

Appliance Diagnostic Modes DW



imagination at work

GE Consumer & Industrial Technical Training



Dishwasher Table of Contents

- **GSD2200/2600/2800 Series**
- **GSD2000/3000/4000Z Series (#31-9004)**
- **GSD4200/4400/4900X Series (#31-3281)**
- **GSD5100/5300/5600/5900 Series (#31-9035)**
- **EDW4000/4060 Series (#31-9085)**
- **GSD6200/6300/6600/6660/6700 Series (#31-9085)**
- **PDW7300/7700/7800/7880 Series (#31-9085)**



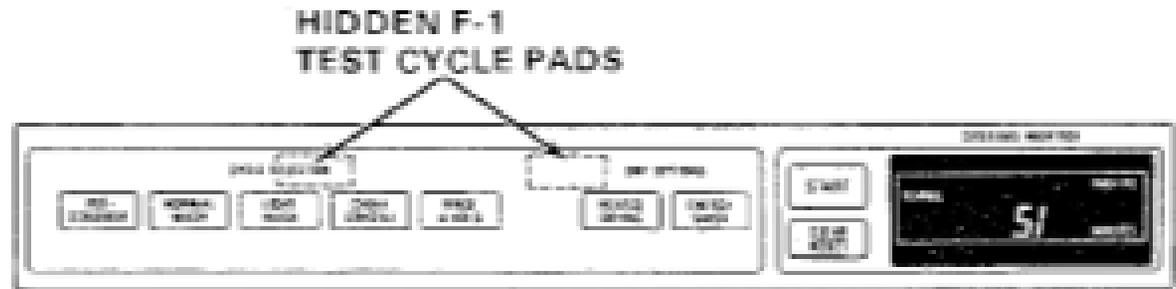
Dishwasher Table of Contents

- **PDW8200/8260/8400/8480 Series (#31-9102)**
- **PDW8500/8600/8680 Series (#31-9102)**
- **PDW9200/9280/9700/9800/9880 Series (#31-9113-1)**
- **ZBD6800/6880/6890K Series (#31-9116)**
- **ZBD5600/5700/5900 Series (#31-9019)**
- **ZBD6400/6500/6600/6700/6900 Series (#31-9087)**
- **ZBD7000/7100 Series (#31-9087)**

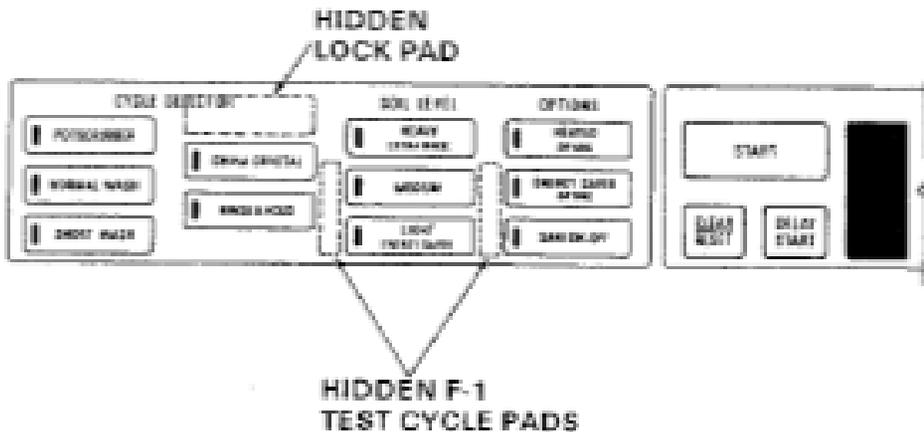


GSD2200/2600/2800 Series

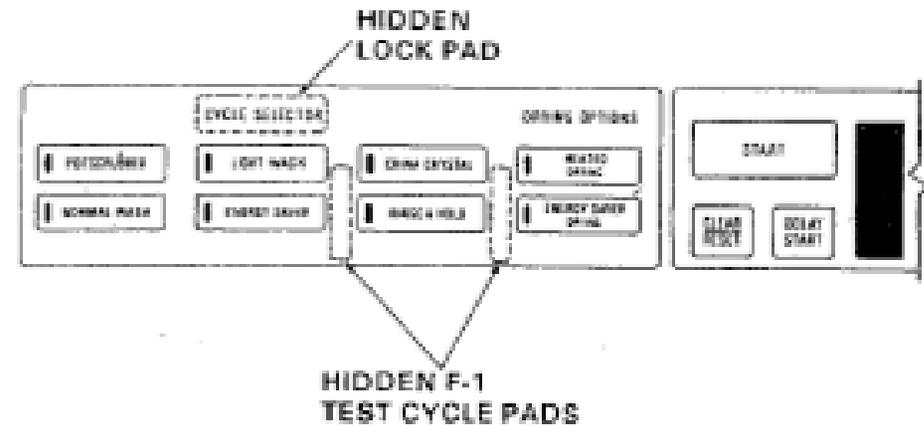
GSD2200D CONTROL PANEL



GSD2800D CONTROL PANEL



GSD2600D CONTROL PANEL



To set up the F-1 cycle:

- (1) Close the detergent cup and latch the door.

If the cup is not closed, CUP OPEN will appear in the display when the Technician tries to initiate the test cycle. The cup must then be closed, and the set up procedure repeated from the beginning.

- (2) Press the two hidden pads simultaneously. These pads are indicated on a drawing in the Mini-Manual.

F-1 will appear in the display when the pads are touched.

- (3) Press the START pad.

The F-1 test cycle will now proceed through the sequence shown on the chart. The codes listed show up in the digital display area. The functions will stay on for the times indicated, unless shortened by pressing the START pad to move on to the next function.



Run through F-1 test cycle.

- CAUTION: Do not shorten F, DA, or rA functions.
- If a fault code appears in the display, check operation of the electrical component and sensor involved. Also check for open harness connections. DO NOT ASSUME THAT THE CONTROL IS AT FAULT. DO NOT REPLACE THE CONTROL WITHOUT CHECKING FURTHER.

To freeze a function during the F-1 test cycle, press the NORMAL WASH pad while the function is operating. This feature allows the Technician more time to make electrical voltage checks if required.

Caution: If "88" function is frozen on, heater remains on.

To unfreeze the function, press the START pad.



CODE	FUNCTION	TIME	CHECK FOR
BB	DISPLAYS ON	5 SEC.	ALL DIGITS, WORDS, LIGHTS ON. HEATER IS ALSO ON.
(2) F	WATER FILL	65 SEC.	WATER VALVE ON. MOTOR RUNS.
(2) DA	DETERGENT CUP TRIP	30 SEC.	DETERGENT MOTOR ON.
C1	CIRCULATE— HEAT TO 132°	30 MIN.	MOTOR ON. HEATER ON AT 950 WATTS. HEATER OFF AT 132°F WATER.
CD	CIRCULATE	30 SEC.	MOTOR ON.
(2) rA	RINSE AGENT DISPEN. TRIP	30 SEC.	DETERGENT MOTOR ON.
c2	CIRCULATE — HEAT TO 145°	30 MIN.	MOTOR ON. HEATER ON AT 950 WATTS. HEATER OFF AT 145°F WATER.
PO	PUMP OUT	405 SEC. MAXIMUM	DRAIN SOLENOID ON FOR 5 SEC. PUMP OUT UNTIL WATER GONE OR TO 405 SEC.
Dr	HEATED DRY	34 MIN.	HEATER CYCLES ON 25 SEC., THEN OFF 25 SEC.

NOTES: (1) PRESS START PAD TO SHORTEN TIME.

(2) CAUTION: ALLOW FULL TIME FOR F, DA, AND rA.

(3) TO FREEZE FUNCTION, PRESS NORMAL WASH PAD. TO UNFREEZE,
PRESS START PAD.



GSD2000/3000/4000Z Series

GE Profile™

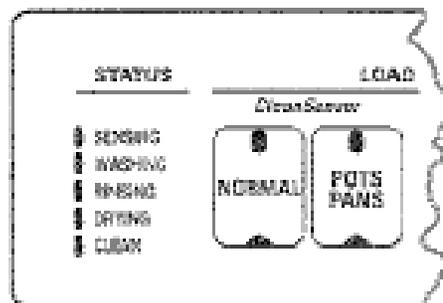


CUSTOMER CUES		
Status Lights	What It Means	What To Do
 START RESET	This is normal. The START/RESET pad has been pressed.	Allow the dishwasher up to 90 seconds to drain and reset before selecting a new cycle.
 CLEAN FLASHING + BEEPING SOUND	Control Error Control not being assigned to act as a particular model.	Press the START/RESET pad to turn off the beeper - the RINSING light will continue to flash. Disconnect power for one minute and reset. If condition continues, call for service.
 NORMAL FLASHING + BEEPING SOUND	Control Error Sequence switch not reaching its target position within 30 seconds.	Press the START/RESET pad to turn off the beeper - the dishwasher will attempt to reset. Restart the wash cycle. If this error continues, call for service.



GSD2000/3000/4000Z Series

GE Profile Performance™

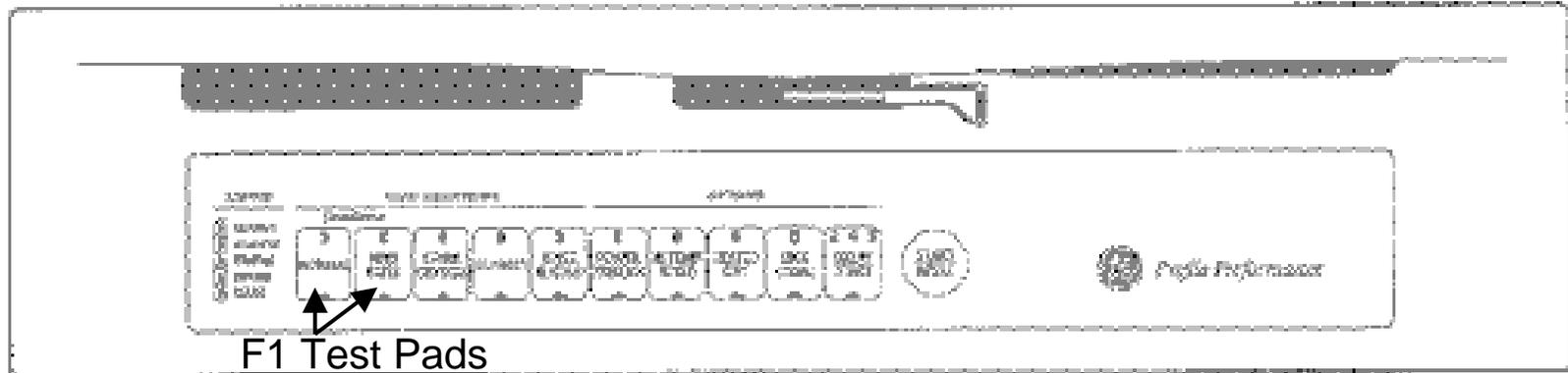


CUSTOMER CUES		
Status Lights	What It Means	What To Do
 SENSING OFF	CLEANSENSOR Error.	If the sensing light does not come on during the NORMAL or POTS PANS cycles, the CLEANSENSOR is not working - call for service. The dishwasher will continue to work without the CLEANSENSOR. NOTE: This light will not stay on the entire cycle.
 WASHING FLASHING	START/RESET pad has been pressed	Allow the dishwasher up to 90 seconds to drain and reset before selecting a new cycle.
 RINSING FLASHING + BEEPING SOUND	Control Error Control not being assigned to act as a particular model.	Press the START/RESET pad to turn off the beeper - the RINSING light will continue to flash. Disconnect power for one minute and reset. If condition continues, call for service.
 DRYING FLASHING + BEEPING SOUND	Control Error Sequence switch not reaching its target position within 30 seconds.	Press the START/RESET pad to turn off the beeper - the dishwasher will attempt to reset. Restart the wash cycle. If this error continues, call for service.

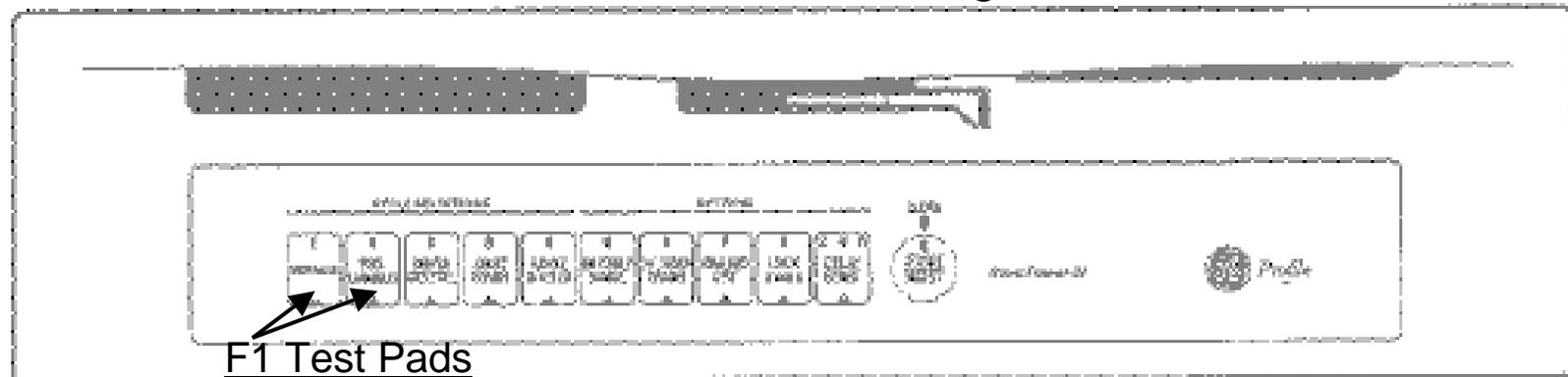


GSD2000/3000/4000/4300/4600/4900Z Series

GE Profile Performance with Turbidity Sensor



GE Profile without Turbidity Sensor



GSD2000/3000/4000/4300/4600/4900Z Series

F1 TEST CYCLE SET UP

1. Close detergent cup and latch door.
 2. Press POTS & PANS and NORMAL WASH keypads at the same time and hold for one second. It will then step through the test.
- * If the keypad is pressed except HEATED DRY, it will beep and the control will advance to next step.
 - * If POTS & PANS and NORMAL WASH keypads are pressed at the same time for .5 seconds, control will exit test cycle, pump out any water, and return to normal operation.
 - * Pump will come on in step 4 and stay on until step 13 for models WITHOUT auxiliary pump. For models WITH auxiliary pump, pump will come on in step 4 and stay on until step 11.
 - * Use clamp on amp meter to check current flow in heating coil.

FREEZE CAPABILITY

The FREEZE CAPABILITY shall allow the repair technician to pause only the F1 test cycle. Pressing the HEATED DRY keypad shall cause the control to pause on the current test step and the NORMAL WASH LED to illuminate. After the control is paused, pressing any keypad will cause the F1 test cycle to resume where it was when the pause was initiated, and the NORMAL WASH LED will be turned OFF. If the F1 test cycle is paused in a step with the heater ON, then the control will turn the heater OFF after one (1) minute into the FREEZE CAPABILITY pause.



GSD2000/3000/4000/4300/4600/4900Z Series

F-1 TEST CYCLE MATRIX Models WITH Auxillary Pump			
Step	Time (Sec's)	LED Display	Definition
1.		Sensing / Washing	Binary Code (Factory Use Only)
2.	5	All LEDs	
3.	30	Drying / Clean	Trips detergent cup Water valve on for 30 seconds
4.	47	Rinsing	Water valve on for 47 sec. Main pump on Close active vent
5.	60	Rinsing / Clean	Main pump and heater on for 60 sec.
6.	10	Rinsing / Drying	Remove water with main pump and turn drain solenoid on for 10 sec.
7.	50	Rinsing / Drying / Clean	Main pump on for 50 sec.
8.	Less than 10	Washing	Advance sequence switch to trip rinse agent Check turbidity sensor, tub temperature, memory. Errors cause beep and all LED's on
9.	30	Washing / Clean	Water valve on for 30 sec.
10.	47	Washing / Drying	Water valve and main pump on for 47 sec.
11.	3600 (50 min)	Washing / Drying / Clean	Main pump and heater on for 60 sec.
12.	60	Washing / Rinsing	Open vent, turn on auxillary pump for 60 sec.
13.		Washing / Rinsing / Drying / Clean	Home Sequence Switch End Test

F-1 TEST CYCLE MATRIX Models WITHOUT Auxillary Pump			
Step	Time (Sec's)	LED Display	Definition
1.		Sensing / Washing	Binary Code (Factory Use Only)
2.	5	All LEDs	
3.	30	Drying / Clean	Trips detergent cup Water valve on for 30 seconds
4.	47	Rinsing	Water valve on for 47 sec. Main pump on Close active vent
5.	60	Rinsing / Clean	Main pump and heater on for 60 sec.
6.	10	Rinsing / Drying	Remove water with main pump and turn drain solenoid on for 10 sec.
7.	50	Rinsing / Drying / Clean	Main pump on for 50 sec.
8.	Less than 10	Washing	Advance sequence switch to trip rinse agent Check turbidity sensor, tub temperature, memory. Errors cause beep and all LED's on
9.	30	Washing / Clean	Water valve on for 30 sec.
10.	47	Washing / Drying / Clean	Water valve and main pump on for 47 sec.
11.	3600 (60 min)	Washing / Drying	Main pump and heater on for 60 sec.
12.	10	Washing / Rinsing	Open vent, turn on main pump, drain solenoid on for 10 sec.
13.	50	Washing/Rinsing/Clean	Main pump on for 50 sec.
14.		Washing / Rinsing / Drying / Clean	Home Sequence Switch End Test



GSD2000/3000/4000/4300/4600/4900Z Series

GE Profile™ (Non-Sensor) F-1 TEST LED DISPLAY RESULTS		
LED Display	Explanation	Potential Problem Fault
NORMAL	The NORMAL LED will flash and control will beep when the sequence switch is not reaching its target position within 30 seconds.	<ol style="list-style-type: none"> 1. Check connections between the sequence switch and control. 2. Replace sequence switch 3. Replace control
CLEAN	The CLEAN LED will flash and control will beep when model selection connector is missing.	Install correct model plug

GE Profile Performance™ (Turbidity Sensor) F-1 TEST LED DISPLAY RESULTS		
LED Display	Explanation	Potential Problem Fault
SENSING	The SENSING LED will flash when control is receiving incorrect signal from turbidity sensor	<ol style="list-style-type: none"> 1. Connectors are not plugged in or terminal is not seated properly 2. Replace turbidity sensor 3. Replace Control
HEATED DRY	The HEATED DRY LED will flash when control is reading the tub temperature sensor as open or short circuit	<ol style="list-style-type: none"> 1. Broken wire or terminal is not seated 2. Connectors are not plugged in 3. Temperature sensor is shorted or open 4. Replace control
DRYING	The DRYING LED will flash and control will beep when the sequence switch is not reaching its target position within 30 seconds	<ol style="list-style-type: none"> 1. Check connections between sequence switch and control 2. Replace sequence switch 3. Replace control
LOCK	The LOCK LED will flash when the EPROM inside the control is damaged	<ol style="list-style-type: none"> 1. Replace control
RINSING	The RINSING LED will flash and control will beep when model selection connector is missing	<ol style="list-style-type: none"> 1. Install correct model selector jumper 2. Check jumper for wires seated or jumper missing, replace with correct jumper



GSD2000/3000/4000/ 4300/4600/4900Z Series

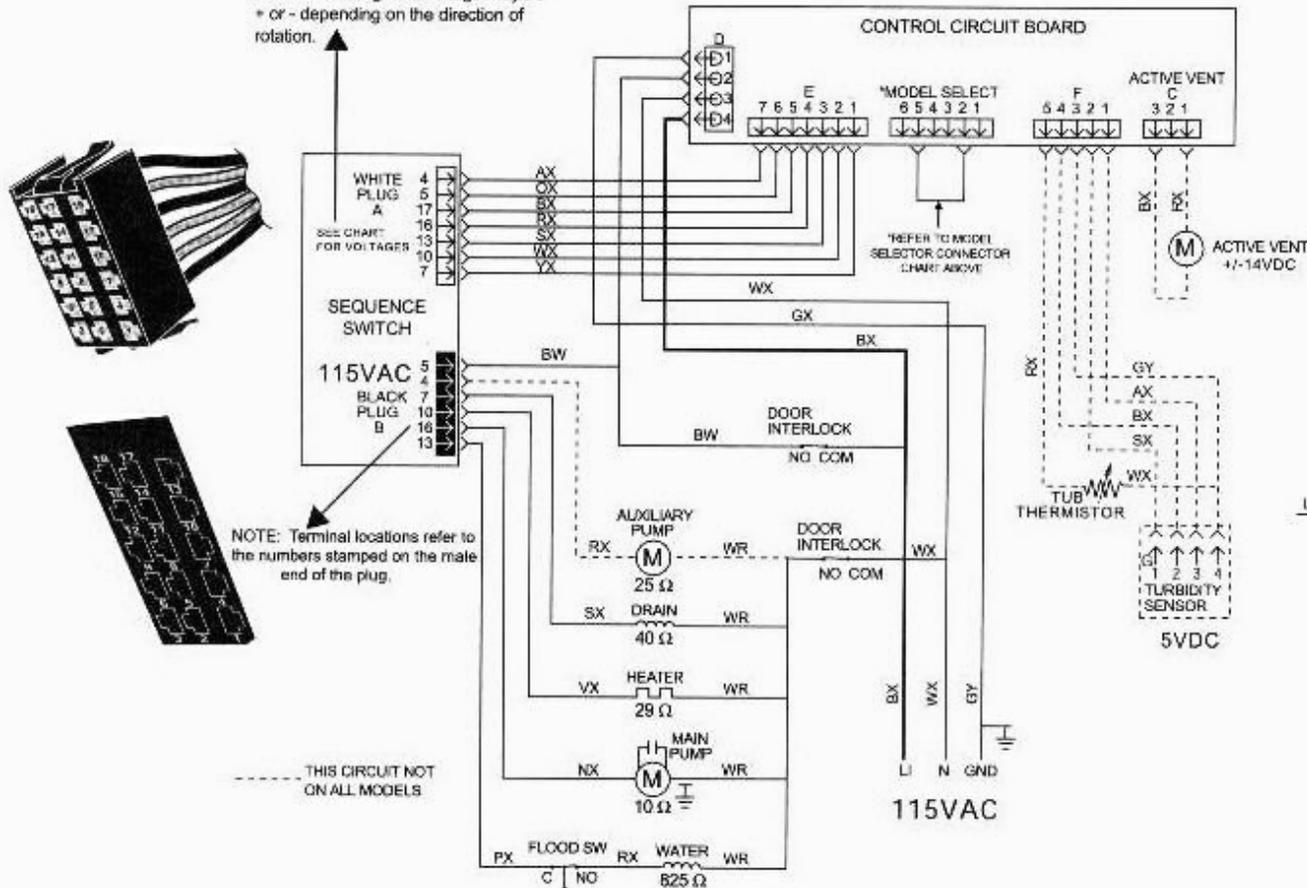
SEQUENCE SWITCH
WHITE PLUG VOLTAGES

PIN	VDC	
4	14	DRIVE MOTOR **
5	14	DRIVE MOTOR **
17	5	5 VDC COMMON
16	5	
13	5	
10	5	
7	5	

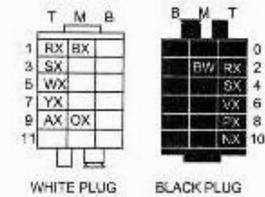
** Only powered when the sequence switch is rotating. DC voltage may be + or - depending on the direction of rotation.

MODEL SELECTOR CONNECTOR CHART

MODELS	WIRE COLOR	TERMINAL POSITION
GSD4900'S	YELLOW	2 & 5
GSD4600'S	WHITE	1 & 6
GSD4310, 4320, 4330	YELLOW	2 & 5
GSD4315, 4325, 4335	BLUE	3 & 5
GSD4800'S	WHITE	1 & 6



SEQUENCE SWITCH
LEAD COLORS AND TERMINAL LOCATIONS



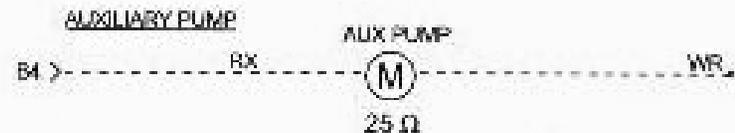
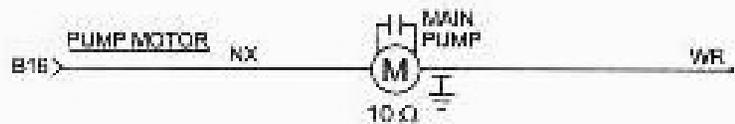
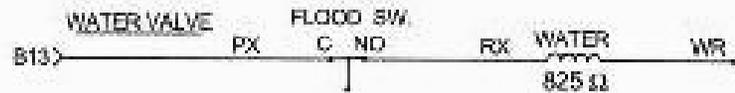
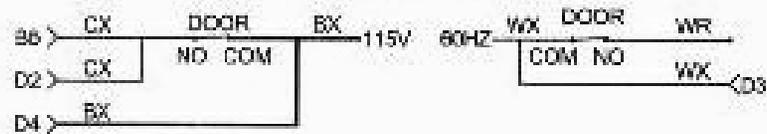
COLOR CODE			
LETTERS	COLOR	LETTERS	COLOR
AX	LT. BLUE	FX	RED
BX	BLACK	SX	GRAY
CX	BROWN	TX	TAN
NX	DK. BLUE	VX	PURPLE
OX	ORANGE	WX	WHITE
PX	PINK	YX	YELLOW

THE "X" INDICATES ONE SOLID COLOR - NO TRACER. WIRES WITH TRACER SHOW BOTH COLORS. EXAMPLE - WR IS WHITE WITH RED TRACER.

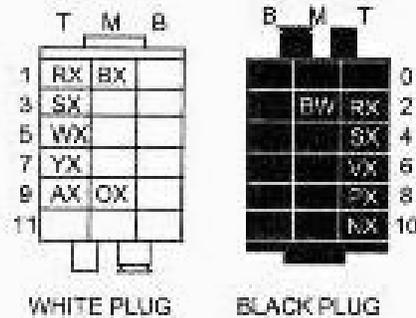


GSD2000/3000/4000/4300/4600/4900Z Series

STRIP CIRCUITS



SEQUENCE SWITCH LEAD COLORS AND TERMINAL LOCATIONS



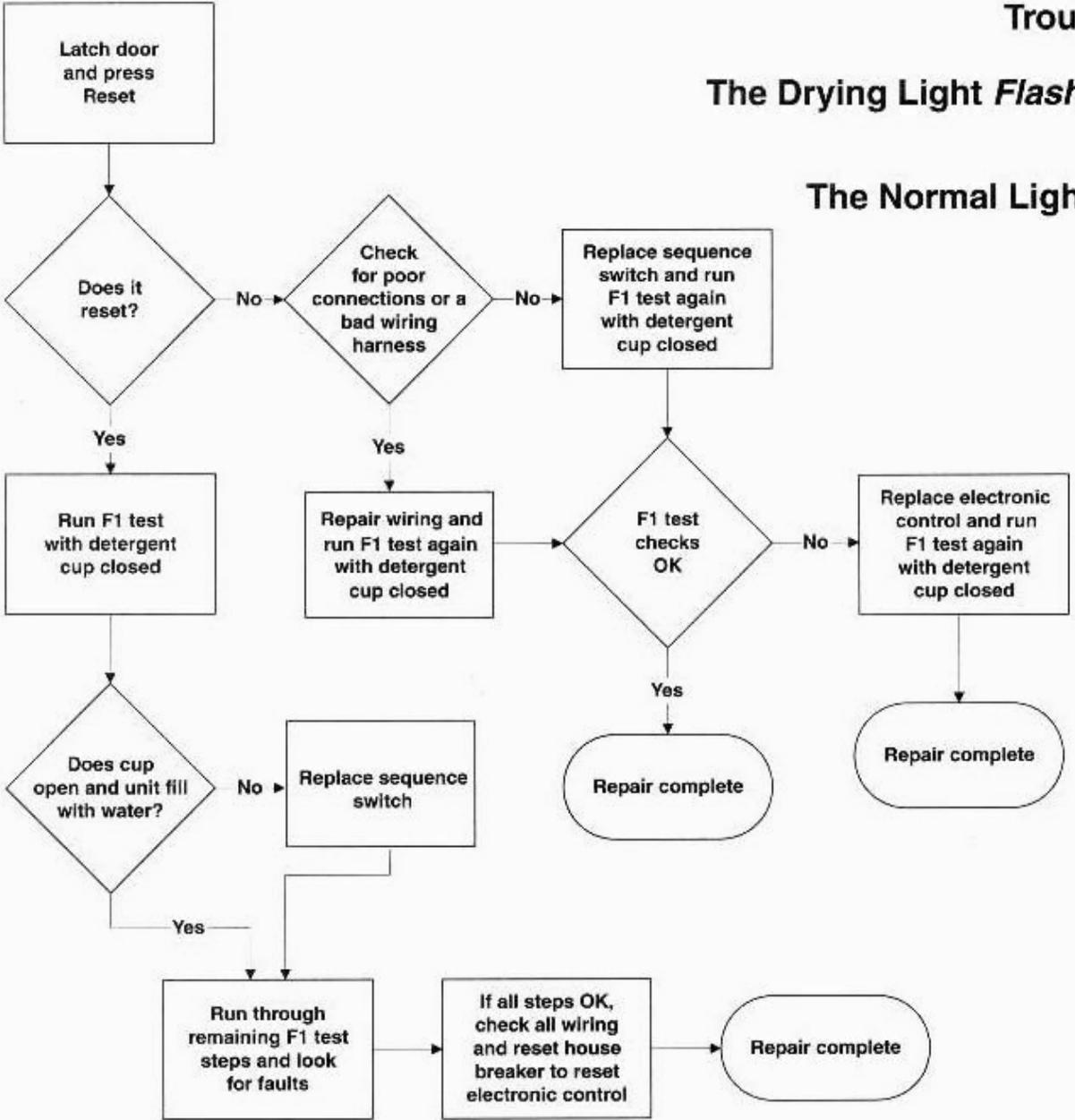
COLOR CODE			
LETTERS	COLOR	LETTERS	COLOR
AX	LT. BLUE	RX	RED
BX	BLACK	SX	GRAY
CX	BROWN	TX	TAN
NX	DK. BLUE	VX	PURPLE
OX	ORANGE	WX	WHITE
PX	PINK	YX	YELLOW

THE "X" INDICATES ONE SOLID COLOR - NO TRACER. WIRES WITH TRACER SHOW BOTH COLORS. EXAMPLE - WR IS WHITE WITH RED TRACER.

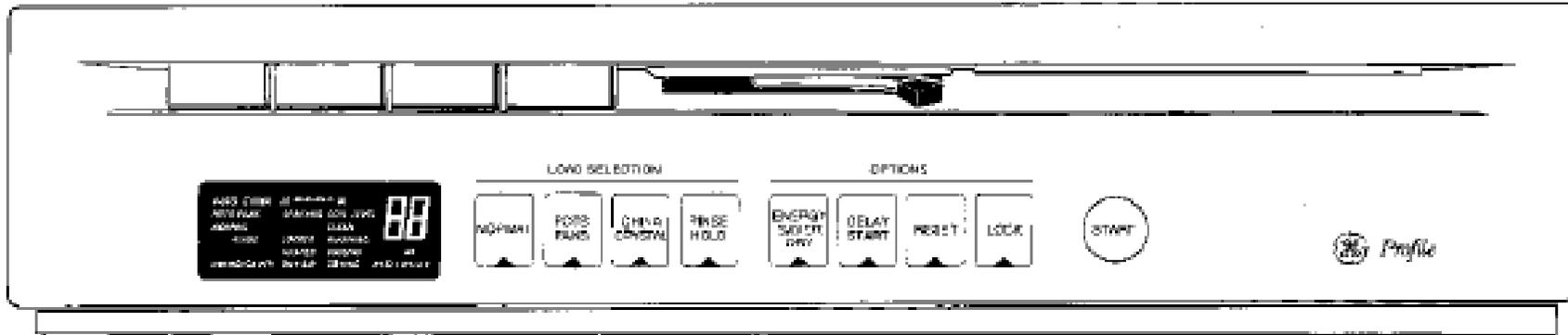


Troubleshooting

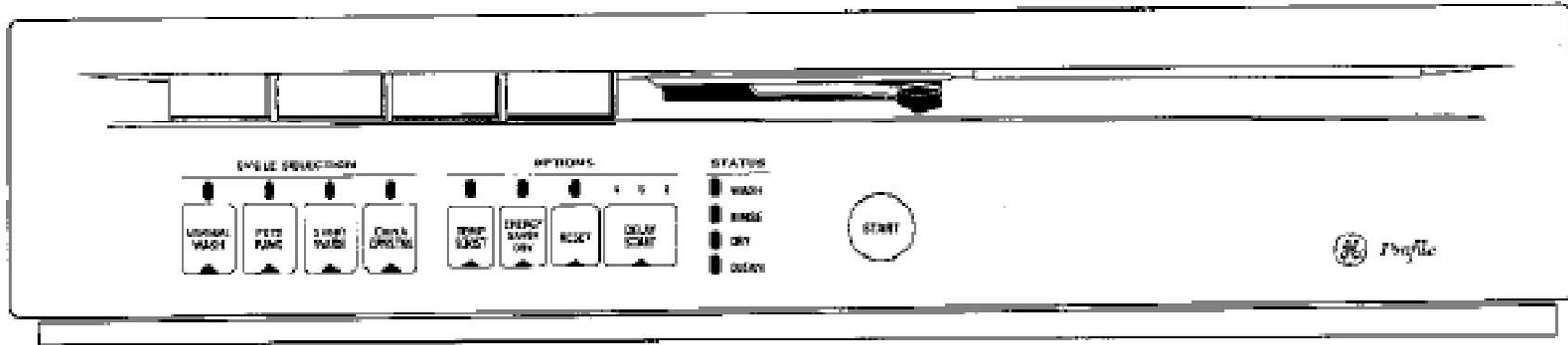
The Drying Light *Flashing* on Profile Performance™ Models or The Normal Light *Flashing* on Profile™ Models



GSD4200/4400/4900X Series



GSD4930X, GSD4920X, GSD4910X, GSD4430X, GSD4420X, GSD4410X, Smart Models



GSD4230X, GSD4220X, GSD4210X, Value Models



GSD4210/4220/4230X Series

Display	What it Means	What to Do
 <p>Reset Light Flashing</p>	<p>Electrical power to the dishwasher has been interrupted but is now back on.</p>	<p>IF DISHWASHER WAS IN USE WHEN THE POWER FAILURE OCCURRED:</p> <ol style="list-style-type: none"> 1. Press the RESET pad and wait approximately 30 seconds. 2. Unlatch and open the door. <ol style="list-style-type: none"> A) If the detergent cup is open and empty, close the door and rerun the cycle with detergent in the closed cup only. B) If the detergent cup is closed reset the dishwasher for the wash cycle you want. <p>IF THE DISHWASHER WAS NOT IN USE when power failure occurred, use dishwasher as you normally would.</p>
 <p>Wash Light Flashing</p>	<p>Drain is blocked. This indicates that the drain is so clogged that the dishwasher cannot continue to operate in a satisfactory manner. Dishwasher will stop.</p>	<p>Locate and remove the blockage in the drain system.</p> <ol style="list-style-type: none"> 1. Check the air gap (see the Air Gap section). 2. Check for a kink in the drain hose. 3. Check for stopped-up drains. (NOTE: Warranty service does not cover household drain problems.) <p>To pump any remaining water out of the machine:</p> <ol style="list-style-type: none"> 1. Latch door. 2. Touch "RESET". Select desired cycles and then touch START and RESET again.



GSD4210/4220/4230X Series

<p>DRY</p> <p>Dry Light Flashing</p>	<p>There is too much water in the dishwasher.</p>	<p>The dishwasher is designed to automatically pump out extra water as long as the door is latched. When you hear the motor stop running:</p> <ol style="list-style-type: none"> 1. Unlatch the door and see if all the water is gone. (It is normal for a small amount of water to remain in the bottom of tub to keep the water seal lubricated.) 2. If you see water entering the dishwasher, close and latch the door. Shut off the water supply to the dishwasher. 3. Press the RESET pad. 4. If water is gone and no water is entering the dishwasher, restart cycle. 5. If the DRY light starts to flash again, shut off the water supply to the dishwasher. Call for service.
<p>RINSE</p> <p>Rinse Light Flashing</p>	<p>Not enough water is entering the dishwasher.</p>	<p>Unlatch the door. If there is no water in the bottom of the dishwasher, check the water supply to the dishwasher.</p> <ul style="list-style-type: none"> • Is the dishwasher water supply turned on? (Valve usually located under the sink.) • Is the household water supply turned on? • If you use well or cistern water, is the supply adequate (volume and pressure)? <p>Press the RESET pad. If the water supply is adequate, try the cycle again. If the RINSE light flashes again, call for service.</p>



Display	What it Means	What to Do
<p>PF and Reset</p>	<p>Electrical power to the dishwasher has been interrupted but is now back on.</p>	<p>IF DISHWASHER WAS IN USE WHEN THE POWER FAILURE OCCURRED:</p> <ol style="list-style-type: none"> 1. Press the RESET pad and wait approximately 30 seconds. 2. Unlatch and open the door. <ol style="list-style-type: none"> A) If the detergent cup is open and empty and the dishwasher was set for the NORMAL, POTS/PANS or CHINA CRYSTAL cycle, close door and put the load through a RINSE HOLD cycle. After the RINSE HOLD cycle is completed, add detergent and reset the load for the washing cycle you want. B) If the detergent cup is closed and the dishwasher was set for the NORMAL, POTS/PANS or CHINA CRYSTAL cycle, reset the dishwasher for the wash cycle you want. C) If the dishwasher was set for the RINSE HOLD cycle, reset the dishwasher for RINSE HOLD. <p>IF THE DISHWASHER WAS NOT IN USE when power failure occurred, use dishwasher as you normally would.</p>
<p>[1</p>	<p>Slow draining. The dishwasher is taking longer than normal to drain the water out. This is usually caused by a blockage in the drain air gap (see Air Gap section), a kink in the drain hose, or a stopped-up pipe.</p>	<p>This dishwasher is designed to automatically compensate for longer than normal drain times, but cycle time will be extended. If this code continues to appear frequently:</p> <ol style="list-style-type: none"> 1. Clean the air gap (See Air Gap section). 2. Check for a kink in the drain hose. 3. Check plumbing for slow or stopped-up drains. (NOTE: Warranty service does not cover household drain problems.)



GSD4400/4900X Series

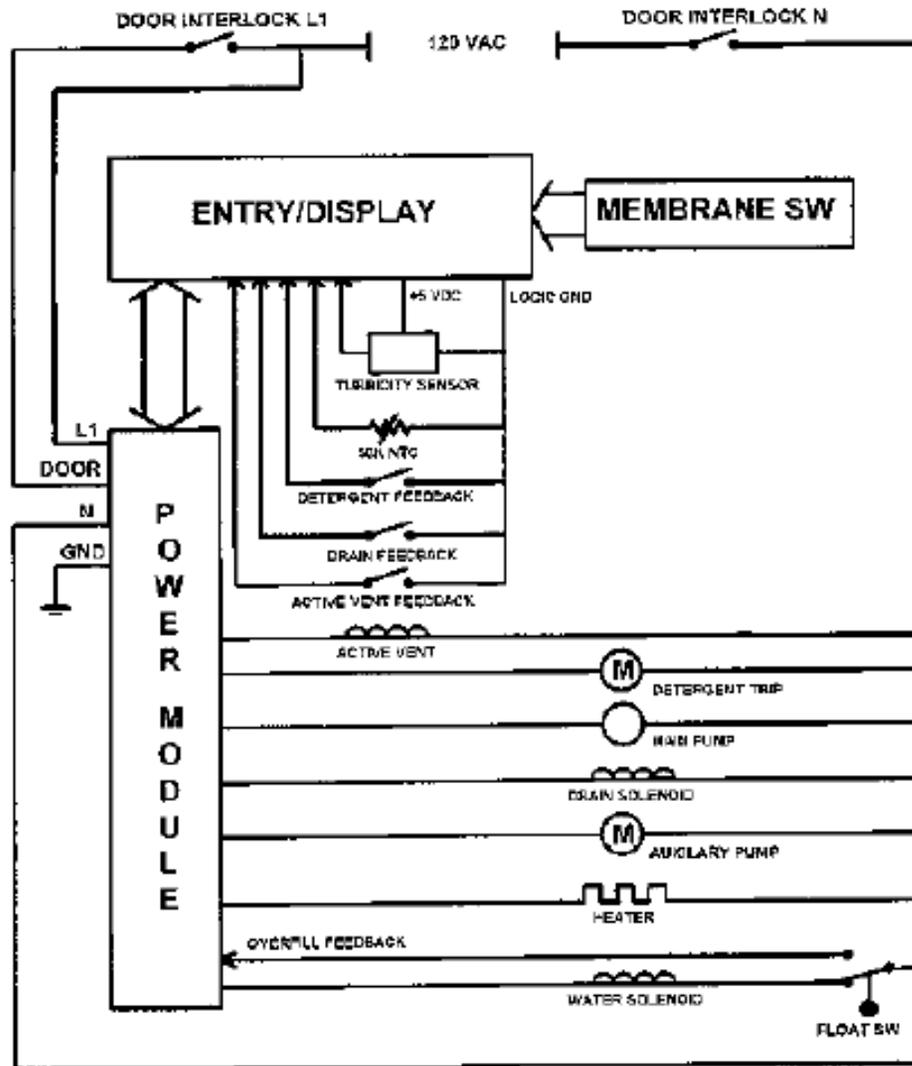
<p>[2] Reset</p>	<p>Drain is blocked. Similar to slow drain. This indicates that the drain is so clogged that the dishwasher cannot continue to operate in a satisfactory manner. Dishwasher will stop.</p>	<p>Press the RESET pad to stop the beep. Locate and remove the blockage in the drain system. To pump any remaining water out of the machine:</p> <ol style="list-style-type: none"> 1. Latch door. 2. Select any cycle. 3. Touch "START" and then immediately touch RESET. (NOTE: Warranty service does not cover household drain problems.)
<p>[3]</p>	<p>Drain sensor is not functioning. Dishwasher will continue cycle along with a fixed drain period.</p>	<p>If [3] repeats for the next cycle, call for service.</p>
<p>[4] Reset</p>	<p>There is too much water in the dishwasher.</p>	<p>Press the RESET pad to stop the beep. The dishwasher is designed to automatically pump out extra water as long as the door is latched. When you hear the motor stop running:</p> <ol style="list-style-type: none"> 1. Unlatch the door and see if all the water is gone. 2. If you see water entering the dishwasher, close and latch the door. Shut off the water supply to the dishwasher. 3. If water is gone and no water is entering the dishwasher, restart cycle. 4. If [4] repeats, shut off the water supply to the dishwasher. Call for service.



E5	<p>This can be caused by either of these reasons:</p> <p>Not enough water is entering the dishwasher.</p> <p style="text-align: center;">or</p>	<p>Unlatch the door. If there is no water in the bottom of the dishwasher, check the water supply to the dishwasher.</p> <ul style="list-style-type: none"> • Is the dishwasher water supply turned on? (Valve usually located under the sink.) • Is the household water supply turned on? • If you use well or cistern water, is the supply adequate (volume and supply)? <p>If the water supply is adequate, try the cycle again. If E5 repeats, call for service.</p>
	<p>The drain pump could be temporarily blocked (usually caused by food particles such as cereal).</p>	<p>Unlatch the door. If there is standing water in the bottom of the dishwasher, relatch the door, touch START, then immediately touch RESET to start the pump. If E5 continues to appear, you may need to do this several times to break up the blockage.</p>
E6	<p>The water temperature in the dishwasher did not reach the proper wash temperature. This is usually caused by lack of hot water coming from the household water-heater.</p>	<p>Avoid showers or laundry just prior to running the dishwasher. (Use the DELAY START feature to start dishwasher when the water heater is up to normal temperature.) Adjust household water heater thermostat to 120°F. minimum.</p> <p>If E6 appears nearly every cycle and you know the water from the household water heater is hot (120°F. or more), call for service.</p>
E7	<p>The temperature sensor in the dishwasher is not functioning properly. Dishwasher may continue to be used, but it will not heat water automatically.</p>	<p>The temperature sensor needs to be replaced. Call for service.</p> <p>NOTE: You may continue to use your dishwasher. For best results adjust your household water heater thermostat to 140°F.</p>



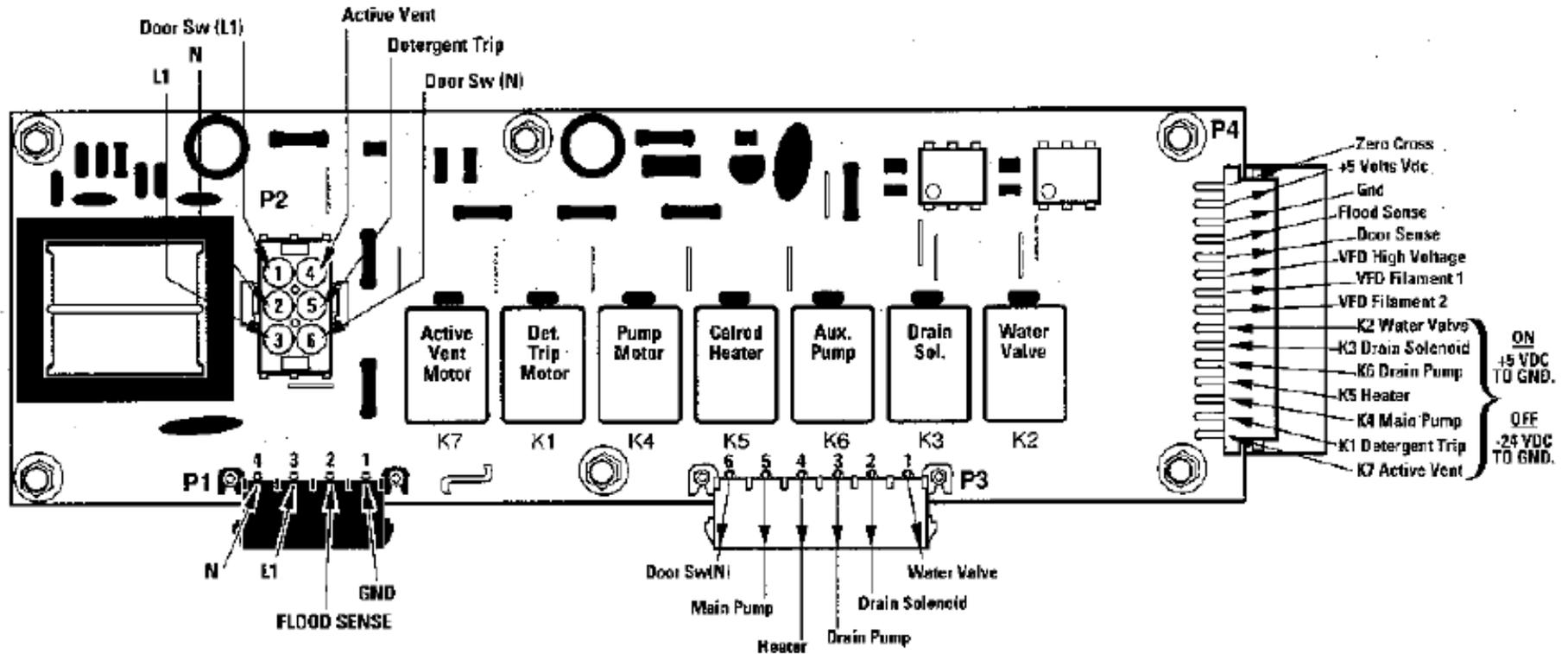
GSD4400/4900X Series



NOTE: Junction box L1 & N are not shown. (They feed transformer on power module through P1.)

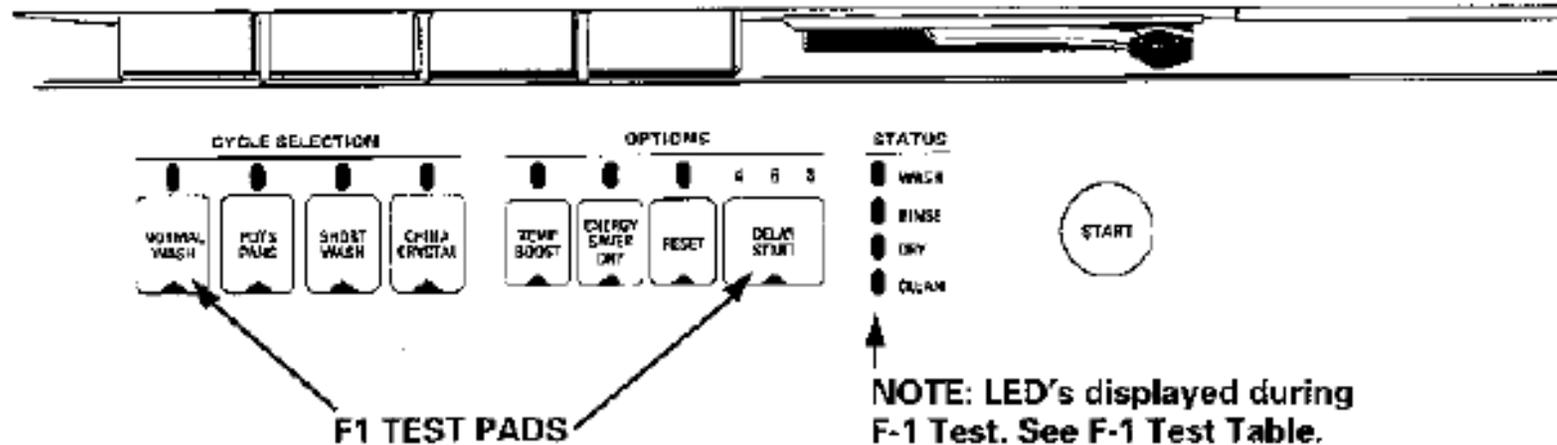


GSD4400/4900X Series



GSD4210/4220/4230X Series

VALUE MODEL F-1 TEST AND WASH CYCLE MATRIX



F-1 TEST CYCLE SET UP (VALUE MODELS)

1. Close detergent cup and latch door.
2. Press **normal** and **delay start** at the same time and hold for 3 seconds. Pads could be difficult to contact and put into test cycle, just continue to press pads until all LED's are lit.
 - If **start** pad is pressed, control will advance to next step.
 - If **reset** pad is pressed, control will exit test cycle, pump any water out and return to normal operation.
 - Pump will **come on** in step 2 and **stay on** until step 11.
 - Use clamp on ampmeter to check current flow in heating coil.

FREEZE CAPABILITY

This will allow the control to pause during an F-1 test cycle. Press the **normal** pad to pause and press **normal** again to continue.



F-1 TEST CYCLE MATRIX

Step	Time (Sec)	LED Display	Definition
1	5	All LED's	Turn on heater
2	70	Wash	Turn off heater Turn water valve on for 70 sec. 30 sec. into step, pump turns on
3	180	Wash	Turn on heater. Pump will run until end of Step 11.
4	Variable	Wash	Turn off heater. Turn drain solenoid on for 5 sec. for pump-out.
5	70	Wash	Turn on water valve for 70 sec.
6	30	Wash	Turn on detergent trip motor. Detergent cup opens.
7	1800 (30 Min.)	Wash Plus Dry	Turn heater on, pump continues.
8	30	Wash	Turn heater off, pump continues.
9	30	Rinse	Turn on detergent trip motor until the detergent home switch closes.
10	1800 (30 Min.)	Rinse Plus Dry	Turn heater on. Pump continues.
11	Variable	Clean	Turn heater off. Turn drain solenoid on for 5 sec. Turn pump off when control senses that the drain feedback switch opens.
12	600	Dry	Turn heater on.



GSD4210/4220/4230X Series

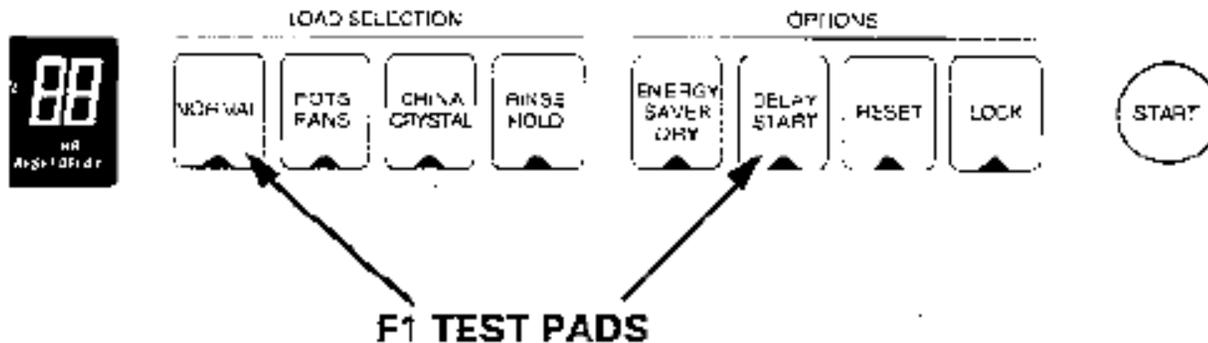
F-1 TEST DIAGNOSTIC DISPLAY RESPONSE	
LED Display	Explanation
WASH	The WASH LED will flash when the pump-out time exceeds 100 seconds, and cycle will be terminated.
RINSE	The RINSE LED will flash when one pump-out is less than 6 seconds.
DRY	The DRY LED will flash when the control senses a flood condition within the dishwasher.
NORMAL	The NORMAL LED will flash when the drain feedback signal is not sensed.
POTS/PANS	The POTS/PANS LED will flash when the detergent trip on time exceeds 60 seconds.

SYSTEMS MONITOR CODES	
LED Display	Problem
RESET	Power failure occurs with machine latched, the RESET LED will flash until the machine is reset.
WASH	The WASH LED will flash when the pump-out time exceeds 400 seconds.
RINSE	The RINSE LED will flash when 2 consecutive pump-outs are less than 6 seconds.
DRY	The DRY LED will flash and the control will beep when the control senses a flood condition within the dishwasher. When pump-out stops control will continue to beep and cycle will be terminated.



GSD4400/4900X Series

SMART MODEL F-1 TEST AND TIMING CHART



F-1 TEST CYCLE SET UP

1. Close detergent cup and latch door.
 2. Press **normal** and **delay start** at the same time and hold for 2 seconds.
- If **start** pad is pressed, control will advance to next step.
 - If **reset** pad is pressed, control will exit test cycle, pump any water out and return to normal operation.
 - Use clamp on ammeter to check current flow in heating coil.

FREEZE CAPABILITY

This will allow the control to pause during an F-1 test cycle. Press the **lock** pad to pause and press **start** pad to continue.



GSD4400/4900X Series

F-1 TEST CYCLE MATRIX			
Step	Time	Display	Definition
1	5	All Segments	Check temp. sensor for open.
2	70	Auto	Turn water valve on for 70 seconds. Close active vent.
3	5-30	Sensing Soil Level	Reading turbidity sensor – running average of 4 readings.
4	5	Clean & #	Display clean water reading. Display fault if sensor error.
5	Variable	Reset	Turn on drain solenoid and main pump. Turn main pump off when control – senses feedback switch opens.
6	70	Normal	Turn water valve on for 70 seconds.
7	30	dA	Turn on main pump. Turn on detergent trip motor.
8	1800 (30 Min.)	Washing Temp Boost	Turn heater on, pump continues looking for 120° water temp. If >120°, turn off heater.
9	30	Washing	Turn off heater.
10	30	rA	Turn on detergent trip motor until the detergent home switch closes. Open active vent.
11	1800 (30 Min.)	Rinse Temp Boost	Turn heater on, main pump continues looking for 130° water temp. If >130°, turn off heater.
12	45	Reset	Pump out, using only the drain pump.
13	600 (10 Min.)	Drying	Turn on heater.

If monitor code is displayed – press start to finish F1 test.



GSD4400/4900X Series

FAILED TURBIDITY SENSOR

If the turbidity sensor fails, the ALTO in the display will not be shown. There might be one of three different F codes (F0, F1, or F4) that would be displayed during the F1 test only.

F0 - LOW SIGNAL - failed LED, failed receiver, optical window degraded. Replace turbidity sensor.

F1 - HIGH SIGNAL - Bad sensor - replace sensor. Intermittent connection - repair.

F4 - NO SIGNAL - Bad sensor - replace sensor. Open or shorted wire - repair.



GSD4400/4900X Series

“PF/RESET” – Electrical power has been interrupted to the dishwasher. “PF” comes up in the display along with RESET; if unlatched nothing happens until the door is latched. In both cases a Normal Wash cycle is automatically programmed, but the pads can't be activated until the active vent and detergent trip feedback switches are both in the home position, and RESET pad is pressed.

“C1” – This will illuminate when a slow drain fault is detected. If the pump out time is over 100 seconds “C1” will be in the display. If the pump runs longer than 400 seconds the C2 code will take effect.

“C2” – Displays when the pump out time is more than 400 seconds. The control shall stop the pump for 5 seconds, and then restart the pump and energize the drain solenoid. The drain solenoid shall be energized for 5 seconds and the pump should continue to run. This procedure will determine if the drain valve is stuck open or if the drain is truly plugged. If the drain feedback indicates that the drain valve has closed, then the control will adjust the count down time and continue the wash cycle. When the stop and restart procedure does not cause the drain valve to close then the drain is plugged. The fault code “C2” will be displayed and accompanied by a beep at 1 second intervals and the cycle will be terminated. “C2” will remain displayed until RESET is pressed.



GSD4400/4900X Series

POSSIBLE CAUSES

- Drain air gap is restricted
- Clogged disposer
- Pump gate valve did not return after normal pump out
- Faulty drain sensor switch
- Drain solenoid plunger stuck
- Food soil in filter chamber

- Check valve in filter chamber not sealing
- Pump inlet partially clogged
- Loose pump impeller

REPAIR

Clean air gap
Run disposer to clean it out
Repair, if necessary replace motor mech.
Repair or replace switch
Replace solenoid
Remove filter screen and check valve assembly in filter chamber
Swollen or distorted, check leakage around threads
Clean inlet/sump
Replace motor/pump mechanism

"C3" – Displays when the control DOES NOT sense the drain feedback signal. The control will default to continue the wash cycle and finish the cycle.

POSSIBLE CAUSES

- Pump out switch inoperative
- Solenoid did not pull in

- Loose or open connections

- Bent or misaligned drain sensor switch bracket

REPAIR

Replace switch
Check solenoid for continuity, if okay check for 120 volts
Check connections from control to solenoid
Straighten or replace



GSD4400/4900X Series

"C4" – Displayed when the control senses a flood condition within the dishwasher. The control will beep at 1 second intervals, de-energize the water valve, start the circulate pump (if not running) and run up to 1 minute after the overflow condition ceases. Pressing RESET will clear display, if in the wash cycle it will be terminated.

POSSIBLE CAUSES

- Double fill after "PF"
- Float switch cover dislodged
- Water valve stuck open
- Flow rate of valve too high
- Bad switch, open wire

REPAIR

- Normal condition, press RESET
- Reseat cover
- Replace valve
- Replace (use correct valve)
- Repair or replace as needed

"C5" – If the control detects two consecutive pump out times of less than 6 seconds this will be on the display.

The control assumes that either no water has entered the dishwasher during the last two fills or the pump inlet is clogged. The fault code will be displayed with a beep at 1 second intervals and the wash cycle will be terminated. It will remain on the display until the reset pad is pressed.

POSSIBLE CAUSES

- Water turned off to machine
- False signal
- Water valve inoperative
- Leak causing water to drain from tub
- Pump out during circulation (diverter valve leak)

REPAIR

- Check supply and turn on
- Press RESET and try again
- Check valve and signal to it
- Repair as required
- Replace mechanism



GSD4400/4900X Series

“C6” – The water temperature did not reach 120° during the main wash. The fault shall continue to be illuminated until the door latch is opened or the RESET pad is pressed.

POSSIBLE CAUSES

- Water heater set too low
- High hot water usage prior to using dishwasher
- Open heating element
- No voltage to heating element

REPAIR

Water temp coming into dishwasher must be 120°F.
Avoid showers, etc.

Replace element
Check circuit from control to element

“C7” – At the start of each wash cycle the control will check the temperature sensor to determine if the sensor is open or shorted. If the sensor is open or shorted, then this code will be displayed and the heater will not operate during the wet part of the cycle. The wash cycle will be completed and pressing RESET will clear fault from the display.

POSSIBLE CAUSES

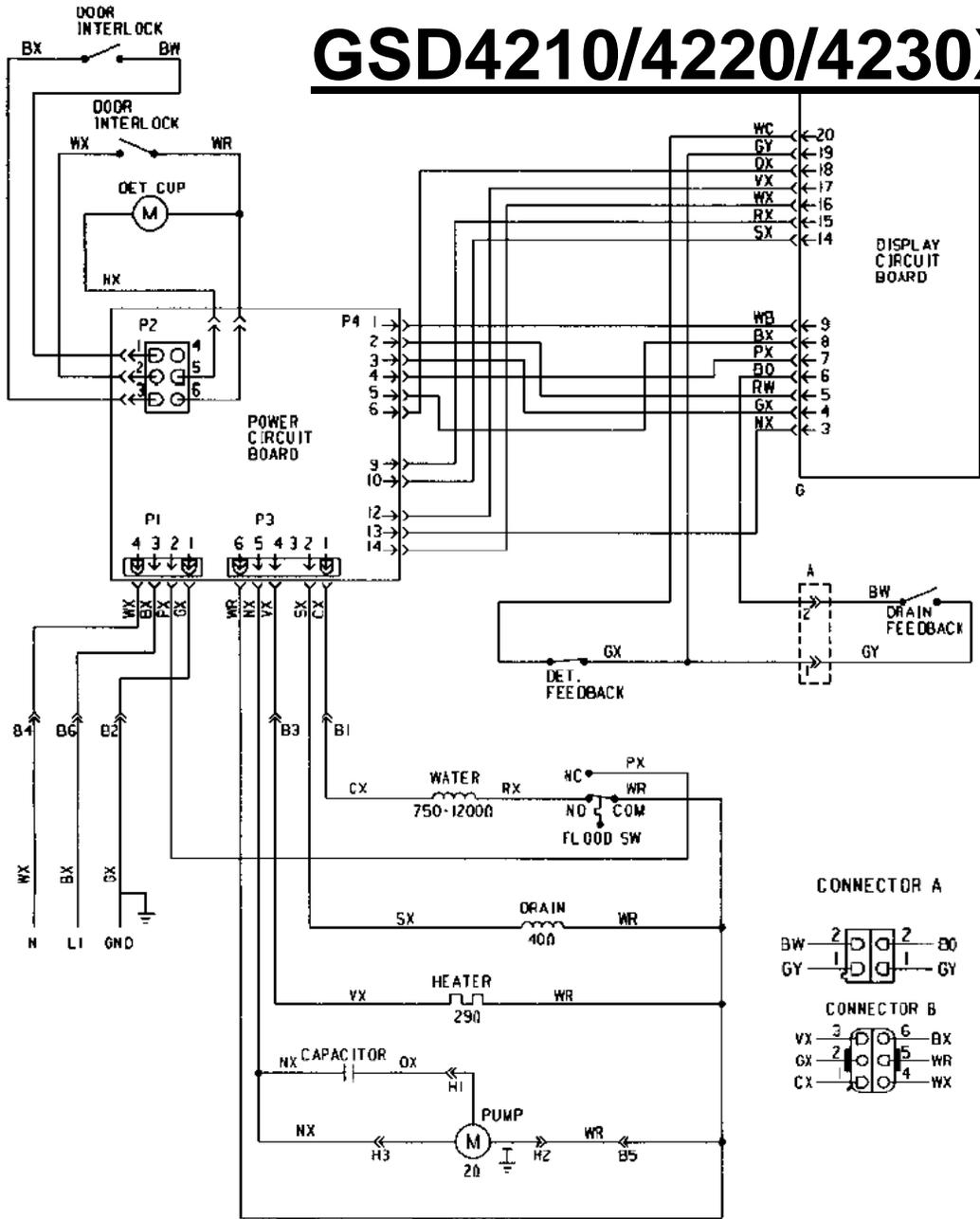
- Bad thermistor
- Open wire
- Bad control

REPAIR

Check resistance from pin 3 to 4 on turbidity sensor, should be 50K @ room temp. if not, turbidity sensor would have to be replaced
Check continuity from control to sensor
Check for 5 VDC from 3-4 at turbidity connector

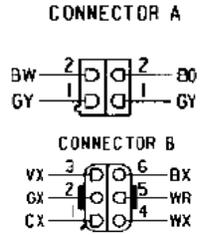


GSD4210/4220/4230X Series

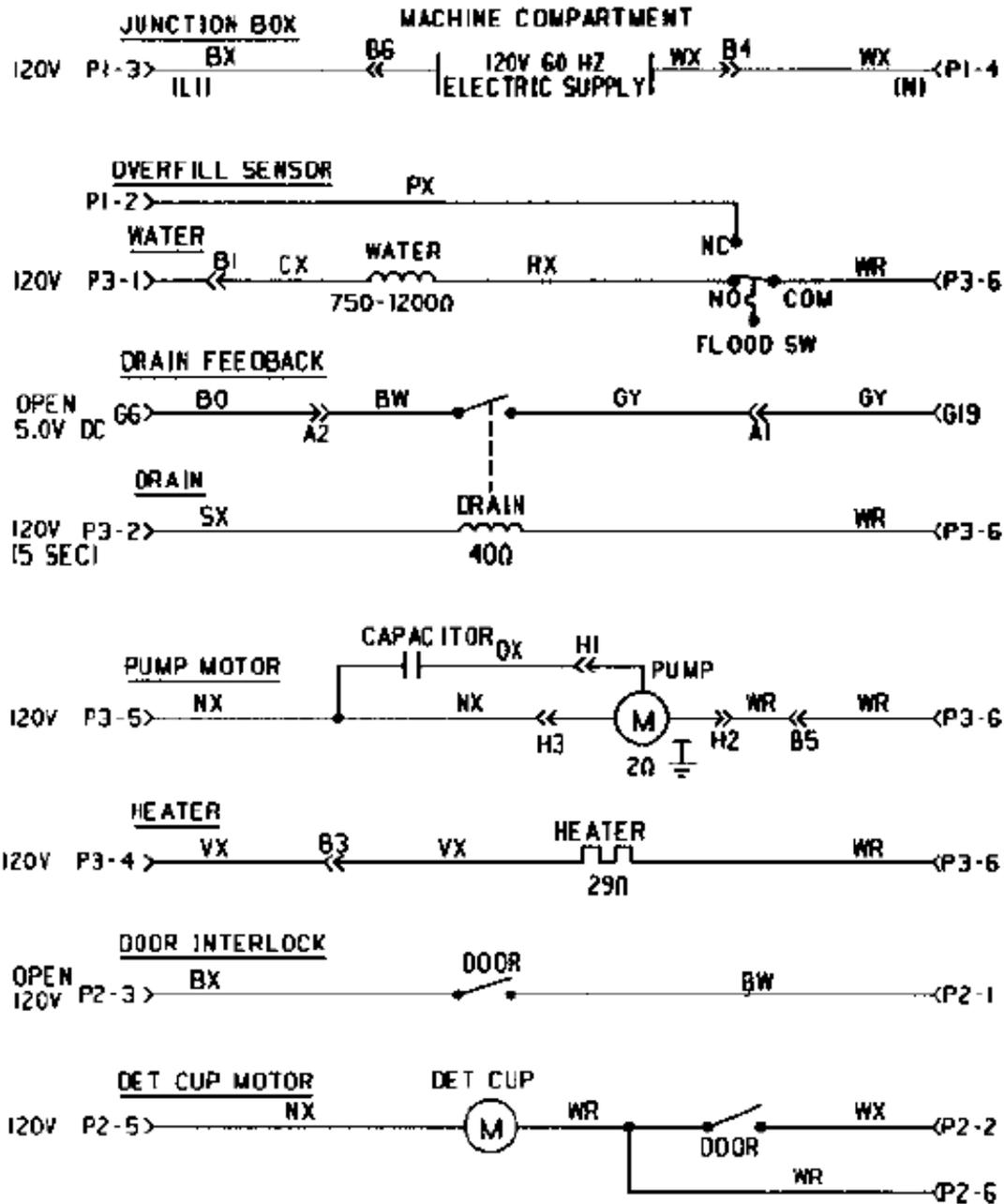


COLOR CODE			
LETTERS	COLOR	LETTERS	COLOR
BX	BLACK	RX	RED
CX	BROWN	SX	GRAY
GX	GREEN	TX	TAN
NX	DK. BLUE	VX	VIOLET
DX	ORANGE	WX	WHITE
PX	PINK	YX	YELLOW

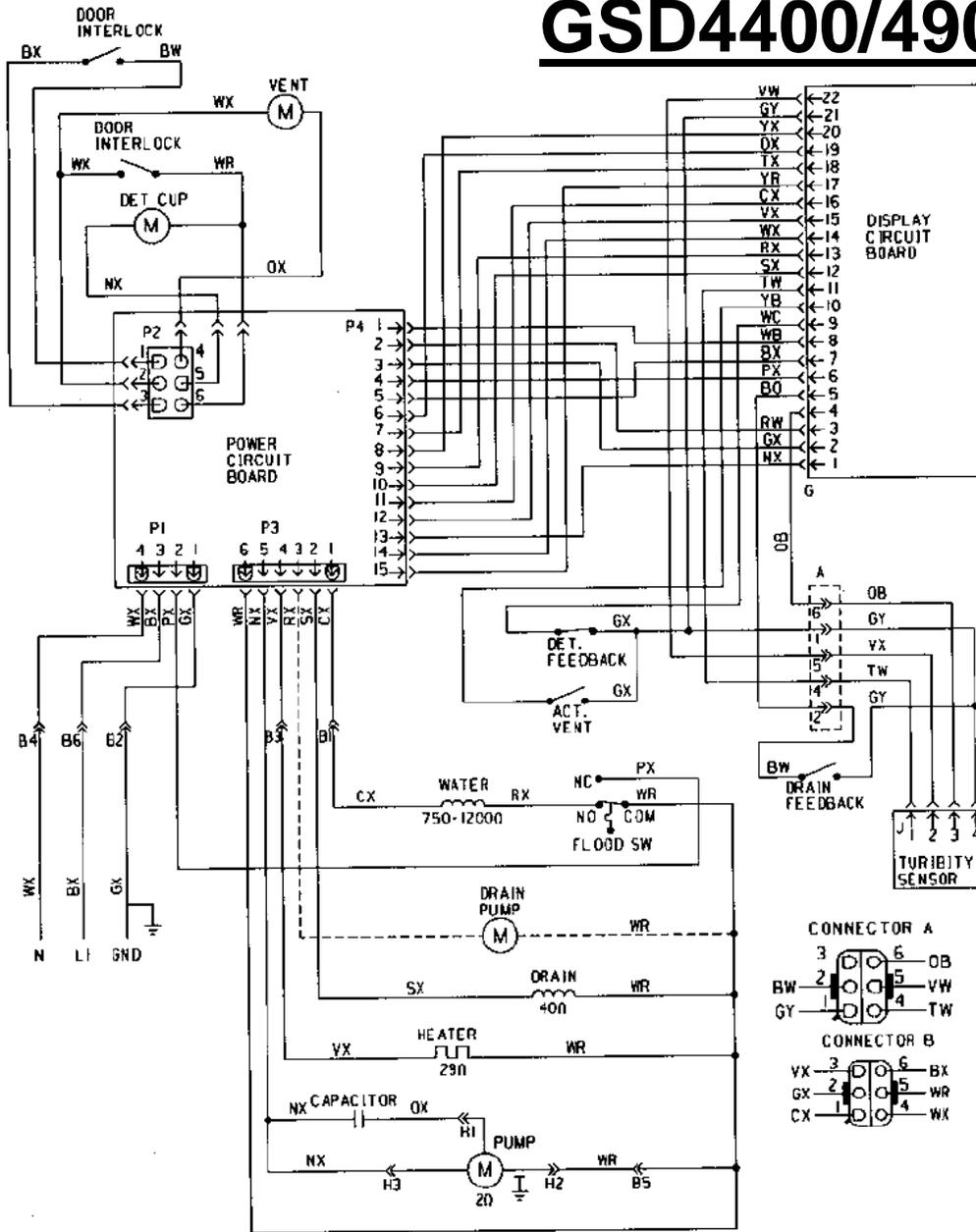
THE "X" INDICATES ONE SOLID COLOR - NO TRACER. WIRES WITH TRACER SHOW BOTH COLORS. EXAMPLE - WR IS WHITE WITH RED TRACER.



GSD4210/4220/4230X Series



GSD4400/4900X Series

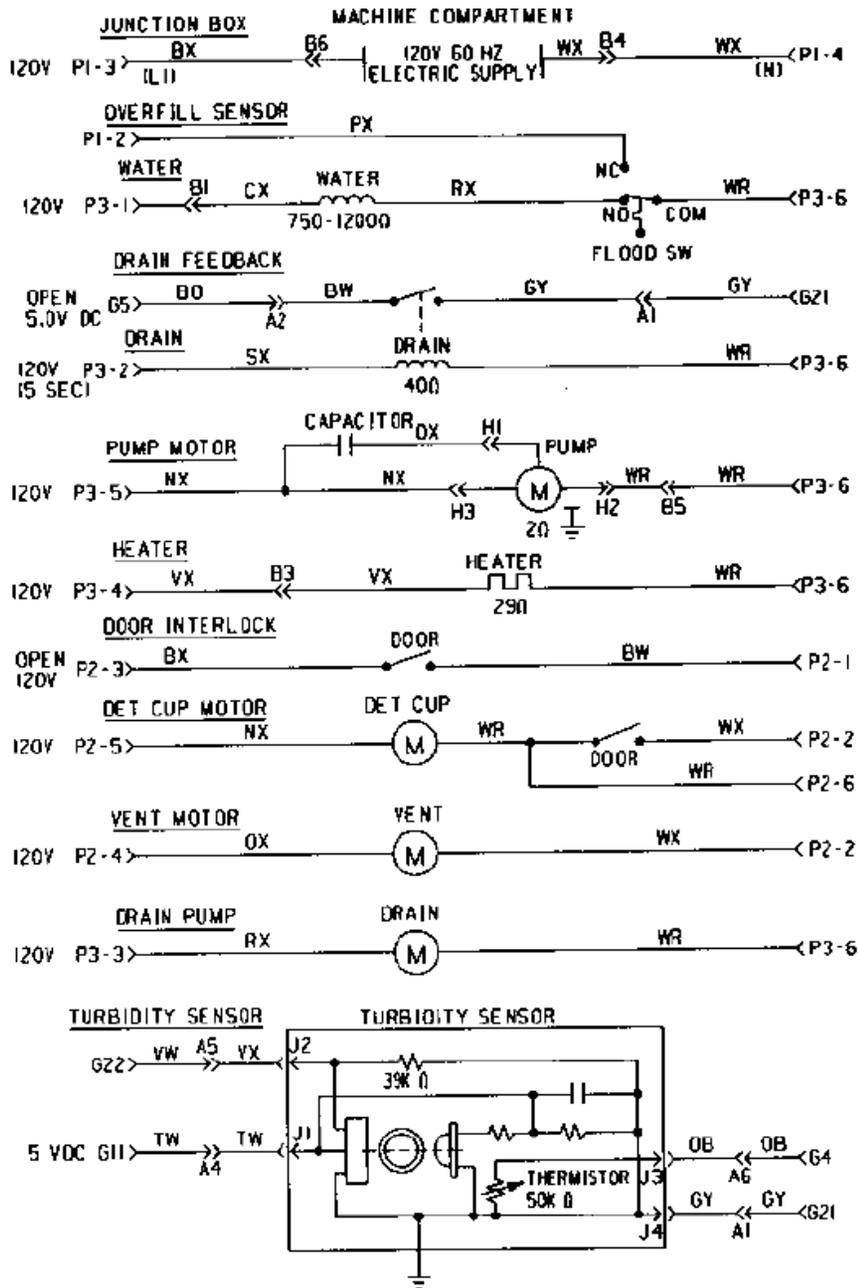


COLOR CODE			
LETTERS	COLOR	LETTERS	COLOR
BX	BLACK	RX	RED
CX	BROWN	SX	GRAY
GX	GREEN	TX	TAN
NX	DK. BLUE	VX	VIOLET
OX	ORANGE	WX	WHITE
PX	PINK	YX	YELLOW

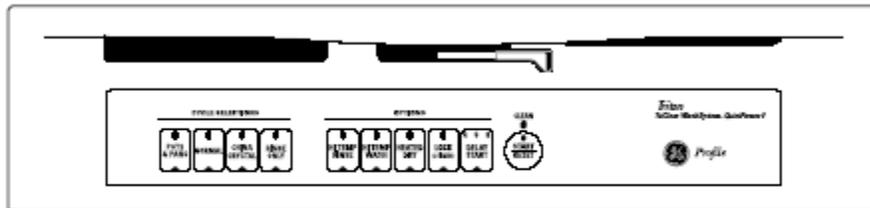
THE "X" INDICATES ONE SOLID COLOR-NO TRACER. WIRES WITH TRACER SHOW BOTH COLORS. EXAMPLE-WR IS WHITE WITH RED TRACER.



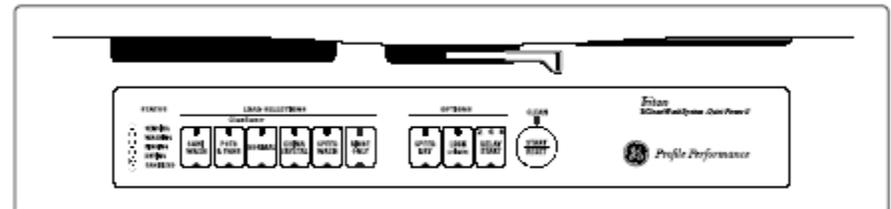
GSD4400/4900X Series



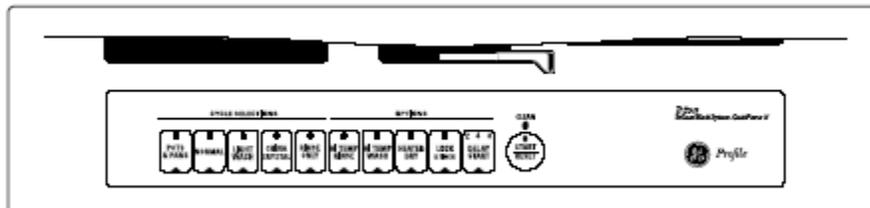
GSD5100/5300/5600/5900 Series



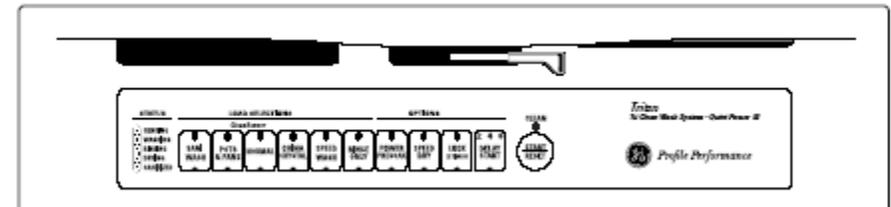
5100 Series



5600 Series



5300 Series



5900 Series



GSD5100/5300/5600/5900 Series

GE Profile™



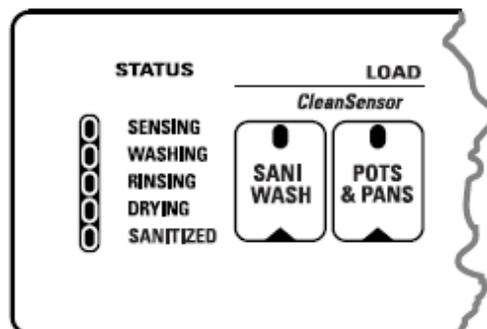
(5300 Series shown)

CUSTOMER CUES		
Status Lights	What It Means	What To Do
 START RESET	This is normal. The START/RESET pad has been pressed.	Allow the dishwasher up to 90 seconds to drain and reset before selecting a new cycle.
 CLEAN FLASHING + BEEPING SOUND	Control Error Control not being assigned to act as a particular model.	Press the START/RESET pad to turn off the beeper - the RINSING light will continue to flash. Disconnect power for one minute and reset. If condition continues, call for service.
 NORMAL FLASHING + BEEPING SOUND	Control Error Sequence switch not reaching its target position within 30 seconds.	Press the START/RESET pad to turn off the beeper - the dishwasher will attempt to reset. Restart the wash cycle. If this error continues, call for service.



GSD5100/5300/5600/5900 Series

GE Profile Performance™



CUSTOMER CUES		
Status Lights	What It Means	What To Do
 SENSING OFF	CLEANSENSOR Error.	If the sensing light does not come on during the NORMAL or POTS PANS cycles, the CLEANSENSOR is not working - call for service. The dishwasher will continue to work without the CLEANSENSOR. NOTE: This light will not stay on the entire cycle.
 WASHING FLASHING	START/RESET pad has been pressed	Allow the dishwasher up to 90 seconds to drain and reset before selecting a new cycle.
 RINSING FLASHING + BEEPING SOUND	Control Error Control not being assigned to act as a particular model.	Press the START/RESET pad to turn off the beeper - the RINSING light will continue to flash. Disconnect power for one minute and reset. If condition continues, call for service.
 DRYING FLASHING + BEEPING SOUND	Control Error Sequence switch not reaching its target position within 30 seconds.	Press the START/RESET pad to turn off the beeper - the dishwasher will attempt to reset. Restart the wash cycle. If this error continues, call for service.



GSD5100/5300 Series

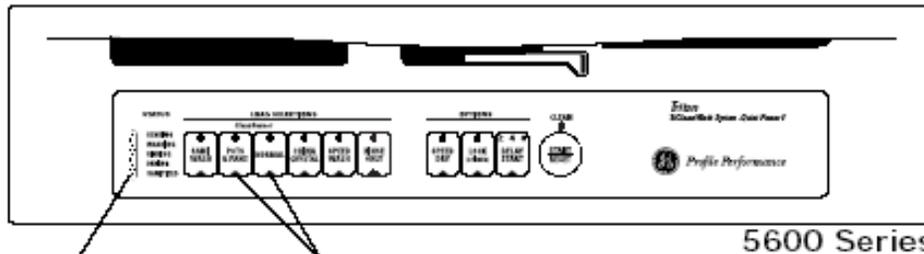
MODELS 5100/5300 F-1 TEST CYCLE MATRIX				
STEP	TIME (Sec)	SEQUENCE SWITCH ACTION	LED DISPLAY*	DESCRIPTION
1	30	—	START/RESET, CLEAN, KEY 1, DELAY START 1, 2, 3	(Factory Use Only)
2	5	—	Illuminate all LEDs	Energize all LEDs for 5 seconds
3	10 + 30	Trip Detergent & Fill	START/RESET, DELAY START 2, 3	Sequence switch trips detergent cup; Water valve ON for 30 seconds
4	30	Fill & Circulate	START/RESET, DELAY START 1	Water valve and main pump ON for 30 seconds; Close active vent
5	60	Circulate & Heat	START/RESET, DELAY START 1, 3	Main pump and Calrod ON for 60 seconds
6	10	Circulate & Drain	START/RESET, DELAY START 1, 2	Drain solenoid and main pump ON for 10 seconds to evacuate water
7	50	Circulate	START/RESET, DELAY START 1, 2	Continue main pump ON for 50 seconds to evacuate water
8	< 10	Trip Rinse Agent	START/RESET, KEY 1	Sequence switch trips rinse agent
9	30	Fill	START/RESET, KEY 1, DELAY START 3	Water valve ON for 30 seconds
10	23	Fill & Circulate	START/RESET, KEY 1, DELAY START 2	Water valve and main pump ON for 23 seconds
11	3600 (60 min.)	Circulate & Heat	START/RESET, KEY 1, DELAY START 2, 3	Main pump and Calrod ON for 60 minutes
12	75	Auxiliary Pump	START/RESET, KEY 1, DELAY START 1	Auxiliary pump ON for 75 seconds to evacuate water; Open active vent
13	—	Home		Drive Sequence Switch to the Home position and exit F1 Test Cycle

GE Profile™ (Non-Sensor) F-1 TEST LED DISPLAY RESULTS		
LED Display	Explanation	Potential Problem Fault
NORMAL	The NORMAL LED will flash and control will beep when the sequence switch is not reaching its target position within 30 seconds.	<ol style="list-style-type: none"> 1. Check connections between the sequence switch and control 2. Replace sequence switch 3. Replace control
CLEAN	The CLEAN LED will flash and control will beep when model selection connector is not detected.	<ol style="list-style-type: none"> 1. Check jumper wires for proper seating or missing connector. 2. Install correct model plug

*NOTE: KEY 1 represents keypad position # 1 (left of the DELAY START keypad)
 DELAY START 1, 2, & 3 represent the leftmost, middle, and rightmost DELAY START LEDs, respectively.

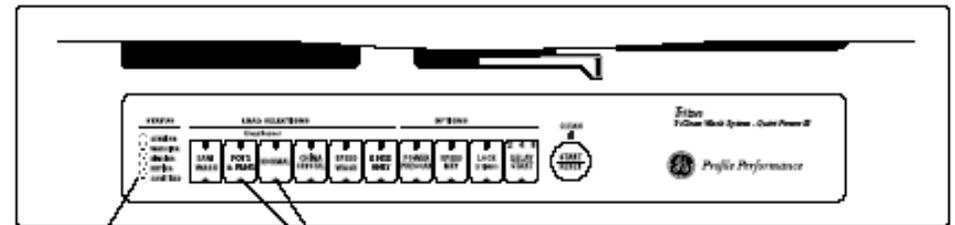


GSD5600/5900 Series



5600 Series

NOTE: F-1 Test Pads
LED'S Displayed during F-1 Test Table



5900 Series

NOTE: F-1 Test Pads
LED'S Displayed during F-1 Test Table

F1 TEST CYCLE SET UP

1. Close detergent cup and latch door.
2. Press POTS & PANS and NORMAL WASH keypads at the same time and hold for one second. It will then step through the test.
 - * If any keypad is pressed (except HEATED DRY), the control will beep and advance to next step.
 - * If POTS & PANS and NORMAL WASH keypads are pressed at the same time for 0.5 seconds, the control will exit test cycle, pump out any water and return to normal operation.
 - * The main pump will come on in step 4 and stay on until step 11.
 - * Use clamp-on amp meter to check current flow in heating coil.

FREEZE CAPABILITY

The FREEZE CAPABILITY shall allow the repair technician to pause only the F1 test cycle. Pressing the HEATED DRY keypad shall cause the control to pause on the current test step and the NORMAL WASH LED to illuminate. After the control is paused, pressing any keypad will cause the F1 test cycle to resume where it was when the pause was initiated, and the NORMAL WASH LED will be turned OFF. If the F1 test cycle is paused in a step with the heater ON, then the control will turn the heater OFF after one (1) minute into the FREEZE CAPABILITY pause.



GSD5600/5900 Series

MODELS 5600/5900 F-1 TEST CYCLE MATRIX				
STEP	TIME (Sec)	SEQUENCE SWITCH ACTION	LED DISPLAY*	DESCRIPTION
1	30	—	Key 2, SENSING, WASHING flash; Any combination of KEY 1 and DELAY START 1, 2, or 3	(Factory Use Only)
2	5	—	Illuminate all LEDs	Energize all LEDs for 5 seconds
3	10 + 50	Trip Detergent & Fill	DRYING, SANITIZED	Sequence switch trips detergent cup. Water valve ON for 50 seconds
MODELS WITH 1.25 WATER VALVE:				
4a	32	Fill & Circulate	RINSING	Water valve and main pump ON for 32 seconds; Close the active vent

*NOTE: KEY 1 & KEY 2 represent key positions # 1 & 2, starting left of the DELAY START keypad respectively. DELAY START 1, 2, & 3 represent the leftmost, middle, and rightmost DELAY START LEDs, respectively.

In STEP 8 of the F1 Test Cycle: If the control senses a turbidity sensor error, then the control shall flash the SENSING LED. If the control senses a tub temperature sensor error, then the control shall flash the HEATED DRY LED. If the control senses an EEPROM error, then the control shall flash the LOCK LED. *If any of these diagnostic errors are detected, the cycle will not advance to STEP 9 until a key is pressed.*

MODELS WITH 1.70 WATER VALVE:				
4b	10	Fill & Circulate	RINSING	Water valve and main pump ON for 10 seconds; Close the active vent
5	60	Circulate & Heat	RINSING, SANITIZED	Main pump and Calrod ON for 60 seconds
6	10	Circulate & Drain	RINSING, DRYING	Drain solenoid and main pump ON for 10 seconds to evacuate water
7	50	Circulate	RINSING, DRYING, SANITIZED	Continue main pump ON for 50 seconds to evacuate water
8	< 10	Trip Rinse Agent & Self-diagnostics	WASHING	Sequence switch trips rinse agent; Read turbidity sensor, temperature sensor and EEPROM. If turbidity or diagnostic errors occur, energize beeper and flash LEDs (see below).
9	50	Fill	WASHING, SANITIZED	Water valve ON for 50 seconds
MODELS WITH 1.25 WATER VALVE:				
10a	22	Fill & Circulate	WASHING, DRYING	Water valve and main pump ON for 22 seconds
MODELS WITH 1.70 WATER VALVE:				
10b	3	Fill & Circulate	WASHING, DRYING	Water valve and main pump ON for 3 seconds
11	3600 (60 min.)	Circulate & Heat	WASHING, DRYING, SANITIZED	Main pump and Calrod ON for 60 minutes
12	75	Auxiliary Pump	WASHING, RINSING	Auxiliary pump ON for 75 seconds to evacuate water; Open active vent
13	—	Home	WASHING, RINSING, DRYING, SANITIZED	Drive sequence switch to Home position and exit F1 Test Cycle



GSD5600/5900 Series

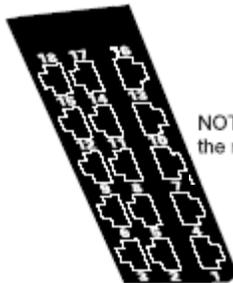
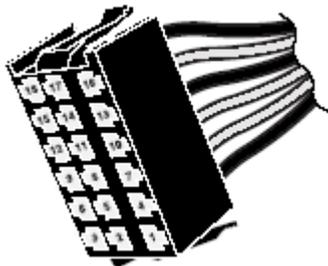
GE Profile Performance™ (Turbidity Sensor)		
F-1 TEST LED DISPLAY RESULTS		
LED Display	Explanation	Potential Problem Fault
SENSING	The SENSING LED will flash when control is receiving incorrect signal from turbidity sensor	<ol style="list-style-type: none"> 1. Connectors are not plugged in or terminal is not seated properly 2. Replace turbidity sensor 3. Replace Control
HEATED DRY	The HEATED DRY LED will flash when control is reading the tub temperature sensor as open or short circuit	<ol style="list-style-type: none"> 1. Broken wire or terminal is not seated 2. Connectors are not plugged in 3. Temperature sensor is shorted or open 4. Replace control
DRYING	The DRYING LED will flash and control will beep when the sequence switch is not reaching its target position within 30 seconds	<ol style="list-style-type: none"> 1. Check connections between sequence switch and control 2. Replace sequence switch 3. Replace control
LOCK	The LOCK LED will flash when the EEPROM inside the control is damaged	<ol style="list-style-type: none"> 1. Replace control
RINSING	The RINSING LED will flash and control will beep when model selection connector is missing	<ol style="list-style-type: none"> 1. Install correct model selector jumper 2. Check jumper for wires seated or jumper missing, replace with correct jumper



**SEQUENCE SWITCH
WHITE PLUG VOLTAGES**

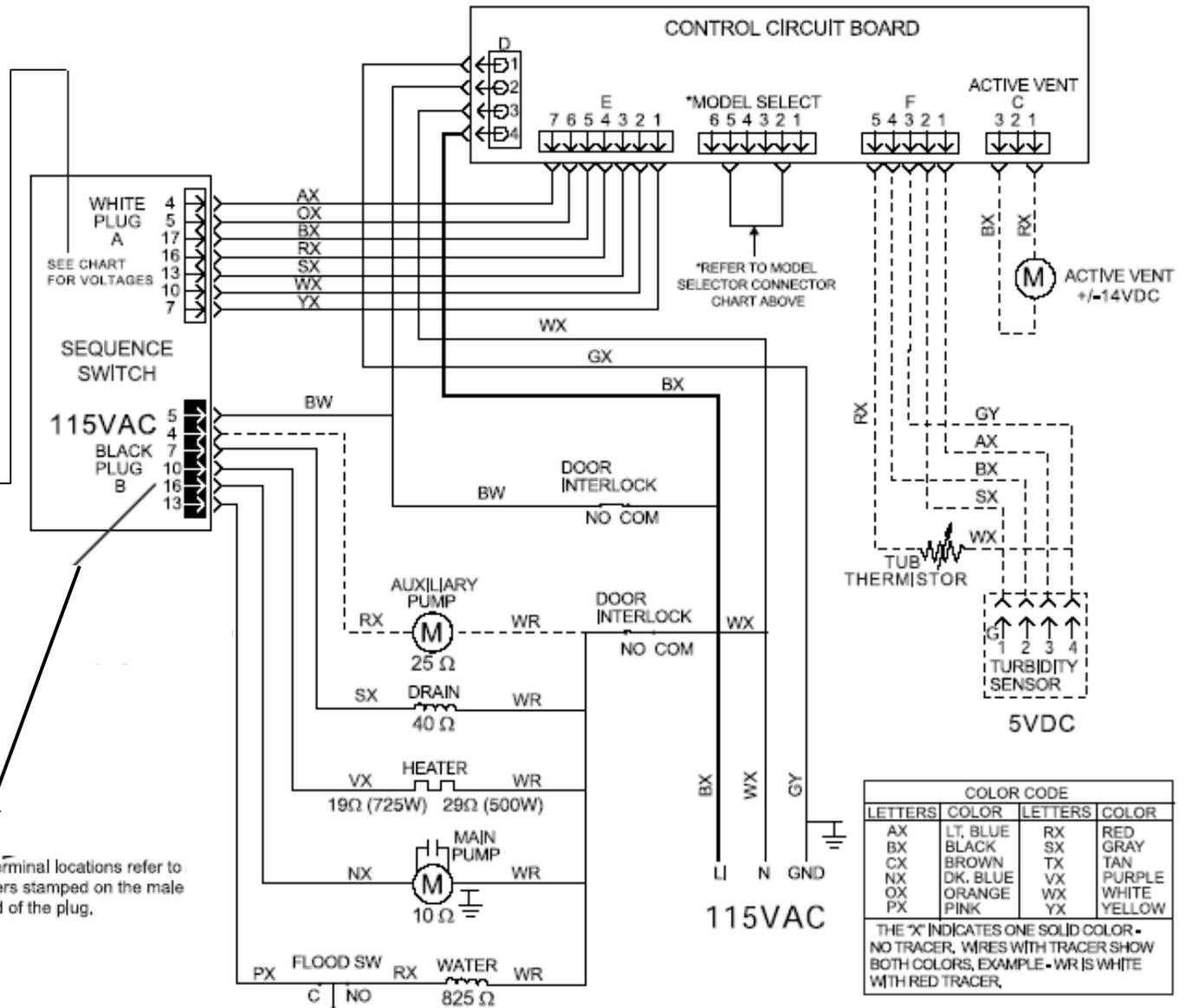
PIN	VDC	
4	14	DRIVE MOTOR **
5	14	DRIVE MOTOR **
17	5	5 VDC COMMON
16	5	
13	5	
10	5	
7	5	

** Only powered when the sequence switch is rotating, DC voltage may be + or - depending on the direction of rotation.

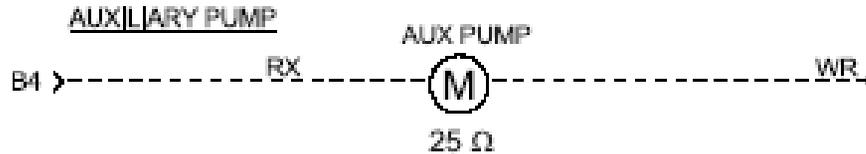
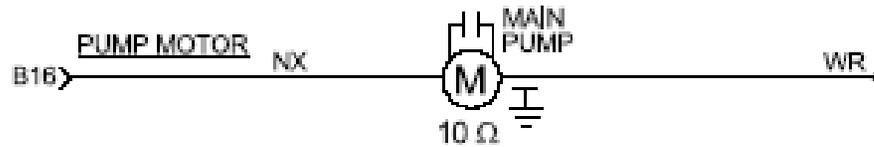
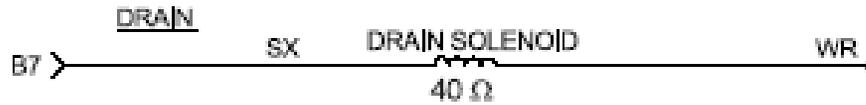
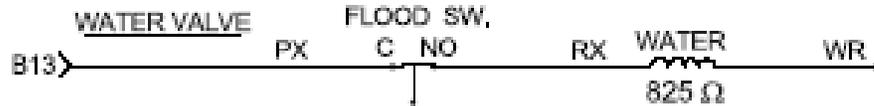
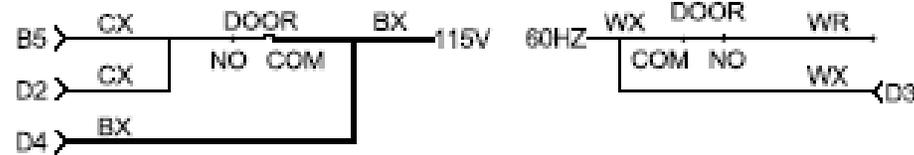


NOTE: Terminal locations refer to the numbers stamped on the male end of the plug.

GSD5100/5300/5600/5900 Series

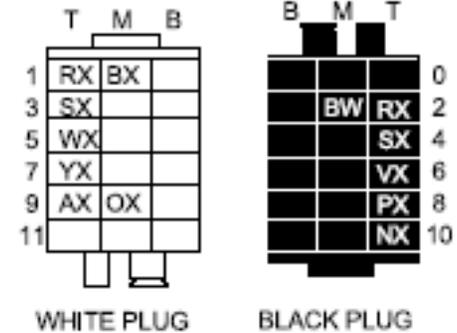


STRIP CIRCUITS



GSD5100/5300/5600/5900 Series

SEQUENCE SWITCH
LEAD COLORS AND TERMINAL LOCATIONS





Triton

PDW8200

PDW8260

PDW8400

PDW8480

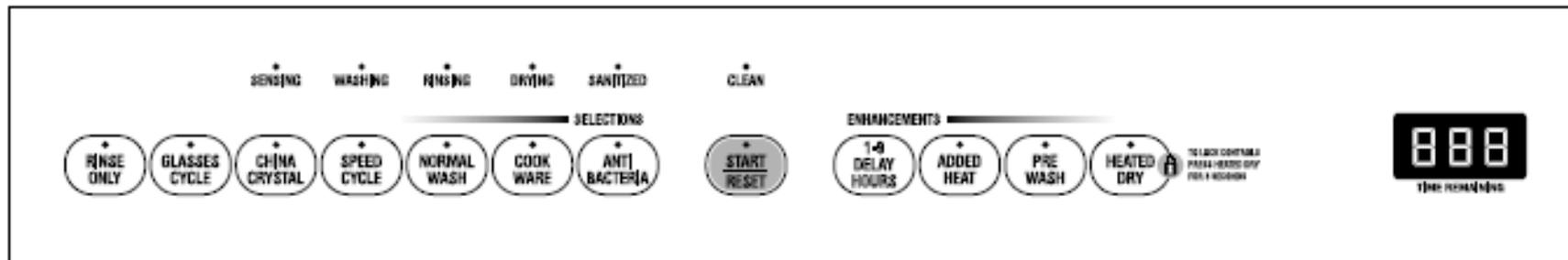
PDW8500

PDW8600

PDW8680



Triton



FLASHING DISPLAY LIGHTS

<i>Status Indicator Lights</i>	<i>What It Means</i>
START/RESET	Cycle has been interrupted by pressing the START/RESET keypad. Light will quit flashing after the dishwasher automatically drains out the water.
CLEAN	Unit has no water. Check the water supply. If water is turned on call for service.



Triton

THIS DISHWASHER IS PROGRAMMED WITH A SERVICE MODE TO AID THE TECHNICIAN IN TROUBLESHOOTING THE DISHWASHER. EACH COMPONENT MAY BE CYCLED TO DETECT IF IT IS FUNCTIONING CORRECTLY. COMPONENTS ARE CYCLED BY PRESSING KEYPADS TO THE RIGHT OR LEFT OF THE START/RESET KEYPAD. DETERMINE WHICH TYPE OF CONTROL PANEL IS PRESENT (FLAT OR BOWED) AND THEN USE THE MATRIX BELOW TO DETERMINE HOW TO CYCLE EACH COMPONENT.

FLAT PANEL



○ Indicates Keypad Used Only on Some Models

TO ENTER SERVICE MODE:
PRESS THE COOKWARE (POTS & PANS ON SOME MODELS) AND THE HEATED DRY KEYPAD SIMULTANEOUSLY FOR 3 SECONDS.

BOWED PANEL



○ Indicates Keypad Used Only on Some Models

TO EXIT SERVICE MODE :
PRESS THE START/RESTART KEYPAD AT ANYTIME TO EXIT.



Triton

TRITON XL SERVICE MODE TEST MATRIX *			
KEYPAD		DESCRIPTION	TIME in seconds**
PAD	CONTROL TYPE		
Keypads to the left of the Start/Reset keypad (Selections)			
1L	FLAT	Activates Drain Pump	75
	BOWED	Activates Detergent Module	
2L	FLAT	Activates Detergent Module	60
	BOWED	Activates Main Pump	
3L	FLAT	Activates Main Pump	75
	BOWED	Activates Heating Element	
4L	FLAT	Activates Heating Element	300
	BOWED	Activates Drain Pump	
5L	FLAT	Activates Water Valve (Length of time is model dependent)	50 or 71
	BOWED		
START/RESET		Used to EXIT Service Mode	
Keypads to the right of the Start/Reset keypad (Enhancement/Extras)			
1R	FLAT	Activates the following in order: Status LEDs; Wash LEDs; Start/Reset and Option LEDs; finally "888" will be shown on the 3 digit display (some models)	3 seconds each cycle
	BOWED		
2R	FLAT	Opens Active Vent	
	BOWED		
3R	FLAT	Closes Active Vent	
	BOWED		

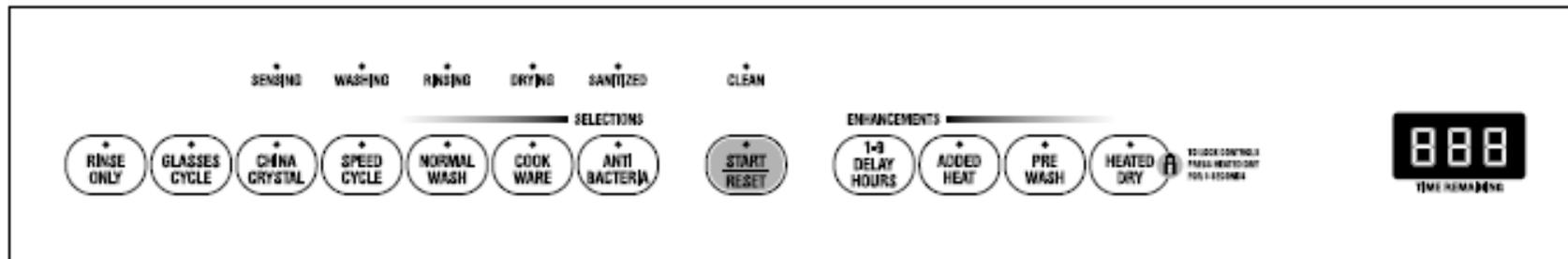
***NOTE :** Service mode may be used for 30 minutes maximum. After 30 minutes the service mode will automatically turn off.

****NOTE :** Component will be activated for indicated time. Component may be deactivated by pressing the same keypad that was pressed to activate the component.



Triton

Factory test mode is the most accurate way to test the turbidity sensor circuit (circuit contains control module, wiring, and turbidity sensor). Factory test mode will test the thermistor (used for automatic temperature control) that is contained in the turbidity sensor and will test the transmitter that is contained in the turbidity sensor.



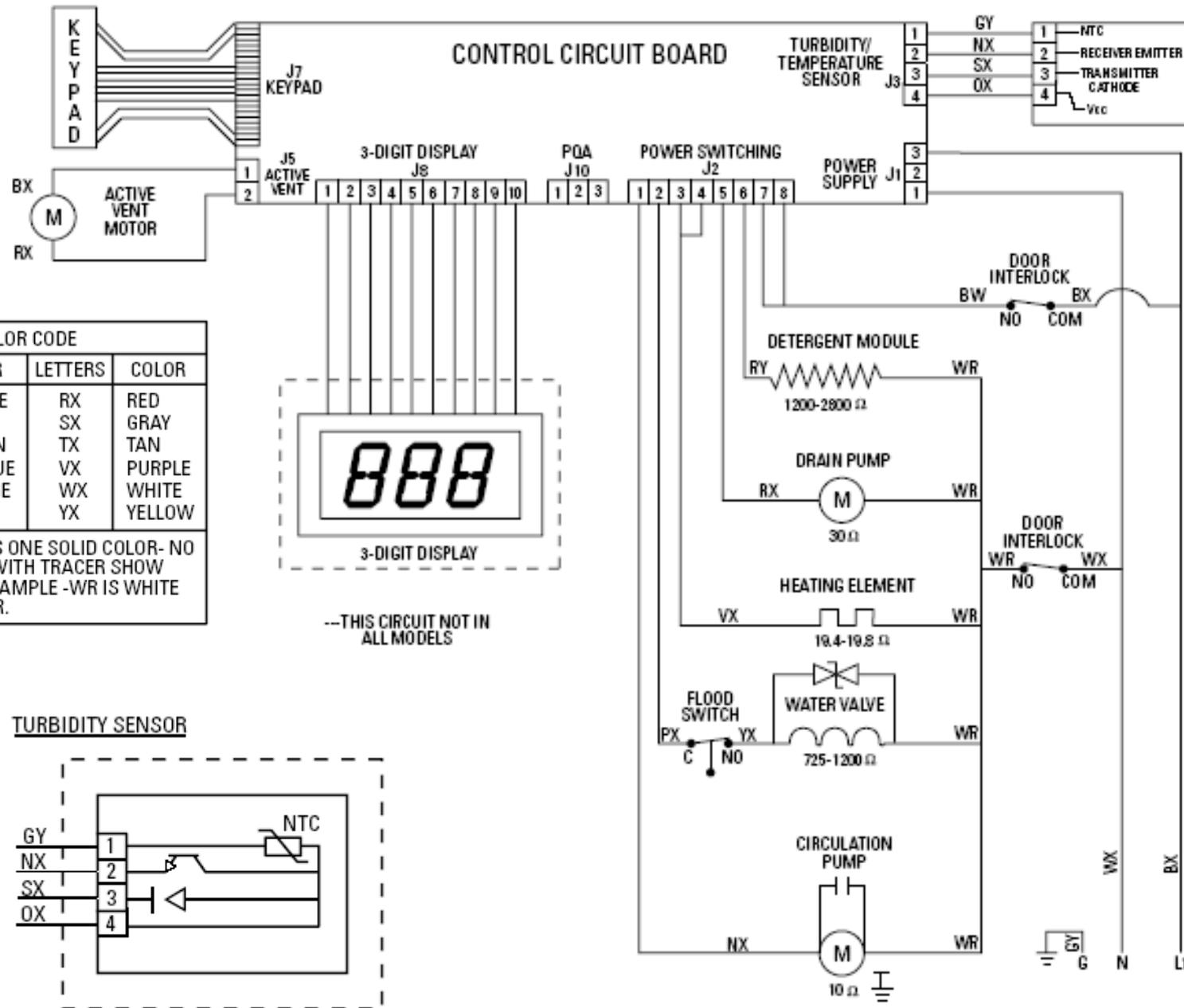
Triton

Entering Factory Test Mode

Note: This mode can only be entered within the first 2 minutes after power-up. After 2 minutes, factory test mode is unavailable.

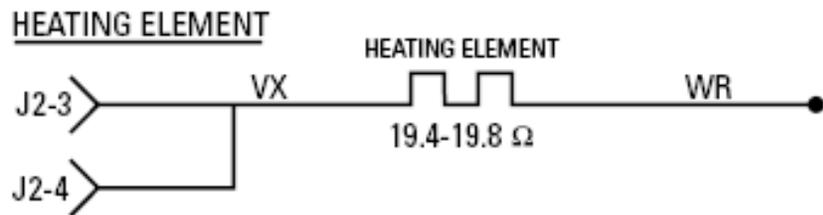
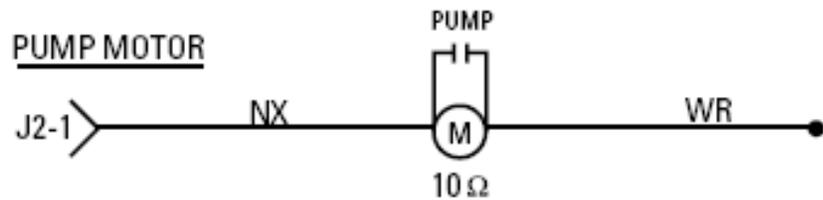
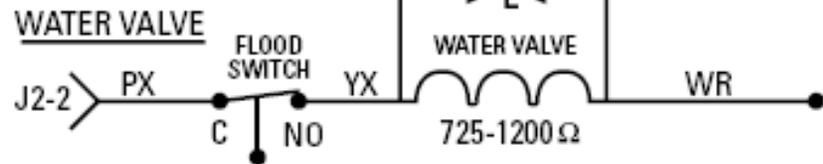
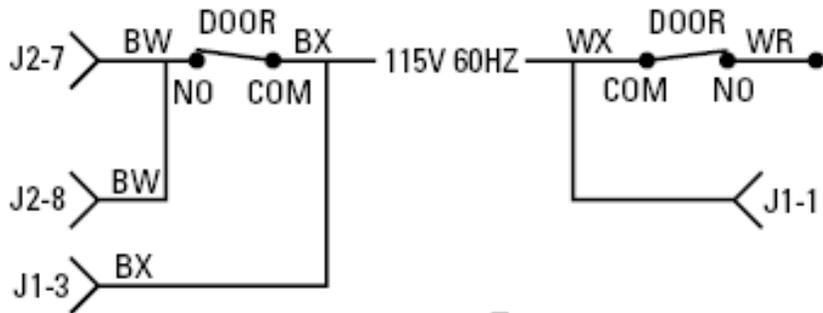
1. Disconnect power from dishwasher. Wait 10 seconds and connect power to dishwasher.
2. Press the NORMAL WASH keypad and POTS & PANS (or COOK WARE) keypad at the same time for 5 seconds (This step must be performed within 2 minutes of power-up).
3. The following sequence should occur:
 - a. All LEDs illuminate for a short period of time.
 - b. Water valve activates. The dishwasher will fill for the appropriate amount of time.
 - c. Circulation pump activates. The dishwasher will circulate for approximately 1 minute.
 - d. Turbidity sensor check. The control module will check the thermistor circuit, the turbidity (transmitter) circuit, and calibrate itself to the turbidity sensor (transmitter). The turbidity sensor check lasts for 20 to 30 seconds.
- If the turbidity sensor check fails, the control module will beep continuously and the Lock LED will be illuminated. The control module, wiring, and turbidity sensor are suspect if the turbidity sensor check fails. Press any keypad to stop the control module beeping and move to the next step in the factory test mode sequence.
- If the turbidity sensor check passes, the control module will automatically move to the next step in the factory test mode sequence.
- e. Drain pump activates. Allow the dishwasher to pump out all water (approximately 75 seconds). After the water has been pumped out, the dishwasher will begin to fill again. Press the START/RESET keypad while the dishwasher is filling. The dishwasher will then pump out for approximately 2 minutes and then return to normal operation. The dishwasher will automatically exit factory test mode 1 hour and 10 minutes after the test was initiated if the START/RESET keypad is not pressed to exit.



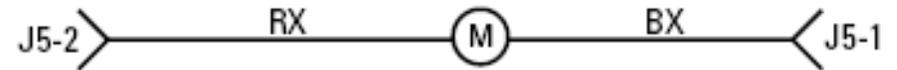


Triton

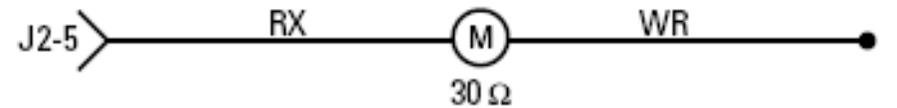
STRIP CIRCUITS



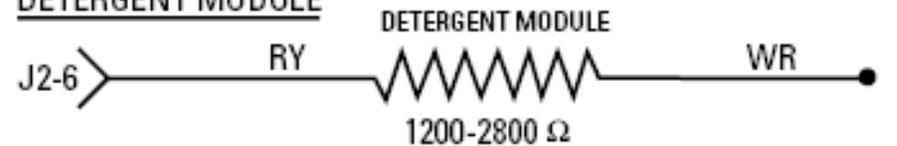
VENT MOTOR



DRAIN PUMP



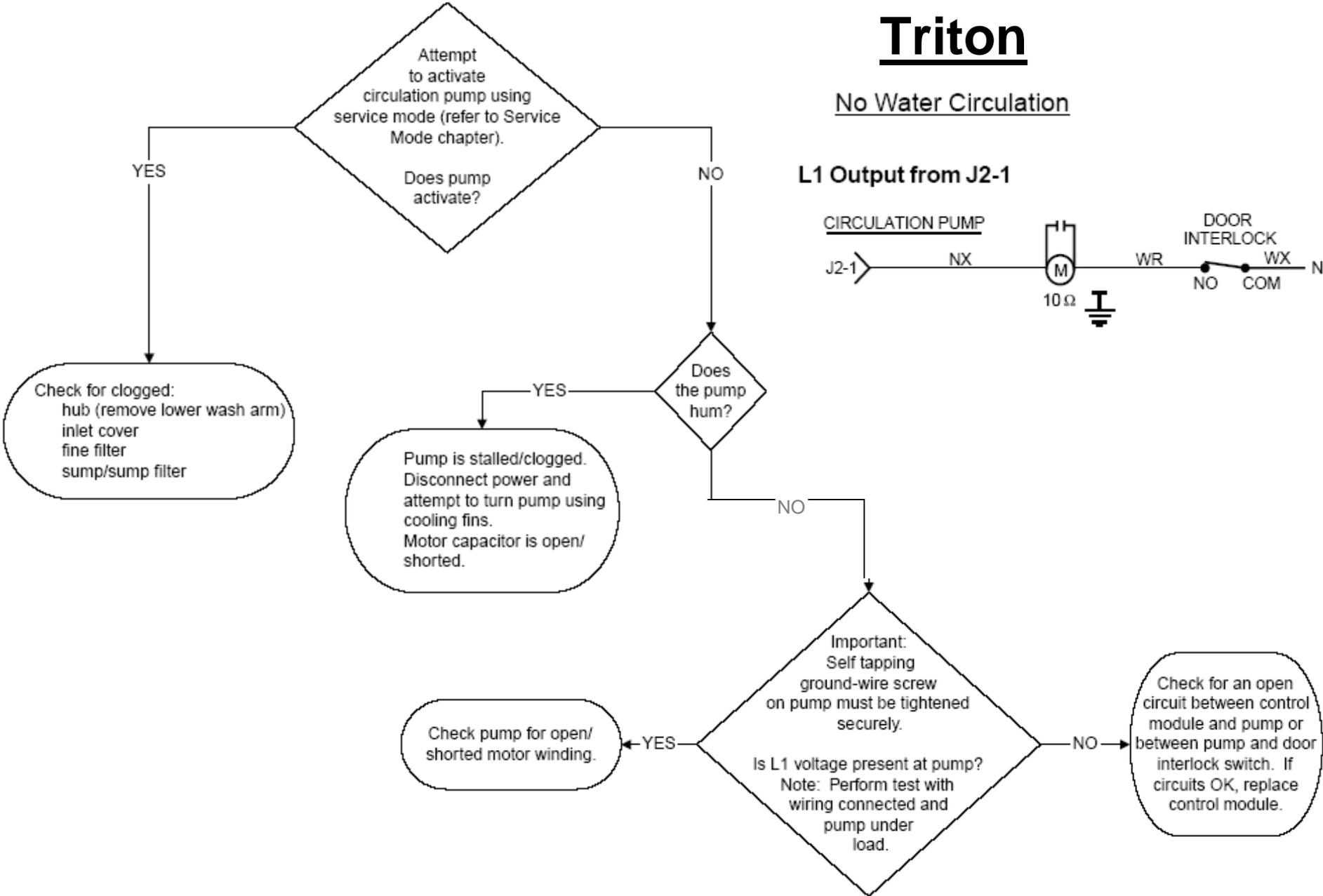
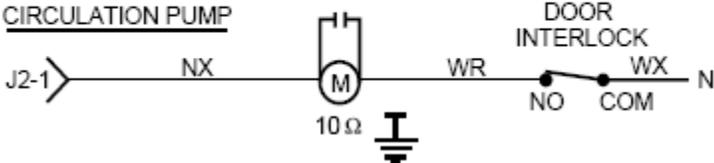
DETERGENT MODULE



Triton

No Water Circulation

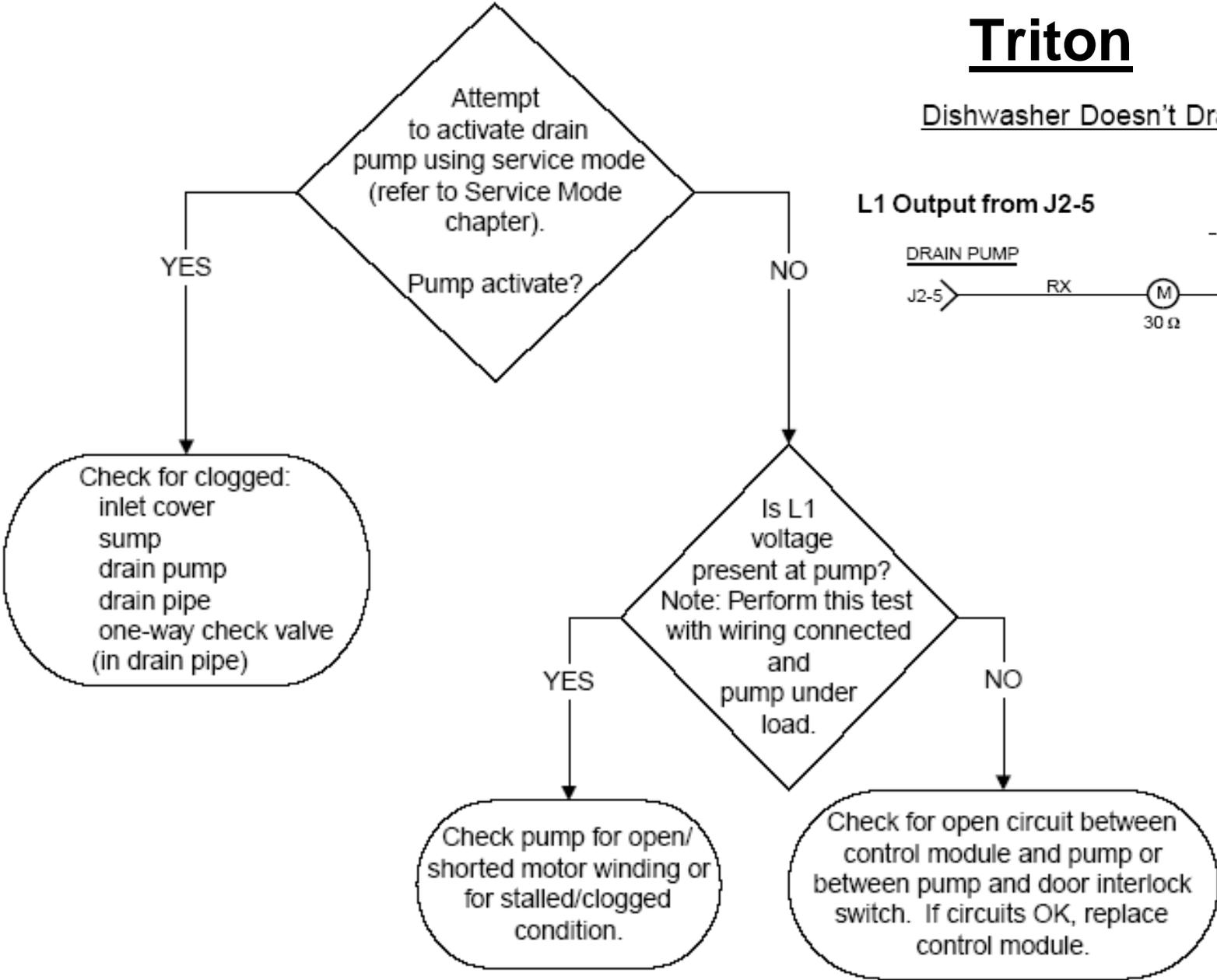
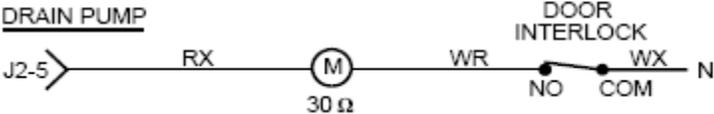
L1 Output from J2-1



Triton

Dishwasher Doesn't Drain

L1 Output from J2-5



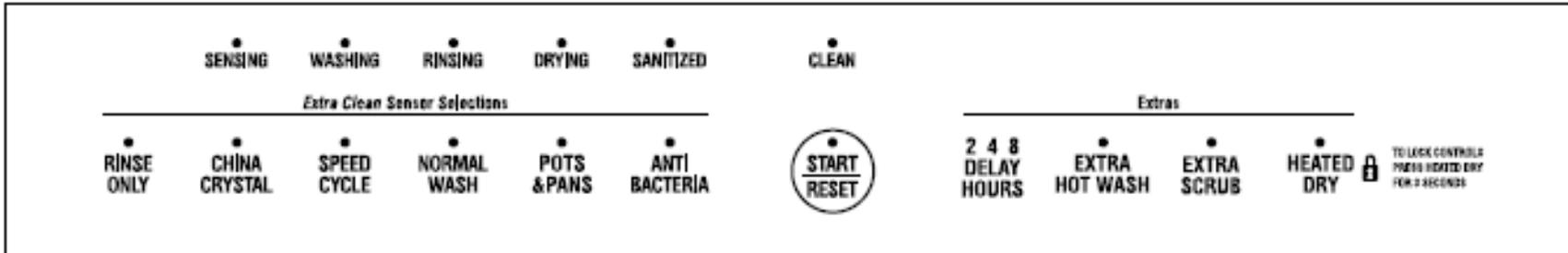


Triton XL

EDW4000 PDW7300
EDW4060 PDW7700
GSD6200 PDW7800
GSD6300 PDW7880
GSD6600
GSD6660
GSD6700



Triton XL



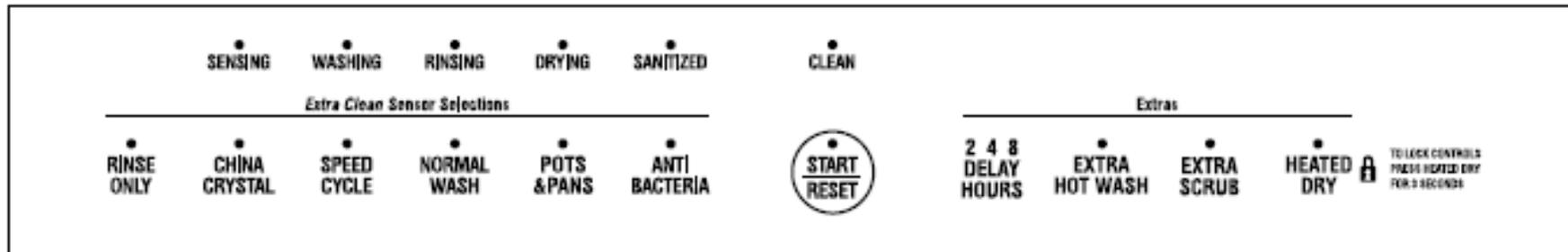
FLASHING DISPLAY LIGHTS

<i>Status Indicator Lights</i>	<i>What It Means</i>
START/RESET	Cycle has been interrupted by pressing the START/RESET keypad. Light will quit flashing after the dishwasher automatically drains out the water.
CLEAN	Unit has no water. Check the water supply. If water is turned on call for service.



Triton XL

Factory test mode is the most accurate way to test the turbidity sensor circuit (circuit contains control module, wiring, and turbidity sensor). Factory test mode will test the thermistor (used for Automatic Temperature Control) that is contained in the turbidity sensor and will test the transmitter that is contained in the turbidity sensor.



Triton XL

Entering Factory Test Mode

Note: This mode can only be entered within the first 2 minutes after power-up. After 2 minutes, factory test mode is unavailable.

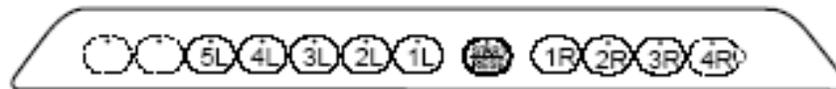
1. Disconnect power from dishwasher. Wait 10 seconds and connect power to dishwasher.
2. Press the NORMAL WASH keypad and POTS & PANS (or COOK WARE) keypad at the same time for 5 seconds (This step must be performed within 2 minutes of power-up).
3. The following sequence should occur:
 - a. All LEDs illuminate for a short period of time.
 - b. Water valve activates. The dishwasher will fill for the appropriate amount of time.
 - c. Circulation pump activates. The dishwasher will circulate for approximately 1 minute.
 - d. Turbidity sensor check. The control module will check the thermistor circuit, the turbidity (transmitter) circuit, and calibrate itself to the turbidity sensor (transmitter). The turbidity sensor check lasts for 20 to 30 seconds.
- If the turbidity sensor check fails, the control module will beep continuously and the Lock LED will be illuminated. The control module, wiring, and turbidity sensor are suspect if the turbidity sensor check fails. Press any keypad to stop the control module beeping and move to the next step in the factory test mode sequence.
- If the turbidity sensor check passes, the control module will automatically move to the next step in the factory test mode sequence.
- e. Drain pump activates. Allow the dishwasher to pump out all water (approximately 75 seconds). After the water has been pumped out, the dishwasher will begin to fill again. Press the START/RESET keypad while the dishwasher is filling. The dishwasher will then pump out for approximately 2 minutes and then return to normal operation. The dishwasher will automatically exit factory test mode 1 hour and 10 minutes after the test was initiated if the START/RESET keypad is not pressed to exit.



Triton XL

THIS DISHWASHER IS PROGRAMMED WITH A SERVICE MODE TO AID THE TECHNICIAN IN TROUBLESHOOTING THE DISHWASHER. EACH COMPONENT MAY BE CYCLED TO DETECT IF IT IS FUNCTIONING CORRECTLY. COMPONENTS ARE CYCLED BY PRESSING KEYPADS TO THE RIGHT OR LEFT OF THE START/RESET KEYPAD. DETERMINE WHICH TYPE OF CONTROL PANEL IS PRESENT (FLAT OR BOWED) AND THEN USE THE MATRIX BELOW TO DETERMINE HOW TO CYCLE EACH COMPONENT.

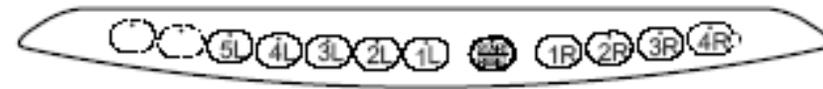
FLAT PANEL



○ Indicates Keypad Used Only on Some Models

TO ENTER SERVICE MODE:
PRESS THE COOKWARE (POTS & PANS ON SOME MODELS) AND THE HEATED DRY KEYPAD SIMULTANEOUSLY FOR 3 SECONDS.

BOWED PANEL



○ Indicates Keypad Used Only on Some Models

TO EXIT SERVICE MODE :
PRESS THE START/RESTART KEYPAD AT ANYTIME TO EXIT.



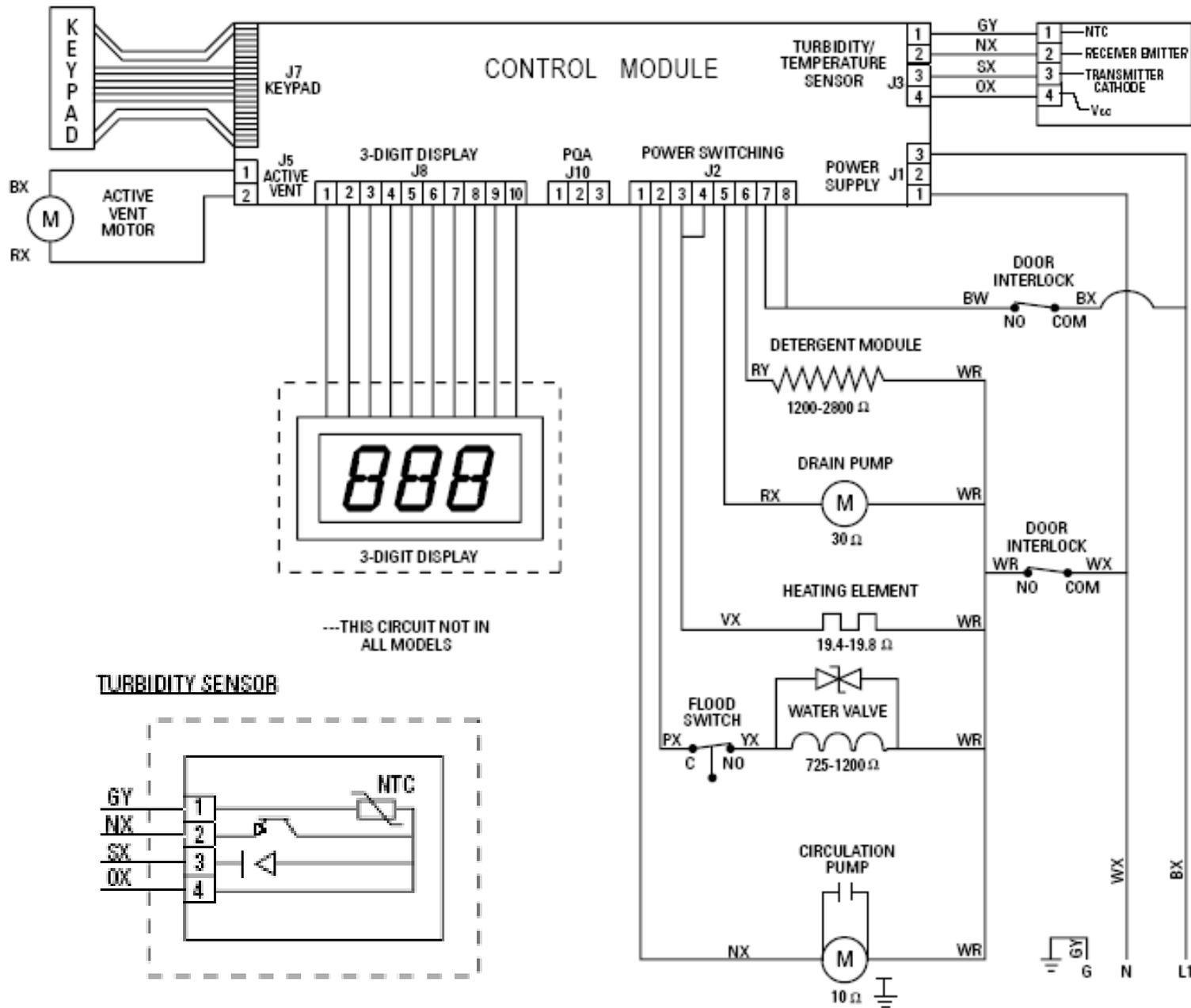
Triton XL

TRITON XL SERVICE MODE TEST MATRIX *			
KEYPAD		DESCRIPTION	TIME in seconds**
PAD	CONTROL TYPE		
Keypads to the left of the Start/Reset keypad (Selections)			
1L	FLAT	Activates Drain Pump	75
	BOWED	Activates Detergent Module	
2L	FLAT	Activates Detergent Module	60
	BOWED	Activates Main Pump	
3L	FLAT	Activates Main Pump	75
	BOWED	Activates Heating Element	
4L	FLAT	Activates Heating Element	300
	BOWED	Activates Drain Pump	
5L	FLAT	Activates Water Valve (Length of time is model dependent)	50 or 71
	BOWED		
START/RESET		Used to EXIT Service Mode	
Keypads to the right of the Start/Reset keypad (Enhancement/Extras)			
1R	FLAT	Activates the following in order: Status LEDs; Wash LEDs; Start/Reset and Option LEDs; finally "888" will be shown on the 3 digit display (some models)	3 seconds each cycle
	BOWED		
2R	FLAT	Opens Active Vent	
	BOWED		
3R	FLAT	Closes Active Vent	
	BOWED		

***NOTE :** Service mode may be used for 30 minutes maximum. After 30 minutes the service mode will automatically turn off.

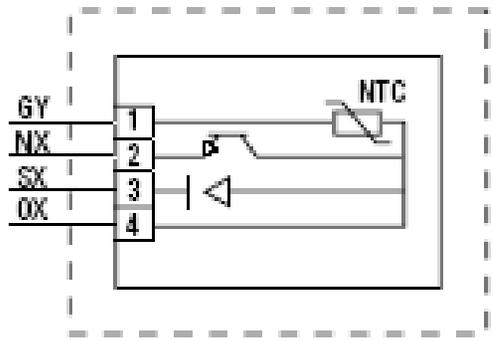
****NOTE :** Component will be activated for indicated time. Component may be deactivated by pressing the same keypad that was pressed to activate the component.





---THIS CIRCUIT NOT IN ALL MODELS

TURBIDITY SENSOR



CONN.	INPUT/OUTPUT	COMPONENT
J1-1	Neutral	House Supply
J1-3	L1 Input	House Supply
J2-1	L1 Output	Circ. Pump
J2-2	L1 Output	Water Valve
J2-3	L1 Output	Heating Elem.
J2-4	L1 Output	Heating Elem.
J2-5	L1 Output	Drain Pump
J2-6	L1 Output	Det. Module
J2-7	L1 Input	Door Interlock
J2-8	L1 Input	Door Interlock
J3-1	Input (thermistor)	Turbidity Sensor
J3-2	Input (turbidity)	Turbidity Sensor
J3-3	0 to 5 VDC output*	Turbidity Sensor
J3-4	5 VDC output*	Turbidity Sensor
J5-1	+ or - 12 VDC*	Active Vent
J5-2	+ or - 12 VDC*	Active Vent

*Measure voltage with black test lead connected to J10-1.

COLOR CODE			
LETTERS	COLOR	LETTERS	COLOR
AX	LT. BLUE	RX	RED
BX	BLACK	SX	GRAY
CX	BROWN	TX	TAN
NX	DK. BLUE	VX	PURPLE
OX	ORANGE	WX	WHITE
PX	PINK	YX	YELLOW

THE 'X' INDICATES ONE SOLID COLOR- NO TRACER. WIRES WITH TRACER SHOW BOTH COLORS. EXAMPLE -WR IS WHITE WITH RED TRACER.



Profile/Monogram Top Control Stainless Steel



PDW9200

PDW9280

PDW9700

PDW9800

PDW9880

ZBD6800

ZBD6880

ZBD6890



Profile Top Control Stainless Steel Service Mode

- Service mode allows you to test individual components on the dishwasher.
- Service mode will automatically exit after 30 minutes.
- The START/RESET keypad will EXIT service mode at any time.

To ENTER Service Mode:

Press & hold the **DOWN ARROW** & **HEATED DRY** keypads simultaneously for 3 seconds.

All LEDs will light for 3 seconds when service mode is entered.



Profile Top Control Stainless Steel

6 PAD CONTROL



PAD	Description	Notes
1L	Activates/Deactivates Heater and Fan	Test times out after 6 minutes.
2L	Activates/Deactivates Water Valve	Operates until flood switch opens.
3L	Activates/Deactivates Detergent Cup	Clean LED ON . Can take up to 40 seconds for detergent cup to open.
4L	Activates/Deactivates Auxilliary Pump	Cookware LED ON .
5L	Activates/Deactivates Main Pump	Normal LED ON .
START/RESET	Use to exit Service Mode	



Profile Top Control Stainless Steel

7 PAD CONTROL



PAD	Description	Notes
1L	Activates/Deactivates Heater and Fan	Test times out after 6 minutes.
2L	Not Used	NA
3L	Activates/Deactivates Water Valve	Operates until flood switch opens.
4L	Activates/Deactivates Detergent Cup	Clean LED ON . Can take up to 40 seconds for detergent cup to open.
5L	Activates/Deactivates AuxilliaryPump	Cookware LED ON .
6L	Activates/Deactivates Main Pump	Normal LED ON .
START/RESET	Use to exit Service Mode	



Profile Top Control Stainless Steel Factory Test Mode

- Factory Test Mode must be used to calibrate the main control, turbidity sensor & keypad membrane whenever one of these components is replaced.
- Factory Test Mode can be used to test the thermistor & transmitter in the turbidity sensor.
- Disconnect power for at least 15 seconds, then reconnect power to enter Factory Test Mode.
- Factory Test Mode must be entered within 2 minutes of reconnecting power or the test is unavailable.



Profile Top Control Stainless Steel Factory Test Mode

To ENTER Factory Test Mode:

After power has been reconnected:

Press & hold the **UP ARROW** & **DOWN ARROW** keypads simultaneously for 3 seconds. All LEDs will light for 10 seconds when factory test mode is entered.



Press **DELAY START** or **DELAY HOURS** (on some models) to quickly advance to the next step (not available during steps 6 or 10).



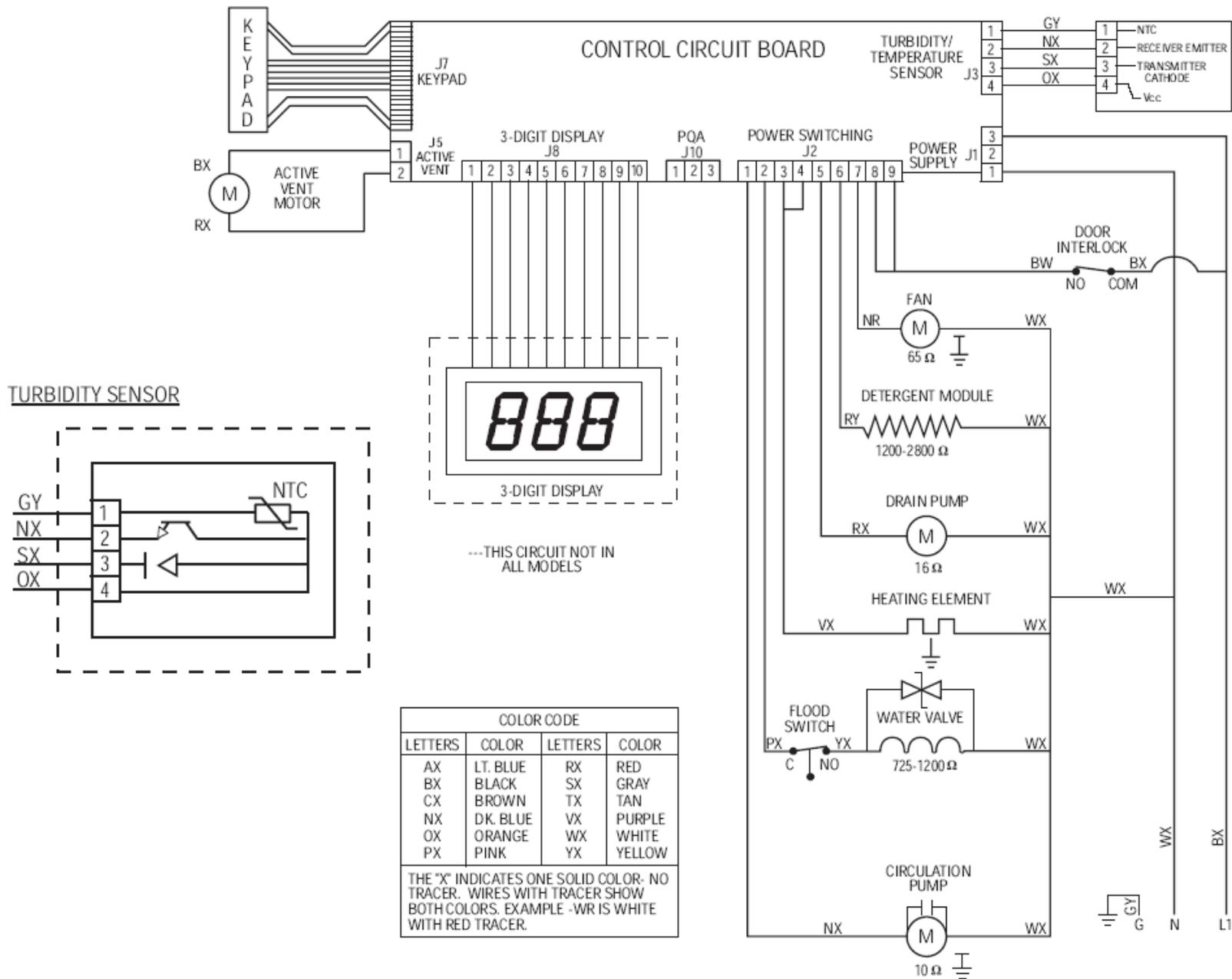
Factory Test Mode

1. All LEDs illuminate for 10 seconds.
2. Vent fan energizes for 5 seconds, then the active vent closes.
3. Detergent module is activated. Water valve energizes for 60 seconds.
4. Main pump is energized. Water valve continues filling for an additional 10 seconds.
5. Heater is energized & main pump continues to run for an additional 60 seconds.
6. Dishwasher pauses for 40 seconds. During this time, the turbidity sensor, control module board & membrane key panel are being calibrated.

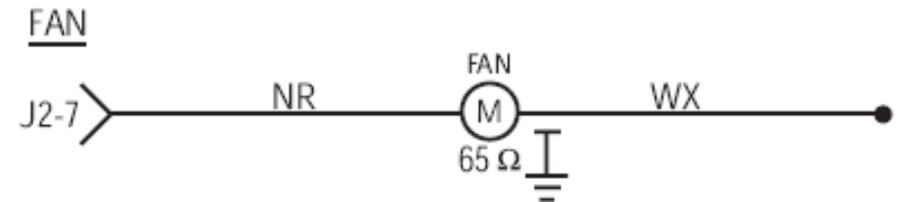
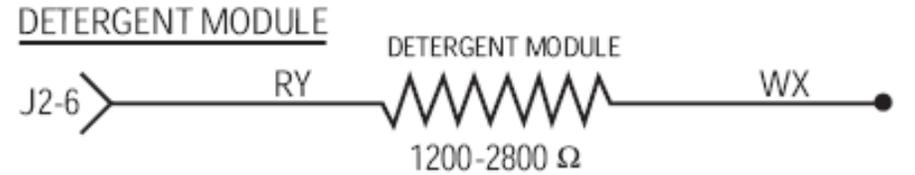
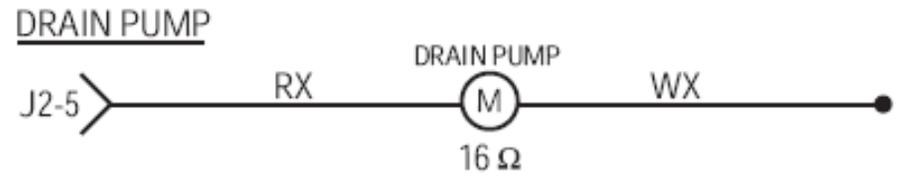
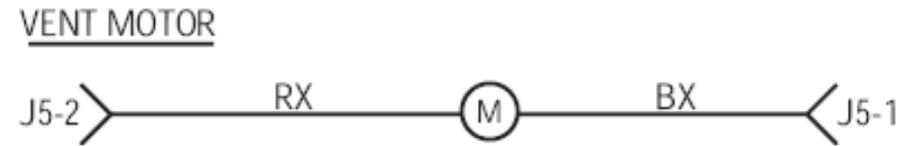
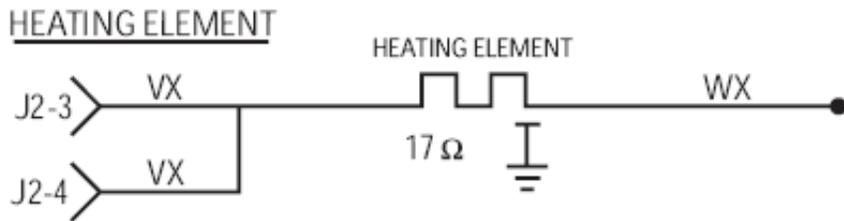
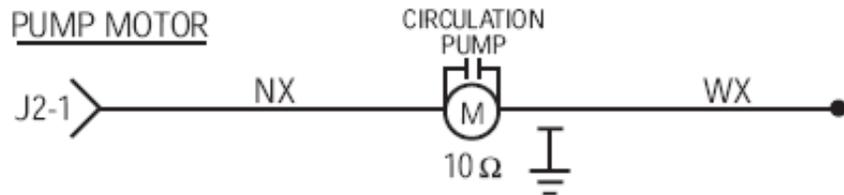
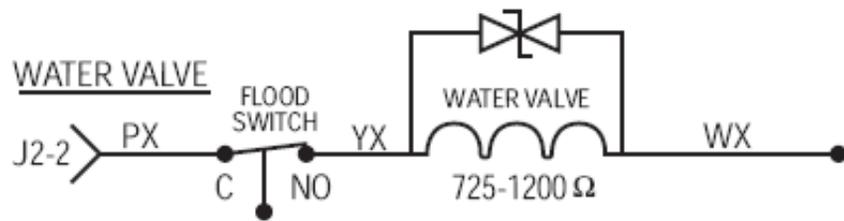
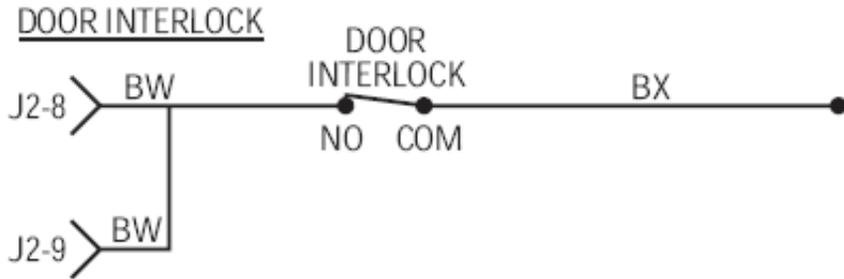
NOTE: The control module will beep continuously & the lock icon LED will light if: Turbidity/Temp Sensor or EPROM is defective.

7. Drain pump energizes for 75 seconds.
8. The detergent module is energized for 60 seconds & the water valve is energized for 70 seconds.
9. The heater and main pump are energized for 60 minutes.
Press DELAY START (DELAY HOURS on some models) to advance to the next step.
10. Active vent opens, drain pump is energized for 75 seconds, then active vent closes.



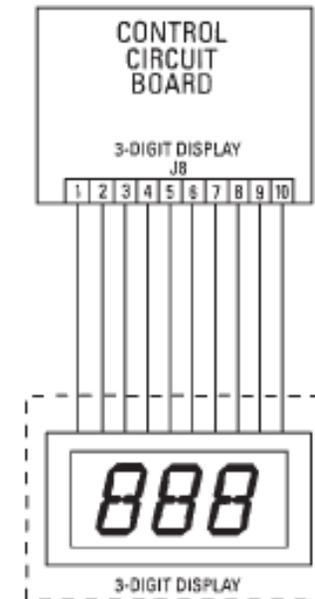
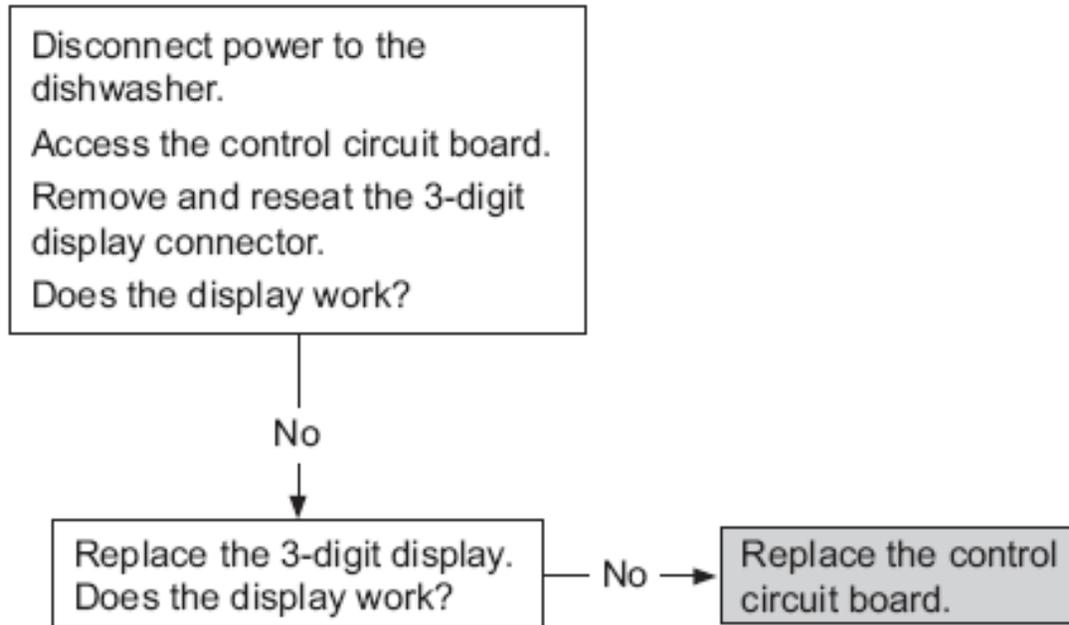


Profile Top Control Stainless Steel



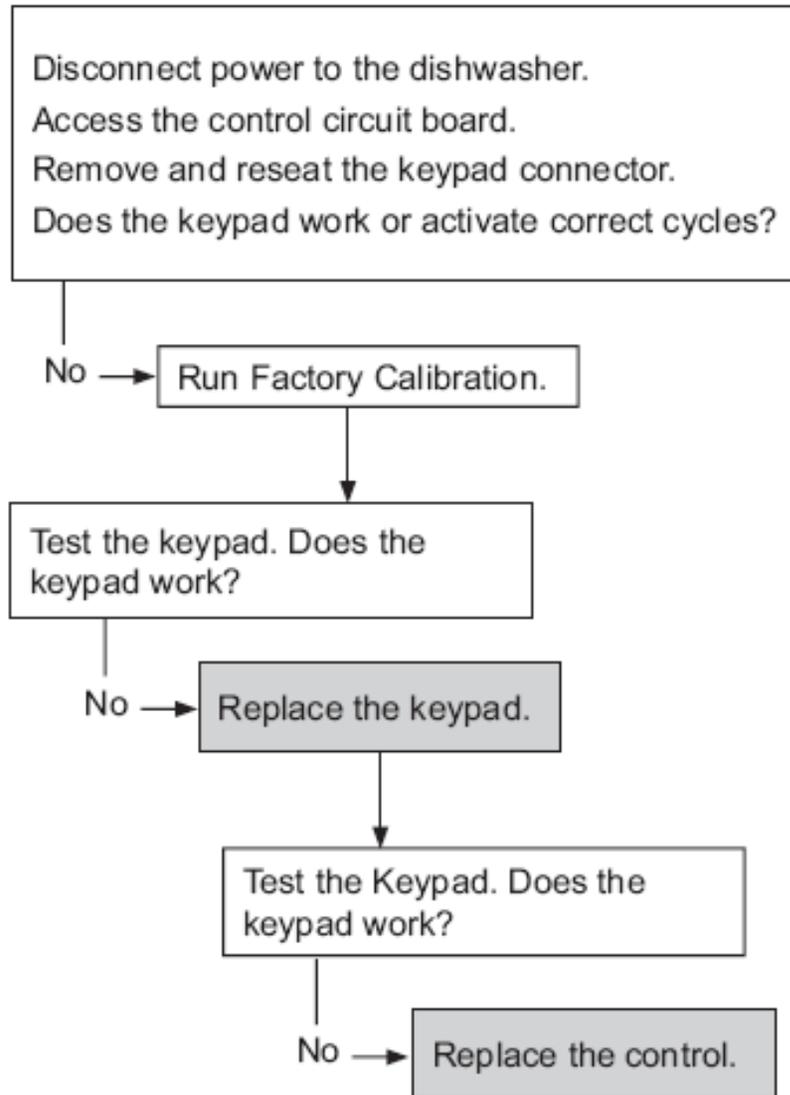
Troubleshooting

3-Digit Display Does Not Work

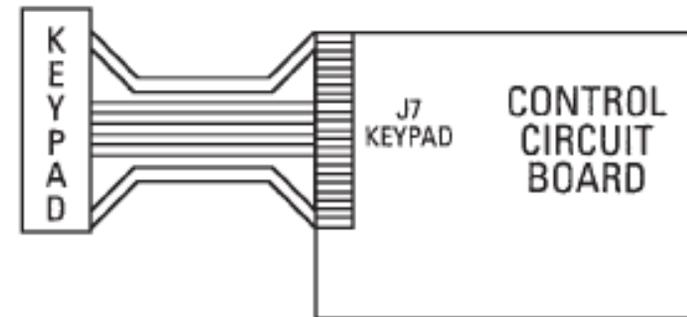


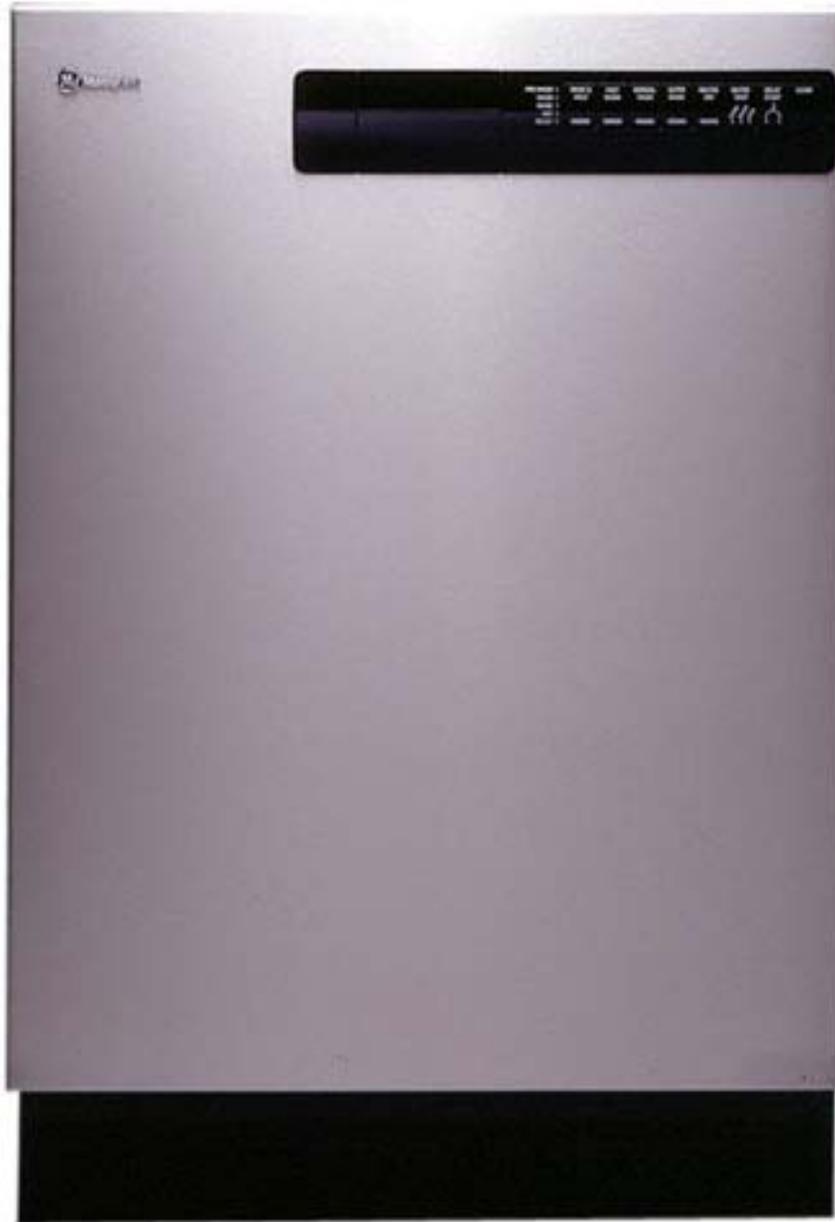
Troubleshooting

Keypad Does Not Work



Note: Carefully remove the keypad label. When replacing the keypad label, make sure the lights and pads align properly with the membrane.





Monogram DW

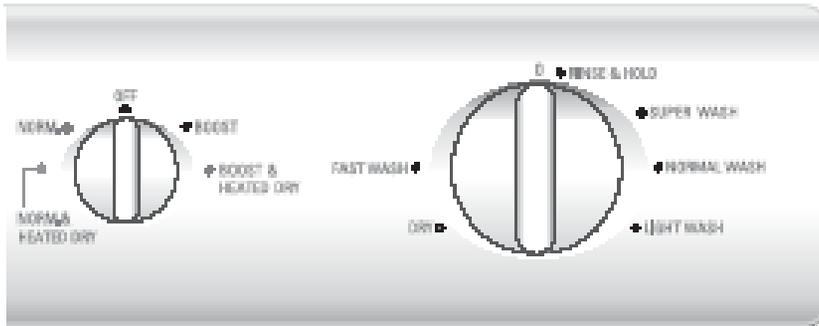
ZBD5600

ZBD5700

ZBD5900



Monogram DW



The Monogram 5600 model is fitted with a soft-set rotary self-indexing timer, which has a detent mechanism to index the timer control knob to the 'start' position of a wash program. Six detent positions from the 12 o'clock position form the actual programs as follows: *Rinse & Hold*, *Super Wash*, *Normal Wash*, *Light Wash*, *Dry* and *Fast Wash*.

A fill time switch is fitted behind the kick panel to select an 80 or 100 second fill time.

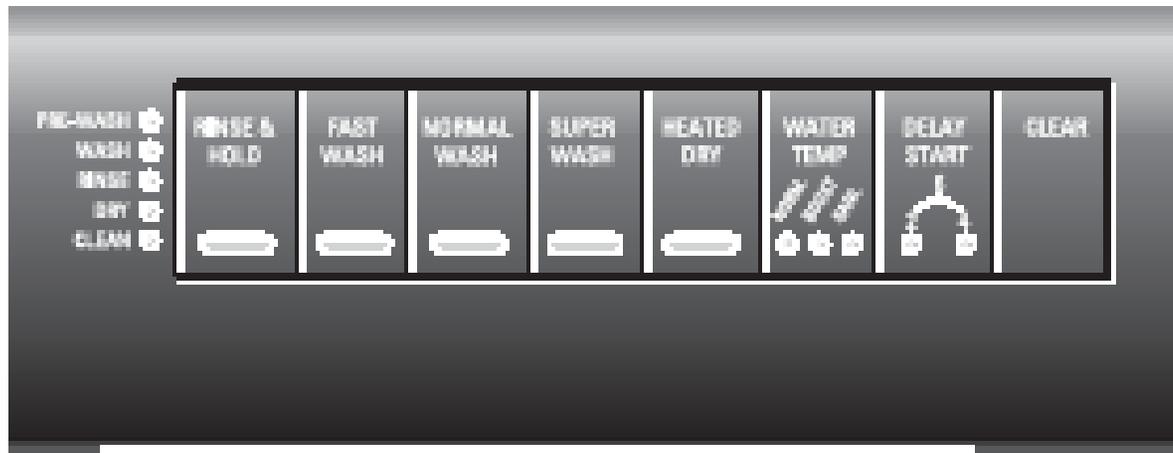
The rotary power select control knob - *Off / Boost / Boost + Heated Dry / Normal / Normal + Heated Dry* provides a definite "Off" position. The selection of "Normal" is an "On" position and also selects the "Normal" program which has a 126°F wash temperature. The element "Dry" program is available by selecting "Normal + Heated Dry". The timer control knob will not advance into the "Heated Dry" mode if "Heated Dry" is not selected.

Selection of "Boost" provides wash temperatures of 142°F and the element "Dry" program (element drying) is available by selecting "Boost + Heated Dry". The "Fast Wash" program is an express wash program and is not provided with a "Dry" mode. Residual drying provides an efficient form of drying.

CAUTION: Do not pull the timer control knob towards you to switch on dishwasher. If the timer control knob is pulled, it will come off the shaft.



Monogram DW



Showroom Display:

Progress indicator LED's and program/option LED's individually illuminate in a continuous sequence.

Display/Buzzer Test:

Test program/option LED's, progress indicator LED's and the buzzer.

Relay/Triac Output Test:

Test all power control board (PCB) outputs.

Fault Indication Mode:

A program/option LED flashes to indicate a fault code. Fault codes are stored in EEPROM for later access.

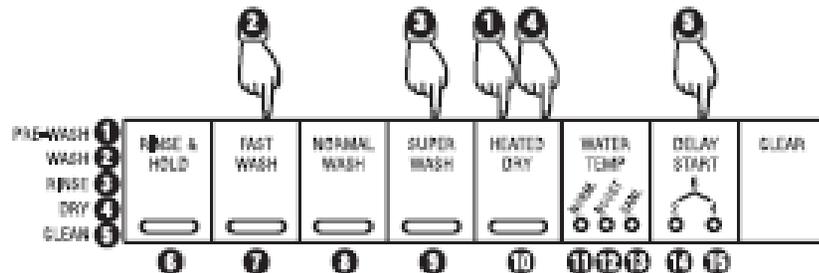
NOTE: Before attempting any self diagnosis functions ensure that the dishwasher is not in Child Lockout Mode or in Buzzer Silencing Mode (refer to Operating Instructions).



Monogram DW

4.2.1.1 To access the Showroom Display Mode, the following buttons must be pressed in sequence: *Heated Dry, Fast Wash, Super Wash, Heated Dry, & Delay Start* with the door closed.

4.2.1.2 All indicator LED's will illuminate together with the buzzer sounding, then the LED's light individually in the following sequence: (1) Pre Wash, (2) Wash, (3) Rinse, (4) Dry, (5) Clean, (6) Rinse & Hold, (7) Fast Wash, (8) Normal Wash, (9) Super Wash, (10) Heated Dry, (11) Water Temp - Normal (12) Water Temp - Boost, (13) Water Temp - Sani, (14) Delay Start - 2hr, (15) Delay Start - 4hr. The display will continue even if the door is opened.

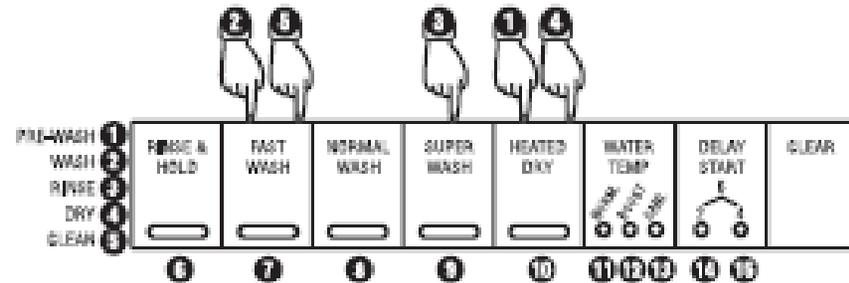


4.2.1.3 To cancel the display, repeat the sequence above: *Heated Dry, Fast Wash, Super Wash, Heated Dry, & Delay Start* with the door closed.

NOTE: Button operation to cancel the showroom display mode is not confirmed by buzzer sound.

4.2.2.1 To access the Display/Buzzer Test Mode, the following buttons must be pressed in sequence: *Heated Dry, Fast Wash, Super Wash, Heated Dry, & Fast Wash* with the door closed.

4.2.2.2 All indicator LED's will illuminate together with the buzzer sounding and then each indicator LED will illuminate individually in the following sequence: (1) Pre Wash, (2) Wash, (3) Rinse, (4) Dry, (5) Clean, (6) Rinse & Hold, (7) Fast Wash, (8) Normal Wash, (9) Super Wash, (10) Heated Dry, (11) Water Temp - Normal (12) Water Temp - Boost, (13) Water Temp - Sani, (14) Delay Start - 2hr, (15) Delay Start - 4hr.

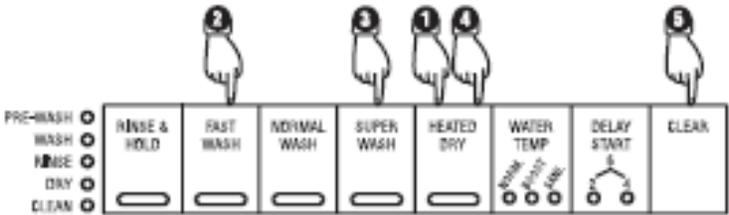


4.2.2.3 To cancel, either enter the RELAY/TRIAC OUTPUT TEST (refer to next section 4.2.3) or follow the sequence: *Heated Dry, Fast Wash, Super Wash, Heated Dry* and *Clear* with the door closed.



Monogram DW

4.2.3.1 To access the Relay/Triac Output Test Mode, the following buttons must be pressed in sequence: *Heated Dry*, *Fast Wash*, *Super Wash*, *Heated Dry* and *Clear* with the door closed.



4.2.3.2 The processor will select the temperature calibration test as a default mode and illuminate a number of program/option LED's depending on the temperature at the thermistor. A total of seven relay/triac outputs of the power control board (PCB) can be accessed and individually tested by manually energizing/de-energizing the relay/triacs and the actual supply circuits to the outboard components of the dishwasher.

4.2.3.3 Press the appropriate button to energize the relay/triac output you wish to test according to the following table:

Program/Options button to press...	...to test Relay/Triac output.
Fast Wash	Detergent/Rinse Aid Dispenser.
Normal Wash	Heating Element (Drying) 1 second on, 2 seconds off.
Super Wash	Heating Element.
Heated Dry	Drain Pump.
Water Temperature	Wash Pump.
Delay Start	Detergent/Rinse Aid.
Clear	Water fill valve.

During the relay/triac output test, the program and option LED's function as a temperature indicating bar graph. The number of LED's on at any one time is dependent upon thermistor temperature. A temperature of 113°F is indicated by only the *Heated Dry* LED illuminating. A temperature of above 210°F causes all program and option LED's to flash at 0.5 second intervals. No LED's are displayed for a temperature below 32°F. Refer to the table below:

Temp °F	Rinse	Fast Wash	Normal Wash	Super Wash	Heated Dry	Water Temp	Delay
< 34	Off	Off	Off	Off	Off	Off	Off
34-75	Off	Off	Off	Off	Off	Off	On
76-93	Off	Off	Off	Off	Off	On	On
95-111	Off	Off	Off	Off	On	On	On
113	Off	Off	Off	Off	On	Off	Off
115-129	Off	Off	Off	On	On	On	On
131-147	Off	Off	On	On	On	On	On
149-165	Off	On	On	On	On	On	On
167-210	On	On	On	On	On	On	On

4.2.3.5 Press the same program/options button to de-energize the relay/triac output.



Monogram DW

During the relay/triac output test (latching mode), the wash progress indicator LED operates as a pressure switch function indicator. A circuit between No. 1 terminal and No. 2 terminal exists when the dishwasher is empty and the wash LED is OFF. As water enters the tub and the water level increases, the pressure switch contacts open between No. 1 terminal and No. 2 terminal, resulting in an open circuit and the wash progress indicator LED will be illuminated.

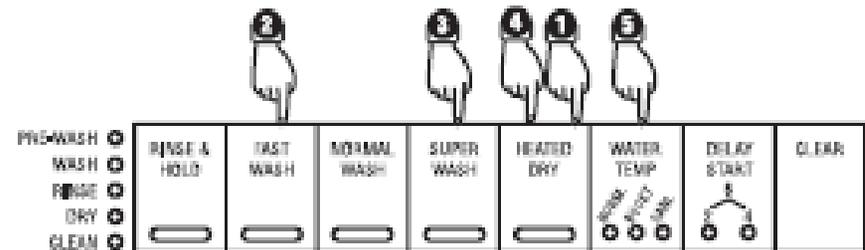
4.2.3.7 To cancel the relay/triac output test mode, press the following buttons in sequence: *Heated Dry, Fast Wash, Super Wash, Heated Dry, & Clear* with the door closed.

To assist with fault diagnosis of the dishwasher, the program/option LED's are utilized to indicate a diagnostic code. The relevant program/option LED's flash at a rate of 2 ON/OFF cycles per second once a fault is detected. If two or more faults occur during the wash program, the relevant program/option LED's flash at the 2 ON/OFF cycles per second rate.

Fault indication remains on if the door is opened and can only be cleared from the program/option LED's by pressing *Clear* at the end of the wash cycle or by starting a wash cycle.

Fault indication status is saved in EEPROM for later access.

4.2.4.1 To access the fault codes, the following buttons must be pressed in sequence: *Heated Dry, Fast Wash, Super Wash, Heated Dry, & Water Temp.*



4.2.4.2 The fault codes (if any are recorded), will then be displayed by flashing the relevant program/option LED's. Pressing the Clear button will clear the retained fault codes from the memory and the power board control (PCB) will be in standby mode with all LED's OFF.

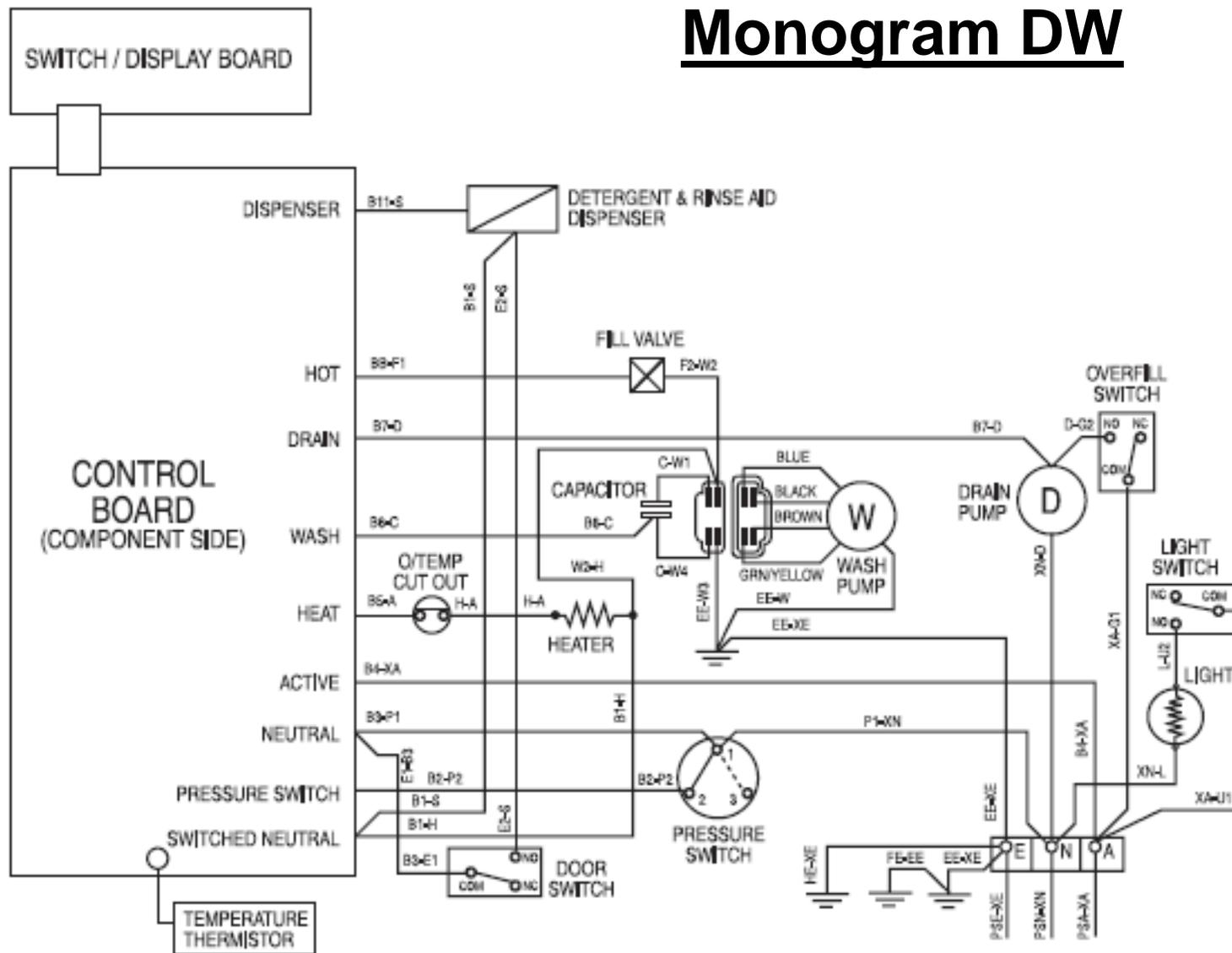
4.2.4.3 Fault Indication Code: There are 5 Fault Codes as per the following table:

Fault Code	Fault Indication	Probable Fault
<i>Normal Wash</i>	Not Heating	Water Temp. rise <8°F in 15 min.
<i>Super Wash</i>	Over Temp.	Water Temp. over 180°F
<i>Fast Wash</i>	Not Filling	Fill Time option expired
<i>Rinse & Hold</i>	Not Draining	Not drained within 5 min.
<i>Heated Dry</i>	Overfill	Under Sump overfill switch closed

4.2.4.9 To Exit Fault Indication Mode: Simply press the *Clear* button.



Monogram DW



NOTE: Schematics and Wiring Diagrams label **L1** as **A** for **Active**, **N** for **Neutral**, and **Ground (GND)** as **E** for **Earth**.





Monogram DW

ZBD6400

ZBD6500

ZBD6600

ZBD6700

ZBD6900

ZBD7000

ZBD7100



Monogram 6000/7000 Series

To recall fault codes, follow the chart below by pressing the buttons in the order listed:

6400/6500	6700/6900
#5 Heated Dry	#5 Smart Dry
#2 Normal Wash	#2 Normal Wash
#4 Sani Wash	#4 Rinse Only
#5 Heated Dry	#5 Smart Dry
#6 Water Temp	#6 Water Temp
6905	7000 Series
#5 Smart Dry	#6 Smart Dry
#2 Normal Wash	#2 Normal Wash
#4 Rinse Only	#4 Rinse Only
#5 Smart Dry	#6 Smart Dry
#6 Water Temp	#5 Water Temp

Notes: The buzzer will then sound for 1 second to indicate that the Fault Indication mode has been accessed. Note: Buzzer silencing mode has no effect in this mode.

If no fault codes were saved, the control is to return to the stand-by (off) state with no LEDs illuminated.



Monogram 6000/7000 Series

Fault detected	Condition	Fault code LED
Not Heating	< 9 deg F in 15 minutes	Normal Wash
Over Temperature	Greater than 180°F, (but less than 210°F).	Pots & Pans or Heavy Duty indicator LED will flash at the standard rate (0.5 second on 0.5 second off).
Door thermistor.	Open circuit thermistor, (temperature sensed is below 32°F) or short circuit thermistor, (temperature sensed is above 210°F).	Pots & Pans or Heavy Duty indicator LED will flash slowly (1 second on, 1 second off).
Not filling	Not filled after selected fill time	China Crystal or Light Wash
Not draining	Not drained in 5 minutes	Rinse Only or Sani Wash
Overfill	Leak Detection switch closed or 2 nd level pressure switch	Heated Dry or Smart Dry
Turbidity Sensor		
High Signal	Count is greater than 65,279 in 0.4 seconds	Water Temp HIGH or SANI.
No Signal & Low Signal	Counter did not receive pulses from sensor Count is less than 50 in 3 seconds	Delay Start 2hr
Turbidity Temp Sensor	Thermistor shorted ,open or constant	Delay Start 4hr

To exit the fault indication mode, and clear any saved fault codes from memory, press and hold down the START/CANCEL button for 3 seconds. The control will then go into a standby (off) state with all LEDs off. *Note: The Average Clean Water Turbidity (ACWT) value will also be cleared.*

To exit the fault indication mode, without clearing the saved fault codes, repeat the button pressing sequence shown above, or remove power.



Monogram 6600 Series

Activating the Fault Indication mode:

If a fault has been detected by the Field Test Cycle, or by the Factory Test Cycle, then the Fault Indication mode will be automatically activated, and the fault will be reported as indicated below.

To manually recall the saved fault codes, carry out the following sequence:

1. Ensure the dishwasher is in Stand-by (OFF) with no program LEDs on;
2. Align the WASH CYCLES and HEAT OPTIONS knobs so that both knobs are horizontal with their position indicators pointing away from each other;
3. Press and hold the Start/Cancel button for 3 seconds.

Notes: The buzzer will then sound for 1 second to indicate that the Fault Indication mode has been accessed. Note: Buzzer silencing mode has no effect in this mode.

If no fault codes were saved, the control is to return to the stand-by (off) state with no LEDs illuminated.

To exit the fault indication mode, and clear any saved fault codes from memory, press and hold down the START/CANCEL button for 3 seconds. The control will then go into a stand-by (off) state with all LEDs off. *Note: The Average Clean Water Turbidity (ACWT) value will also be cleared.*

To exit the fault indication mode, without clearing the saved fault codes: Remove power; or carry out the following sequence:

1. Align the WASH CYCLES and HEAT OPTIONS knobs so that both knobs are horizontal with their position indicators pointing away from each other;
2. Press and hold the Start/Cancel button for 3 seconds.



Monogram 6000/7000 Series

knob position.

6600	6605	Fault type to check for:	Wash Cycles indicator LED will be illuminated (fault detected) if:
Normal Wash.	Normal Wash.	<i>Not Heating</i>	< 9 °F in 15 minutes.
Pots & Pans	Heavy Duty.	<i>Over Temperature</i>	Greater than 180°F, (but less than 210°F).
China Crystal.	Light Wash.	<i>Not filling</i>	Not filled after selected fill time.
Rinse Only.	Rinse Only.	<i>Not draining</i>	Not drained in 5 minutes.
Speed Wash.	Speed Wash.	<i>Overfill</i>	Leak Detection switch closed or 2 nd level pressure switch activated.

knob position.

6600	6605	Fault type to check for:	Heat Options indicator LED will be illuminated (fault detected) if:
Normal	Normal	<i>Open or short circuit Door thermistor.</i>	Temperature sensed was below 32°F or above 210°F.
Normal & Heat Dry.	Normal & Heat Dry.	<i>Open or short circuit Door thermistor.</i>	Temperature sensed was below 32°F or above 210°F.
		<i>Turbidity Sensor</i>	
Sanitize.	Sanitize.	<i>High Signal</i>	Count was greater than 65,279 in 0.4 seconds
High Temp. & Heat Dry.	High Temp. & Heat Dry.	<i>No Signal & Low Signal</i>	Counter did not receive pulses from sensor. Count was less than 50 in 3 seconds.
High Temp.	High Temp.	<i>Turbidity Temp Sensor</i>	Thermistor was shorted ,open or constant.



Relay/Triac Output Test - Electronic

By pressing the following button sequence the relay output test mode can be accessed.

6400/6500

#5 Heated Dry

#2 Normal Wash

#4 Sani Wash

#5 Heated Dry

#8 Start Cancel

6700/6900

#5 Smart Dry

#2 Normal Wash

#4 Rinse Only

*#5 Smart Dry**

#8 Start Cancel

6905

#5 Smart Dry

#2 Normal Wash

#4 Rinse Only

*#5 Smart Dry**

#8 Start Cancel

7000 Series

#6 Smart Dry

#2 Normal Wash

#4 Rinse Only

*#6 Smart Dry**

#8 Start Cancel

* **Note:** For 6700/6900, 6905 and 7000 series:

No beep will be heard when Smart Dry is pressed the second time, as Smart Dry is not a valid Customer option for a Rinse Only wash that was selected just prior.



Monogram 6000/7000 Series

Individual outputs can then be energized/de-energized by pressing the corresponding control button.

CONTROL BUTTON				OUTPUT CONTROLLED
6400/6500	6700/6900	6905	7000 Series	
#1 Pots & Pans	#1 Pots & Pans	<i>No Turbidity sensor fitted.</i>	#1 Pots & Pans	Turbidity Sensor. The SENSING LED, (or POTS & PANS LED on 7000 series), will light when there are valid turbidity sensor readings, (Refer 2.6).
#2 Normal Wash	#2 Normal Wash	#2 Normal Wash	#2 Normal Wash	Detergent/Rinse Aid Dispenser.
#3 China Crystal	#3 China Crystal	#3 Light Wash	#3 China Crystal	Drain Pump.
#4 Sani Wash	#4 Rinse Only	#4 Rinse Only	#4 Rinse Only	Heating Element + <i>Drying LED*</i> .
#5 Heated Dry	#5 Smart Dry	#5 Smart Dry	#6 Smart Dry	Continuously pulses the Heating element as per the Smart/Heated Dry – Post Heatup Drying Pulse specification.
#6 Water Temp	#6 Water Temp	#6 Water Temp	#6 Water Temp	Wash Pump.
#7 Delay Start	#7 Delay Start	#7 Delay Start	#7 Delay	Fan Motor.
#8 Start Cancel	#8 Start Cancel	#8 Start Cancel	#8 Start Cancel	Fill valve, (limited to 3 minutes o prevent flooding).

* 7000 Series note: There is no Drying LED on the 7000 series. Special attention is required when activating the heater, to ensure it is not accidentally left on.

The relay / triac output test can be cancelled by, repeating the button sequence shown above, or by removing power.



Relay/Triac Output Test - Rotary



To access the output latching mode on Rotary Models 6600, 6605 align the wash cycles and heat options indicators on the knobs with the Start/Cancel button (both knobs horizontal and pointing towards start/cancel button, then press and hold for 3 seconds the Start/Cancel button when no program LEDs are on. Both LEDs are to turn on for 1 second to indicate that the output test mode has been accessed.

To turn on an output, rotate the control knobs to the corresponding output to be controlled. (Refer table below). Then press the Start/Cancel button momentarily to latch that output on. Pressing the Start/Cancel button again will turn that output off. More than one output can be latched on at any one time.

To monitor the status of an input signal, rotate the control knobs to the corresponding input to be monitored, (Refer table below). The WASH CYCLES LED will then indicate the status of the selected input. *(Note: To aid testing, the Water Level can be monitored while controlling the Drain pump, Wash pump, or the Fill valve).*



CONTROL KNOB POSITIONS

(Wash Cycle / Heat Option)

Monogram DW

6600	6605	OUTPUT CONTROLLED.	INPUT MONITORED.
Pots & Pans / Normal	<i>Not applicable, no turbidity sensor.</i>	Turbidity Sensor.	Turbidity Sensor. The WASH CYCLES LED will illuminate when there are valid turbidity sensor readings.
Normal Wash / Normal	Normal Wash / Normal	Detergent/ Rinse Aid Dispenser.	Rinse Aid Level Switch. The WASH CYCLES LED will illuminate when the low rinse aid reed switch is closed.
China Crystal / Normal	Light Wash / Normal	Drain Pump Motor.	Water Level. The WASH CYCLES LED will illuminate when water is detected, and Flash at 1Hz. when overflow is detected. <i>Note: Overflow can not be detected while the drain pump is activated.</i>
Speed Wash / Normal	Speed Wash / Normal	Heating Element (Calrod) & HEAT OPTION LED.	Door Thermistor. The WASH CYCLES LED will illuminate when a calibration point of 113°F is reached. Open and short circuit detection also exists.
Rinse Only / Normal	Rinse Only / Normal	Wash Pump.	Water Level. The WASH CYCLES LED will illuminate when water is detected, and Flash at 1Hz. when overflow is detected.
Pots & Pans / Normal & Heat Dry	Heavy Duty / Normal & Heat Dry	Drying Fan Motor.	None. The WASH CYCLES LED will not illuminate.
Normal Wash / Normal & Heat Dry	Normal Wash / Normal & Heat Dry	Fill valve, (limited to 3 minutes to prevent flooding).	Water Level. The WASH CYCLES LED will illuminate when water is detected, and Flash at 1Hz. when overflow is detected.

The output test mode can be cancelled by, pressing and holding down the Start/Cancel button for 3 seconds, or by turning off the power to the control.



Temperature Calibration Test

During the Relay/Triac output test (Refer 4.10.1) the program and option LEDs form a bar graph display indicating the temperature of the door thermistor. See table below.

Note: A thermistor resistance of 1K7=113° F water temperature.

LEGEND: O = LED OFF X = LED ON

Thermistor Temperature (°F)

	POTS & POTS	NORMAL WASH	CHINA CRYSTAL	SANI WASH	HEATED DRY	WATER TEMP	DELAY START
6400 / 6500	POTS & POTS	NORMAL WASH	CHINA CRYSTAL	SANI WASH	HEATED DRY	WATER TEMP	DELAY START
6700 / 6900	POTS & POTS	NORMAL WASH	CHINA CRYSTAL	RINSE ONLY	SMART DRY	WATER TEMP	DELAY START
6905	HEAVY DUTY	NORMAL WASH	LIGHT WASH	RINSE ONLY	SMART DRY	WATER TEMP	DELAY START
34-75 DEG	O	O	O	O	O	O O O	XX
77-93 DEG	O	O	O	O	O	XXX	XX
95-111 DEG	O	O	O	O	X	XXX	XX
113 DEG	O	O	O	O	X	O	O
115-129 DEG	O	O	O	X	X	XXX	XX
131-147 DEG	O	O	X	X	X	XXX	XX
149-165 DEG	O	X	X	X	X	XXX	XX
167-210 DEG	X	X	X	X	X	XXX	XX

An open circuit thermistor or temperature sensed below 32°F - all program and option LEDs are to turn on.

A closed circuit thermistor or temperature sensed above 210°F - all program and option LEDs are to flash at a 0.5 second on 0.5 second off rate.



Temperature Calibration Test – Models 6600/6605/7000

During the Relay/Triac output test, (Refer 4.10.1), If the temperature calibration point of 113°F is reached, then Smart Dry LED will illuminate on 7000 series machines, alternatively the WASH CYCLES LED will illuminate on Rotary machines (provided Door Thermistor monitoring was selected).

If an open circuit thermistor is detected, (temperature sensed is below 32° F), then the indicator LED will flash at a 1 second on, 1 second off rate.

If a short circuit thermistor is detected, (temperature sensed is above 210° F), then the indicator LED will flash at a 0.5 second on 0.5 second off rate.

Notes: No other thermistor temperatures are displayed.

A door thermistor resistance of 1K7N = 113° F water temperature.



Field Service Test Mode

To start the Field Test Cycle on push button models, press the buttons in the sequence shown below:

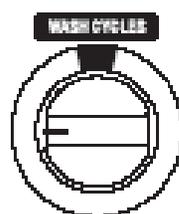
6400/6500	6700/6900	6905	7000 Series
#5 Heated Dry	#5 Smart Dry	#5 Smart Dry	#6 Smart Dry
#2 Normal Wash	#2 Normal Wash	#2 Normal Wash	#2 Normal Wash
#4 Sani Wash	#4 Rinse Only	#4 Rinse Only	#4 Rinse Only
#5 Heated Dry	#5 Smart Dry*	#5 Smart Dry*	#6 Smart Dry*
#1 Pots & Pans	#1 Pots & Pans	#1 Heavy Duty	#1 Pots & Pans

* **Note:** For 6700/6900, 6905 and 7000 series:

No beep will be heard when Smart Dry is pressed the second time, as Smart Dry is not a valid Customer option for a Rinse Only wash that was selected just prior.

To start the Field Test Cycle on Rotary models, the following steps must be performed:

1. Ensure the dishwasher is in Standby (OFF) with no program LEDs on;
2. Align the WASH CYCLES and HEAT OPTIONS knobs so that both knobs are horizontal with their position indicators pointing away from the Start/Cancel button;
3. Press and hold the Start/Cancel button for 3 seconds.



Hold 3 seconds



Monogram 6000/7000 Series

FIELD TEST CYCLE

STEP	ACTION	TIME/sec	COMMENTS (Note 1).
1	IDENTIFY MODEL TYPE Disable Child Lockout and Buzzer Silencing Modes. Set Fill Time = 30 seconds. Clear any fault codes stored in memory.	5	6400/6500 2 LEDs on 2 Beeps 6700/6900 7000 3 LEDs on 3 Beeps 6905 4 LEDs on 4 Beeps 6600 Heat Options LED on 1 Beep 6605 Wash Cycles LED on 4 Beeps
2	LED and Button TEST	Unlimited	<p>For Push button models: The buzzer will sound for 0.5 seconds at the start of the step. Turn each Status LEDs on individually for a 1/2 second from top to bottom, (if fitted). Each Program/Option LED will turn on individually, from left to right and top to bottom, progressing only when the button associated with the LED is pressed. Note: If multiple LEDs are associated with a button then the button will need to be pressed once for each LED. All LEDs will then turn on until the Start/Cancel button is pressed.</p> <p>For Rotary control models: Both LEDs and Buzzer on for 3 seconds. Then each LED on individually for a 1/2 second from left to right.</p>
3	Checks TURBIDITY sensor for valid frequency and valid thermistor resistance, (only checked for turbidity sensing models). Checks DOOR THERMISTOR for valid resistance.	3	The buzzer will sound for 0.5 seconds at the start of the step. The Sensing or Pots & Pans LED will be on.



Monogram 6000/7000 Series

4	FILL.	10	The buzzer will sound for 0.5 seconds at the start of the step. The Normal or Pots Normal LED will be on. <i>(Limited to 3 minutes if STEP HOLD function is activated. Refer section 4.9.7 Overfill test).</i>
5.1	DRAIN.	15	The buzzer will sound for 0.5 seconds at the start of the step. The China Crystal LED, (or Light Wash LED on a Pot washer), will be on.
5.2	If (Pressure switch = Reset) continue, else indicate NOT DRAINING error.	n/a.	The China Crystal LED, (or Light Wash LED on a Pot washer), will be on.
6.1	FILL.	30	The buzzer will sound for 0.5 seconds at the start of the step. The Rinse Only or Sani Wash LED will be on. <i>(Limited to 3 minutes if STEP HOLD function is activated). Refer section 4.10.7 Overfill test).</i>
6.2	If (pressure switch = Set) continue, else indicate NOT FILLING error.	n/a	The Rinse Only or Sani Wash LED will be on.
7.1	FILL + WASH.	30	The buzzer will sound for 0.5 seconds at the start of the step. The Rinse Only or Sani Wash LED will be on. <i>(Limited to 3 minutes if STEP HOLD function is activated). Refer section 4.10.7 Overfill test).</i>
7.2	PAUSE	3	The Rinse Only or Sani Wash LED will be on.



Monogram 6000/7000 Series

8	WASH + DISPENSE.	60	The buzzer will sound for 0.5 seconds at the start of the step. The Smart or Heated Dry LED will be on.
9	WASH + HEAT to 140°F. IF (temperature rise is not greater than 9°F in 15 minutes) THEN indicate NOT HEATING error.	Max 20 minutes	The buzzer will sound for 0.5 seconds at the start of the step. The Water Temp Normal LED will be on.
10	WASH	30	The buzzer will sound for 0.5 seconds at the start of the step. The Water Temp Hot or Sani LED will be on.
11.1	FAN + DRAIN	20	The buzzer will sound for 0.5 seconds at the start of the step. The Delay Start 2hr LED will be on.
11.2	If (Pressure switch ==Reset) continue, else indicate NOT DRAINING error.	n/a	The Delay Start 2hr LED will be on.
11.3	FAN + DRAIN	30	The Delay Start 2hr LED will be on.
12	FAN	40	The buzzer will sound for 0.5 seconds at the start of the step. The Delay Start 4hr LED will be on.
	Test Complete.	n/a	The buzzer will sound for 0.5 seconds. CLEAN LED is on.



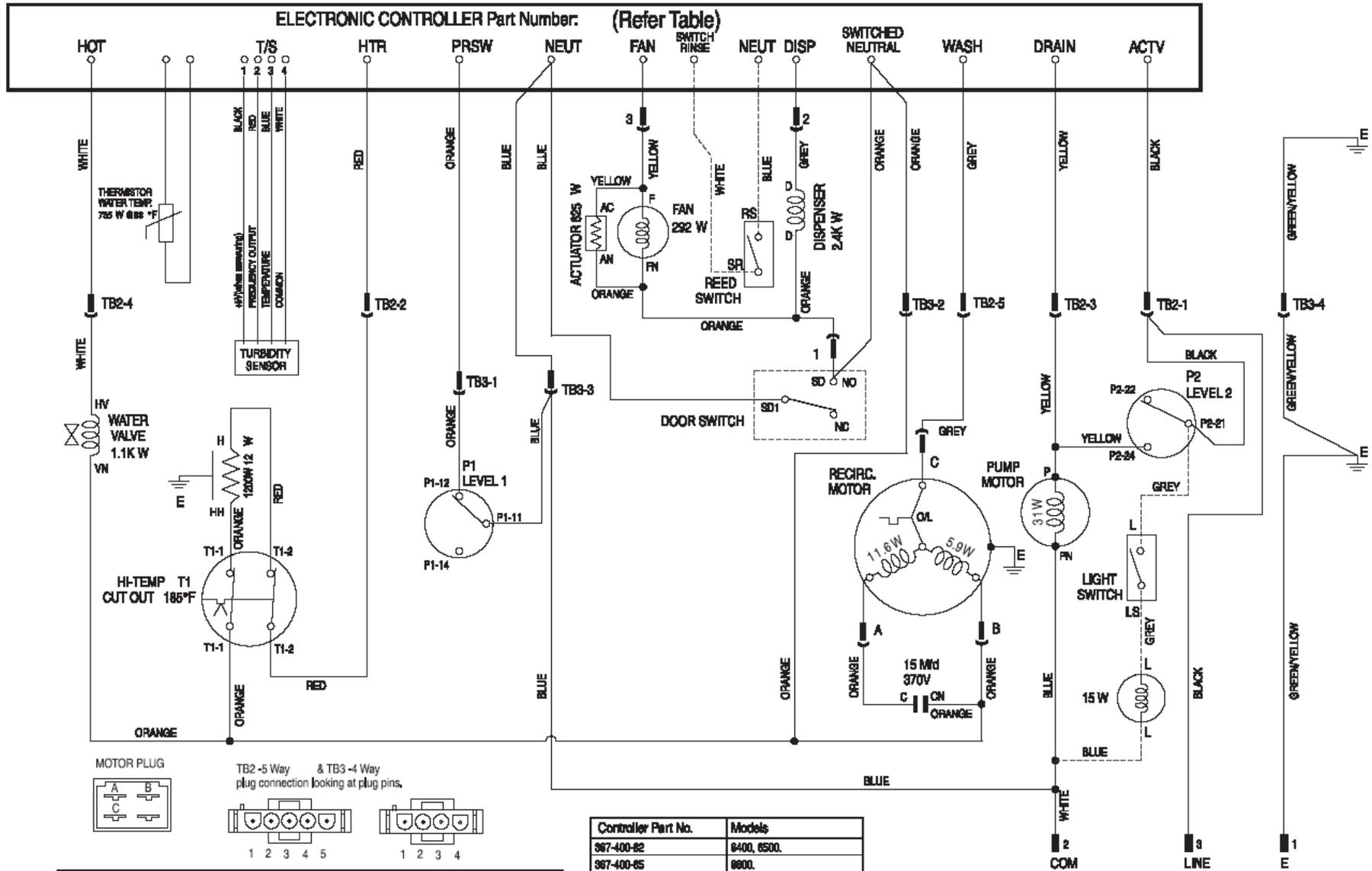
Monogram 6000/7000 Series

Notes:

1. Rotary models do not have any of the specific indicator LEDs mentioned. For rotary models, the only indication of progress from one major step to another is the buzzer sounding for 0.5 seconds at the start of each major step, where indicated.
2. If a fault is detected during the test cycle, then the controller will: Stop the test; Shutdown all outputs; Sound the buzzer continuously; Immediately indicate the fault using the same indication method as described in section 4 FAULT INDICATION, (note fault codes will not be stored); Then wait for the Start/Cancel button to be pressed, at which time the buzzer will be silenced.
3. On Push-button control models, pressing the Water Temp Button is to hold the outputs on in the current step, (except for the "LED and Button Test", and filling steps where a 3 minute time limit exists in order to prevent flooding). Pressing Water Temp Button again will allow progression.
4. On Rotary control models, Turning the HEAT OPTIONS knob such that the position indicator is pointing towards the Heat Options LED, will cause the control to hold the outputs on in the current step, (except for filling steps where a 3 minute time limit exists in order to prevent flooding). Turning the HEAT OPTIONS knob such that the knob is horizontal with the position indicator is pointing away from the Start/Cancel button again, will allow the test to progress again.
5. On Push-button control models, pressing the Delay Start button is to advance the control into the next step, except during the Model Identification, and LED and Button Test steps.
6. On Rotary control models, Turning the WASH CYCLES knob so it is horizontal with the position indicator pointing away from the Start/Cancel button, and then turning the WASH CYCLES knob so the position indicator is pointing towards the Wash Cycles LED, will cause the control to advance into the next cycle step, except during the Model Identification, LED Test and drain steps. To advance the test again, this sequence must be repeated.
7. Pressing and holding down the Start/Cancel button for 3 seconds at any stage, (including if a fault has been detected), is to return the control to the stand-by state, by turning off all LEDs, then draining until 45 seconds after the 1st level pressure switch detects empty, (or for 30 seconds if empty was detected when draining started). The last used Wash program and Option LEDs will flash during the pump out period.

Buzzer silencing mode has no effect during this mode.





FEATURES.	Models
FAN ASSISTED DRY	8400, 8800, 8700, 8900, 8905, 8800, 8805, 7000, 7005, 7100, 7105.
TURBIDITY SENSOR	8400, 8800, 8700, 8900, 8900, 7000, 7100.
INTERIOR LIGHT	8700, 8800, 8905, 8800, 8805, 7000, 7005, 7100, 7105.
DISPENSER REED SWITCH	8700, 8900, 8905, 7000, 7005, 7100, 7105.

Controller Part No.	Models
387-400-82	8400, 8500.
387-400-85	8800.
387-400-88	8905.
387-400-87	8700, 8800.
387-400-86	8905.
387-400-89	7000, 7100.
387-400-95	7005, 7105.

120 Volt 60Hz

(SG67)



Imagination at work



Monogram 6000/7000 Series

The following points are listed in relation to the Pressure Switch function and operation.

- The Pressure Switch Level 1 is set at a level lower than the level required for the timed water fill. This is to ensure that water enters the dishwasher before the controller activates the heater circuit.
- Contacts P1-11 to P1-12 provide an open circuit signal to the controller when the Level 1 water level is satisfied.
- At the satisfied position the controller senses the open circuit neutral circuit and advances the program.
- The actual “head” of water present in the bottom of the Tub actuates the Pressure Switch Diaphragm, resulting in a satisfied condition.



Normal condition of Pressure Switch after water fill

