HAIER

HOUSEHOLD ELECTRICAL DISHWASHER

Service Manual

PART# DW-8888-02

HAIER AMERICA TRADING, LLC
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1. WORKING PRINCIPLE

When the power supply button is pressed, the power is on; the indicator lights up. Then the knob is turned to the symbol with the reference mark "|". The dishwasher starts normal washing cycle. The program controller starts rotating, with an internal cam, which can turn-on/off, the contacts and therefore drives various electrical components working. After starting, the dishwasher will firstly drain previous water that remain, and then open the solenoid valve to proceed in water intake.

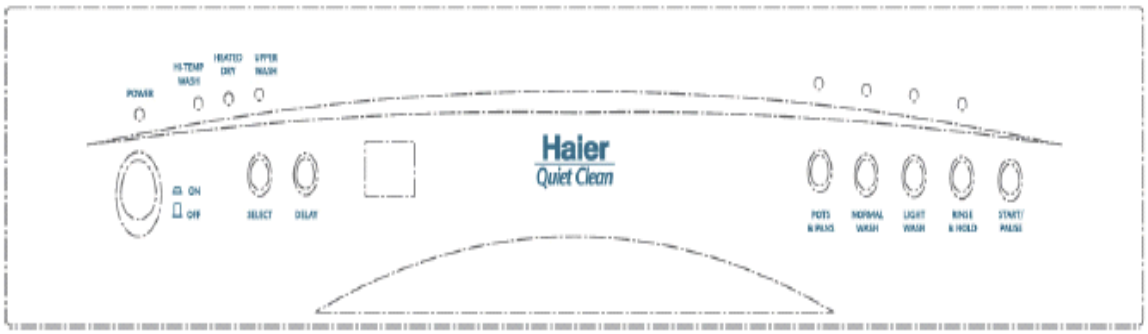
In the lowest point of the bottom of the dishwasher container there is a "water gutter" connected to a "pressure conduit". The "pressure conduit" has an "air pressure switch" installed on it. When the level of the water inside the dishwasher rises, the inner pressure of the "air pressure switch" increases. The "air pressure switch" will stop the rising of the water level when it reaches the setting water level. At this time, the program controller motor keeps on running 15S, and the process of water intake control is over.

When the process of water intake is over, the machine will turn into washing status according to the proceeded program. The fundamental principle is that the city water is circulated by pumping pressure using water pump and sprayed to wash. After the water pump is on, the city water flows through the water pump, turns into high-pressure water current to be pressed into the "sprayer" and sprayed in different angle from the nozzles on the "sprayer", thus achieving the water current spraying for each place inside the machine from different angle. At the same time, the "sprayer" is drove to rotate by the counterforce of spraying, and the effect of spatial spray with various angles and various aspects coming true. After that, the water current converges and flows through the "filter screen" into the " water gutter" and backs to the water pump to be pumped again, thus moves in cycles. During the working process of the wash pump, the pressure of water level decreases, "air pressure switch" is opened and the reset button on it closed which starts the "water intake solenoid valve". When the "air pressure switch" closed and the reset button opened, water intake stops. In the supplement process of water intake, the wash pump keeps on working. During the whole cycle, the heater controlled by thermo limiter controls the water temperature increasing slowly. When the wash process is finished, the program controller will automatically turns to the draining cycle. The dryness of the dishwasher utilizes the excess heat. After the whole cycle is finished, the knob turns back to the dotted line, and the indicator of power supply will still lights up.

The cycle sequence is as follows:

Power on → Program selection → Water intake → Washing → Draining → Rinsing → Draining → Excess heat drying

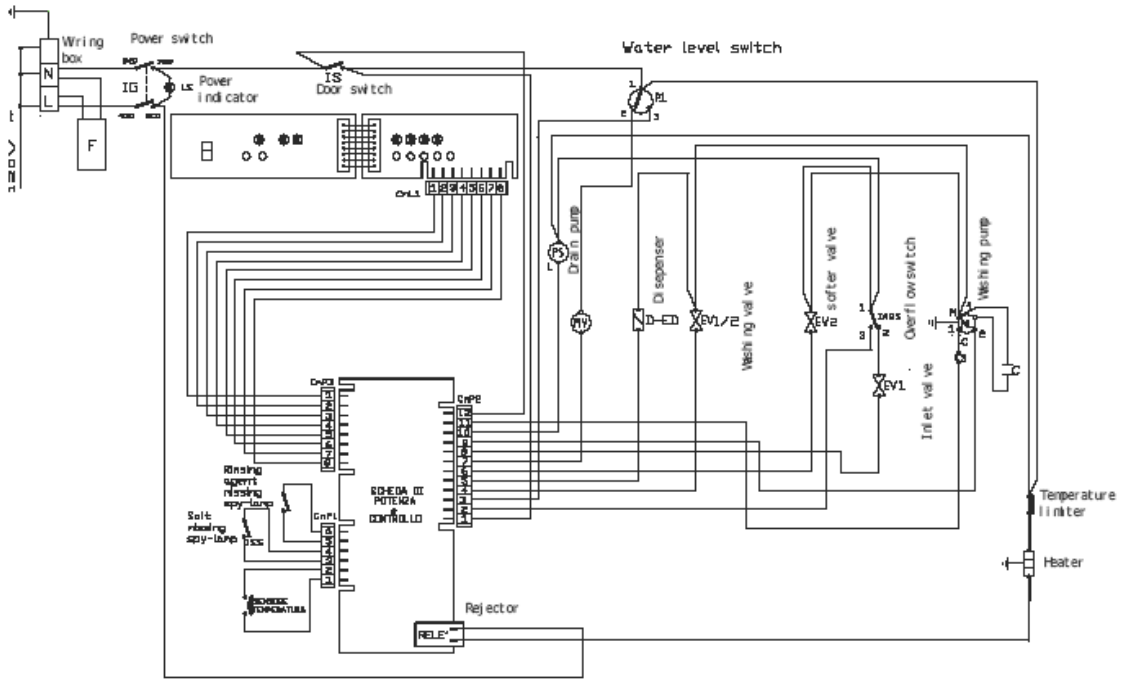
CONTROL PANEL



MAIN TECHNICAL DATA

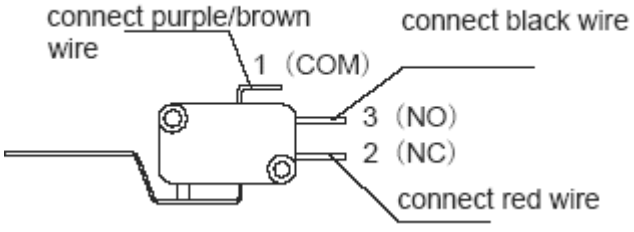
Type / Contents	ESD200
Name	Household dishwasher
Power supply	AC 110-120V/60Hz
Power	Pump: 150, Heater: 1300W, Maximum: 1460W
Washing mode	Spraying
Drying mode	Dry by excess heat
Outline dimension	598*581*864
Weight	93lbs
Capacity	For 12 person
Water pressure used	0.03-0.6Mpa

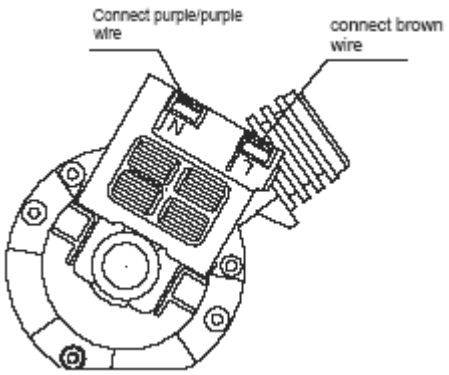
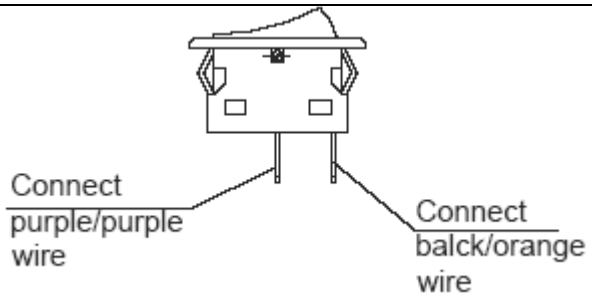
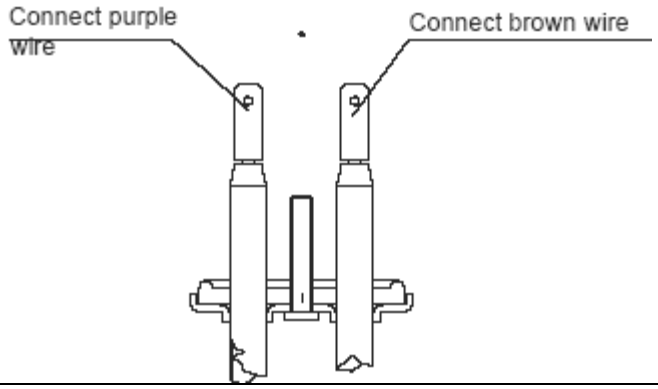
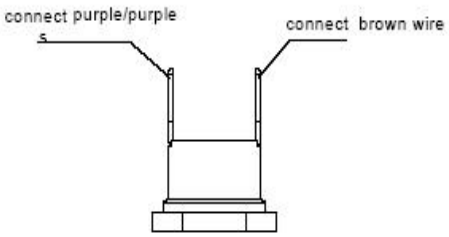
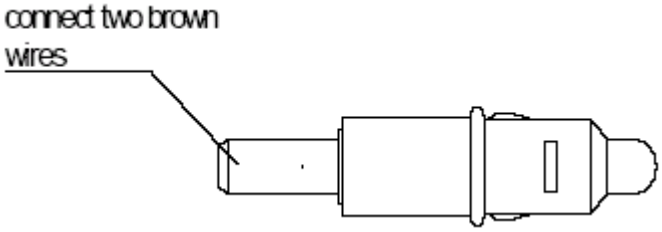
ELECTRICAL CIRCUIT DIAGRAM

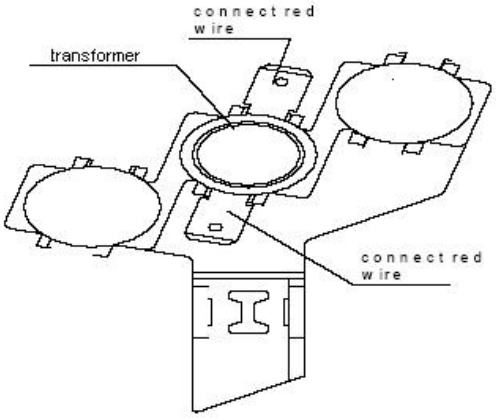
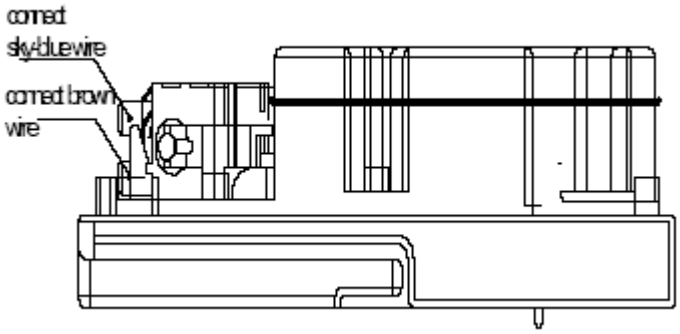
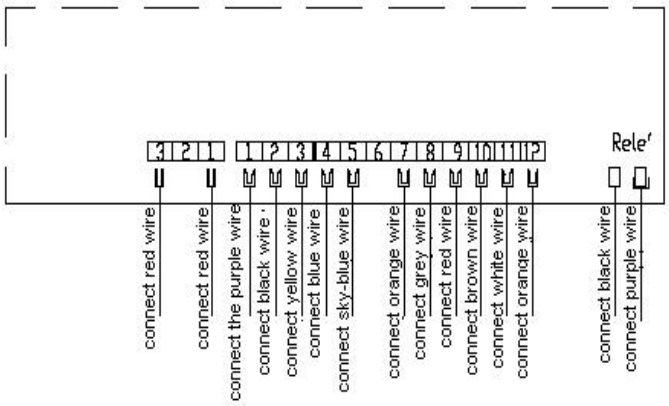
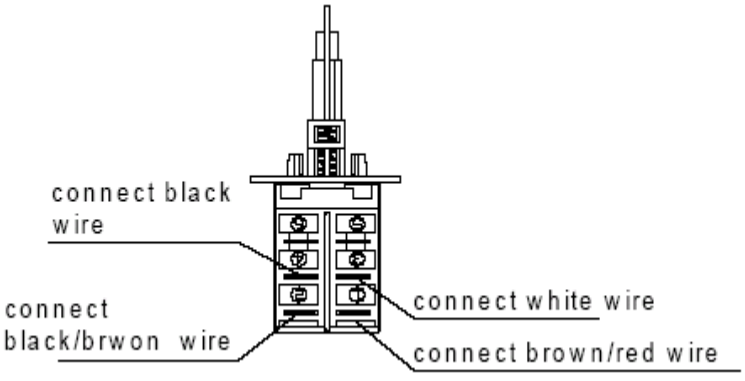


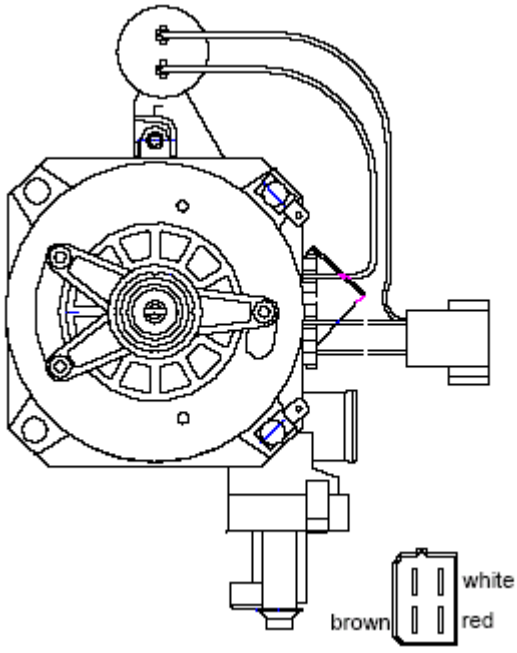
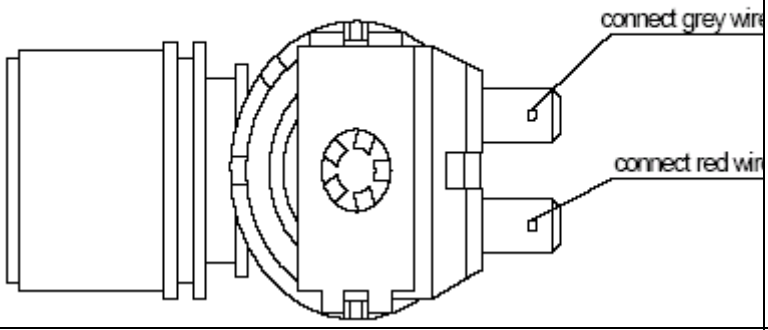
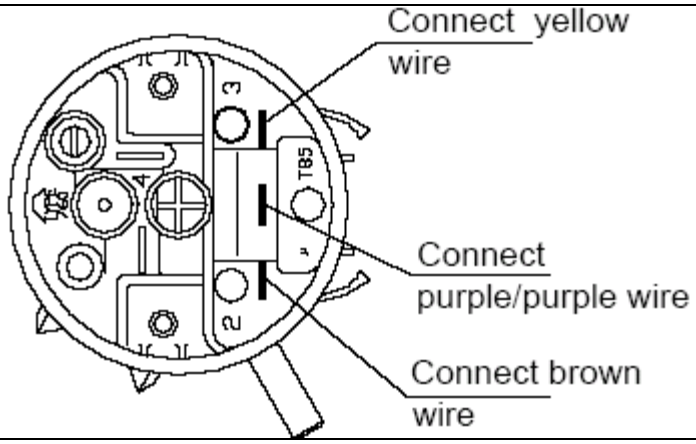
WIRING TECHNOLOGY

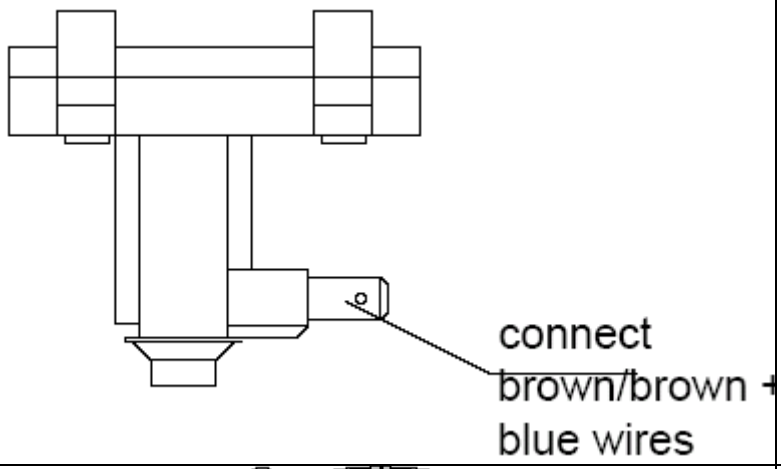
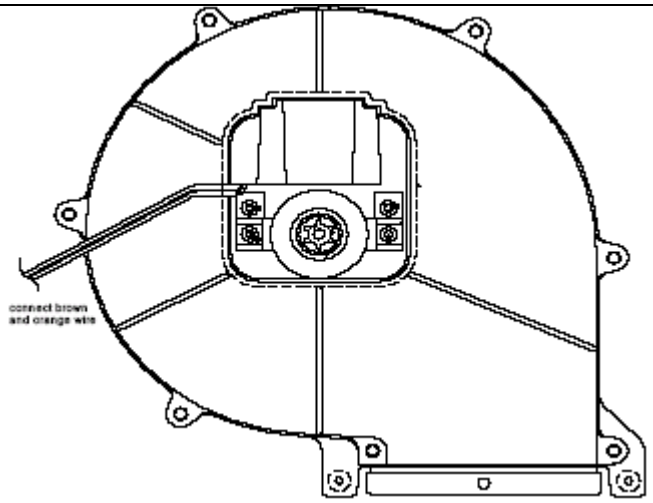
1 Components wiring specification

Serial No.	Name of components	Wiring diagrammatic drawing	Remarks
1	Water overflow switch		Three wire cannot be interchanged

2	Drain pump		Two wires can be interchanged
3	Door Switch		The two wires can be interchanged
4	Heater		The two wires can be interchanged
5	Thermo limiter		The two wire can be interchanged
6	Power supply indicator		The two can be interchanged.

7	Transformer		The wire can not be interchanged
8	Detergent dispenser		The wire can interchanged
9	Control panel		All wires can not be interchanged
10	Power supply switch		All wires can not be interchanged

11	Washing pump		The three wires can be interchanged
12	Water intake supply solenoid valve		The two wires cannot be interchanged
13	Water level switch		The three wires cannot be interchanged

14	Half load value		The two wires can be interchanged
15	Wind motor		The two wires can be interchanged

TROUBLESHOOTING AND MAINTENANCE

- Door switch trouble
  Phenomenon: the dishwasher does not work, The POST&PAN light is flashing
  Check:

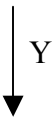
Whether door is closed —N→ close the door

↓ Y

Open the door and check if door flap is OK —N→ Change the door flap

↓ Y

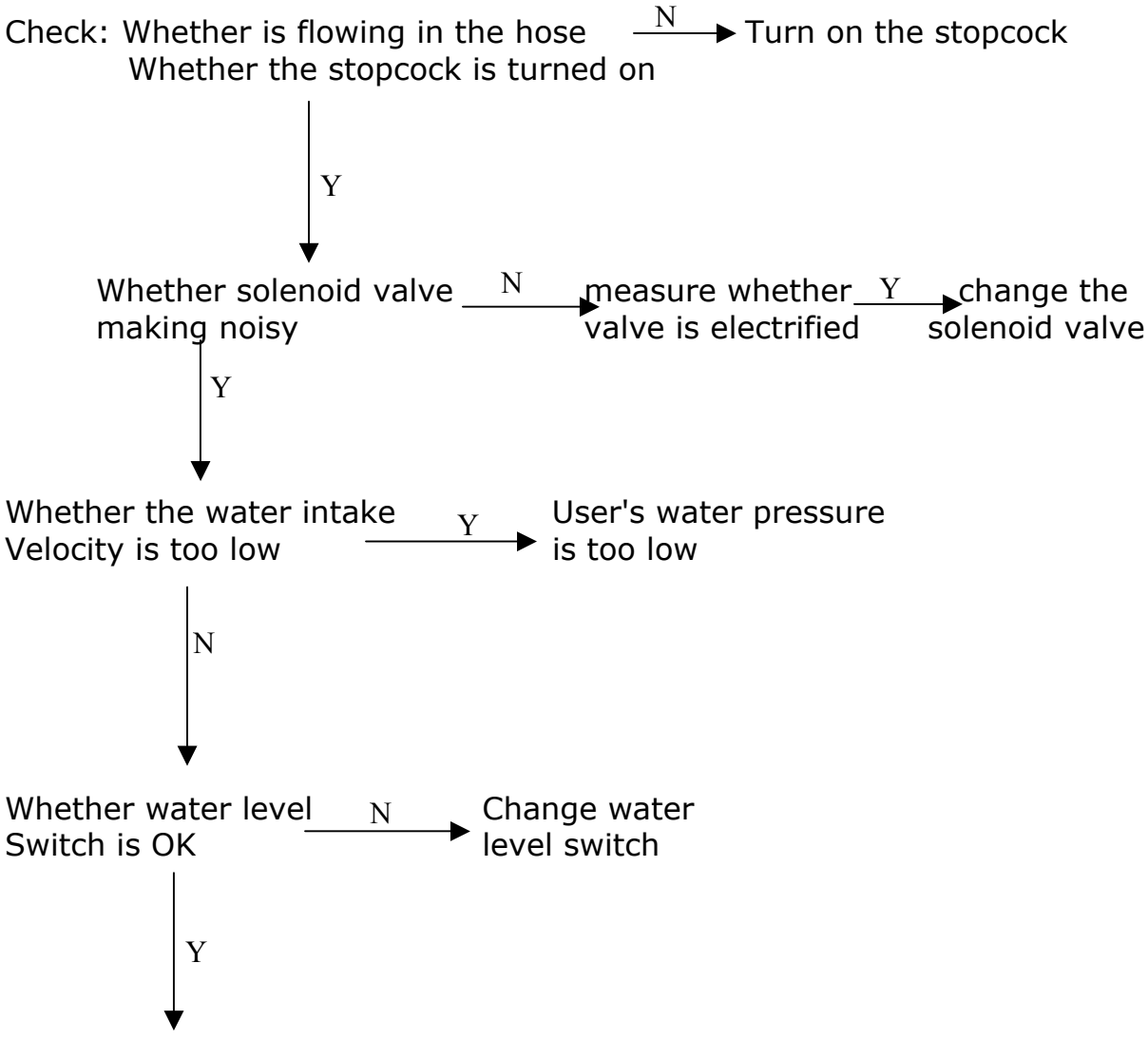
Dismantle the door case and use avometer to measure if the two terminals of door switch —N→ Change the Door switch



Cable or program controller is broken

- Water supply

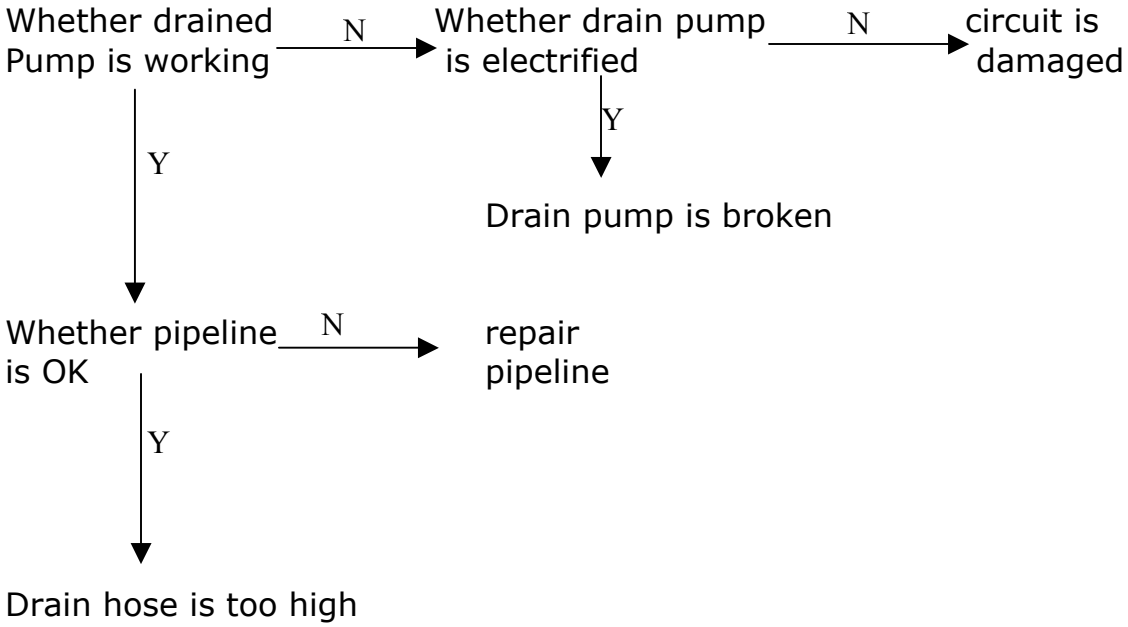
Phenomenon: Water level cannot reach the required location, the three lights of post & pan, normal, light wash is flashing.



- Water supply trouble

  Phenomenon: water cannot be drained, the three lights of pots & pan, light wash, rinse & hold are flashing.

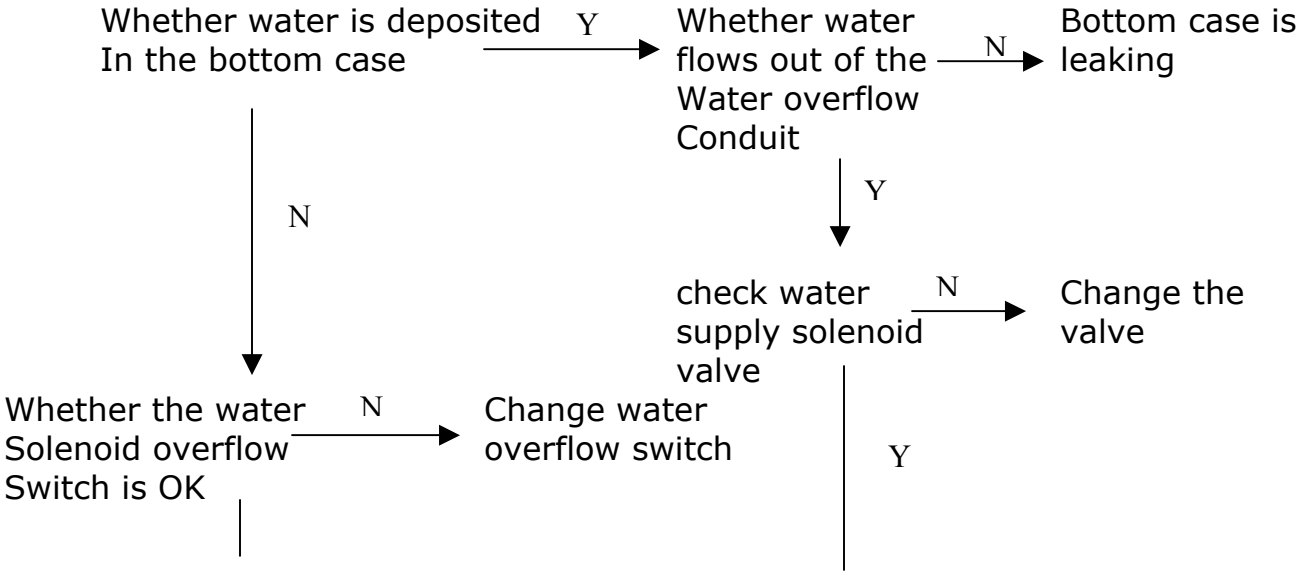
  Check:

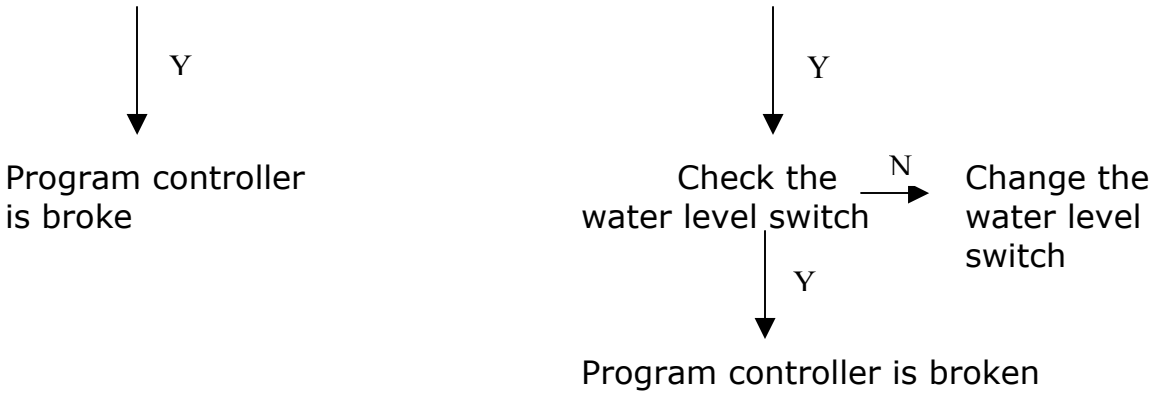


- Water overflow trouble

  Phenomenon: drain pump keep on working, the four lights of pots & pan, normal, light wash, rinse & hold are flashing.

  Check:

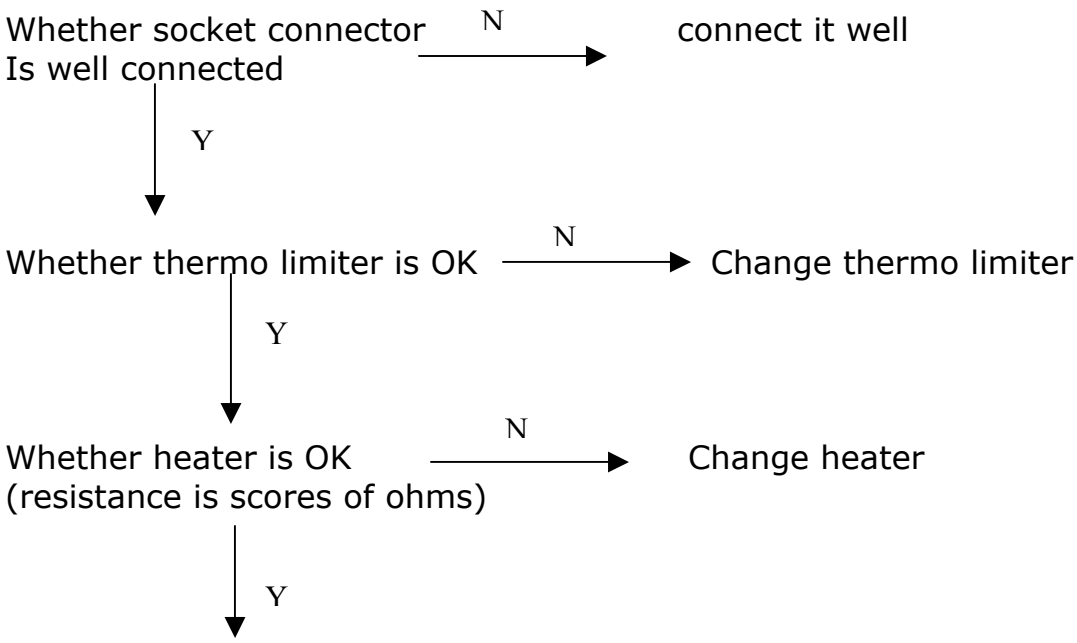




- <u>Heating trouble</u>

  Phenomenon: Water cannot be heated

  Check:

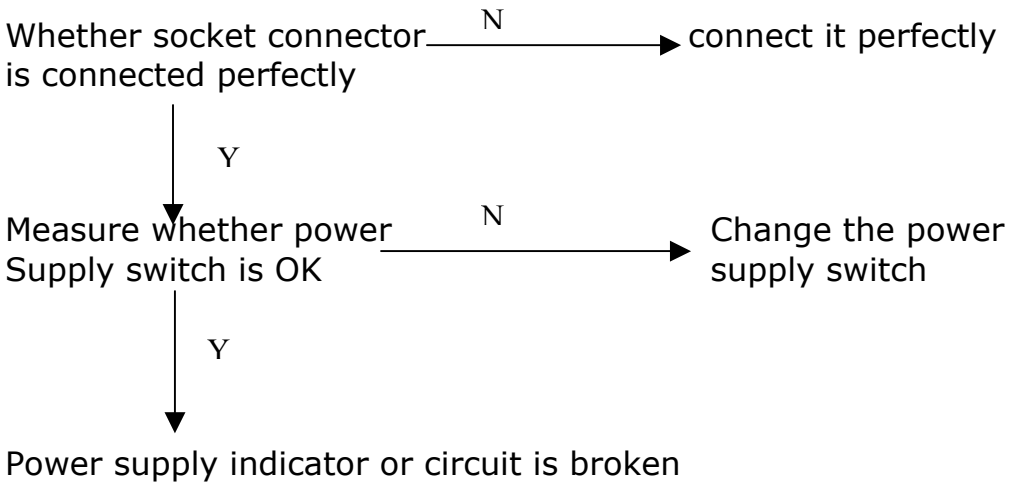


  Program controller or circuit is broken

- <u>Power supply trouble</u>

  Phenomenon: water cannot be heated

  Check :



Advantages of this product series compared to other domestic like products.

a) This product has cleaning rate of over 90%, whereas other domestic like products have 85%
b) The energy of this dishwasher reaches the level of energy standard of America.
c) This dishwasher has rapid-dry, half load and hi-temp wash options.
d) This product can contain 12 sets of eating utensils, applicable to big family.
e) This product utilizes the technique of multipoint spraying and double layers four-sprinkle, which can wash dirt of eating utensils away anywhere.
f) Water softening function is also provided, it can prevent incrustation forming
g) Detergent and rinse aid automatic dispenser is provided and can add them properly that ensures the brightness and cleanness of eating utensils.
h) Water overflow protection is provide
i) The dishwasher is provided with the function of rapid wash and ½ wash that can save water and electricity as well.

ESD Service Information

1. Resistance Measurements

Component	Resistance
Convection Dry Fan Motor	32Ω
Dispenser Door Solenoid	295Ω
Fill Valve Solenoid	961Ω
Heating Element	12-15Ω
Pump Motor	30Ω
Temperature Sensor	Approximately 1100Ω @ 70º F
Upper Wash Valve	1061Ω
Wash Motor – Single Direction	Start Winding (A) - 25Ω Run Winding (M) - 17Ω

2. Troubleshooting & Codes

Pushing "**Power**" during "**Wash**" cycles cancels **ALL** programs
Hi – Temp Wash boosts the water temperature to 161ºF - 167º F

Flashing Light	Problem
Pots & Pans	Problem with door latch or door or wiring
Pots & Pans, Normal Wash, Light Wash	Low or no water fill
Pots & Pans, Light Wash, Rinse & Hold	Water not draining
Pots & Pans, Normal Wash, Light Wash, Rinse & Hold	Water overflow to base pan. Float switch is activated