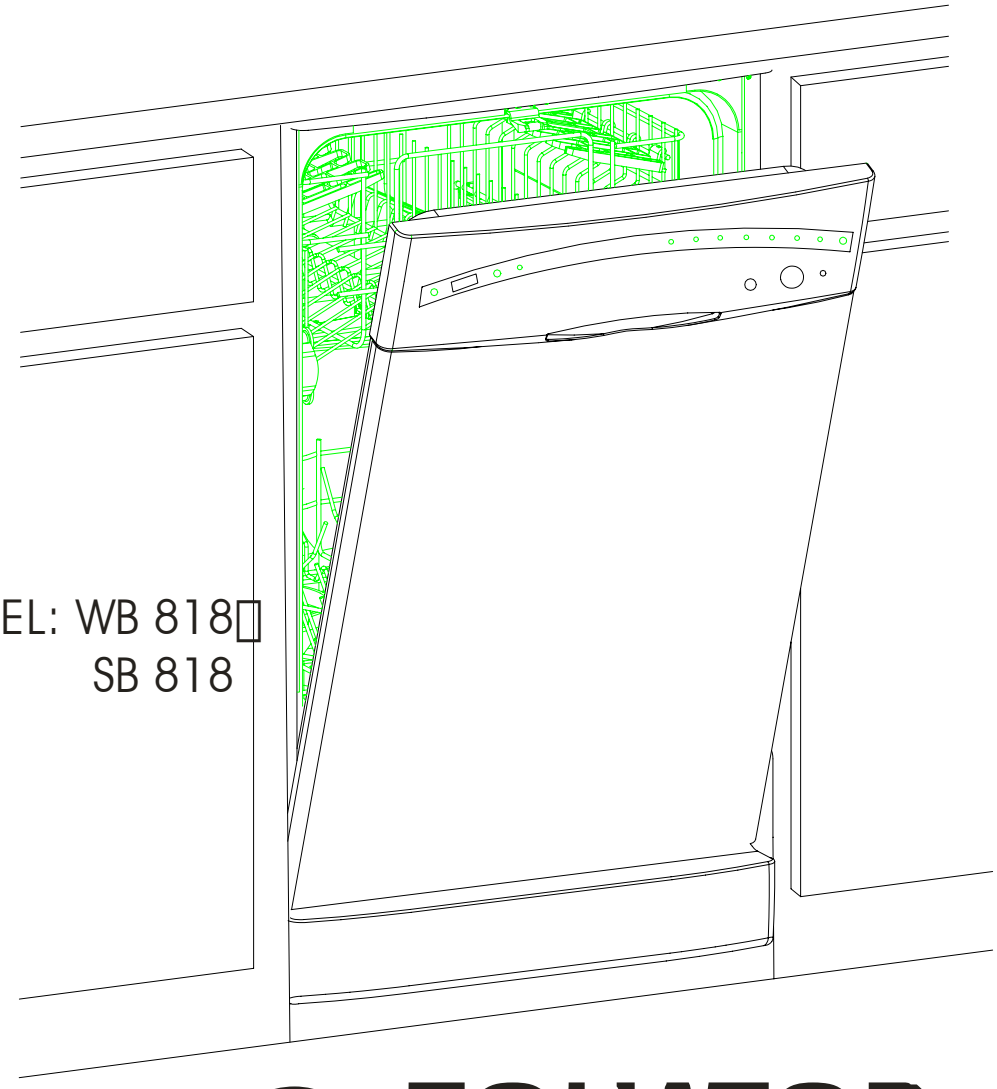
EQUATOR

SERVICE MANUAL
AND
SPARE PARTS CATALOG

First Edition - March 2005

18" DISHWASHERS



MODEL: WB 818□
SB 818

EQUATOR
www.EquatorOnline.com

Advanced Appliances

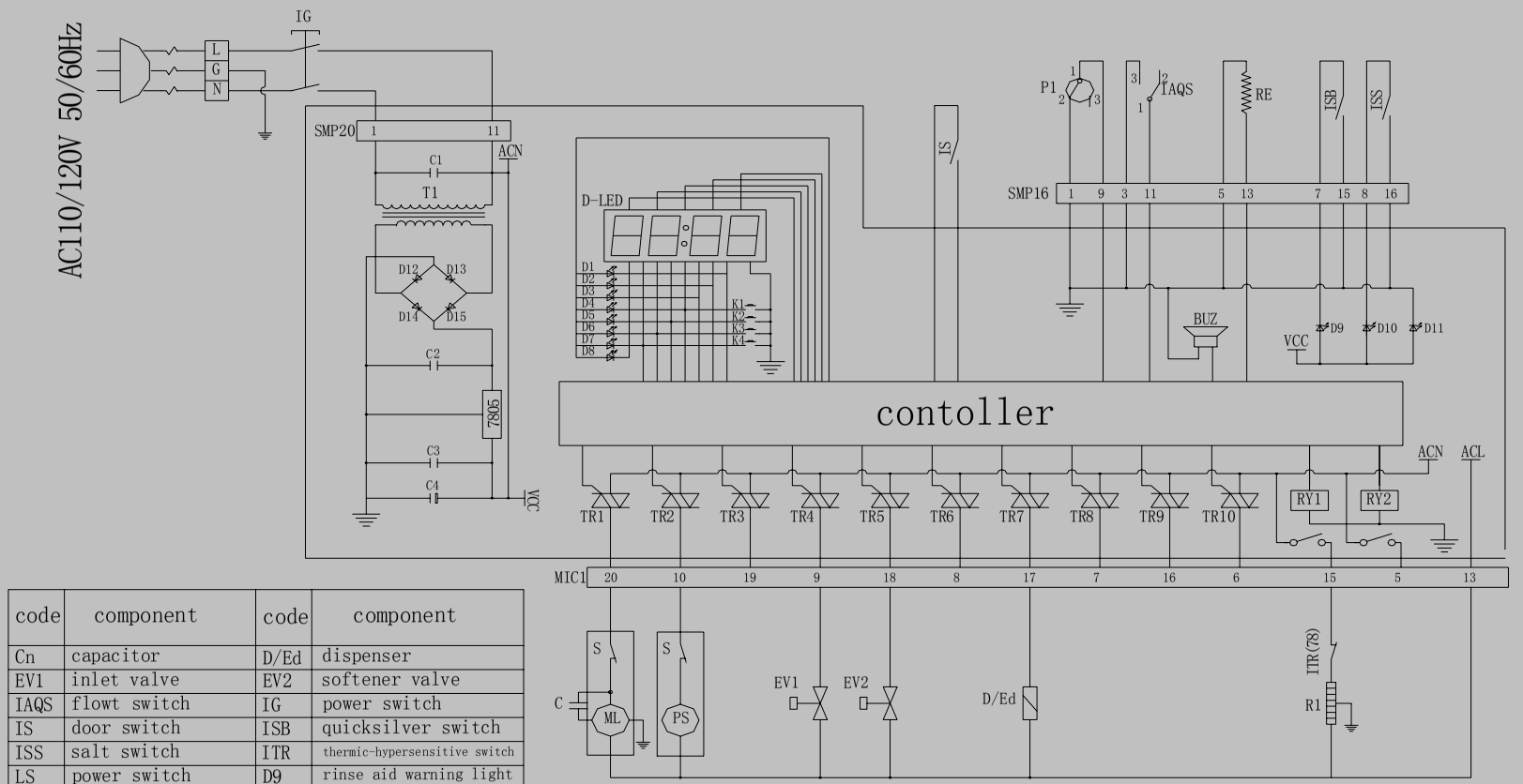
CONTENTS

SPECIFICATION

MODEL	
ELECTRICAL	
Rating	**120V 60Hz**
Motor (HP)	**1/5**
Motor (Amps)	
Heater Wattage	**1000W**
Wash	
Total Amps (Load Rated)	**9.2A**
Thermostat Contacts Close at	**127° F ±5° F** **58℃±3℃**
WATER SUPPLY	
Suggested Min. Incoming Water Temperature	**120° F to 150° F** **49℃ to 66℃**
Pressure (PSI) Minimum/Maximum	**15/120 PSI**
Connection (NPT)	**3/8”**
Consumption (Toil Gallons)	**3.5±5%**
Water Valve Flow Rate (GPM)	**1.08GPM±10%**

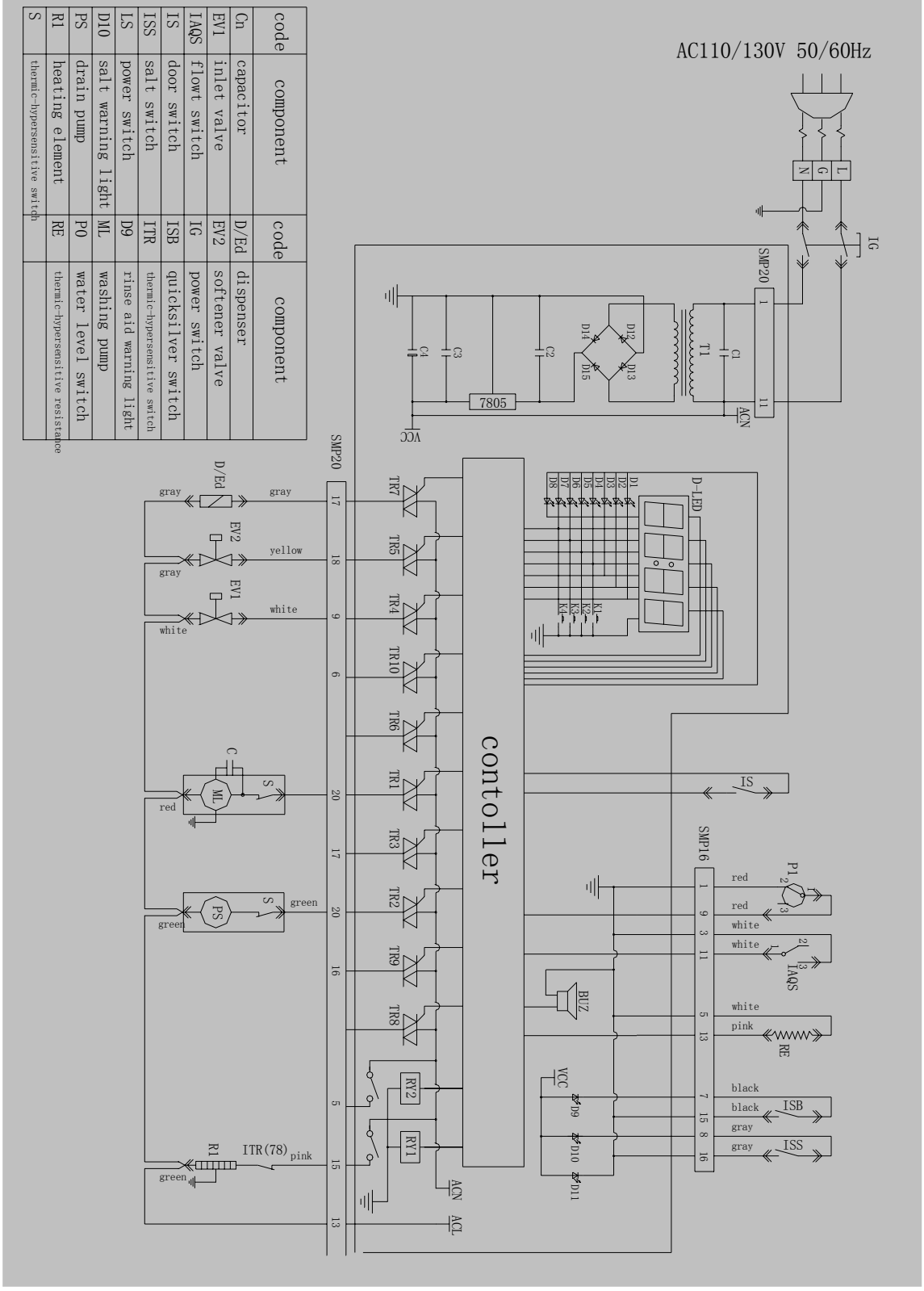
Schenmatic Diangram of Dishwasher

(WQP8-9223 and WQP8-9324)



code	component	code	component
Cn	capacitor	D/Ed	dispenser
EV1	inlet valve	EV2	softener valve
IAQS	flowt switch	IG	power switch
IS	door switch	ISB	quicksilver switch
ISS	salt switch	ITR	thermic-hypersensitive switch
LS	power switch	D9	rinse aid warning light
D10	salt warning light	ML	washing pump
PS	drain pump	P	water level switch
R1	heating element	RE	thermic-hypersensitive resistance
S	thermic-hypersensitive switch		

Wiring Diagram of Dishwasher
(WQP8-9223 and WQP8-9324)



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TIMER CYCLE CHART
COMPONENT OPERATION
AND REPAIR

SAFETY PRECATIONS

Always turn off the electric power supply before servicing any electrical component, making ohmmeter checks, or replacing any parts.

All voltage checks should be made with a voltmeter having a full scale range of 130 volts or higher.

After service is completed, be sure all safety-grounding circuits are complete, all electrical connections are secure, and all access panels are in place.

CIRCUIT BOARD

With the circuit board, user selects the various cleaning cycles of the dishwasher with press the button. The circuit board controls all the electrical functions of the dishwasher in all stages of each cycle. *All functions can be traced on the chart. Diagram provided in this service manual.*

To Test Circuit Board

If the circuit board is suspected of faulty operation, reference chart and electrical schematic diagram and proceed as follows:

1. **Index the circuit board to all of the increment of the cycle, each of the indicators light should is bright.**
2. **Index the circuit board to one of the increment of the cycle, which is a drain period.**
3. **If the pump motor fails to operate during the first cycle increment, check for power at the pump motor connector block, if there is no power check the door latch switch, if there is power, check the pump motor as described in this section.**
4. **If a component controlled by the circuit board fails to function as the circuit board advances through the cycle, check for voltage at the circuit board terminals. If the check voltage is supplied to the component, check the component as described in this section.**

   Continuity through circuit board contacts, other controls, and wires can also be checked with an ohmmeter with electrical power disconnected.

   If the circuit boards contacts fail to close in the sequence shown on the chart are burned (have resistance measurable with an ohmmeter), or if circuit board does not run automatically, replace the circuit board.

To Replace Circuit Board

1. **Disconnect dishwasher from electrical supply.**
2. **Remove the power button.**

Figure 1

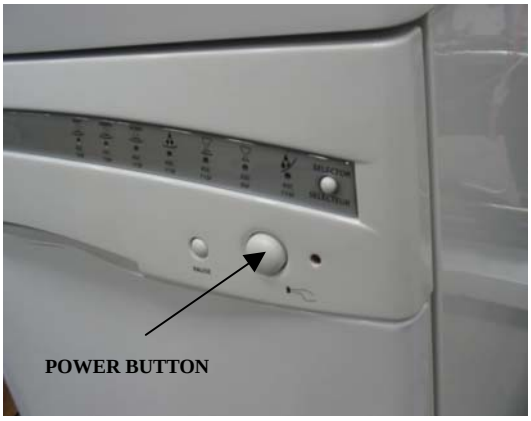


Figure 2

3. **Remove the screws which locking the control panel (See figure1). Remove the power button and unscrew the screws which locking the circuit board behind the control panel. (See Figure 2 and 3.)**
4. **Take down the damaged circuit board and install a new circuit board, reverse procedures to complete repairs. (See figure 3and 4.)**

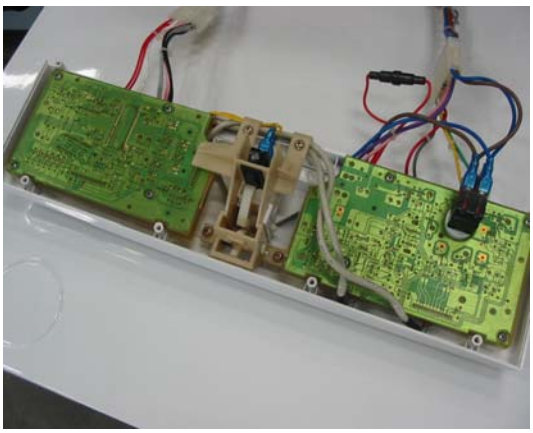


Figure 3

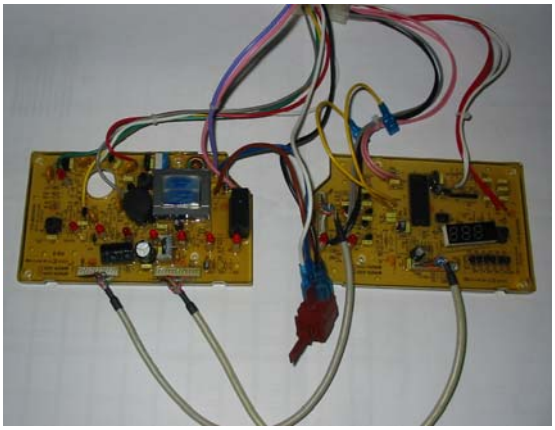


Figure 4

DOOR LATCH AND SWITCH ASSEMBLY

The latch and switch are located in the door assembly behind the control panel. The dishwasher will not operate until the door is closed; the latch engages the door catch.

To Test Or Replace Door Switch.

1. **Disconnect dishwasher from electrical supply.**
2. **Remove screws securing the control panel to the inner door (See Figure 1).**
3. **Remove wire leads from latch switch.**
4. **Use ohmmeter and check switch for continuity.**
5. **If the switch tests is good.**

   Check dishwasher electrical power.

   Check to see if timer is defective.

   If switch is defective remove door switch from latch assembly.
6. **Install new switch and reverse procedures to complete repairs.**

To Replace Door Latch Assembly

1. **Disconnect dishwasher from electrical supply.**
2. **Remove screws securing the control panel to the inner door.**
3. **Remove wire leads from door latch and remove screws securing door latch assembly to inner door. (See Figure 5.)**

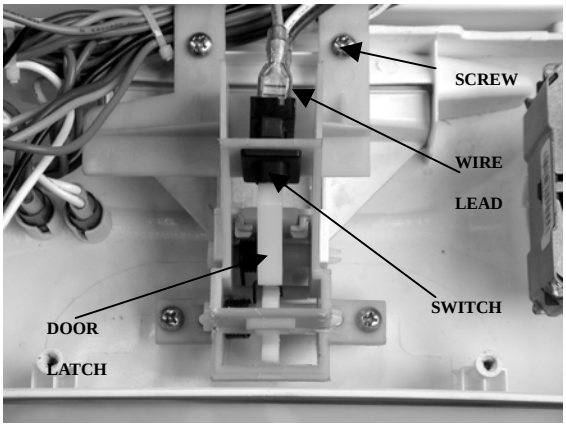


Figure 5

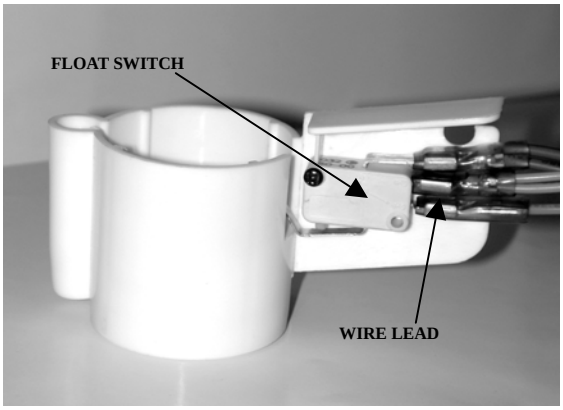


Figure 6

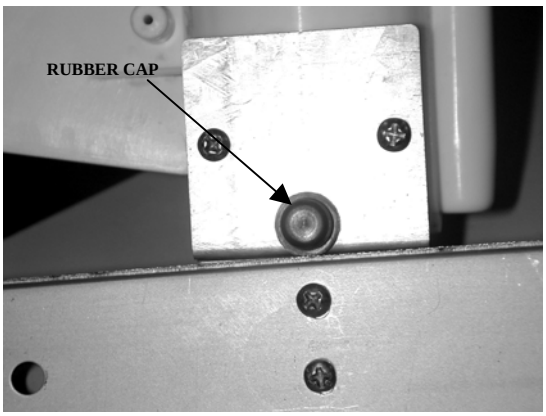
4. **Install new door latch assembly and reverse procedures to complete repairs.**

FLOAT SWITCH ASSEMBLY

The water float assembly is located in the right lower side of the dishwasher (the portable located behind the lower front crosspiece). When too much water enter the dishwasher，the water will enter the float support through the overflow pipe, the float will make the floating switch acts, the electrical supply to the water valve will disconnected and the drain pump keep on working.

If the switch fails to operate, check the following:

- **Loose connection at the switch terminal.**
- **Switch not installed properly.**
- **Warped stem on float, not contacting the actuator blade.**
- **Float support restricts free float movement.**
- **Check if the float support is cracked.**
- **Food or foreign material restricting free float movement.**
- **If the rubber cap lost(See figure7).**



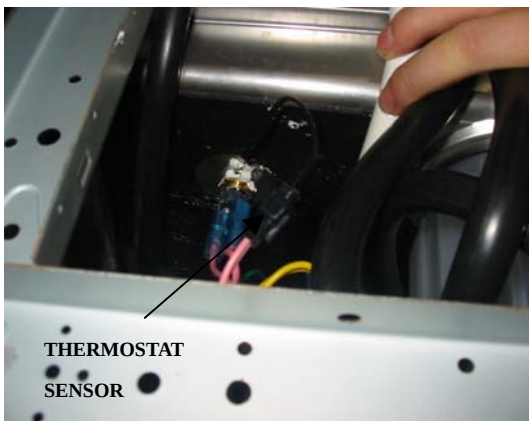


Figure 7 **Figure 8**

To Remove Or Replace Float Switch

1. **Disconnect dishwasher from electrical supply.**
2. **Remove electrical leads to float switch.**
3. **Take down the switch from float support.**
4. **Install new float switch and reverse procedures to complete repairs (See figure 6).**

TROUBLESHOOTING

The troubleshooting cheek list is common for all dishwasher models. They use different parts to accomplish the same thing and diagnosis will remain similar.

When a problem arises, and a possible cause is listed, follow the test, remove or replace procedures as outline in this service manual. The wiring diagram, shematic and timer cycle chat is a necessity when making electrical checks. In most cases an ohmmeter will handle all the tests necessary.

For checking any particular cycle of operation, it absolutely necessary that the cycle be set up as outlined in the product owner's guide.

SYMPTOM	CHECK THE FOLLOWING	REMENDY
Dishwasher will not operation when turn on	●fuse (blow nor tripped) ● Supply line receptacle, wiring harness. ● Circuit board (contacts open or burnt). ● Motor (inoperative, check resistances). ●Door switch (open contacts) ●Door latch not making contact with door switch.	◇Replace fuse or reset breaker. ◇Repair or replace. ◇Replace circuit board. ◇Replace motor. ◇Replace door switch. ◇ Replace or adjust to make contact.
Dishwasher stop washing but draining	● Overflow occur.	◇ Check the reason of overflow pull out the rubber cap wait for a minute let water pour out.
Water can't pour out from float support when pull out the rubber cap.	●Hole in the float supply is jammed.	◇Suck with dust cleaner or other let water pour out.
Dishwasher runs but not heat	●heater element (open). ●Timer contacts (open or burnt). ● Wiring or terminal (burnt or broken). ● Thermostat is closed.	◇Replace heater element. ◇Replace timer. ◇Repair or replace. ◇Replace.
Dishwasher will not stop.	●Timer motor (inoperative). ● Wiring or terminal (burnt or broken). ●Timer (open or burnt contact).	◇Replace timer. ◇Repair or replace. ◇Replace timer.
Dishwasher runs with door open	●Defective door safety switch.	◇Replace door safety switch.
Motor hums but will not	●Start winding(open).	◇Replace motor.

start or run.	**● Motor (bad bearings or locked rotor).**	**◇Replace motor.**
Motor trips out on in terminal thermal overload protector.	**●Start relay not dropping out.** **●Improper voltage.** **●Seal faces binding.** **●Motor shaft binding.** **●Motor windings shorted.** **●Glass or foreign items in pump.**	**◇Replace start relay.** **◇Check voltage.** **◇Repair or replace.** **◇Repair or replace.** **◇Repair motor.** **◇Clean and clear area.**
Repeated dishwasher cycles	**● Circuit board (contacts open or burnt)** **● Motor (inoperative, check resistances).**	**◇Replace circuit board.** **◇Replace timer.**
Dishwasher does not advance automatically.	**● Damaged circuit board.** **●Check circuit for power ,check if the wire misconnected.** **●Have wire cut off**	**◇Replace circuit board.** **◇ Reconnected wire and circuit board .** **◇Repair.**
Dishwasher will not fill with water.	**●Water supply turns off.** **●Defective inlet valve.** **● Check valve screen for obstructions.** **●Defective float switch.** **●Damaged circuit board.** **●Wiring (broken or burnt).**	**◇Turn water supply on.** **◇Replace inlet valve.** **◇Disassemble and clean screen.** **◇Replace switch.** **◇Replace circuit board .** **◇Repair or replace.**
Incomplete water fill.	**●Low water pressure.** **●Clogged water inlet valve screen.** **● Heavy water supply usage elsewhere in home.** **●Kinked or restricted fill hose, water inlet valve to fill tunnel.**	**◇ Minimum water pressure of 15P.S.I** **◇Clean water inlet valve screen.** **◇ Use dishwasher when water usage is at a minimum.** **◇Correct as needed.**
Too much water fill.	**●Water inlet fill valve defective.** **● Damaged circuit board (open or burnt).** **● Float arm binding or out of adjustment.**	**◇Replace water inlet fill valve.** **◇Replace circuit board.** **◇Repair, adjust or replace.**
Dishwasher will not pump out.	**●Drain pump is restricted.** **●Damaged impeller.** **●Wiring or terminal (contacts open or burnt).**	**◇Clear restrictions.** **◇Replace drain pump.** **◇Replace circuit board.**
Water siphons out.	**●Drain hose loop to low.** **● Drain line connected to a floor drain not vented.**	**◇Move to proper height.** **◇Install vent air gap at counter top.**
Water leaks.	**●Spray arm not rotating or split.**	**◇ Check for proper rotation or replace spray arm.**

	● Overcharge of water.	◇Check and correct for proper fill.
	●Tub seal (torn, worn or loose).	◇Replace tub seal.
	● Dishwasher door not sealing properly.	◇ Adjust door latch assembly and/or strike.
	●Dishwasher is not level.	◇Level dishwasher properly.
	● Overburden (wrong type of detergent).	◇Instructs customer/user.
	●Hose clamps loose.	◇Tighten all clamps securely.
	● Heater element mounting nuts loose.	◇Tighten the nut.
	●Water seal leaking.	◇Use a new water seal.
	●O-ring is not in position.	◇Adjust the ring or replace a new.
	● Motor and pump assembly not seated proper in tub liner bottom.	◇Replace seal.
Poor wash ability.	●Spray arm not rotating.	◇Check for proper rotation.
	●Improper loading of dishes, pans and other.	◇ Instructs customer/user on proper loading per owner's guide.
	●Detergent dispenser inoperative.	◇Repair or replace dispenser.
	● Insufficient amount of detergent. Or the detergent is old.	◇On proper amount of fresh deter gent to use.
	●Damaged or the impeller is broken.	◇Replace pump assembly.
	●Detergent not dissolve.	◇Incoming water temperature of 140° F is required to proper dissolve detergent.
Poor drying of dishes	●Improper loading of dishes, pots and other.	◇ Instruct customer/user on proper loading per owner' s guide.
	●Heating element (open).	◇Replace heating element.
	● Incoming water temperature too low.	◇Incoming water temperature of 140° F for best drying results.
	● Wiring or terminal (broken or burnt).	◇Replace or repair.
Detergent cup will not open.	●Cup binding.	◇Repair or replace.
	●Roll pin retainer or shaft broken.	◇Replace pin, retainer or shaft.
	●Defective bi-metal.	◇Repair or replace.
	●Timer contact (open or broken).	◇Replace timer.
Door will not lath.	●Door latch damaged.	◇Replace door latch.
Rinse agent liquid will not eject.	●Electromagnetic valve defective.	◇Replace valve.
	●Rinse agent dispenser not mounted correctly.	◇Mount securely to rear of inner door panel.
	● Plunger stuck or held in closed position.	◇Free plunger or adjust plunger release.
Rinse agent liquid leaks.	●Container cracker or broken.	◇Replace container.

	●Defective seal on plunger. ●Over filling container.	◇Replace plunger. ◇Follow instructions in owner's manual.
Noisy pump assembly.	●Impellers not properly shimmed or rubbing. ●Pump parts not properly installed. ●Debris in bottom of tub sump area. ●Defective motor bearings.	◇Use shim gauge furnished in impeller and seal kit, when seals are properly shimmed the impellers will be in correct operating position. ◇Inspect and correct. ◇Clean out sump area. ◇Replace motor.
Dishwasher continues to fill or continues to fill even though in case of there is no voltage to fill valve.	● Something (dirt or foreign material) under diaphragm in water inlet valve. ●Defective water inlet fill valve.	◇ Clean water inlet valve or replace. ◇Replace water inlet valve.
Detergent left in dispenser.	●Detergent cup held or blocked by large dishes. ● Dispenser wet when detergent was added.	◇On proper loading dishes. ◇Instructs customer/user.
Softener leaking	●Softener broken. ●Softener nut loosen.	◇Replace softener. ◇Screw down softener cap.
Leaking form air inlet.	●Air inlet nut loose. ●Air inlet install up side down.	◇Screw down air inlet nut. ◇Reinstall air inlet properly.
Window Display "E1"	●Inlet Valve Damaged. ●Inlet Valve Disconnected.	◇Replace Inlet Valve. ◇Reconnected Line.
Window Display "E2"	●Pressure Switch Damaged.	◇Replace Pressure Switch.
Window Display "E3"	●Heating Element (open). ●Power Supply To heating Element Cutting.	◇Replace. ◇Reconnect Line.
Window Display "E4"	●Float Switch Act.	◇Take Remove The Rubber Cap Let Water Pour Out.
Window Display "E5"	●Thermostat Sensor Damaged.	◇Replace sensor(See figure8).