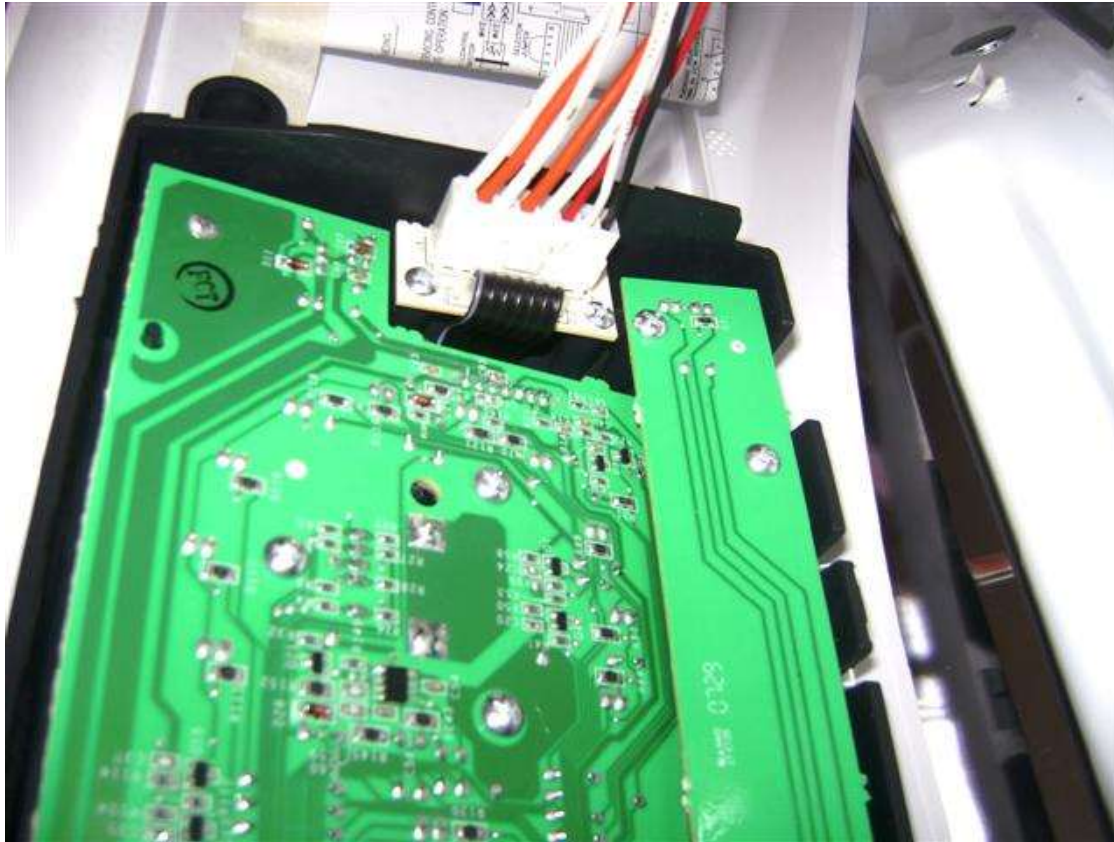
- Pull off main control knob.
- This will expose a single Phillips screw under knob.
- Remove the Phillips screw

Disassembly – Control Panel



With the knob and screw removed, grasp control panel on both sides & lift straight up to release hooks on control panel from grommets on machine frame.

Disassembly – Control Panel



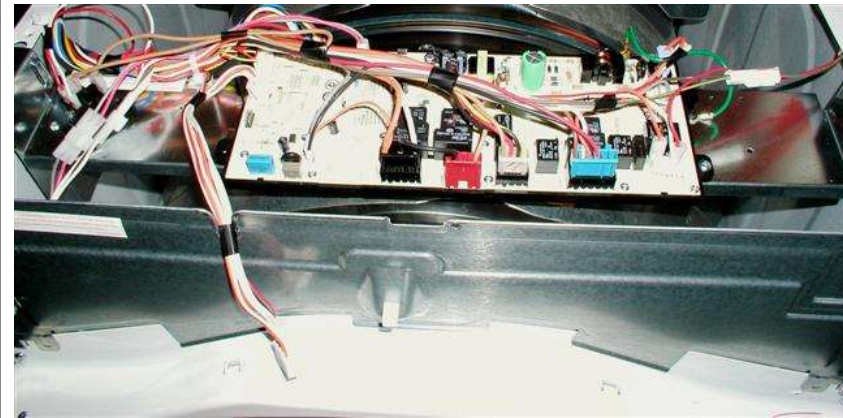
- One plug connects the control board to the dryer's electronic system
- Remove plug & set control aside to continue disassembly

Disassembly - Top



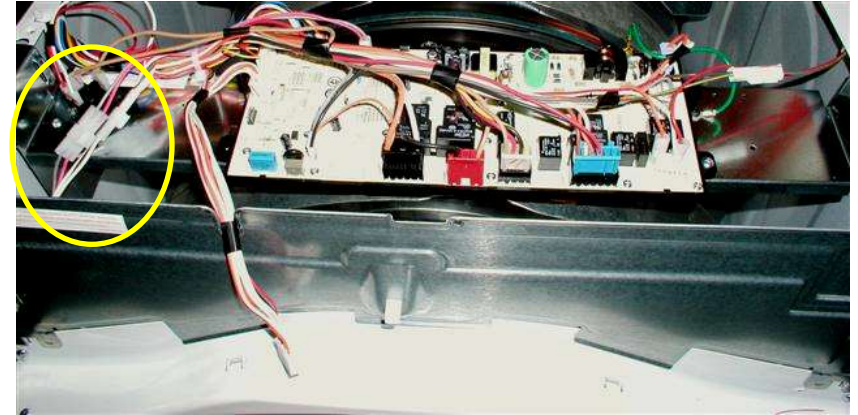
- To release dryer top, remove three Phillips screws from front.
- Lift up top in front and slide top forward to disengage clips in rear

Disassembly - Top



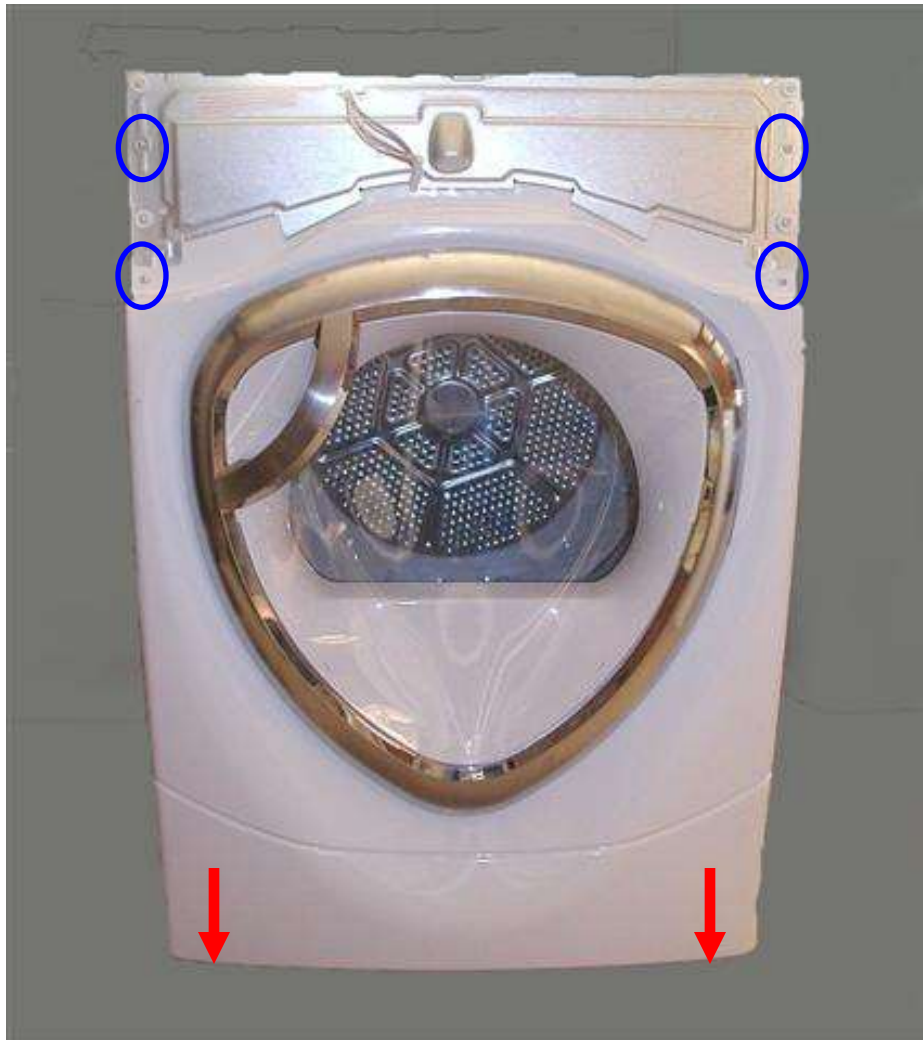
Removing dryer top exposes
Power Board mounted
underneath.

Disassembly – Front Removal



With top removed, disconnect two plugs (one for moisture sensor & one for door switch and light) located next to power Board.

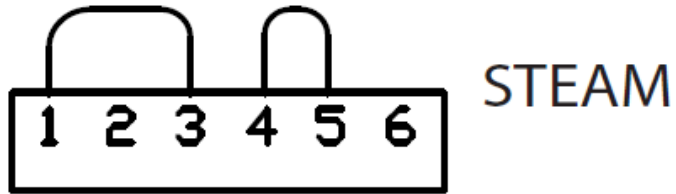
Disassembly – Front Removal



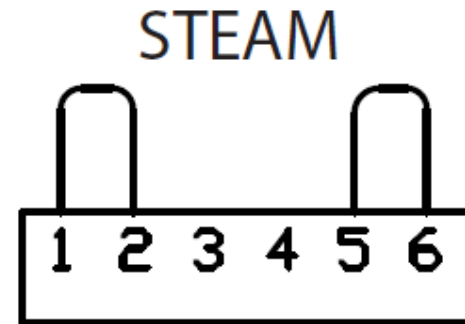
- Loosen but do not remove two Phillips screws at bottom holding front of the dryer to the frame of the machine.
- Remove four Phillips screws at the top of the cabinet front.
- Grasp cabinet front on both sides and lift off loosened screws at bottom.

Model Select Plugs J5

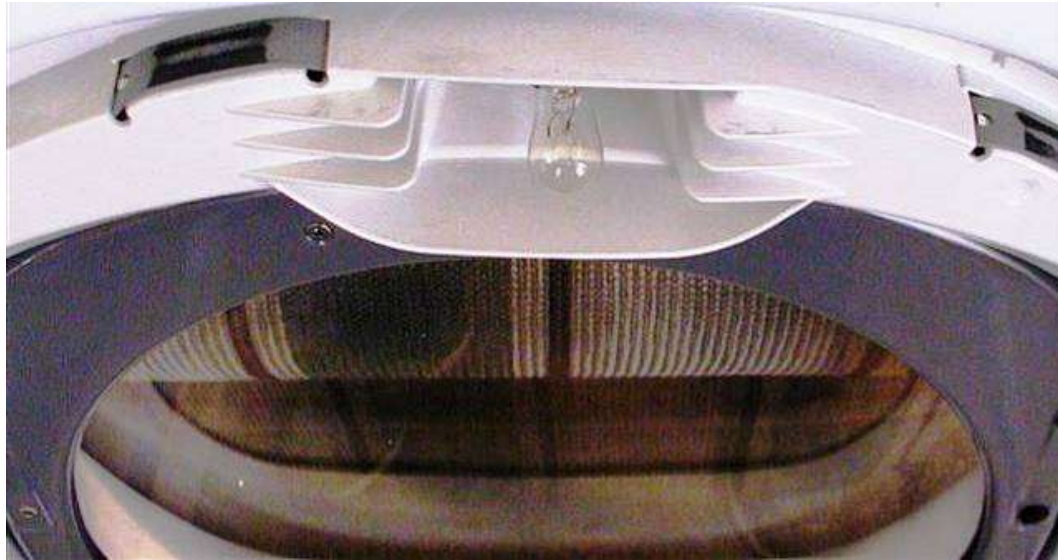
Electric



Gas



Drum Light



Light is energized when door is opened or it can be turned by depressing drum light pad on control panel.

- Threaded bulb base
- 120vac 10W
- Part# WE4M305

Servicing the 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 can be replaced without disassembly of the dryer.

Replacement can be performed by opening the dryer door to access the steam nozzle.



Servicing the Steam Nozzle

Using a 7/16" or 11mm nut driver unscrew the nozzle from the air duct assy.



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

Servicing the Steam Nozzle

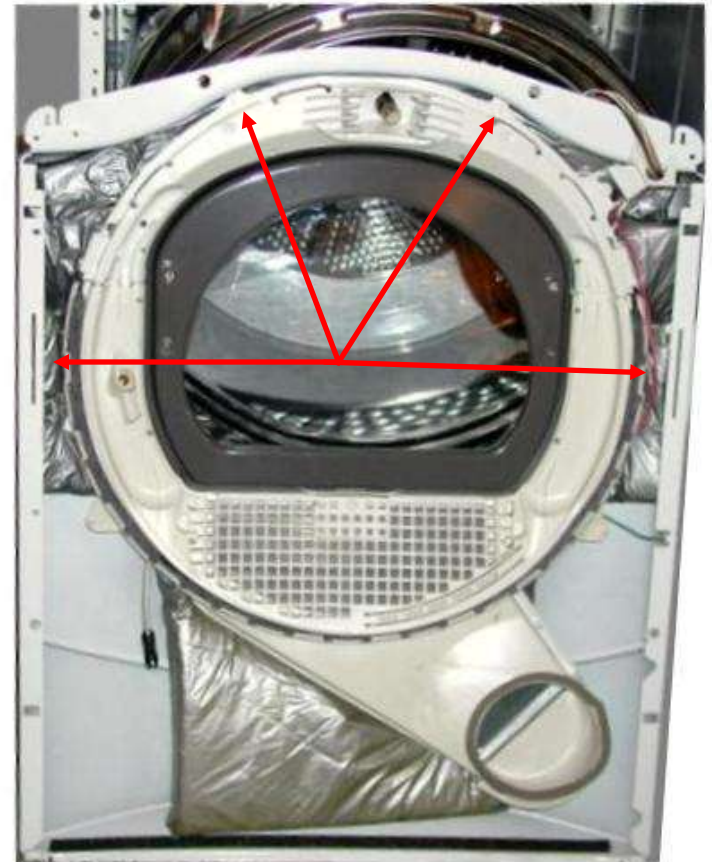
When removing the front of the dryer you will need to disconnect the water line that goes to the nozzle connector in addition to the wiring to the door switch and moisture rods. As you tilt the dryer front forward, press on the John Guest connector collar and release the water line.



Servicing the Steam Nozzle Connector

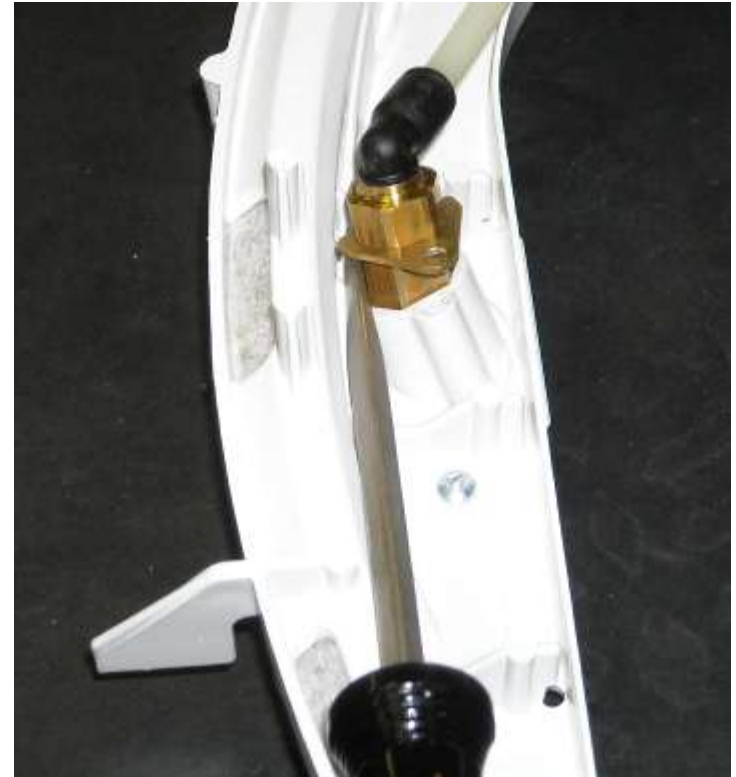
To remove the top bearing and the air duct assembly:

- First, remove two Phillips screws under the door opening in front.
- Unsnap components at points indicated.
- Remove wires from door switch & sensor rods as needed.



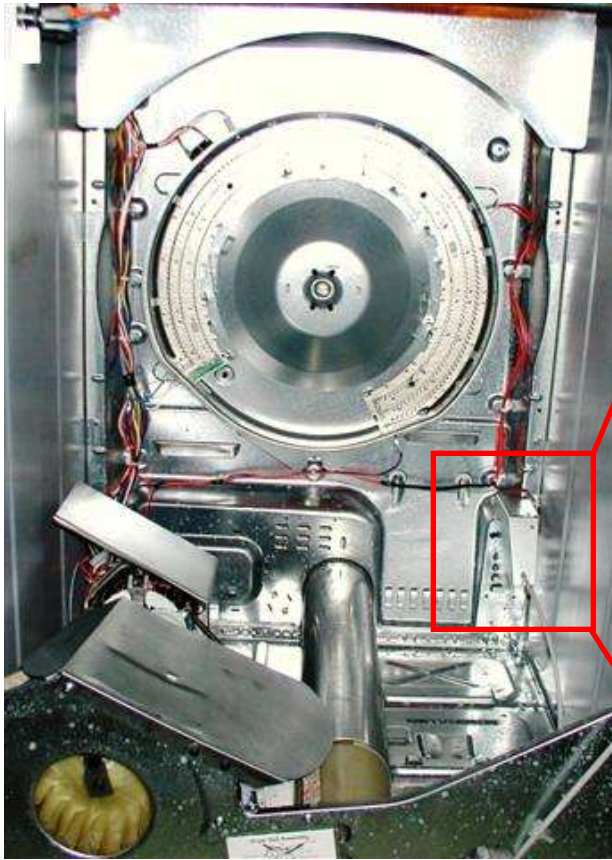
Servicing the Steam Nozzle Connector

On the back side of the air duct assembly, remove the Phillips screw that holds the connector to the housing then pry the connector out of the housing.

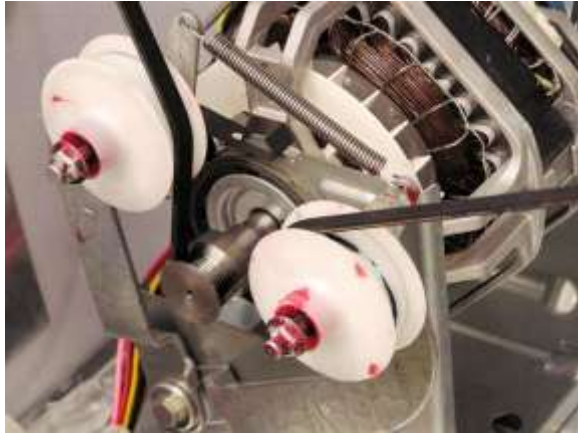


Servicing the Water Inlet Valve

After removing the dryer drum, the water inlet valve is located in the bottom right hand corner of the cabinet. The water valve is enclosed under a metal shield.



Dual Idler Pulley System & Belt Removal



- Before removing or reinstalling the belt, GE Factory Service Technicians are required to wear Abratex Sleeves and use a kneel pad or knee pads.
- Kneel or sit on the floor. Un-hook the belt from the motor pulley.

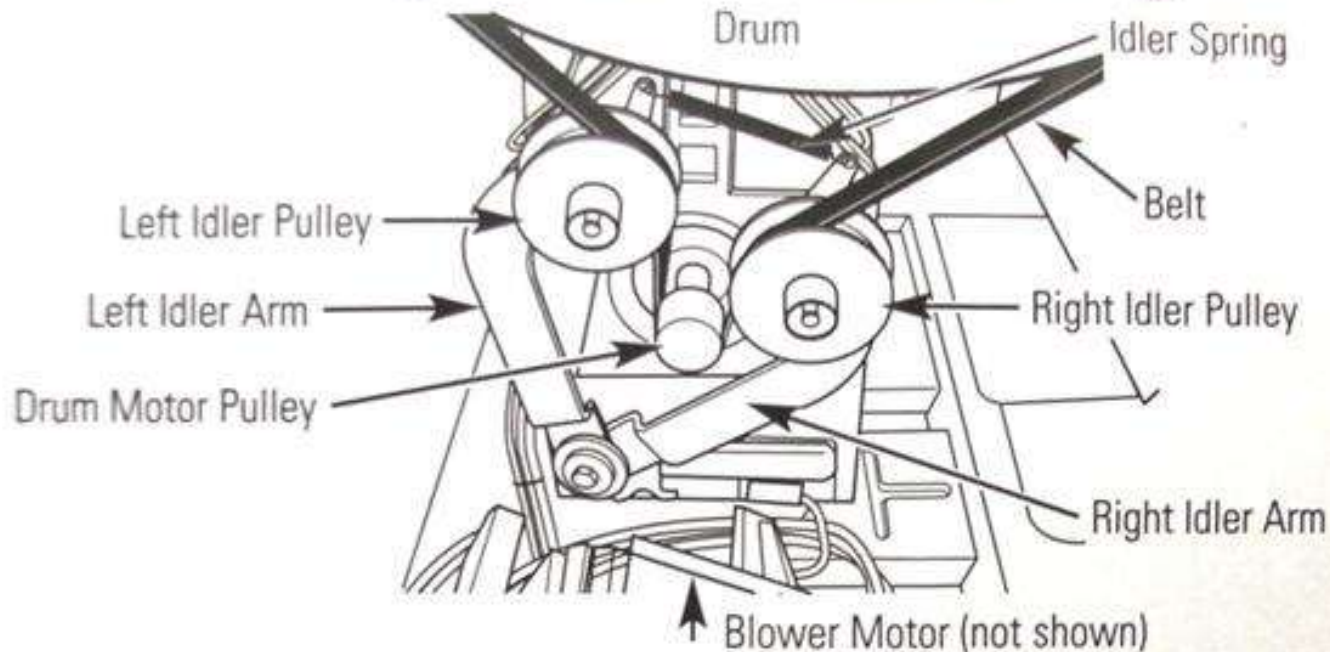
DISASSEMBLY – DRUM REMOVAL



To gain slightly more room to either remove or install the belt, one may want to first remove the blower motor shield.

- Remove two screws on front of shield.
- Lift shield in front, push back about $\frac{3}{4}$ of an inch to disengage tab.
- Lift off shield.

Dryer Belt Assembly



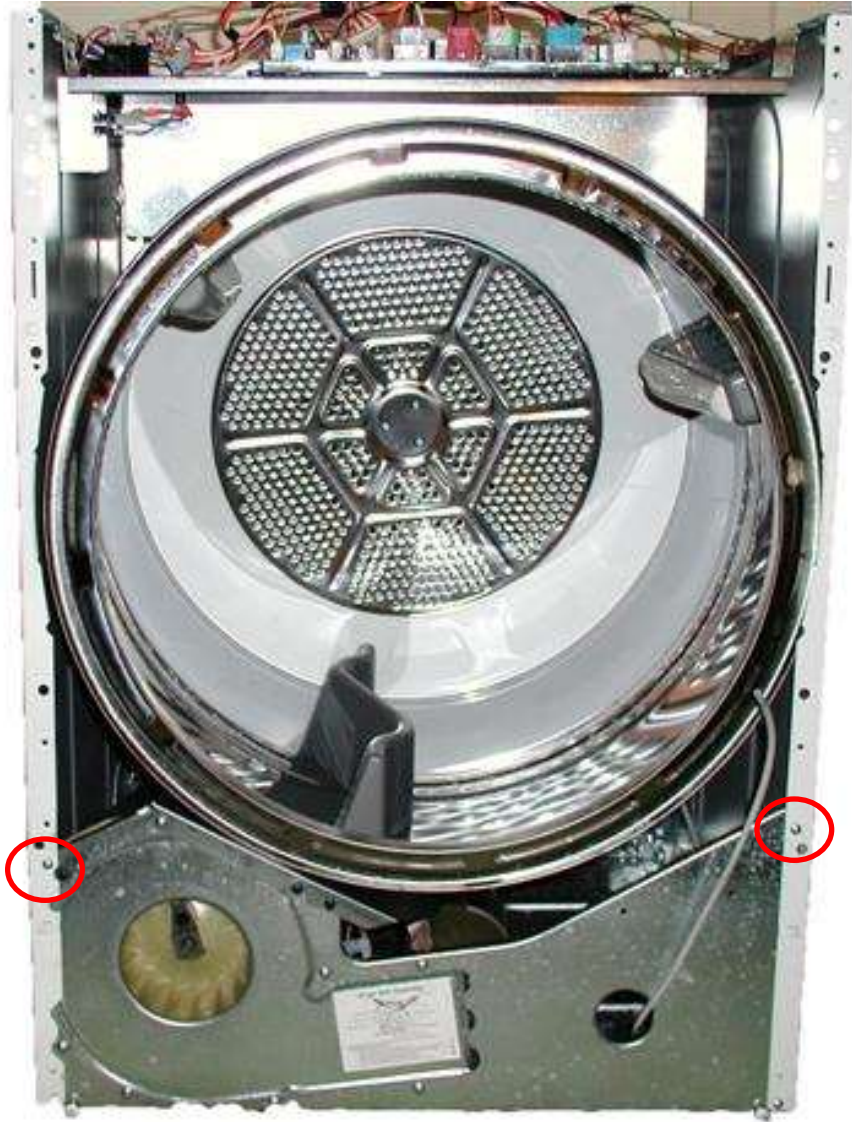
Belt should be oriented so that the belt grooves contact the drum motor pulley.

Suggested belt assembly procedure:

1. Push the left idler arm to the left. (approx 1 inch)
2. Route the belt on the right side of this idler pulley and under the motor pulley.
3. Slowly release the left idler arm and push the right idler arm to the right.
4. Place the belt on the left side of the right idler pulley.
5. Slowly release the right idler arm until the belt is taut.
6. Slowly turn drum by hand to ensure belt is aligned and not twisted.

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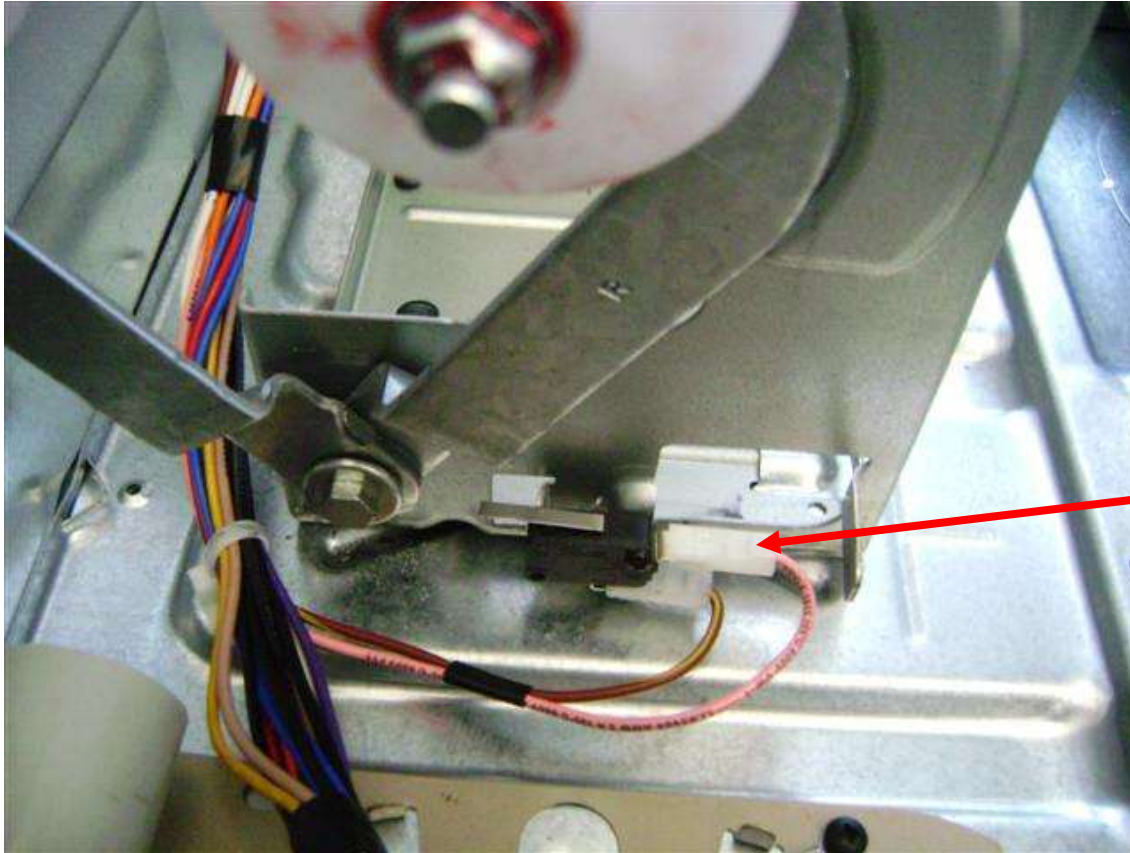
DISASSEMBLY – DRUM REMOVAL



- After releasing belt from pulleys, remove either of the screws indicated in photo and slightly expand that side panel ever so slightly.
- Grasp the belt and lift the drum out of the dryer cabinet.

NOTE: After removing tub, re-install screw to keep apron stable until job is finished.

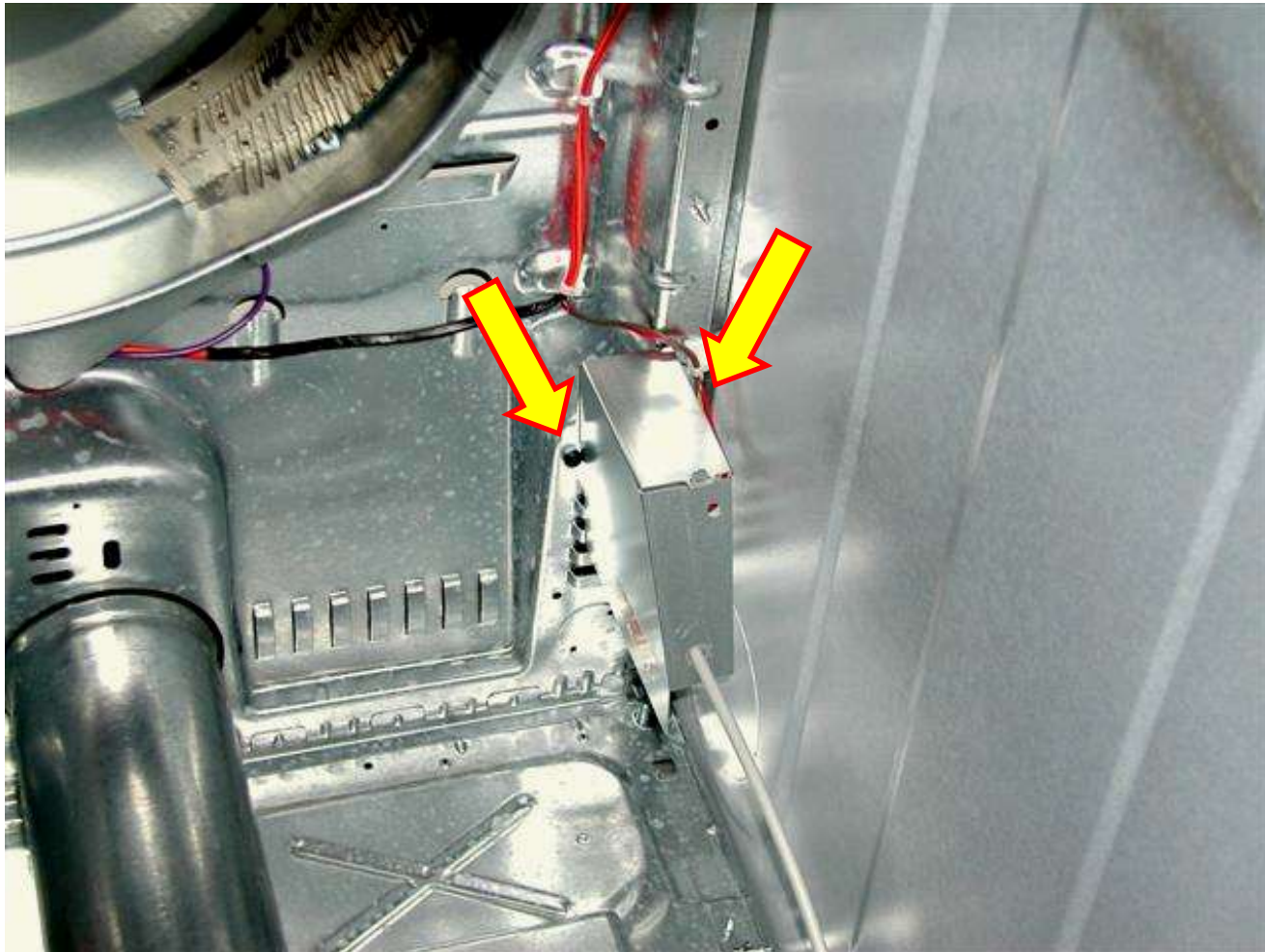
IDLER SWITCH



- Photo on left shows normal operation. Belt intact & switch closed.
- If belt breaks, idler assembly falls to the right.
- Weight of idler arm on switch actuator opens switch.

Servicing the Water Inlet Valve

Remove the two Phillips screws that hold the cover to the cabinet. One screw is visible on the left of the cover and one is partially hidden on the right side of the cover.



Servicing the Water Inlet Valve

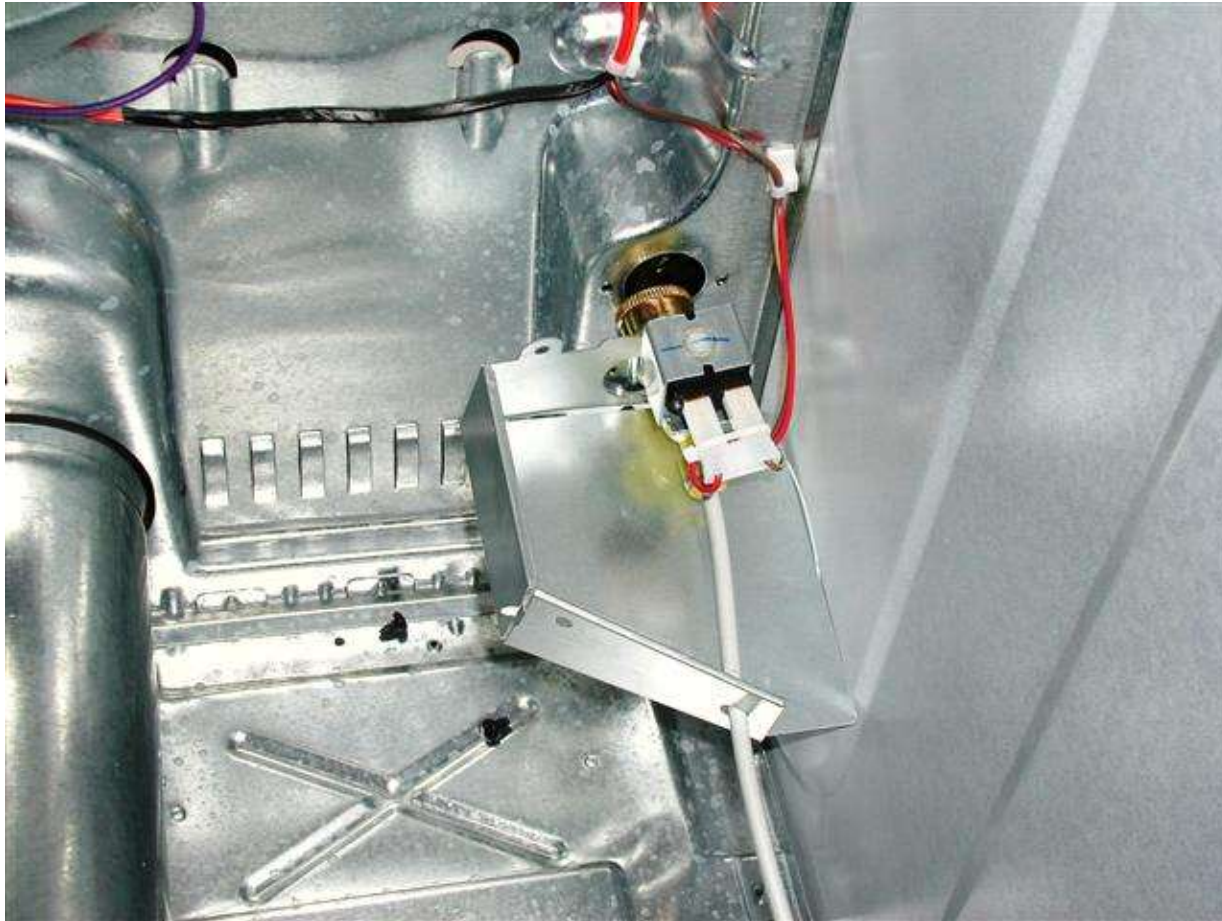
Note on Gas Dryers: To replace the water valve begin by cutting the wire harness tie that is attached to the valve cover. (Not necessary on electric dryers)



Note: A new wire tie will be included with the replacement water valve

Servicing the Water Inlet Valve

Rotate the valve cover towards the left then pull the valve towards the front of the cabinet until the inlet hose clears the back of the cabinet.



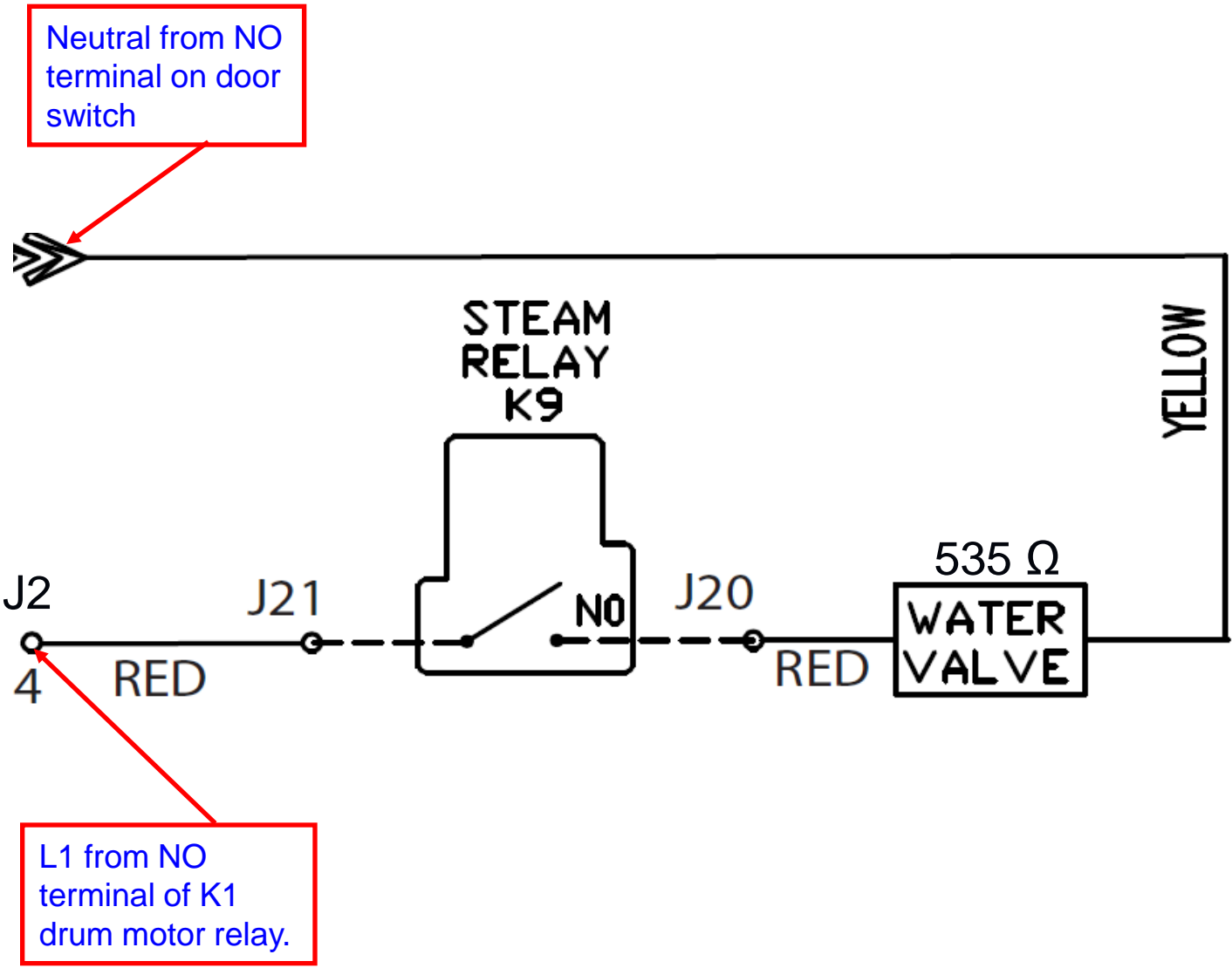
Servicing the Water Inlet Valve

Once the assembly is free disconnect the coil wiring, press the collar on the quick disconnect and remove the output tubing, disconnect the fill hose.

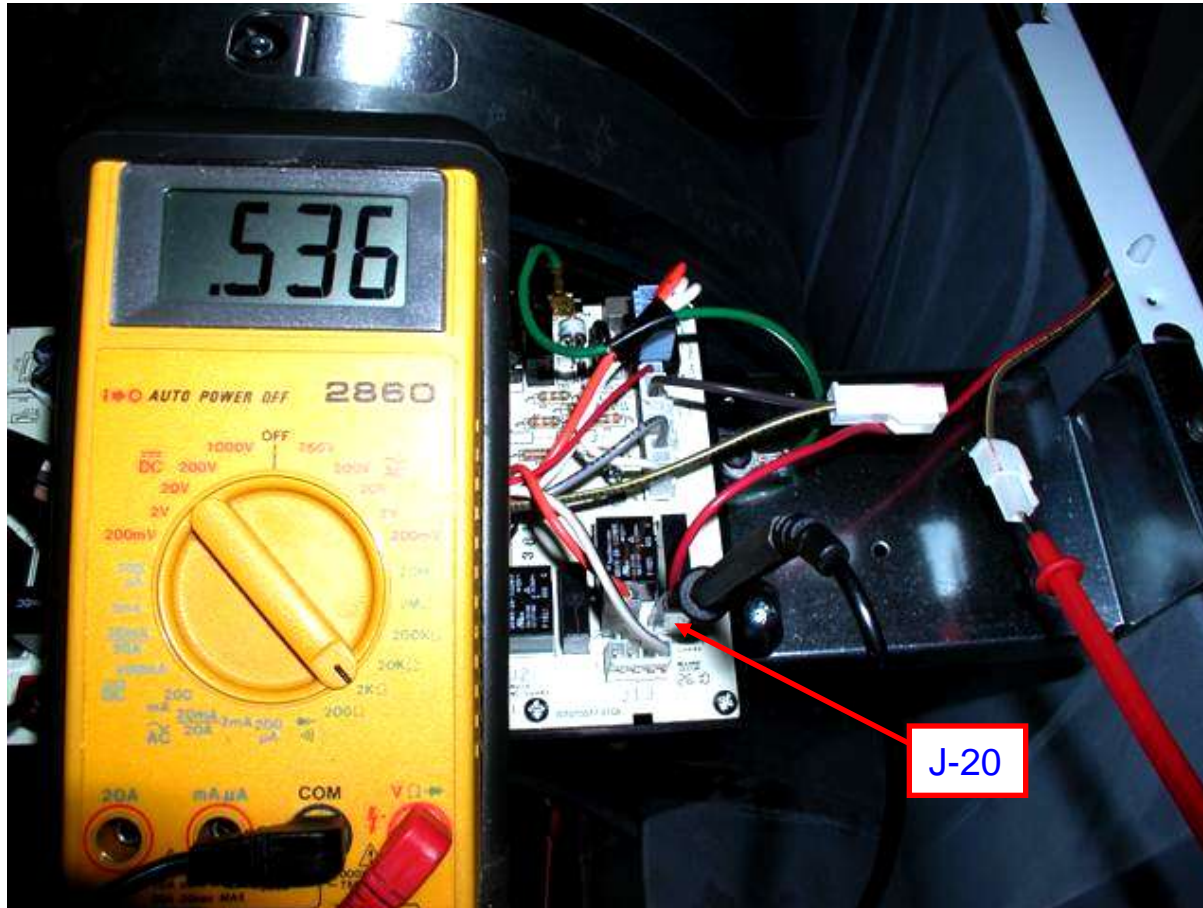
(Capture any residual water with a rag)



Servicing the Water Inlet Valve - Schematic



Servicing the Water Inlet Valve – Coil Resistance



To read water valve coil resistance, place meter leads between J20 terminal and open plug terminal (brown & yellow wire).

Service Mode

How to enter to service mode and navigate:

- From idle state, press and alternate between the “My cycle” and “Delay Start” buttons to enter service mode.
- Upon entering the service mode, the Control shall be in test selection mode and display the list of tests on the VFD.
- Scroll through to the list of tests by using the up or down cursor arrows. Selection shall be represented by bold text.
- Once the desired test is highlighted, press “Enter” to begin the 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.

Service Mode

SERVICE MODE TEST		SEQUENCE	
T01	Configure UI	Enter	Displays "configure UI"
		Power	Return to service mode screen
T02	Error Codes	Enter	Displays error codes
		Start/Pause	Clear highlighted error code from machine
		Power	Returns to service mode screen
T03	Version Info	Enter	Displays the current version of software
		Power	Returns to service mode screen
T04	EEProm Check	Enter	Check UI Memory
		Start	Check PB Memory
		Power	Returns to service mode screen
T05	UI Test	Enter	LEDs light up
		Power	Return to service mode screen
T06	Key Continuity	Enter	To begin testing
		Any button but power	Hear beep as button is pressed
		Power	Returns to service mode screen
T07	Outlet Thermistor	Enter	Displays outlet thermistor temperature
		Start/Pause	Drum tumbles and change direction every 30 sec.
		Power	Returns to service mode screen
T08	Inlet Thermistor	Enter	Displays inlet thermistor temperature
		Start/Pause	Drum tumbles and change direction every 30 sec.
		Power	Returns to service mode screen
T09	Moisture Sensor	Enter	Displays moisture sensor reading
		Power	Return to service mode screen
T10	Blower / Exhaust	Enter	Blower turns on and UI displays rpm
		Power	Return to service mode screen
T11	Dryer Rack	Enter	Displays dryer rack temperature
		Power	Return to service mode screen
T12	Steam Test	Enter	Upon entry, control shall display "STE" 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 to the steam generator throughout the remainder of the test
		Power	Return to service mode screen

Service Mode – Error Codes

Error Code	Description
E1-Interface EEPROM	Reading or writing improperly. Replace UI board.
E101-Power EEPROM	Reading or writing improperly. Replace power board.
E2-Inlet Short	Inlet thermistor shorted, check and replace inlet thermistor if necessary.
E4-Inlet Open	Inlet thermistor open, check and replace inlet thermistor if necessary.
E3-Outlet Short	Outlet thermistor shorted, check and replace outlet thermistor if necessary.
E5-Outlet Open	Outlet thermistor open, check and replace outlet thermistor if necessary.
E61- Check Electrical Connection	Input voltage too high, please check power connections.
E81- Power Model	No model select connector detected, check model selector on power board.
E10- Blower Motor	Blower is not rotating properly. Please check.
E11- Blocked Airflow	Check ventilation system.
E12- Drum Motor	Motor is not rotating properly or centrifugal switch is bad. Please check.
E18- Stuck Button	Stuck keys. Please check

Schematic (Gas)

DANGER: DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING

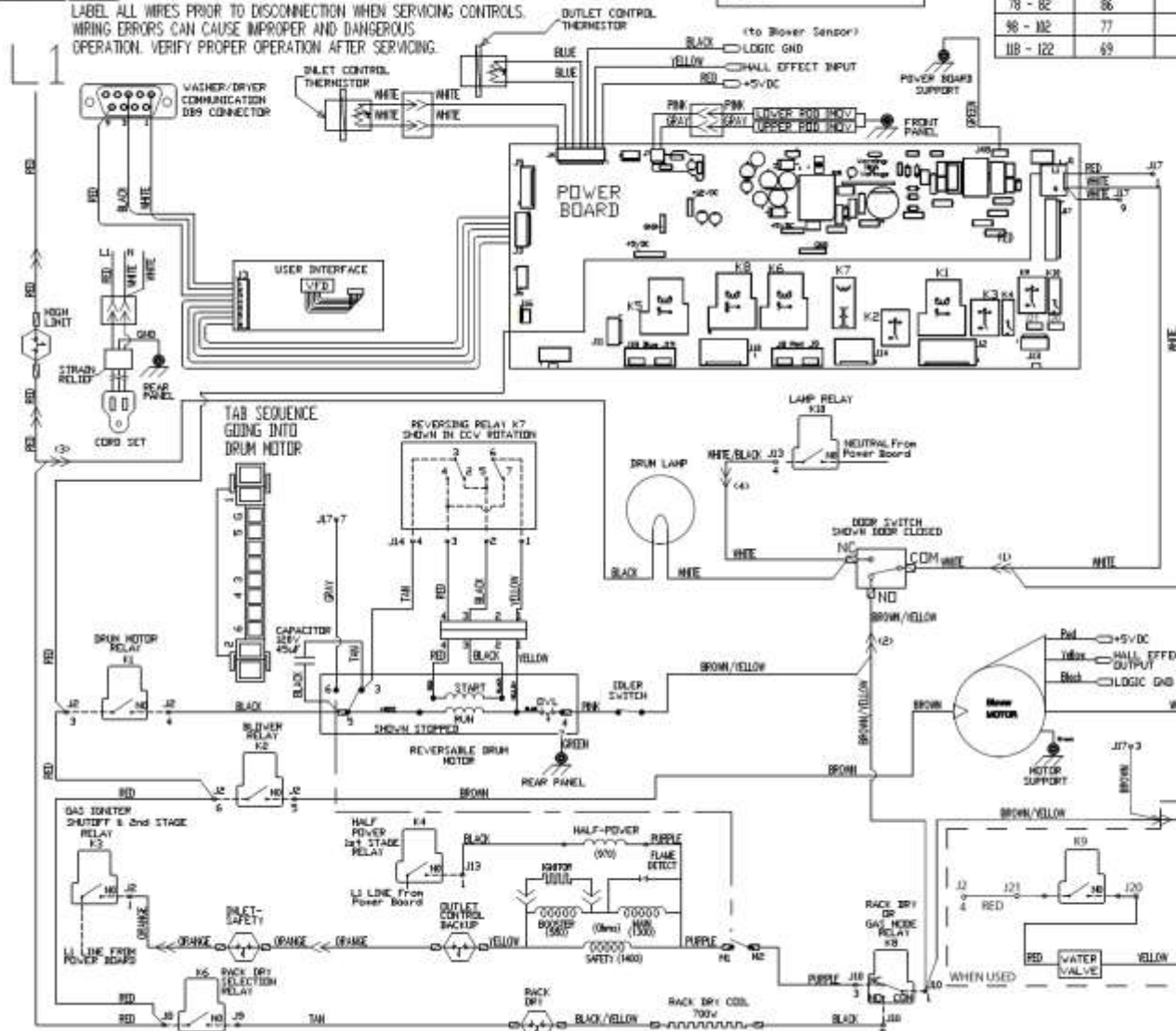
SCHEMATIC CAUTION

LABEL ALL WIRES PRIOR TO DISCONNECTION WHEN SERVICING CONTROLS. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION. VERIFY PROPER OPERATION AFTER SERVICING.

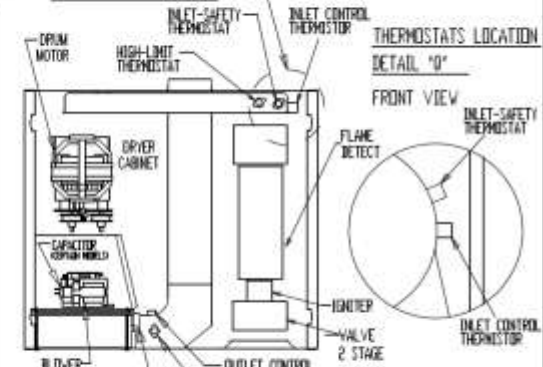
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rev 0

THERMOSTATS RESISTANCE VALUES AT		
K OHMS	F	C
79 - 82	86	30
96 - 102	77	25
118 - 122	49	21

THERMOSTAT	TEMPERATURE F		TEMPERATURE C	
	OPEN	CLOSE	OPEN	CLOSE
OUTLET CONTROL BACKUP	165 ± 5	155 ± 5	74 ± 3	68 ± 3
HIGH-LIMIT	315 ± 10	250 ± 15	157 ± 6	121 ± 9
INLET-SAFETY	300 ± 8	260 ± 12	149 ± 4	127 ± 7
PACK DRY	130 ± 5	105 ± 6	54 ± 3	46 ± 3



SEE DETAIL "Q"



WHEN SERVICING THE DRYER

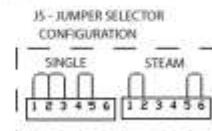


NOTES & LEGEND

- POINT TO POINT TERMINALS
- GANGED CENTRIFUGAL SWITCH
- CONNECTOR JUNCTION
- SCREWS (BONDING AND GROUNDING)

THE IGNITER FUNCTIONING AND THE FLAME CAN BE SEEN THROUGH A VIEWER HOLE LOCATED IN THE BASE OF THE DRYER. USE A MIRROR AS SHOWN IN THESE FIGURES.

ALL RELAYS SHOWN IN POSITION WITH DRYER IN POWER OFF STATE.



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Pub. No. 31-16646

**END OF
PRESENTATION**