

BXB7S BXBLED FAILURE FLOW DIAGRAM

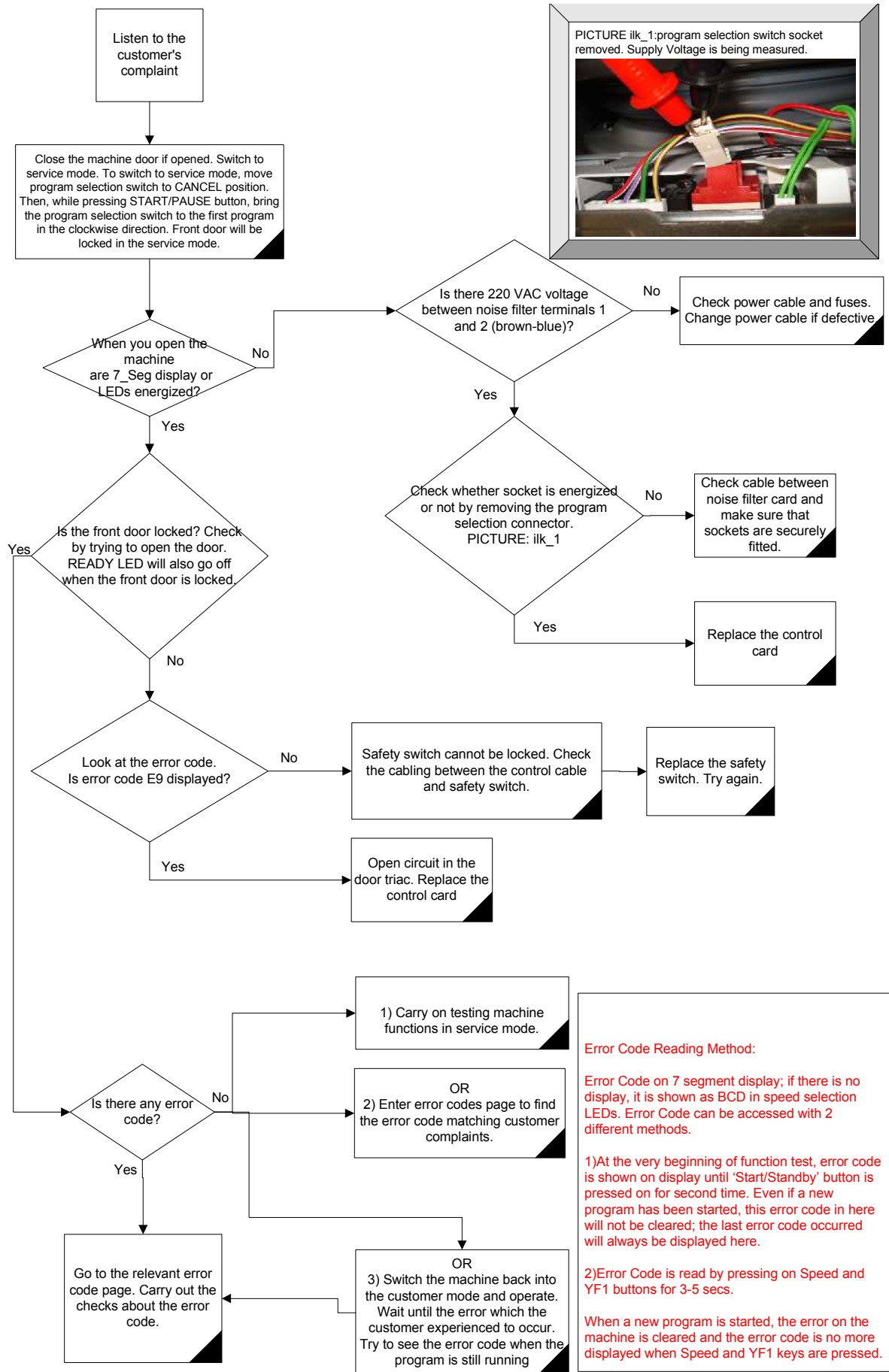
Revisions:

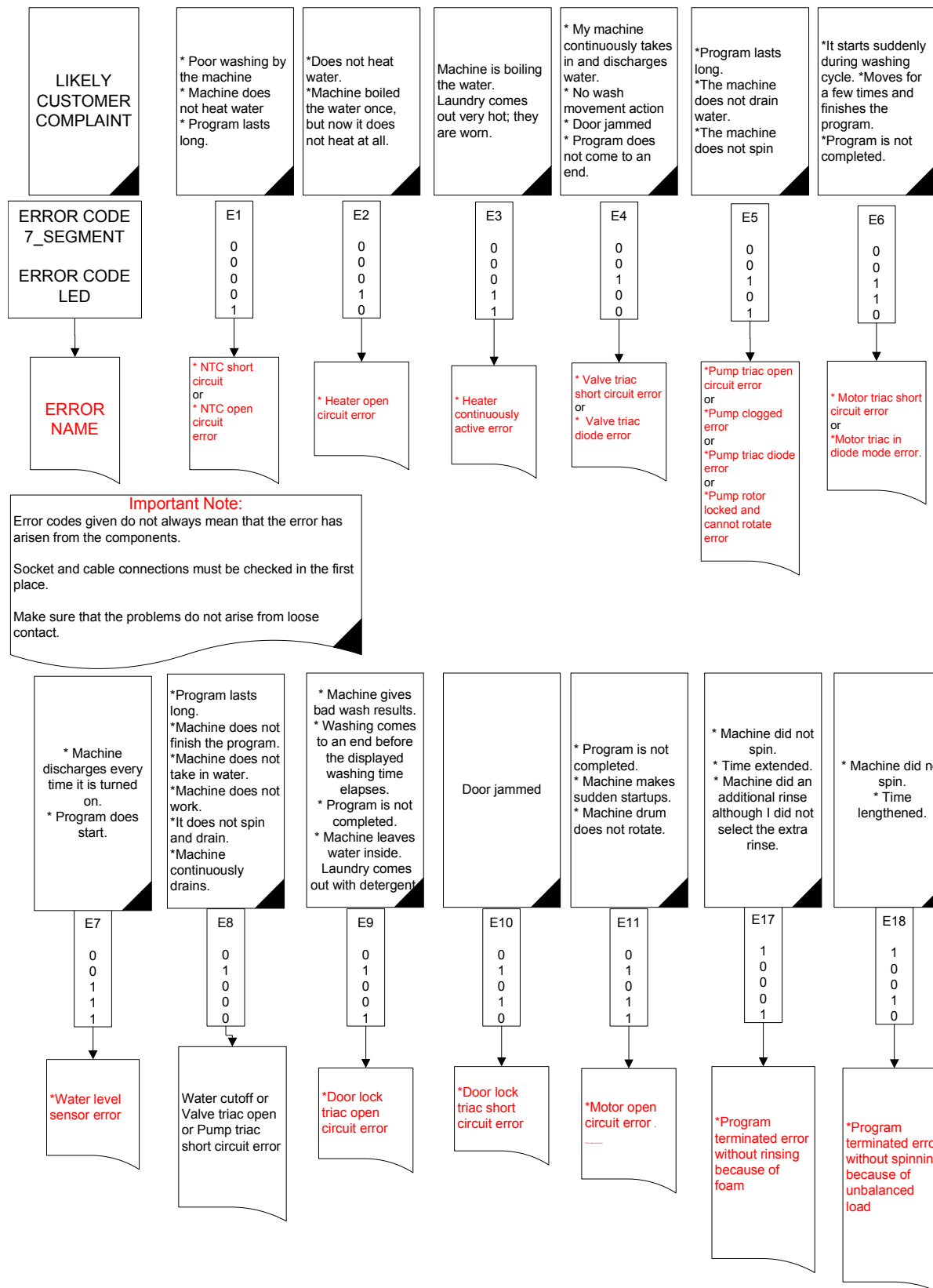
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* Poor washing by the machine
* Machine does not heat water
* Program lasts long.

E1
0
0
0
0
1

* NTC short circuit
or
* NTC open circuit error



Is there E1 error?

Yes

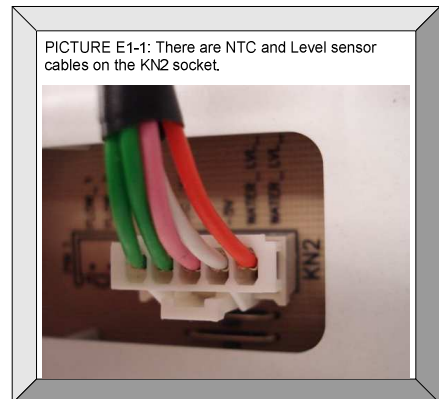
Is KN2 socket on the control card attached?

No

Attach KN2 socket.
(Picture E1-1)

Yes

Take out the KN2 socket and measure the resistance on the socket between 1st (green) and 2nd (green) pins (Picture E1-2)



The measured value is NTC resistance value.
Does it show approx. 4700 OHM under 25°C temperature? (Picture E1-3)
(There should not be open circuit / short circuit)

Yes

Replace control card.

No

Open the rear cover of the machine. After removing the NTC socket on the heater, measure the NTC value directly over the NTC.
(Picture E1-4)

Important Note:

The washing machine makes cold washing and ends the program before the heater is activated in NTC open circuit / short circuit and Heater open circuit conditions, i.e. if there is E1, E2 or E3 error.

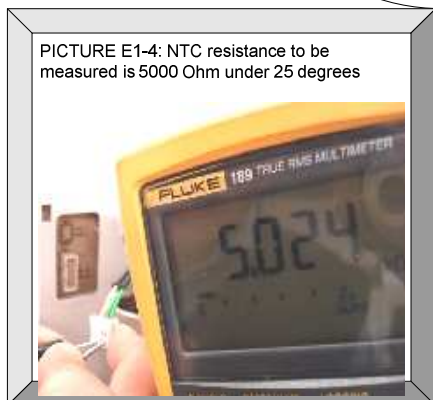
Does it show approx. 4700 OHM under 25°C temperature?
(There should not be open circuit / short circuit)

Yes

As the value measured on the control card socket is wrong, cabling is erroneous; check it. There should not be loose or erroneous cable and socket.

No

Replace NTC. Re-attach the removed sockets into their places



INFORMATION: NTC resistance decreases as its temperature rises. For example, it shows 9500 Ohm under 10 C and 1700 Ohm under 50 C. These values are not erroneous.

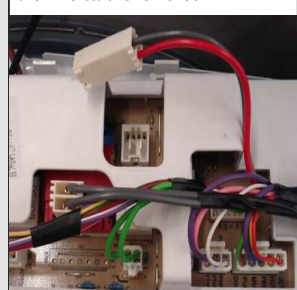
*Does not heat water.
*Machine boiled the water once, but now it does not heat at all.

E2

0
0
0
1
0

* Heater open circuit error

PICTURE E2-1: Heater socket on the KN5 card is removed.

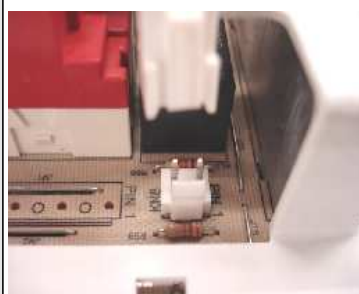


Is there E2 error?

Yes

Remove the panel for a comfortable measuring.
Remove KN5 (Picture E2-1) Heater socket and KN8 (Picture E2-2) Tacho socket.

PICTURE E2-2: KN8 tacho socket is removed.



No

Check to see if there is any short circuit between the first pins of both connectors. (Picture E2-3)

Yes

Replace control card.

PICTURE E2-3: Short circuit check is being made between KN8-1 pin and KN5-1 pin.



Open the rear cover of the machine. Measure heater resistance by removing at least one of the heater terminals; is the resistance 25 Ohms? (Picture E2-4)

Yes

No

Replace the heater

Does the heater operate although there is no water?

No

You may start the washing program.

PICTURE E2-4: One of the cables on the heater is removed (left) and heater resistance is measured.



Check water level sensor. Measure the frequency between pins 1 and 3 while the machine is empty and energized. It should be around 25560 Hertz. (Picture 2-5)

Important Note:

The washing machine makes cold washing and ends the program before the heater is activated in NTC open circuit / short circuit and Heater open circuit conditions, i.e. if there is E1, E2 or E3 error.

PICTURE E2-5: Water level sensor is being checked



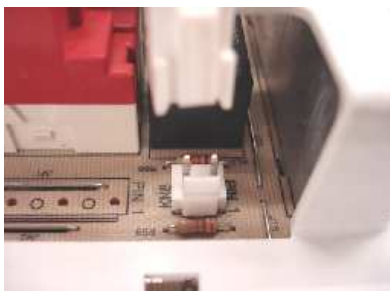
Machine is boiling the water.
Laundry comes out very hot; they are worn.

E3

0
0
0
1
1

* Heater continuously active error

PICTURE E2-2: KN8 tacho socket is removed.



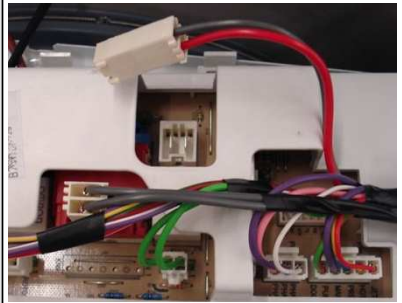
PICTURE E2-3: Short circuit check is being made between KN8-1 pin and KN5-1 pin.



PICTURE E2-4: One of the cables on the heater is removed (left) and heater resistance is measured.

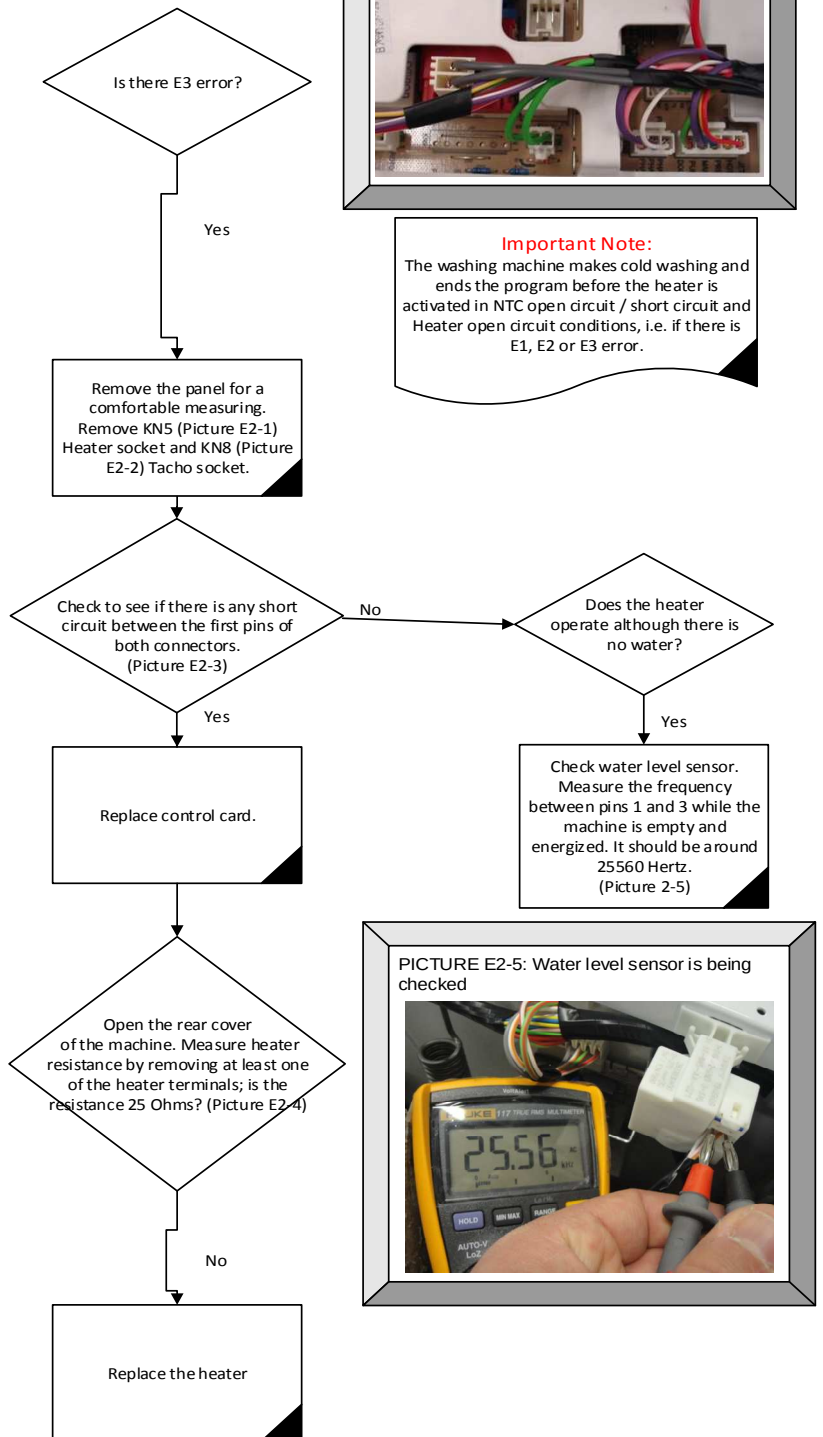


PICTURE E2-1: Heater socket on the KN5 card



Important Note:

The washing machine makes cold washing and ends the program before the heater is activated in NTC open circuit / short circuit and Heater open circuit conditions, i.e. if there is E1, E2 or E3 error.



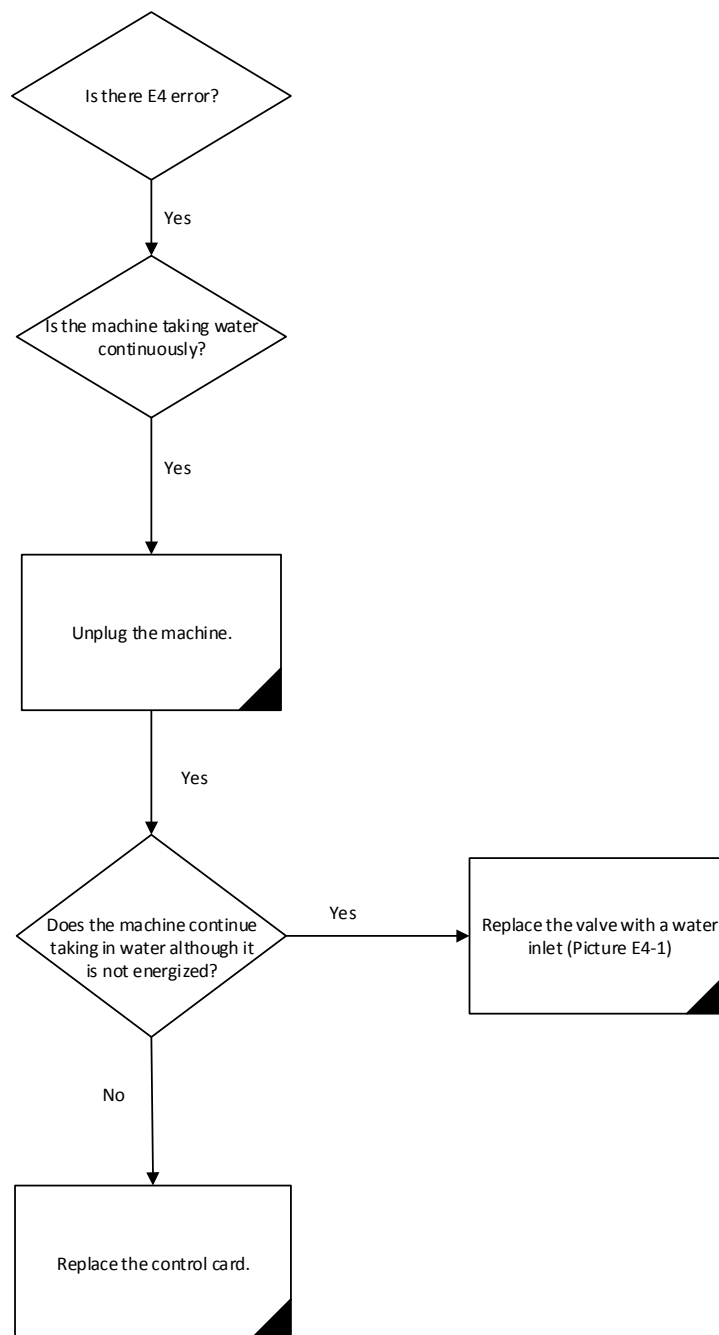
PICTURE E2-5: Water level sensor is being checked



* Machine takes in water continuously.
* No washing movement
* Door cannot be opened
* Programme does not come to an end.

E4

* Valve triac short circuit
or
* Valve triac diode error



*Program lasts long.
*The machine does not drain water.
*The machine does not spin

E5

0
0
1
0
0
1

*Pump triac open circuit error
or
*Pump clogged error
or
*Pump triac diode error
or
*Pump rotor locked and cannot rotate error

PICTURE E5-1: Voltage value going to the pump via card is being measured



PICTURE E5-2: pump resistance is being measured over the pump connector



Is there E5 error?

Yes

Check machine supply voltage. If there is low supply voltage, the pump will not work.

Yes

Start the machine after switching into pump program.

Is the pump motor running?
(It can be understood by touching the filter cover.)

Yes

* Check and clean the pump filter
* Check if the height and length of the drain hose is appropriate, correct accordingly
* Make sure that the drain hose is not kinked or folded.
Make the machine take in water again and start the program again

No

Can the pump discharge water?
(The pump might have become triac diode. The pump cannot pump even if it creates vibration.)

Check if there is 220 VAC between KN6.2 (purple) (pump phase) and KN3.2(morpurple) (pump 0V) pins without removing the control card or any socket while the program is running. Picture E5-1

Is there 220 VAC voltage?

No

Replace the control card.

Yes

Switch off machine and remove its front wall in order to check its pump coil resistance. There should be approx. 147 Ohms between the two pins of the pump connector. Picture E5-2 Check. There should not be open circuit or short circuit

Is the pump resistance correct?

Yes

Is there any loose connection or break between the control card and pump motor and at the socket terminals?

No

Group and restart the machine

Yes

Repair the cables and/or cable terminals

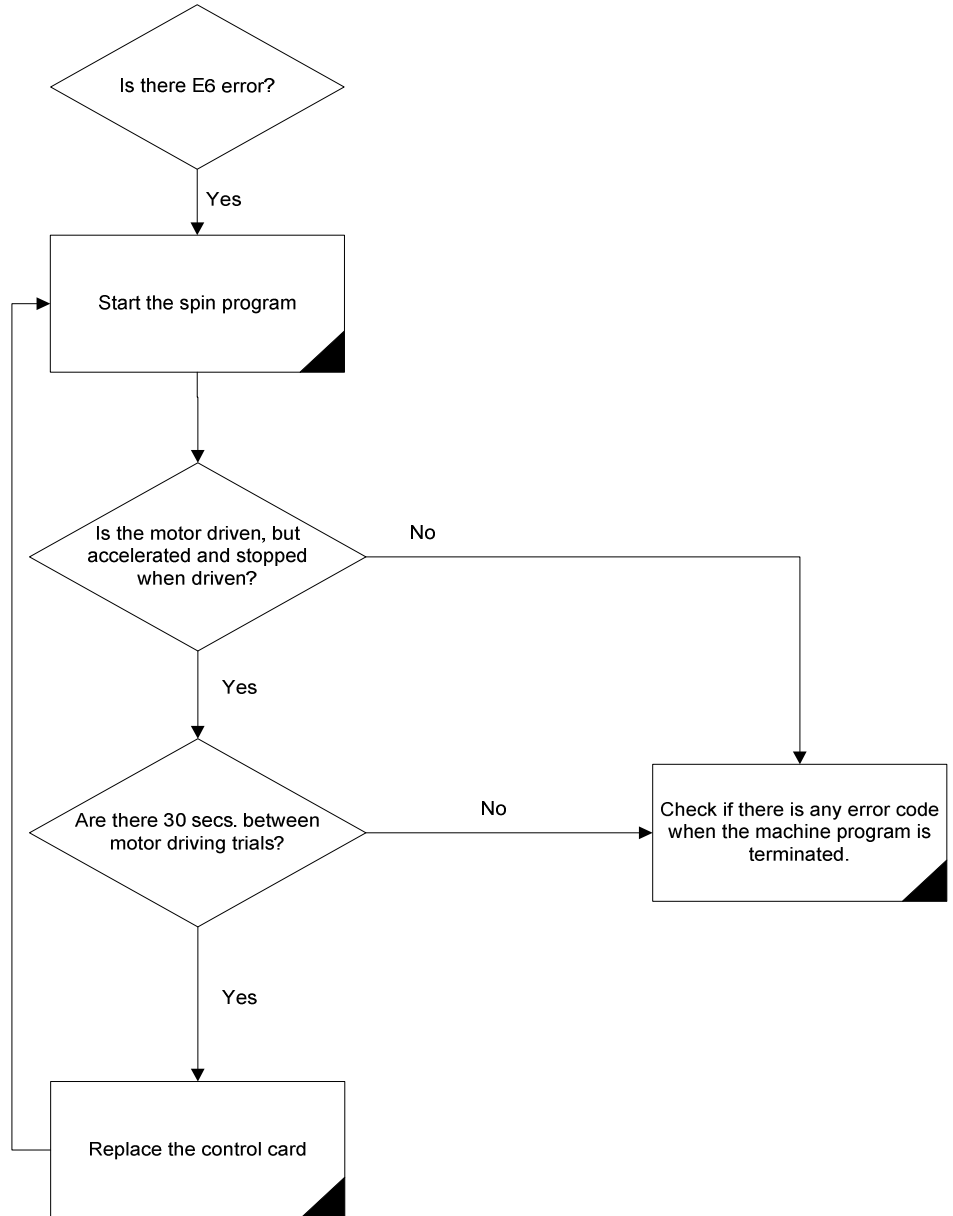
Replace the pump.

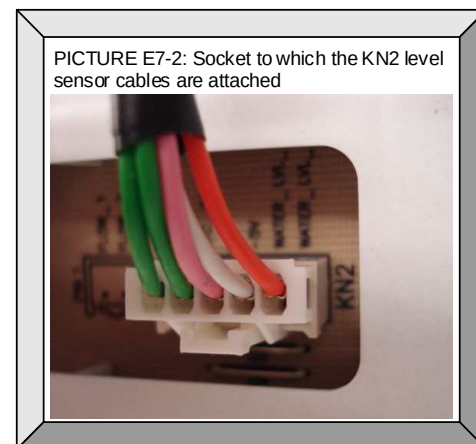
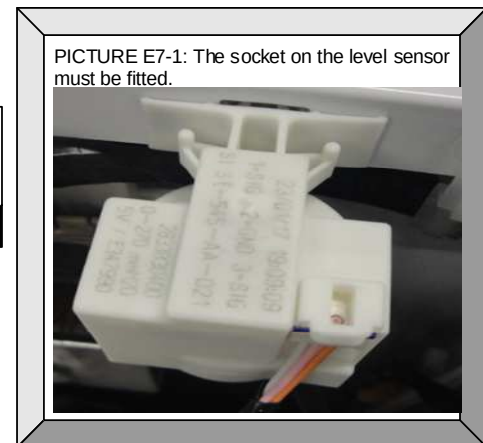
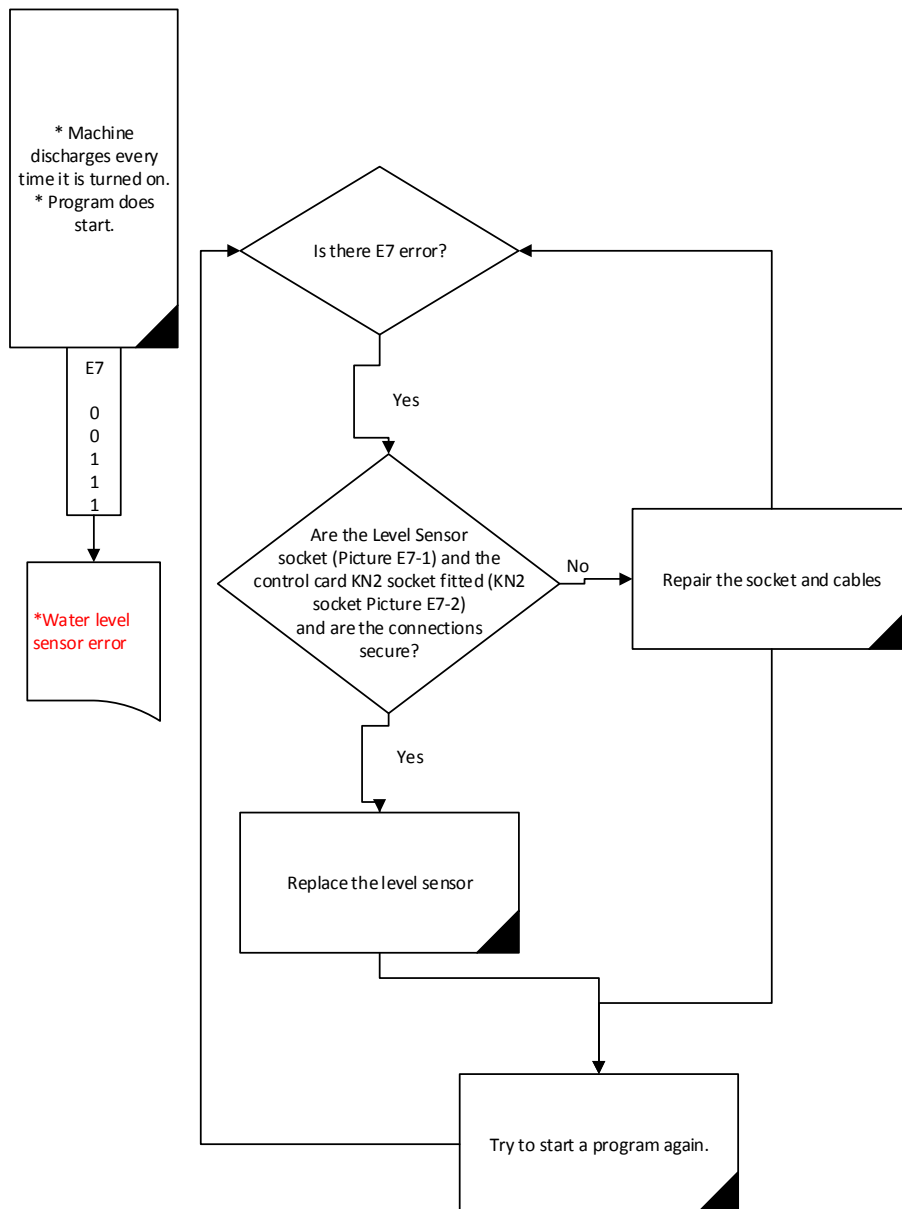
*It starts suddenly during washing cycle. *Moves for a few times and finishes the program.
*Program is not completed.

E6

0
0
1
1
0

* Motor triac short circuit error
or
*Motor triac in diode mode error.





*Program lasts long.
 *Machine does not finish the program.
 *Machine does not take in water.
 *Machine does not work.
 *It does not spin and drain.
 *Machine continuously drain

E8
 0
 1
 0
 0
 0
 0

*Water cutoff
 or
 *Valve triac open
 or
 *Pump triac short circuit error

Is there E8 error?
 Yes

Is the machine taking in water?
 Yes

Yes

Check taps and filters and see if they are open or not. Is the tap turned off or the filter clogged?

Yes

Turn the taps on and try again.

No

Is the machine continuously pumping and discharging water although it is taking in water?

Yes

Replace the main card and try to run a program again except spinning or pump.

PICTURE E8-2: KN3 connector connector on the card



INFORMATION: Main wash pin 3 blue
 Prewash pin 4 yellow
 Hot wash pin 5 red

PICTURE E8-1: AC voltage is being measured over valve connectors



Make sure that the valve connectors (Picture E8-1) and control card KN3 (Picture E8-2) are fitted. Are the connectors fitted?

No

Attach the connectors and try again.

Yes

PICTURE E8-3: AC voltage is being measured over valve connectors



Replace the valve. Try again.

Is there 220 VAC between the connectors of the valve that has to operate? (Picture E8-1)

No

Yes

Is there 220 VAC between KN3 connector's 1st pin on the control card and the valve pin that has to operate? (Picture E8-3)

No

Replace the control card and try again.

Yes

Yes

Correct connections and check. Try again

Is there any error on the cable connections between the control card and the water inlet valves?

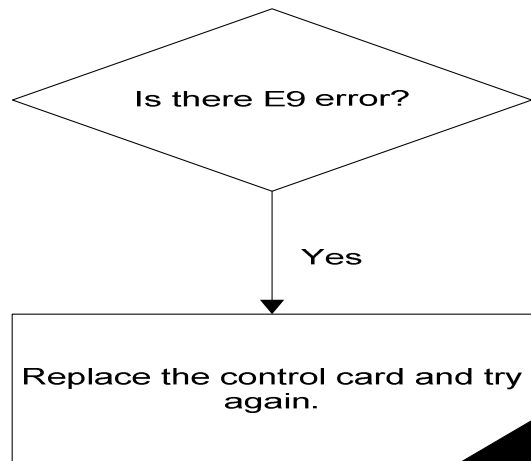
Important Note:
 Prewash and main wash valves are activated concurrently in the softener step. Thus, water is sent to softener compartment.

* Machine gives bad wash results.
* Washing comes to an end before the displayed washing time elapses.
* Program is not completed.
* Machine leaves water inside.
Laundry comes out with detergent

E9

0
1
0
0
1

*Door lock
triac open
circuit error

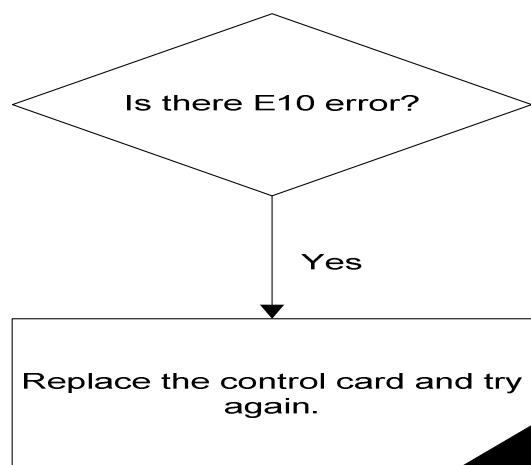


Door jammed

E10

0
1
0
1
0

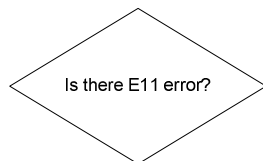
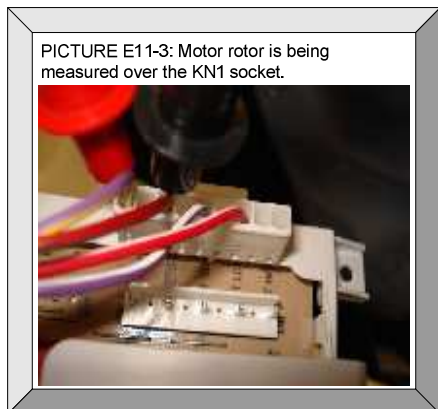
*Door lock
triac short
circuit error



* Program is not completed.
 * Machine makes sudden startups.
 * Machine drum does not rotate.

E11
 0
 1
 0
 1
 1

*Motor open circuit error .



Yes

Start the spin program

Machine is turned off.
 1) Resistance value is measured between the 3rd and 4th pins of the KN1 socket which has been removed from the card. Resistance value is approx. 1.5 Ohm. There should not be open circuit or short circuit (Picture E11-2)
 2) Again, the resistance value is measured between pin 1 and pin 2 ends of the KN1 socket and there should not be any open circuit. (Picture E11-3)

Does the motor make sudden movements and stop?

No

Yes

Cont'd from E11_3 B-B

Are both measurement values correct?

Yes

No

Is there a DC module in the machine?

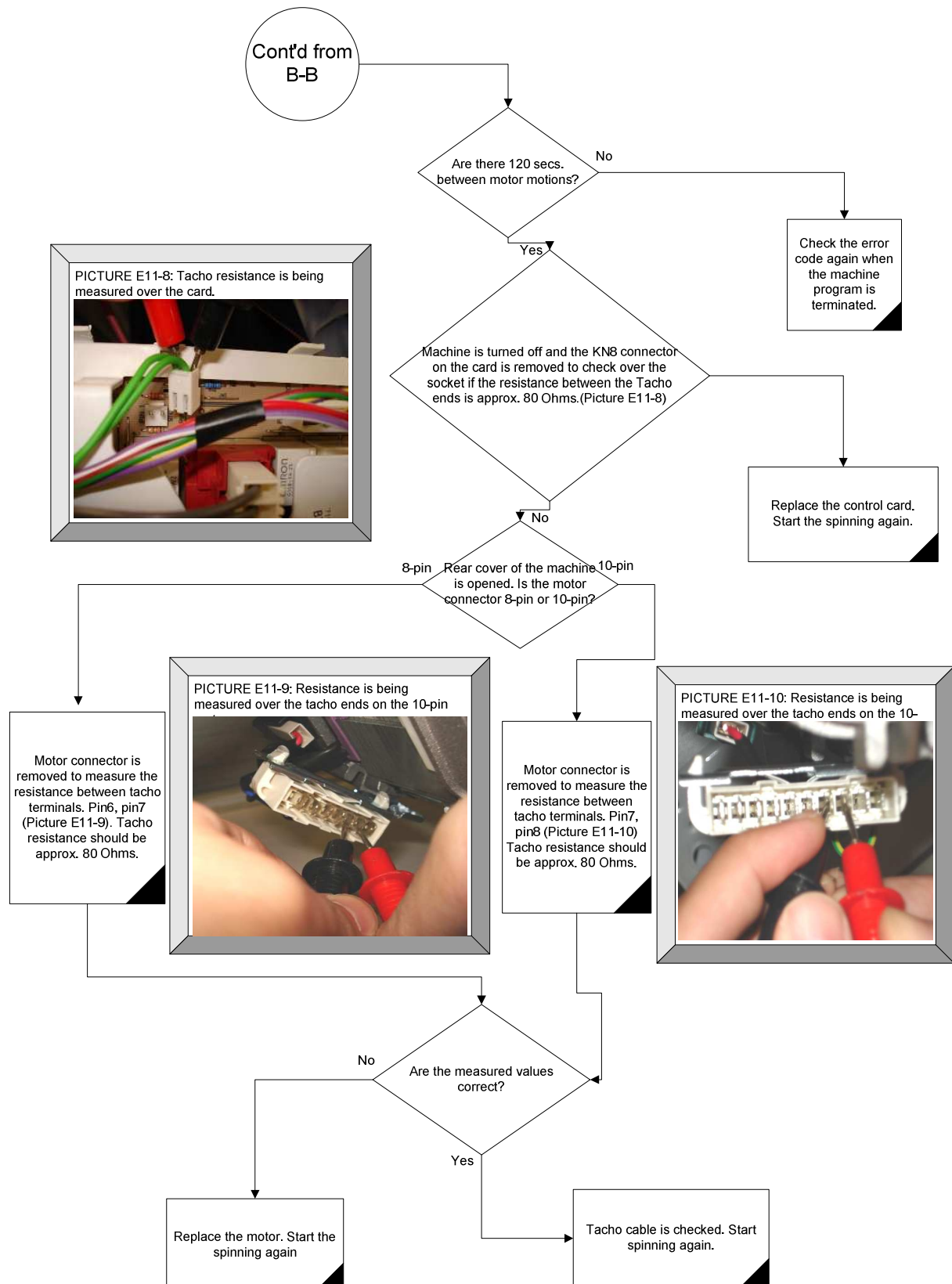
Yes

No

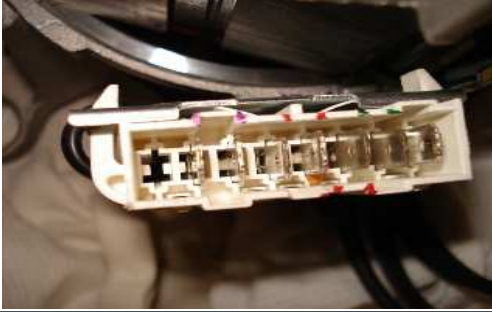
Replace the DC module
 Replace the control card.
 Start the spinning again.

Replace the control card.
 Start the spinning again.

Cont'd from E11_2 A-A



PICTURE E11-12: 8-pin motor connector



IMPORTANT: First connector on the 8-pin motor connector is empty. This connector is also counted.

Picture E11-12

PICTURE 11-4: Motor coil resistance is being measured over the 8-pin motor.



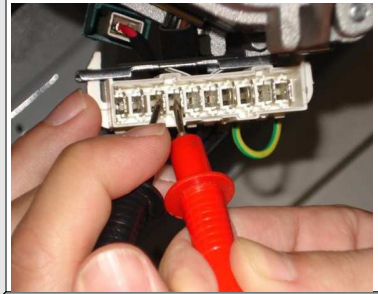
A-A

8-pin

Rear cover of the machine is opened. Is the motor connector 8-pin or 10-pin?

10-pin

PICTURE E11-6: Motor coil resistance is being checked over the 10-pin motor



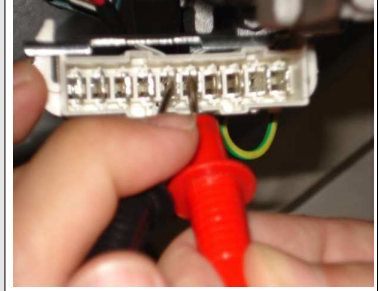
1) Motor socket is removed. Resistance value is measured between the 2nd and 3rd pins of the motor connector. Resistance value is approx. 1.5 Ohm. There should not be open circuit or short circuit (Picture E11-4)
2 Resistance value is measured between pin 4 and pin 5 ends of the motor connector and there should not be any open circuit. (Picture E11-5)

1) Motor socket is removed. Resistance value is measured between the 3rd and 4th pins of the motor connector. Resistance value is approx. 1.5 Ohm. There should not be open circuit or short circuit (Picture E11-6)
2 Resistance value is measured between pin 5 and pin 6 ends of the motor connector and there should not be any open circuit. (Picture E11-7)

PICTURE E11-5: Motor rotor is being checked over the 8-pin motor



PICTURE E11-7: Motor rotor is being checked over the 10-pin motor



Are both measurement values correct?

No

Yes

Check the cabling between the card and the motor and correct accordingly. Start the spinning again.

Replace the motor. Start the spinning again

* Machine failed to spin.
* Time extended.
* Although I did not select extra rinse, machine performed another rinse.

E17

*Programme finished without spinning due to foam.

Is there E17 error?

Yes

Check if the main wash and prewash valves are connected to the related compartment of the detergent dispenser? If prewash is selected, water fills in the prewash compartment when the machine takes in first water. If prewash is not selected, first water is taken from the main wash compartment. Is it so? (Picture E17-1)

No

Correct the water intake hoses.

Yes

Explain the customer the following Antifoam measures.

Foam formation reasons and prevention methods,

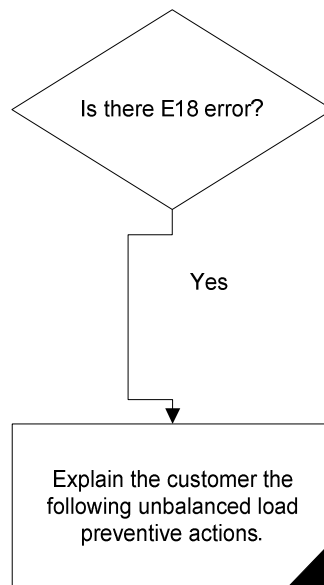
- 1) If you add detergent in the prewash compartment although you have not selected prewash, detergent is taken from this compartment while rinsing the laundry and cause foam formation.
- 2) You should use detergents for automatic machines.
- 3) Laundry can remain with detergent as a result of using excessive detergent. You should try to use only adequate amount of it.
- 4) Keep your detergent in a closed and dry place.
- 5) You should use less amount of detergent than ever for your lacy laundry.
- 6) You should not use too much softener.

* Machine did not spin.
* Time lengthened.

E18

1
0
0
1
0

*Program terminated error without spinning because of unbalanced load



Reasons for ending the program without spinning as a result of unbalanced load detection

- 1) Laundry may pile up on one side of the drum when you run your machine with less laundry. There is the risk of damaging the washing machine when it is operated in higher speeds with unbalanced load. Therefore, when the unbalanced load in the machine is calculated more than the limit value, the machine does not spin for safety reasons.
- 2) Piling up of laundry at one point in the drum will be higher when the machine is operated with a single pullover, bathrobe or towel. Avoid washing such laundry as one piece as much as you can.

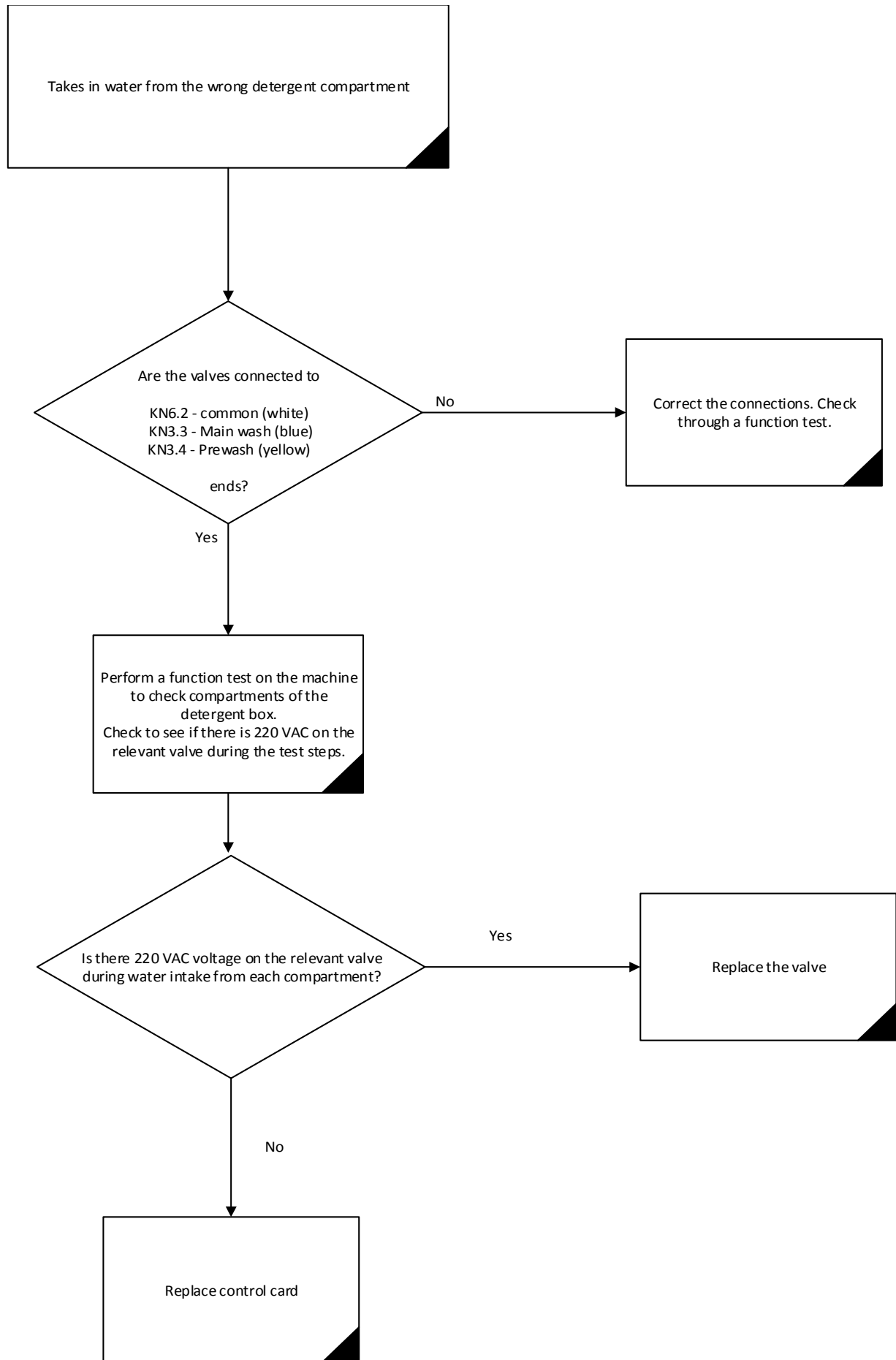
Yes

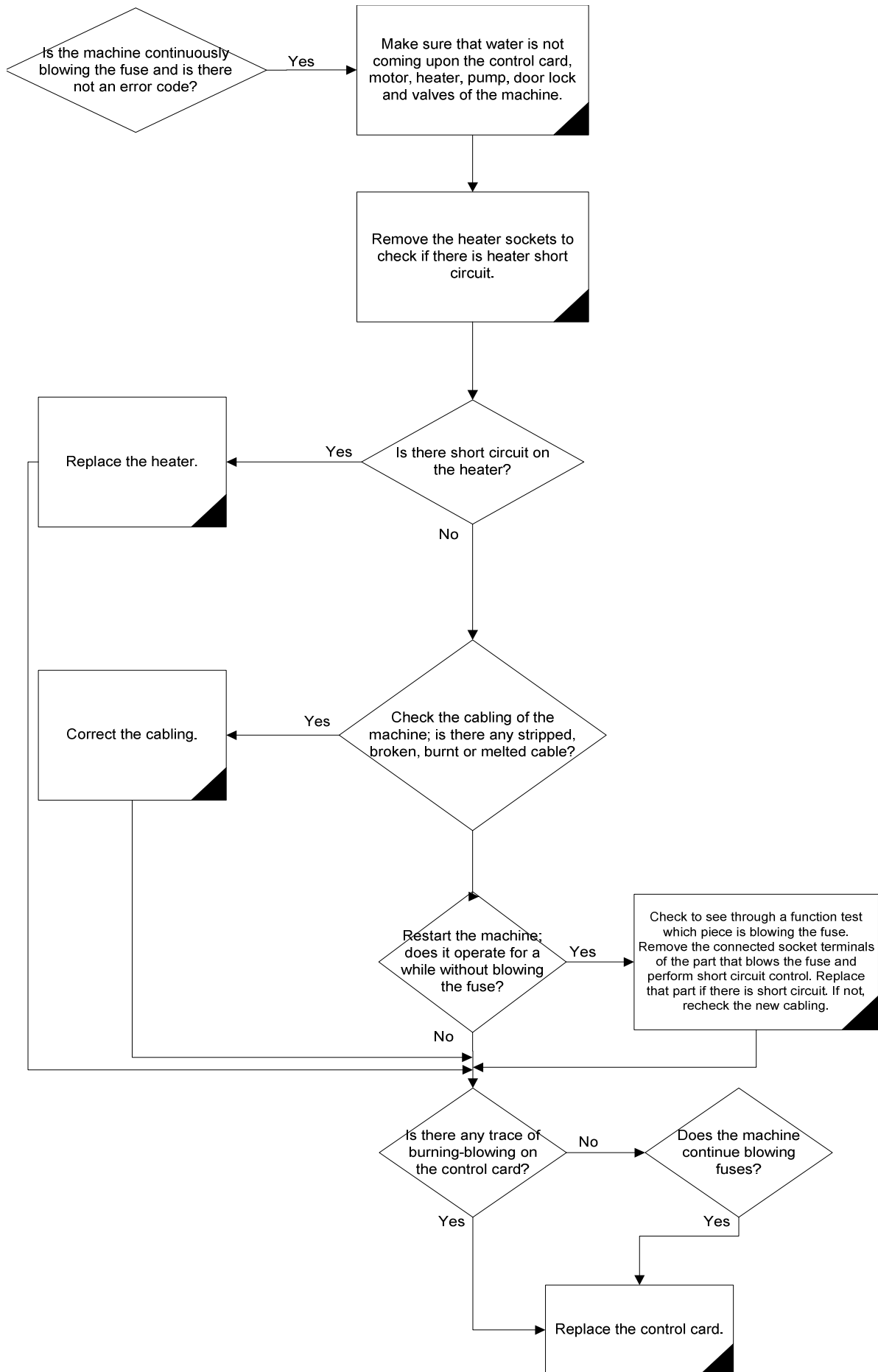
Program selection switch does not function.
Or the
selected program and the running program are not identical
or
some programs cannot be selected.

For example, although spinning is selected, the machine
takes in water.



Replace the control card.





Error code is shown on the screen in case of 7_segment display. Nothing is shown on the speed indication LEDs.	Spin speed adjustment LEDs error display (speed LEDs are used to show error codes in models not equipped with 7_segment display)					ERROR
	Speed 5 MAX	Speed_4	Speed_3	Speed_2 (rinse hold)	Speed_1 (no spin)	
E01					✓	*Heater ntc open circuit error or *Heater ntc short circuit error
E02				✓		*Heater open circuit error
E03				✓	✓	Heater continuously active error
E04			✓			* Valve triac short circuit or 'Valve triac diode error
E05			✓		✓	'Pump triac open circuit or Pump blocked or Pump triac diode or 'Pump rotor locked and does not rotate error
E06			✓	✓		*Motor triac short circuit or *Motor in triac diode mode error.
E07			✓	✓	✓	*Water level reading error
E08		✓				*Water cut off or *Valve triac open or *Pump triac short circuit error
E09		✓			✓	'Door lock triac open circuit error
E10		✓		✓		'Door lock triac short circuit error
E11		✓		✓	✓	*Motor open circuit or * Tacho open circuit
E17	✓				✓	*Program terminated error without spinnin because of foam
E18	✓			✓		*Program terminated error without spinnin because of unbalanced load