⚠ WARNING

Electrical Shock Hazard

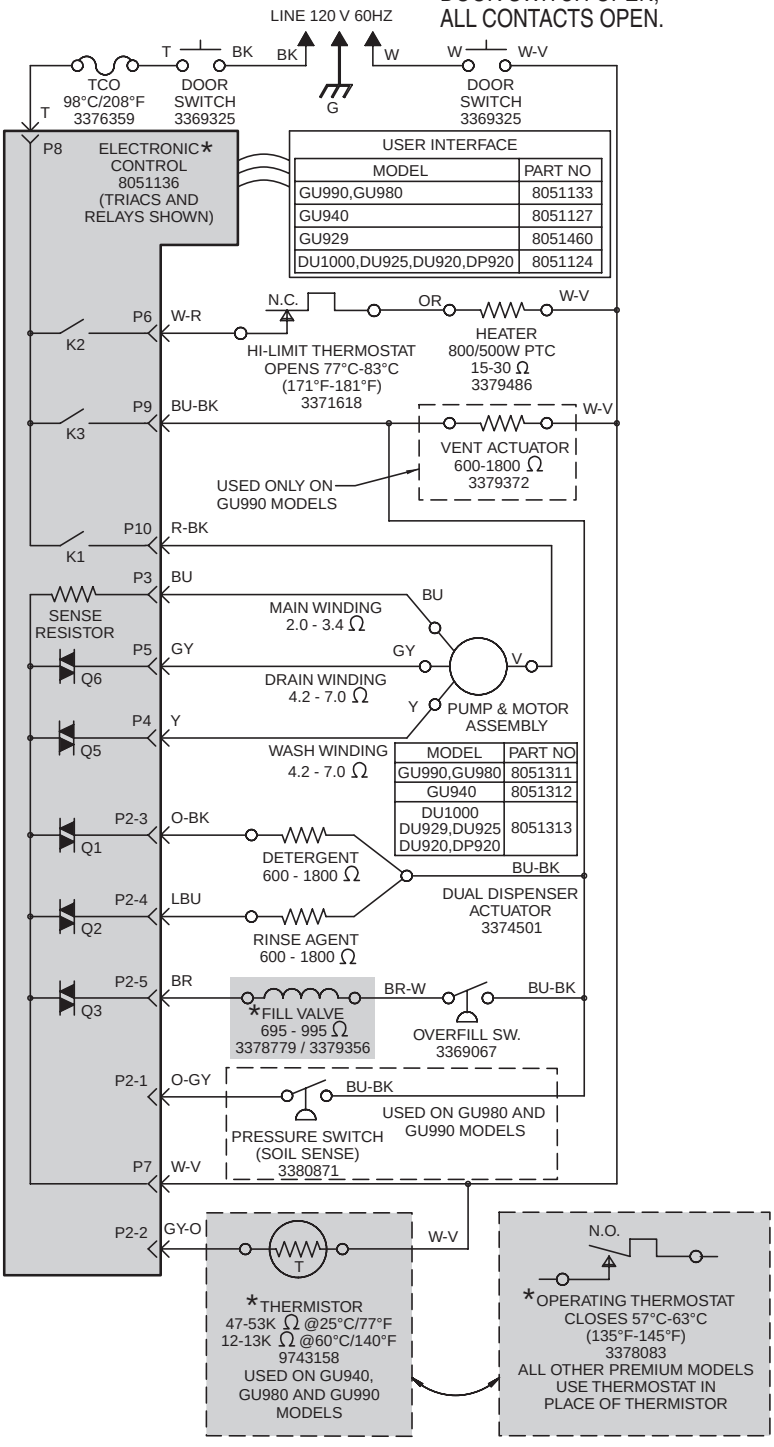
Disconnect power before servicing.

Replace all panels before operating.

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

WIRING DIAGRAM

SCHEMATIC SHOWN WITH DOOR SWITCH OPEN, ALL CONTACTS OPEN.



SPECIFICATIONS

Electrical Supply: (Under load) 60 Hz, 120 VAC.

Supply Water Flow Rate: To fill 1.9 liters (2 quarts) in 27 seconds, 120 PSI max., 20 PSI min.

Supply Water Temperature: 49° to 71°C (120° to 160°F) (Before starting a cycle, run water from sink faucet until hot.)

Water Charge: 8.3 liters (2.2 gallons) (approx.)

Lower Spray Arm Rotation: 30 to 40 rpm.
Upper Spray Arm Rotation: 20 to 30 rpm.

REPAIR KITS

- Vinyl Rack Patch Kit No. 676453
- Tine Tip Kit No. 675679

CONNECTOR PIN OUT:		
PIN NO.	**DESCRIPTION**	**WIRE COLOR**
P1	RIBBON CABLE TO USER INTERFACE	
P2-1	PRESSURE SWITCH (SOIL SENSE)	O-GY
P2-2	THERMISTOR/THERMOSTAT	GY-O
P2-3	DETERGENT DISPENSER	O-BK
P2-4	RINSE AGENT DISPENSER	LBU
P2-5	FILL VALVE	BR
P3	MOTOR MAIN WINDING	BU
P4	MOTOR AUX WINDING - WASH	Y
P5	MOTOR AUX WINDING - DRAIN	GY
P6	SWITCHED L1 TO HEATER	W-R
P7	AC NEUTRAL	W-V
P8	L1	T
P9	SWITCHED L1 TO VENT, FILL VALVE, DUAL DISPENSER, & PRESSURE SWITCH	BU-BK
P10	SWITCHED L1 TO MOTOR COMMON	R-BK

ELECTRICAL COMPONENTS KEY	
Part Number	**Electrical Component**
✶ 8051136	Electronic Control
✶ 3378083	Operating Thermostat
✶ 9743158	Thermistor
✶ 3378779	Fill Valve
✶ 3379356	Fill Valve (GU990 only)
3383915	Wiring Harness - GU990
3383914	Wiring Harness - GU980
8271433	Wiring Harness - DU1000, GU940, DU929, DU925, DU920
8271434	Wiring Harness - DP920
✶ DENOTES ENERGY EFFICIENT COMPONENTS. DO NOT SUBSTITUTE	

NOTE: Even with the door open, there is line voltage at several points in the console and below the tub. Therefore, be sure to disconnect the power supply at the fuse box before replacing a component.

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING OF DISHWASHER

A. Static electricity discharge may cause damage to the electronic control. Touch a grounded metal object (cold water faucet, unpainted part of grounded appliance, etc.) to discharge any static electricity in your body before handling the electronic control.

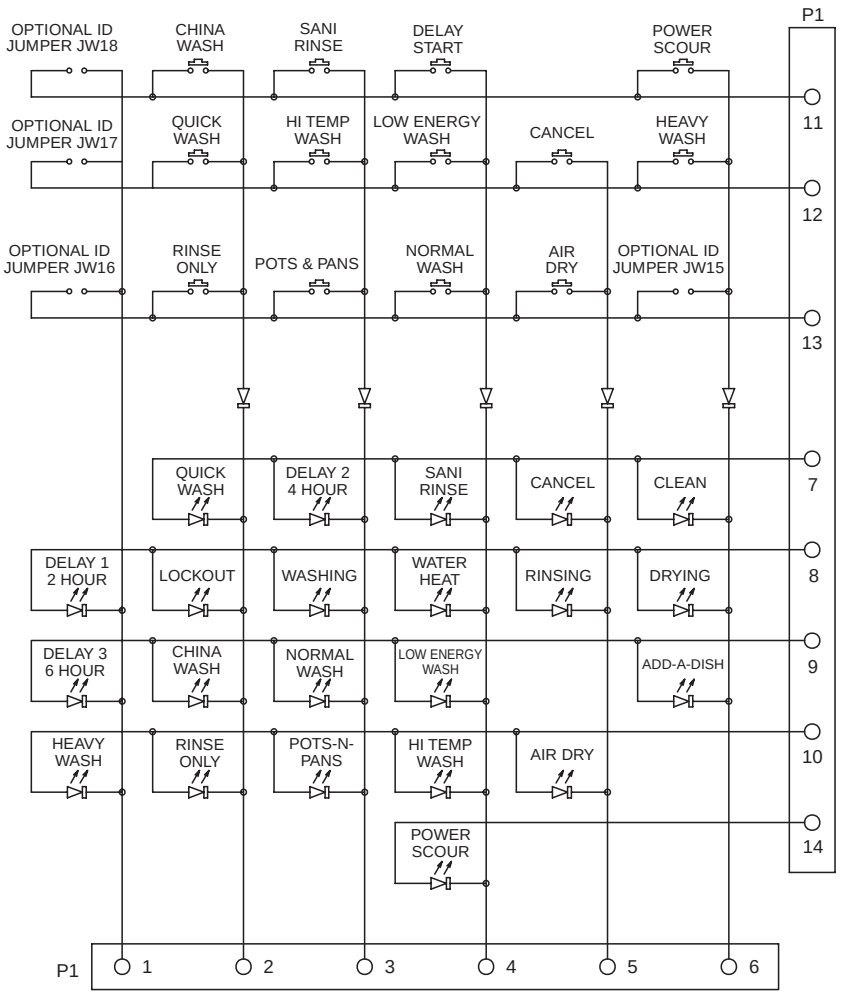
B. Always check wiring harnesses and connectors before any test procedures.

C. Disconnect power supply before touching the electronic control or re-seating connectors.

D. Voltage checks are made by inserting probes beside wires on the connectors, with the AC power source applied and all connectors plugged in.

E. Resistance checks are made on components with wiring harnesses or connectors disconnected.

USER INTERFACE MATRIX



USER INTERFACE NOTES

Drawing depicts the line matrix for the maximum featured model user interface, 8051133. The line matrix is identical on all lesser-featured electronic model user interfaces; switches and LED's for unused features are simply omitted.

DIAGNOSTICS AND SALES DEMO TIMING CHART NOTES

(Page 3)

1. The Diagnostics Test Cycle starts at interval 11 and concludes at interval 2. To initiate the Diagnostics Test Cycle, press the following sequence of keys within 10 seconds:

HIGH TEMP WASH, AIR DRY,
HIGH TEMP WASH, AIR DRY
or
POWER SCOUR, AIR DRY,
POWER SCOUR, AIR DRY

The Diagnostics Test Cycle may be manually advanced to the next interval by pressing the POTS & PANS key. To exit diagnostics, press CANCEL.

2. The Sales Demo Cycle consists of a single 6-minute wash interval which starts at interval 1 and concludes at interval 0. To initiate the Sales Demo Cycle, press the following sequence of keys within 10 seconds:

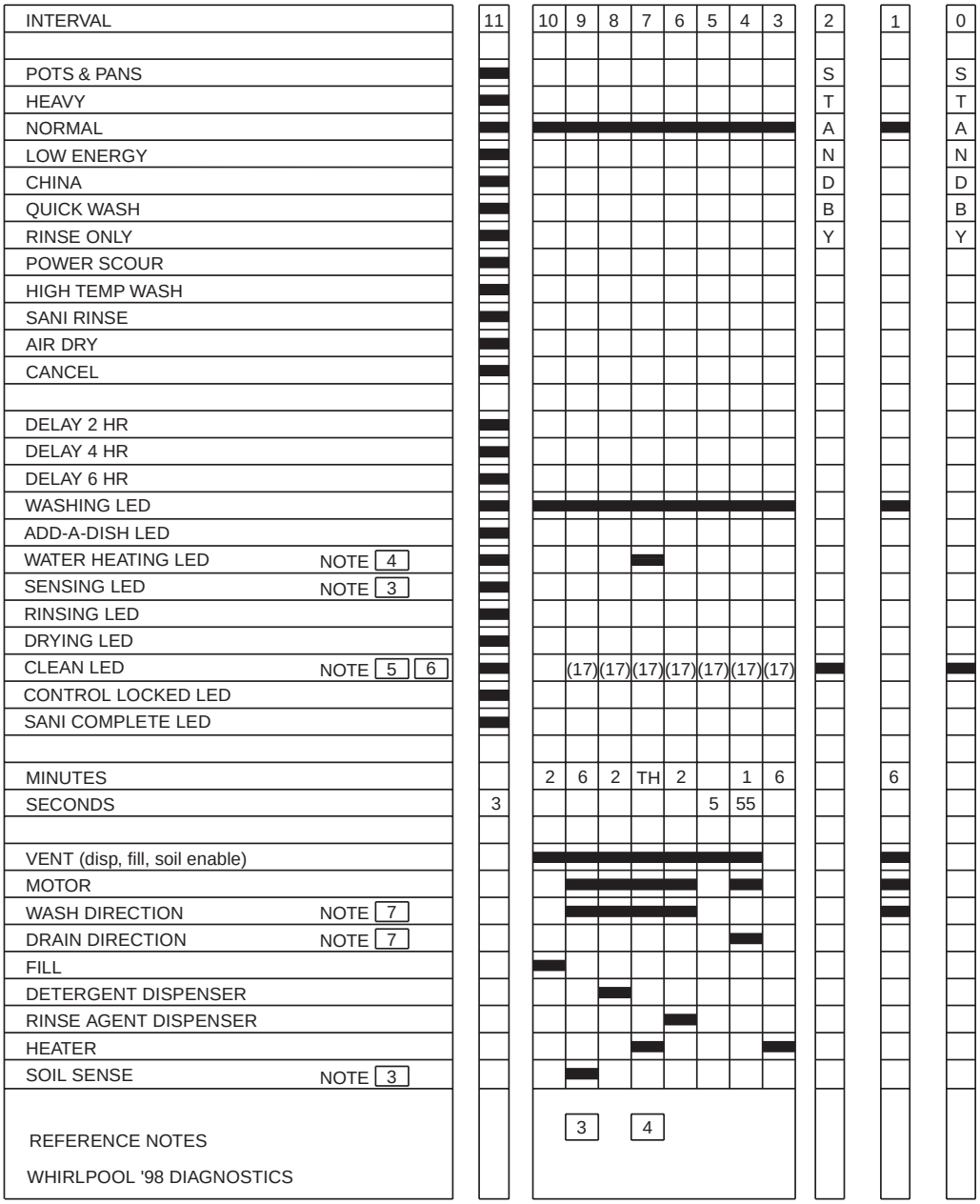
HIGH TEMP WASH, AIR DRY,
HIGH TEMP WASH, AIR DRY,
HIGH TEMP WASH
or
POWER SCOUR, AIR DRY,
POWER SCOUR, AIR DRY,
POWER SCOUR

3. The Diagnostics Test Cycle executes a soil sensing interval at interval 9 to test the soil sensing circuit.

If the soil sensing pressure switch is tripped at any time during this sense interval, the control will immediately terminate the sense interval and proceed with the remainder of the diagnostics cycle.

If the time limit for this sense interval elapses without detecting soil, the control simply proceeds with the remainder of the diagnostics cycle.

4. The diagnostics cycle suspends cycle timing and executes a thermal hold at interval 7. The thermal hold interval is terminated and cycle timing resumes when the water is heated to the desired setpoint temperature (60°C/140°F), the maximum default time limit elapses (1 hour), or the cycle is manually advanced to the next interval by pressing the POTS & PANS key. The WATER HEATING LED is illuminated during the thermal hold.



5. The CLEAN LED is illuminated at the end of both the Diagnostics Test Cycle and the Sales Demo Cycle. The CLEAN LED can be extinguished by opening the door or pressing any key.

6. During intervals 9 through 3 of the diagnostics cycle, the CLEAN LED is illuminated whenever the control detects a resistance of greater than approximately 45 k-ohms on the thermistor/thermostat circuit. This feature is intended to help determine whether a thermostat or thermistor is installed. A thermostat with normally open contacts would trigger the CLEAN LED (until the thermostat is tripped). Under normal operation, the resistance of the thermistor is always less than 45 k-ohms and would not trigger the CLEAN LED.

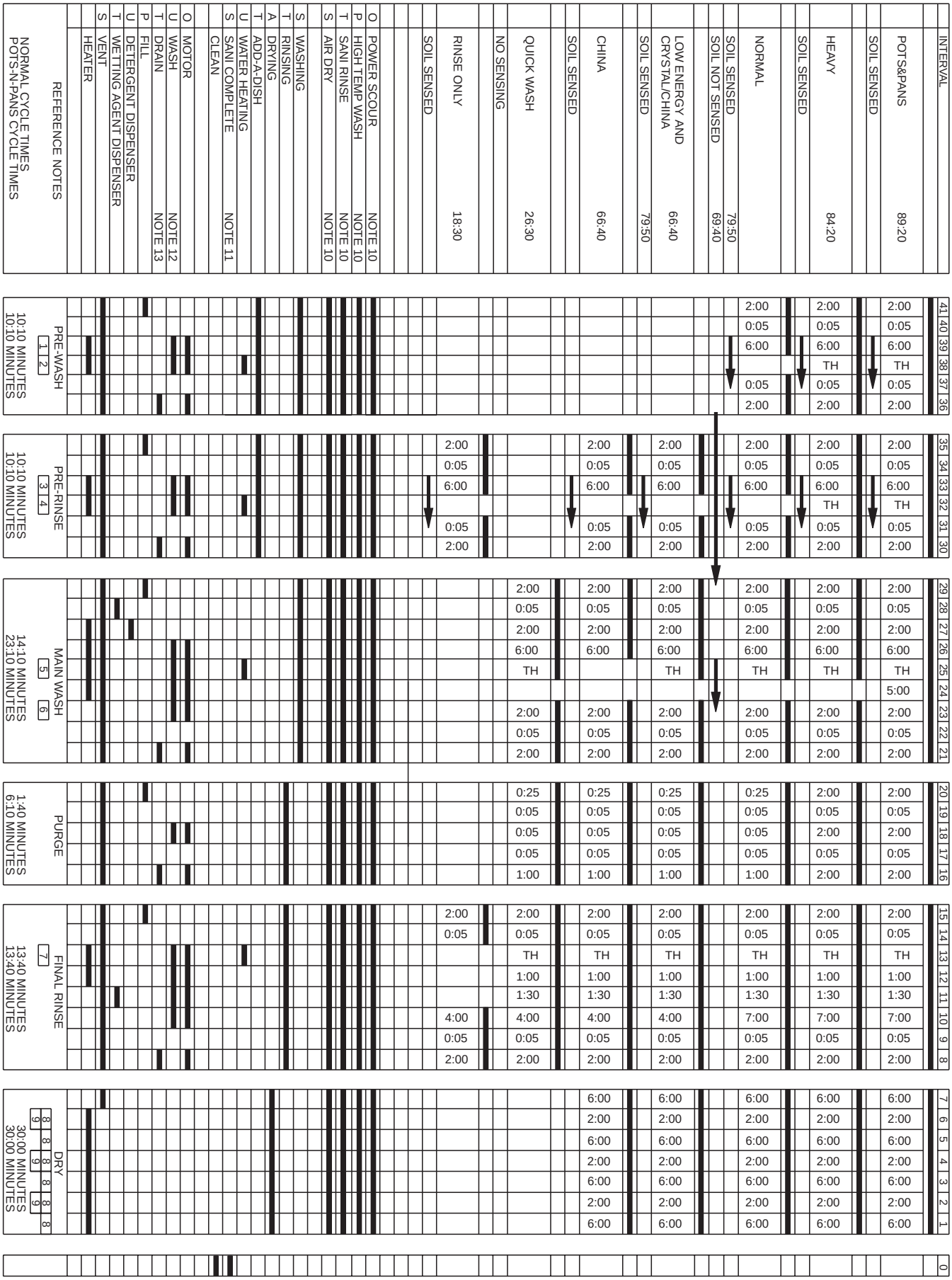
7. The wash and drain auxilary windings are only "ON" when the motor is being started. When the control has determined that the motor has been started satisfactorily, the auxilary winding will be turned "OFF".

8. Entering the key sequence HIGH TEMP WASH (or POWER SCOUR), AIR DRY, HIGH TEMP WASH, (or POWER SCOUR), AIR DRY, after a cycle has started, will enable the POTS-N-PANS key rapid advance feature. This will allow service to rapidly step to any interval of the currently running cycle.

CYCLE TIMING CHART NOTES (Page 4)

1. PRE-WASH SENSE INTERVAL
Pressure switch contact closure at any time during this interval causes the cycle to jump to interval 37, immediately. For the normal cycle, the heater is "OFF" during this interval. For the HEAVY and POTS-N-PANS cycles the heater is "ON" during this interval. The POWER SCOUR option changes this interval to a 16 minute heated wash interval for all 3 cycles (NORMAL, HEAVY and POTS-N-PANS). If the water temperature reaches 60°C (140°F) or the thermostat closes, the heater is turned "OFF". Time continues to elapse and all other output states remain the same until the prescribed interval time has elapsed.

CYCLE TIMING CHART



CYCLE TIMING CHART NOTES

(Continued)

2. PRE-WASH THERMAL HOLD
This thermal hold is only executed during the HEAVY and POTS-N-PANS cycles. The thermal hold setpoint is 60°C (140°F) or thermostat contact closure and the default time is 25 minutes.

Pressure switch contact closure at any time during this interval causes the cycle to jump to interval 37, immediately.

3. PRE-RINSE SENSE INTERVAL
Pressure switch contact closure at any time during this interval causes the cycle to jump to interval 31, immediately. For the NORMAL cycle, the heater is "OFF" during this interval. For the HEAVY and POTS-N-PANS cycles the heater is "ON" during this interval. The POWER SCOUR option changes this interval to a heated wash interval for the NORMAL cycle. If the water temperature reaches 60°C (140°F) or thermostat closes, the heater is turned "OFF". Time continues to elapse and all output states remain the same until the prescribed interval time has elapsed.

4. PRE-RINSE THERMAL HOLD
This thermal hold is only executed during the HEAVY and POTS-N-PANS cycles and only occurs if the pressure switch trips during the sense or thermal hold intervals of the pre-wash. The thermal hold setpoint is 60°C (140°F) or thermostat contact closure and the default time is 20 minutes. Pressure switch contact closure at any time during this interval causes the cycle to jump to interval 31, immediately.

5. MAIN WASH THERMAL HOLD
This thermal hold is automatic for the POTS-N-PANS and HEAVY cycles (setpoint = 60°C/140°F). For the normal cycle, this thermal hold is invoked by selecting the POWER SCOUR or HIGH TEMP WASH options (setpoint = 60°C/140°F), or as a result of the pressure switch tripping during the pre-wash (setpoint = 54°C/130°F). For the LOW ENERGY WASH and QUICK WASH cycles, this thermal hold is invoked by selecting the HIGH TEMP WASH option (setpoint = 60°C/140°F). In all cases, the default time for this thermal hold is 20 minutes.

6. MAIN WASH RECIRCULATION INTERVAL
The POWER SCOUR option increases the length of this interval to 10:00 for the POTS-N-PANS and HEAVY cycles.

7. FINAL RINSE THERMAL HOLD
This thermal hold is automatic for all cycles except the CHINA WASH and RINSE ONLY cycles (setpoint = 60°C/140°F). For the CHINA WASH cycle, this thermal hold only occurs if the pressure switch trips during the pre-rinse (setpoint = 54°C/130°F). In all cases the default time is 25 minutes.

If the SANI RINSE option is selected, then the setpoint for this thermal hold becomes 65°C (150°F) and the default time changes to 45 minutes.

8. AIR DRY
The default status for the dry period is HEAT DRY "ON". Selecting the AIR DRY option causes the heater to be turned "OFF" during this interval.

9. CHINA DRY INTERVAL
When the CHINA WASH cycle is selected, the heater will be turned "OFF" during this interval.

10. OPTION LED'S
When a valid option is active, then the LED for that option will be "ON".

11. SANI COMPLETE LED
When the SANI RINSE option has been selected and completed, a SANI COMPLETE indicator is illuminated at the end of the cycle. During a cycle in which SANI RINSE has been selected, the target thermal hold temperature for the SANI RINSE option must be satisfied and maintained. If this condition is not satisfied (because the final rinse thermal hold default time elapsed or power to the dishwasher was lost at any time during the remainder of the cycle that follows due to a door opening or AC line failure) then the SANI COMPLETE indicator will flash on and off at the end of the cycle. Opening the door or pressing any key will turn the indicator off in either case.

12. MOTOR WASH PHASE WINDING
This output is only "ON" when the motor is starting in the wash mode. When the control has determined that the motor has started, the wash phase winding will be turned "OFF".

13. MOTOR DRAIN PHASE WINDING
This output is only "ON" when the motor is starting in the drain mode. When the control has determined that the motor has started, the drain phase winding will be turned "OFF".

14. DIAGNOSTIC SENSOR INPUT TEST
The soil sense pressure switch input is active during this interval. Pressure switch contact closure at any time during this interval causes the cycle to jump to the next interval, immediately.

15. DIAGNOSTIC THERMAL HOLD
The default status for this thermal hold is "ON". The thermal hold setpoint is 60°C (140°F) or thermostat contact closure and the default time is 60 minutes. After 60 minutes, the thermal hold is terminated and normal cycle timing resumes. The diagnostic test cycle advance function can also be used to terminate this thermal hold.

16. CYCLE COMPLETE
A CLEAN indicator LED will be on at the end of this cycle. Opening the door or pressing any key will turn the indicator off.

17. DIAGNOSTICS CYCLE - THERMOSTAT/THERMISTOR INDICATOR
The CLEAN LED will turn on during the display test at the beginning of the cycle (interval 11) and again at the conclusion of the cycle (interval 2) regardless of what it detects on the thermistor input. The CLEAN LED will be on in intervals 3 through 9 of the cycle whenever an "OPEN" (resistance greater than 200 k-ohms, ± 50 k-ohms) is detected on the thermistor input by the control. Consequently, if a normally open operating thermostat were to be installed on the thermistor input, the CLEAN LED would be on throughout the cycle until the thermostat tripped (e.g., during the thermal hold). With a thermistor installed, the CLEAN LED would only be on in intervals 10 and 0, because the thermistor always has a resistance of between 50 k-ohms and 8 k-ohms under normal operating conditions.

OPTIONS

Water Heat: Forces a thermal hold to occur in the main wash regardless of soil level. The set point for this thermal hold is 60°C (140°F). This option is automatic with the POTS & PANS and HEAVY cycles. It is not available on CHINA WASH or RINSE ONLY cycles.

Sani Rinse: Raises the setpoint temperature of the thermal hold in the final rinse to approximately 65°C (150°F). This option is not available with CHINA WASH, QUICK WASH and RINSE ONLY cycles. This option is only possible on models that use a thermistor.

Air Dry: Opens the circuit to the heater element during the dry period of the cycle. This option is not available on QUICK WASH and RINSE ONLY cycles (which have no dry period).

Power Scour: Inserts additional heated wash time into the POTS-N-PANS, HEAVY and NORMAL CYCLE pre-wash sequence (interval 39 becomes a 16 minute, thermostatically controlled, heated wash), turns the heater on in interval 33 of the normal cycle pre-rinse, invokes a thermal hold in the main wash of the normal cycle and extends interval 23 to 10 minutes in the POTS-N-PANS and HEAVY cycles. This option is not available on LOW ENERGY, CHINA WASH, QUICK WASH or RINSE ONLY cycles.

Cancel/Drain: Terminates current active cycle and clears cycle selections. Executes 2-minute drain upon first selection if water is likely to be left in sump. Subsequent selections toggle between 2-minute drains and going to standby.

OTHER CONTROL FEATURES

Control Lock: The CONTROL LOCK LED is illuminated and all keys of the keyboard are disabled whenever the CONTROL LOCK feature is invoked by the customer. The CONTROL LOCK feature (and LED) can be turned on or off by the customer at any time by holding down the AIR DRY option key for 4 seconds.

Delay Start: Allows the customer to delay the start of a cycle by up to 6 hours. Each press of the delay key increases the delay time selection by two hours. The selected delay period will begin clocking down upon selecting the cycle key. The cycle selected will begin automatically upon completing the delay period.

ERROR MESSAGES

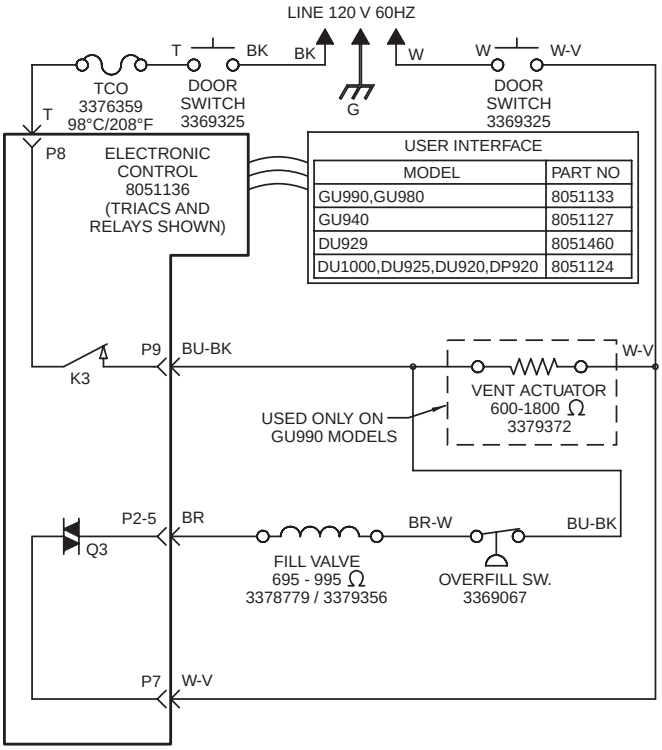
Stuck Key: If the control detects that a key is stuck in the depressed position, dishwasher operation will be suspended and the control will flash the LED associated with that key until the condition is corrected. If a key without an LED is stuck or multiple keys are stuck, the control will flash the LOCK-OUT LED.

DISHWASHER CIRCUITS

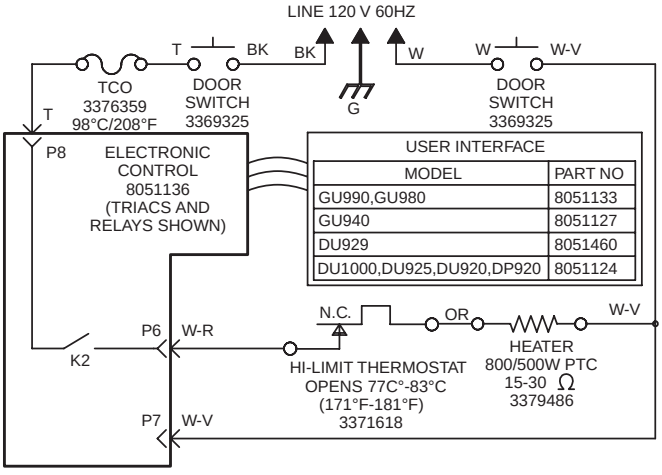
The following individual circuits are for use in diagnosis. **Before starting diagnosis, check the line voltage and for blown fuses.**

SCHEMATICS SHOWN WITH DOOR SWITCH OPEN.

FILL



AIR DRY

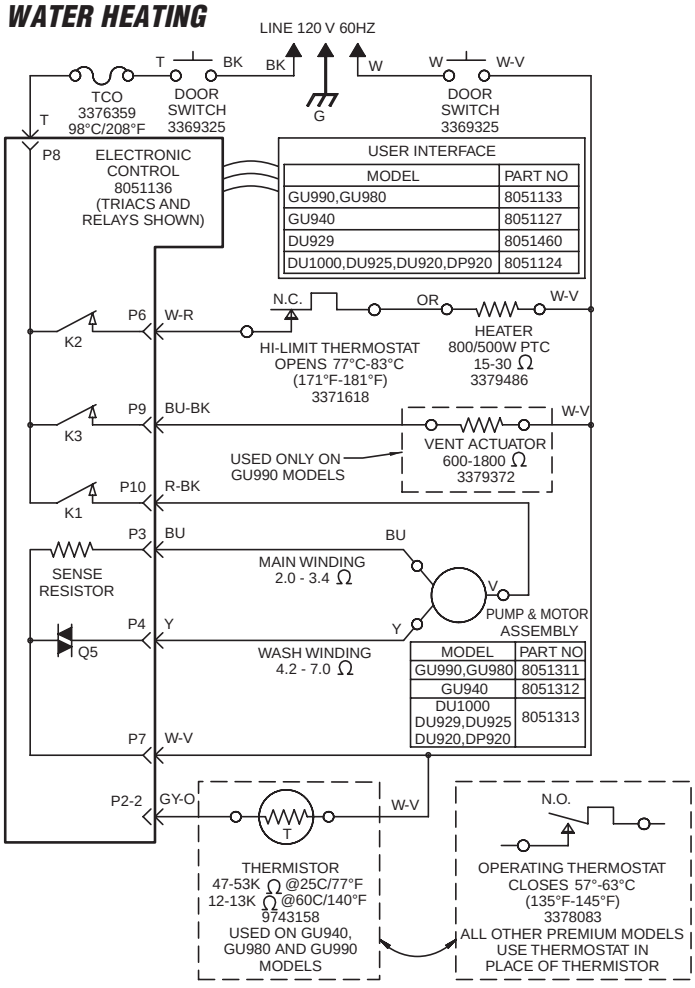


DISHWASHER CIRCUITS

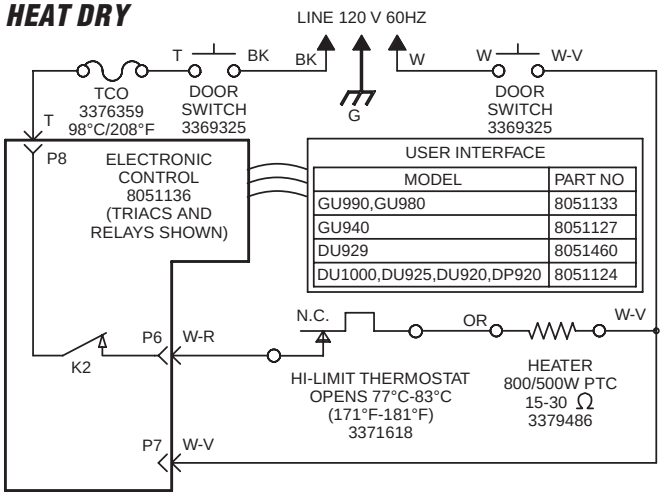
The following individual circuits are for use in diagnosis. **Before starting diagnosis, check the line voltage and for blown fuses.**

SCHEMATICS SHOWN WITH DOOR SWITCH OPEN.

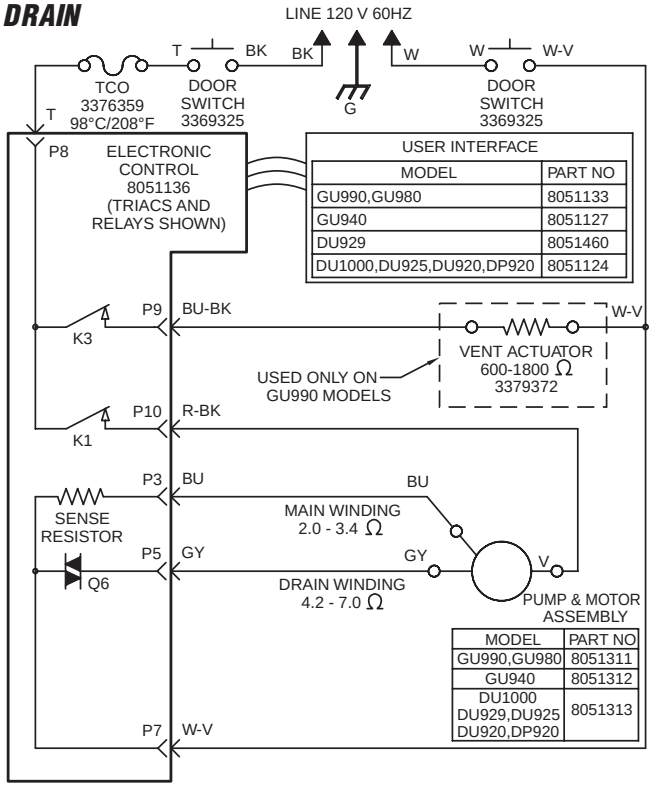
WATER HEATING



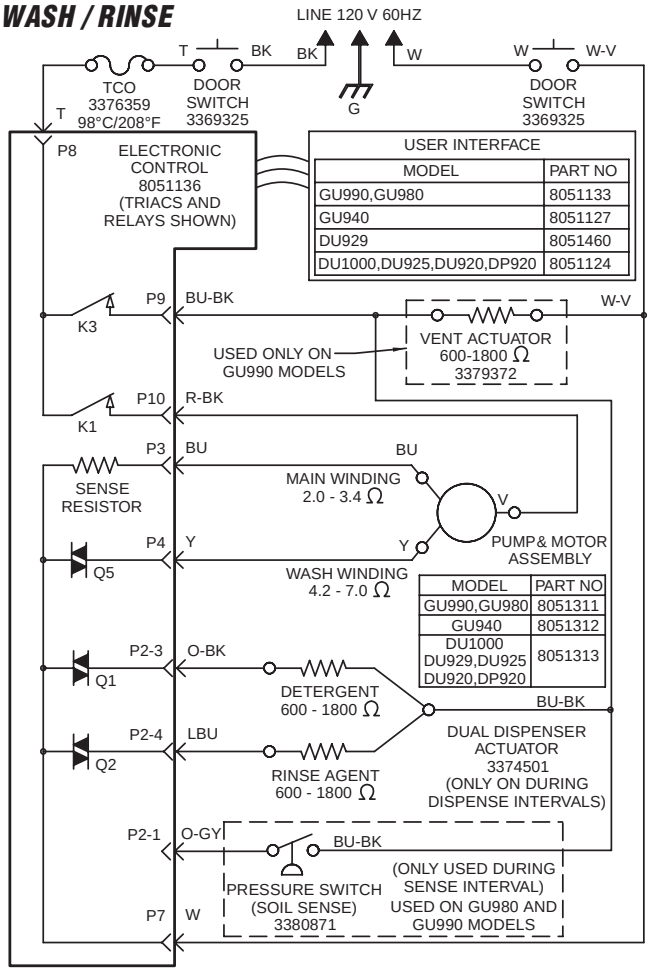
HEAT DRY



DRAIN



WASH / RINSE



ARTICULATED VENT ASSEMBLY & ELECTRONICS COVER REMOVAL

1. Disconnect electrical power from dishwasher.
2. Refer to Figure 1. Open dishwasher door and insert the end of a screwdriver into the notch in the vent louver. Push counter-clockwise to rotate louver approximately 1/8 turn to release it. Remove louver and set aside for later reinstallation.
3. Remove eight (8) screws around perimeter of the inner door panel and remove panel. See Figure 1.
4. To remove the vent assembly, refer to Figure 2 and disconnect two (2) electrical harness wire leads from wax motor terminals. Lift out the vent assembly, retaining the seal ring for later reinstallation.
5. To access electronic controls, press in on snap tab at end of electronics cover to release, then lift cover up at tab end as you slide cover out. See Figure 2.

ELECTRONICS COVER & ARTICULATED VENT ASSEMBLY REINSTALLATION

1. Reinstall electronics cover by sliding it into position above controls and pressing down till snap tab holds it in place. (Figure 2 shows cover removal.)
2. Reinstall the vent assembly. Refer to Figure 2 and reconnect two (2) electrical harness wire leads to the wax motor terminals. Place seal ring in seal ring groove of vent assembly, and lower vent assembly into place.
3. Reinstall inner door panel. Align it in place over the vent assembly, and reinstall eight (8) screws around the inner door panel perimeter. See Figure 1.
4. Align vent louver over vent assembly, and turn louver clockwise by hand to engage vent assembly.
5. Insert the end of a screwdriver into the notch in the vent louver. Push clockwise to rotate louver approximately 1/8 turn to lock it in position. See Figure 1.
6. Reconnect electrical power to dishwasher.

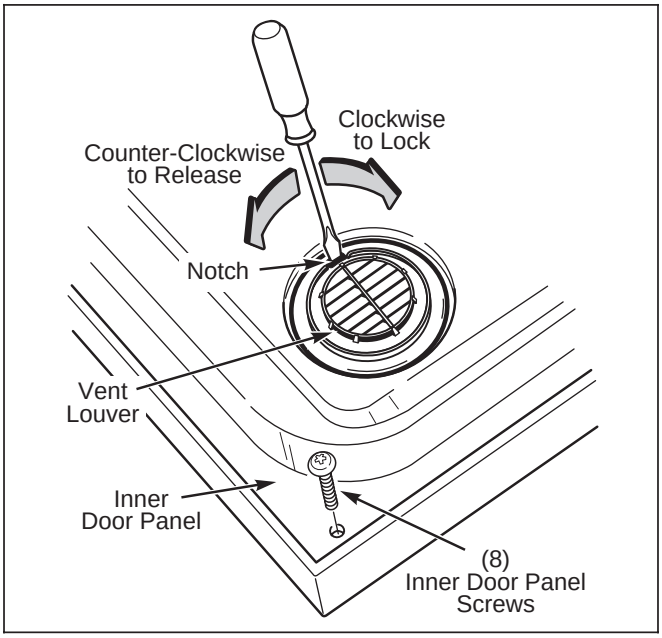


Figure 1

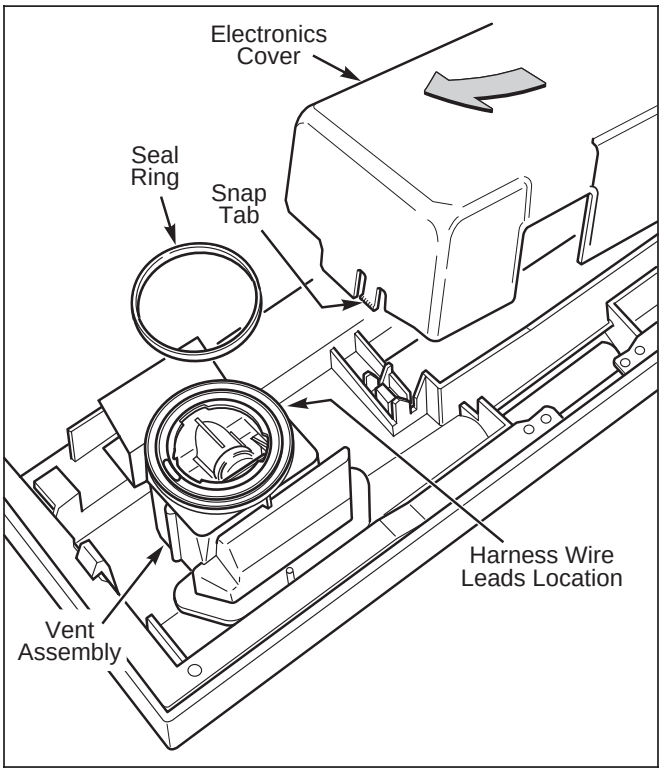


Figure 2

PART NO. 8066008 REV. A

NOTE: This sheet contains important Technical Service Data

FOR SERVICE TECHNICIAN ONLY
DO NOT REMOVE OR DESTROY