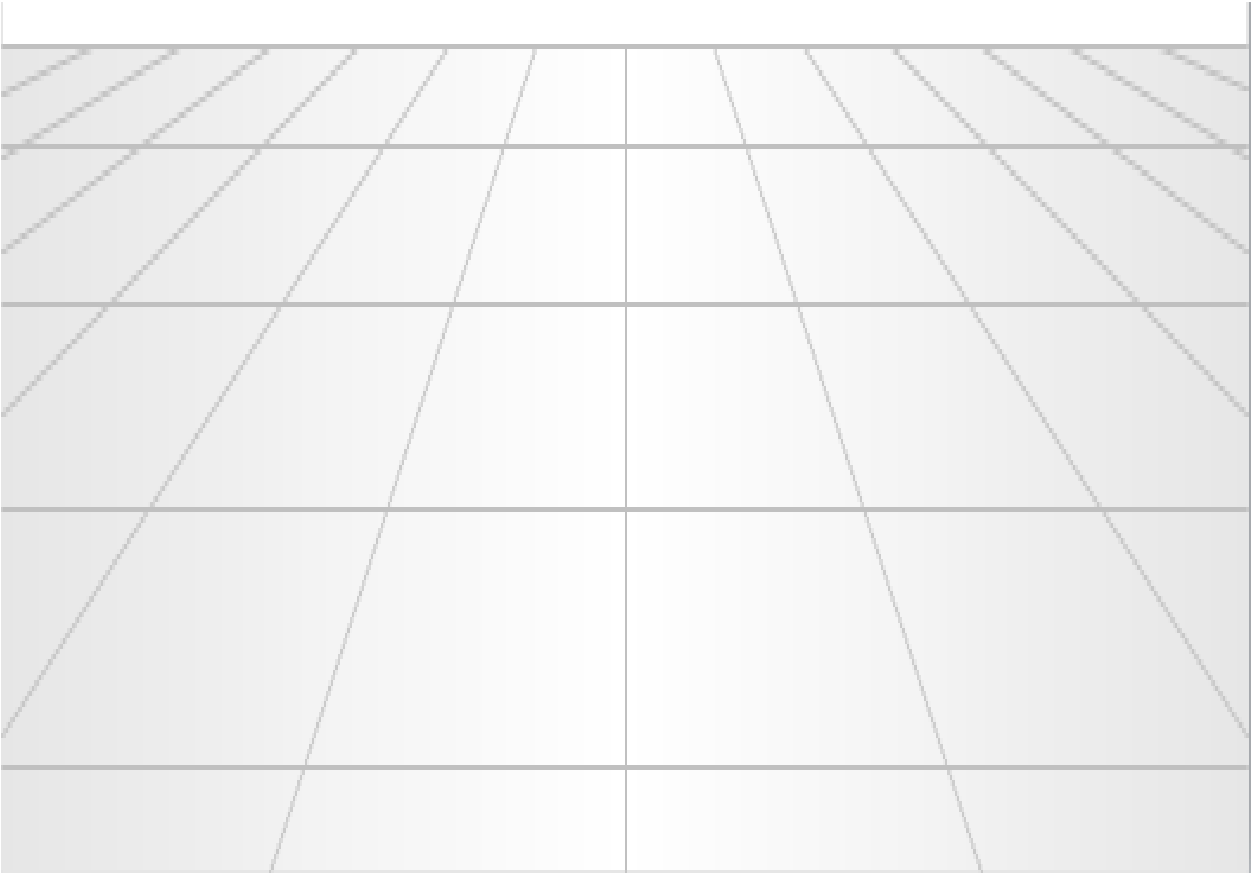


B13 BETTER(B13BEST) FAULT FLOW DIYAGRAMI



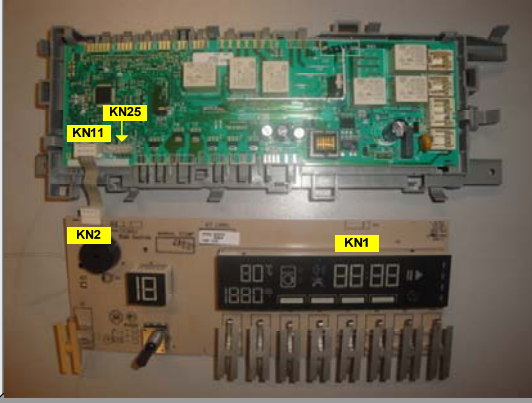
FAILURE / ERROR CODES

SERVICE MODE ERROR CODE	ERROR DEFINITION
E01	NTC short circuit NTC open circuit error
E02	Heater open circuit error
E03	Heater continuously active error
E04	Valve triac short circuit Valve triac diode error
E05	*Pump triac open circuit error or *Pump clogged error or *Pump triac diode mode error or *Pump rotor locked and cannot rotate error
E06	Motor triac short circuit or (UMDC) Motor triac diode mode error (UMDC)
E07	Water level sensor reading error
E08	Water cutoff or Valve triac open circuit or Pump triac short circuit error
E09	Door lock triac open circuit error
E10	Door lock triac short circuit error
E11	Motor phase open circuit error (ASKOLL) Motor triac open circuit or (UMDC) Motor tacho open circuit (UMDC)
E12	Water level is at aquastop level error
E13	BLAC motor communication cable open circuit error
E15	Flowmeter short circuit or open circuit error
E17	Program finished without rinsing because of foam (it is not an error, it is a warning)
E18	Program finished without rinsing because of unbalanced load (it is not an error, it is a warning)
E28	Door lock signal (zero cross) is not received error
E29	Operating voltage out of limit error

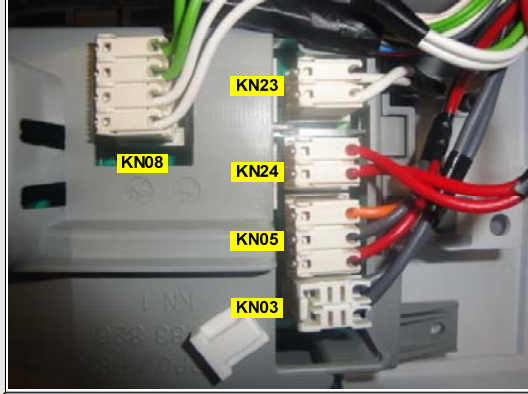
FAILURE FLOW / ERROR FINDING DIAGRAMS

Electronic Board Sockets

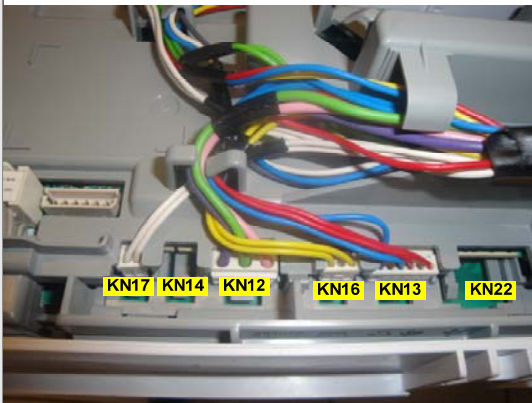
PICTURE-1 Control card and display card



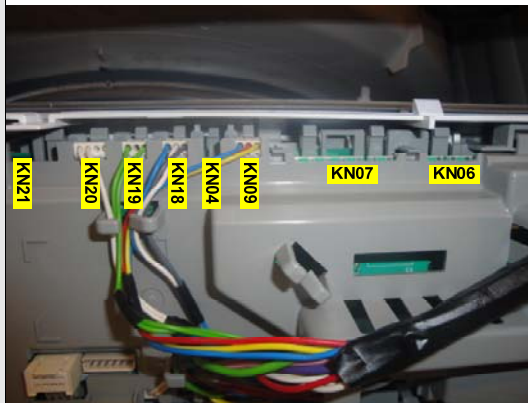
PICTURE-2 Control card sockets



PICTURE-3 Control card sockets



PICTURE-4 Control card sockets

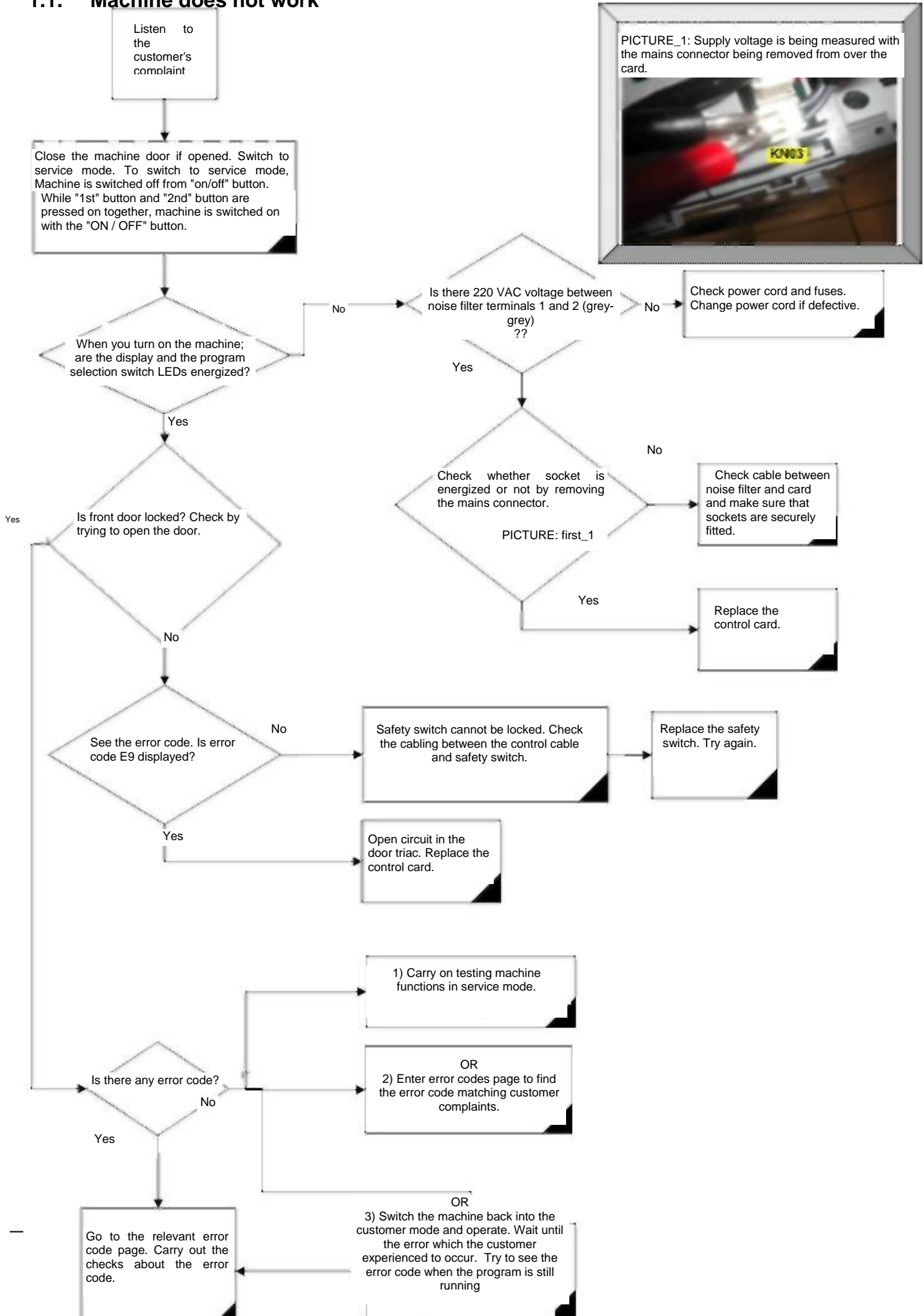


KN1- DISPLAY CARD PROGRAM INSTALLATION
KN2- DISPLAY CARD INPUT (DISPLAY)
KN03- 220 VAC INPUT
KN05- DOOR LOCK
KN06- MOTOR DC CARD (UMDC)
KN07- MOTOR (UMDC)
KN08- MOTOR-IMPEDANCE COIL (BLAC)
KN09- MOTOR COMMUNICATION (BLAC)
KN11- DISPLAY CARD INPUT (MAIN BOARD)
KN12- DRAINING-JET PUMP
KN13- PREWASH-MAIN WASH VALVE
KN14- HOT WATER VALVE
KN16- STEAM VALVE
KN17- AQUASTOP
KN18- WATER LEVEL SENSOR
KN19- NTC
KN20- FLOWMETER (WATER METER)
KN23- STEAM GENERATOR
KN24- HEATER
KN25- MAIN BOARD PROGRAM INSTALLATION

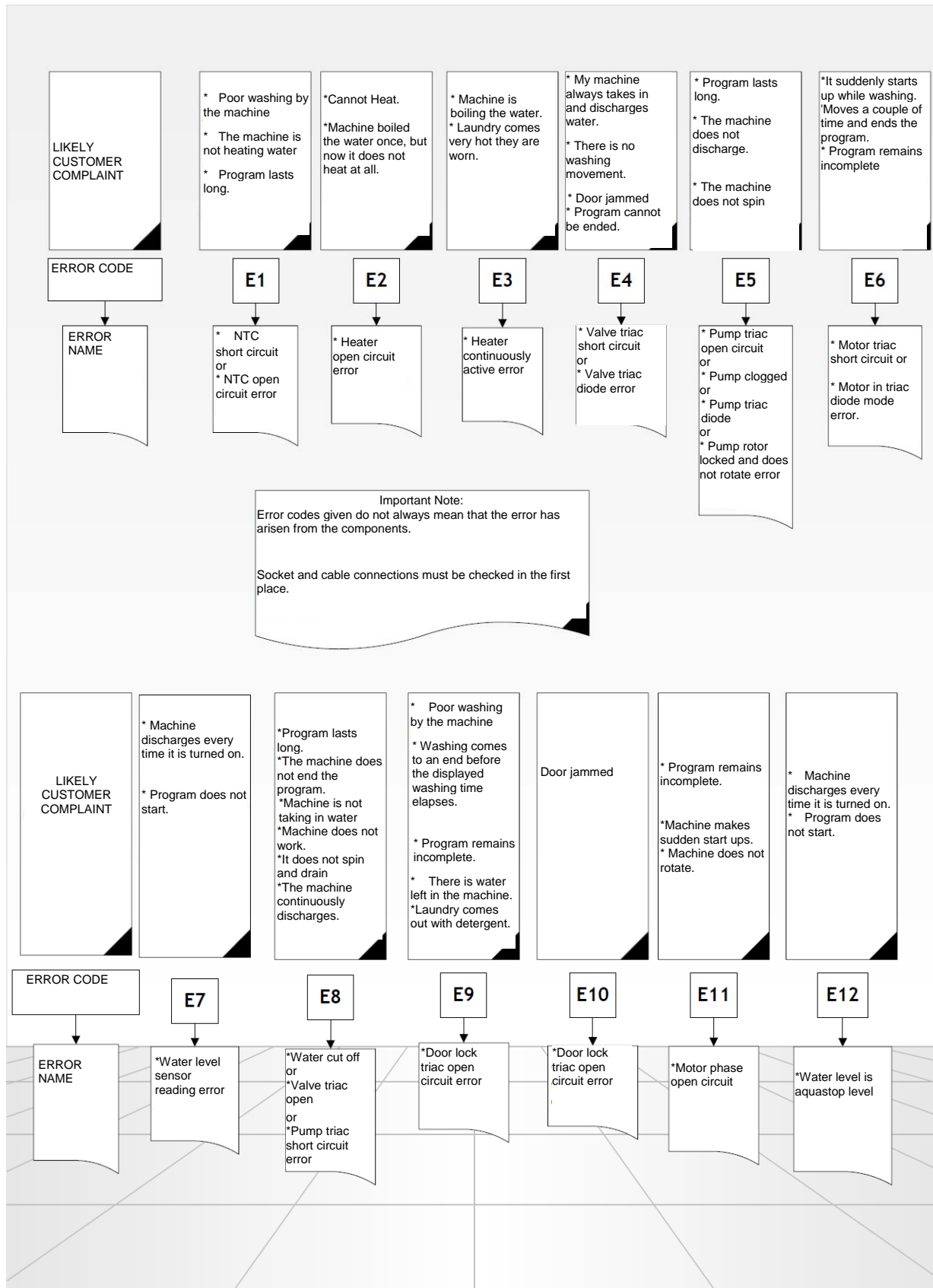
PICTURE-5 MOTOR DC CARD sockets **KN2- UMDC MOTOR**
KN12- THERMOCOUPLE
KN12- UMDC MOTOR WINDING

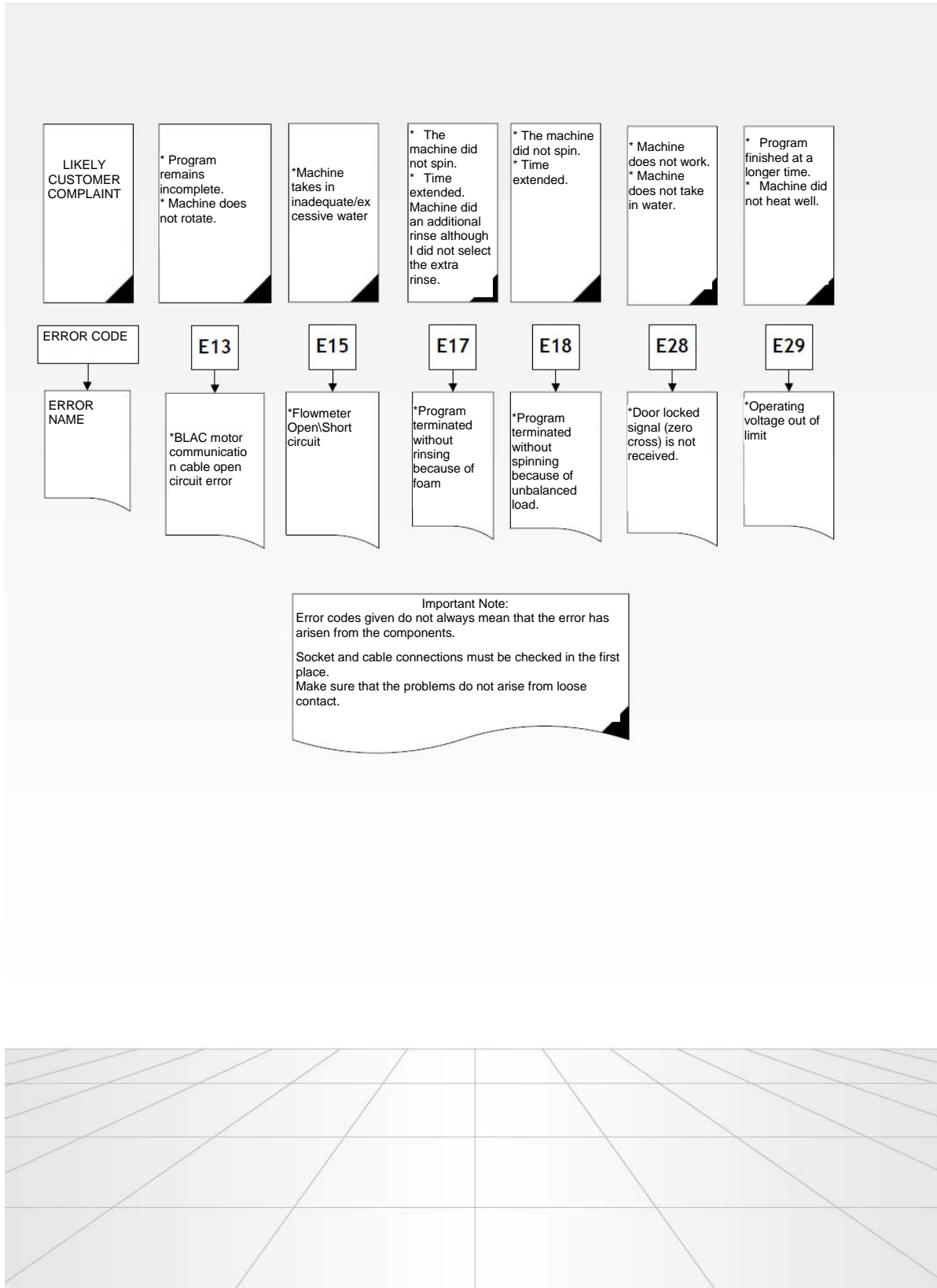


1.1. Machine does not work

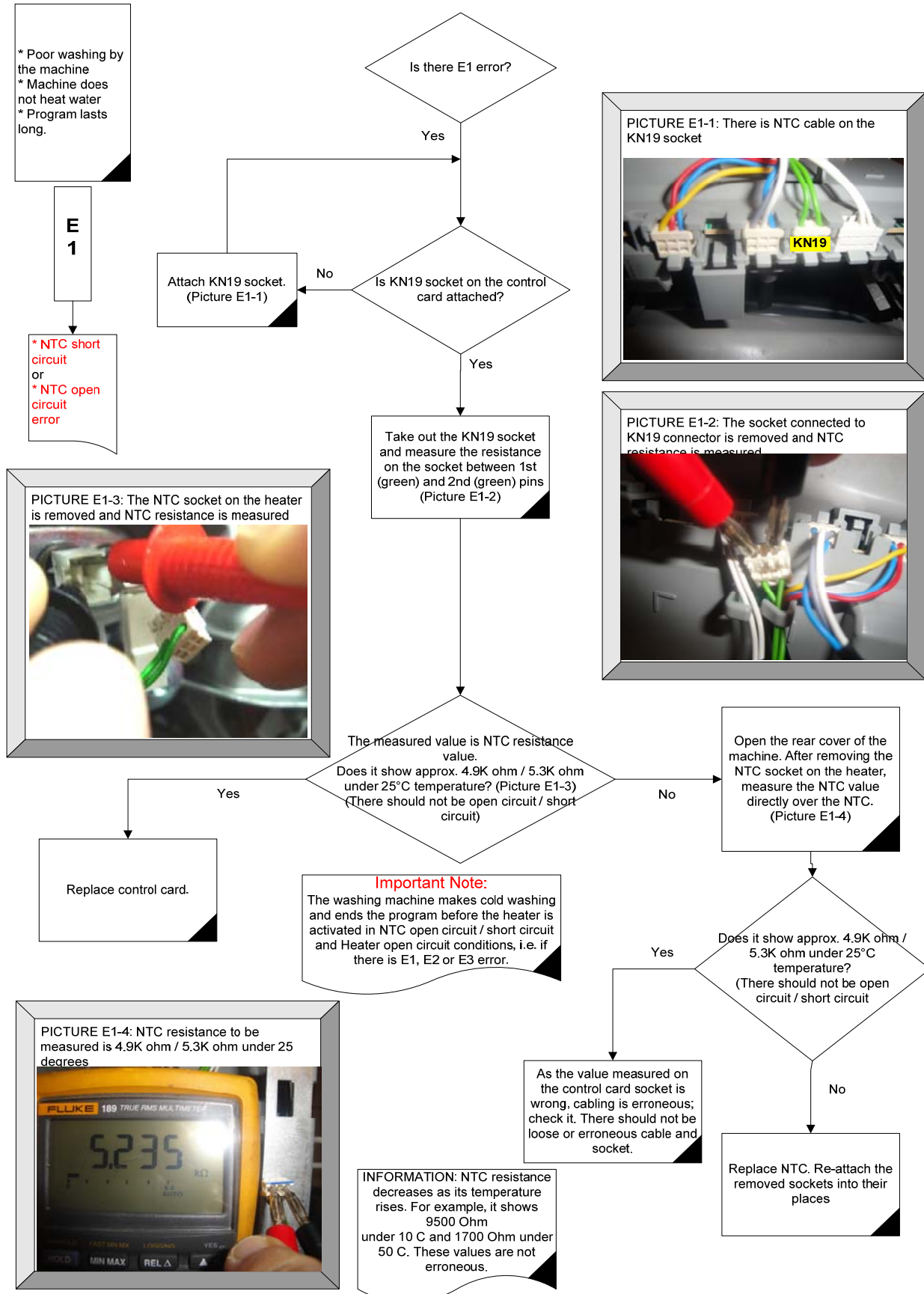


Error Codes and Possible Customer Complaints

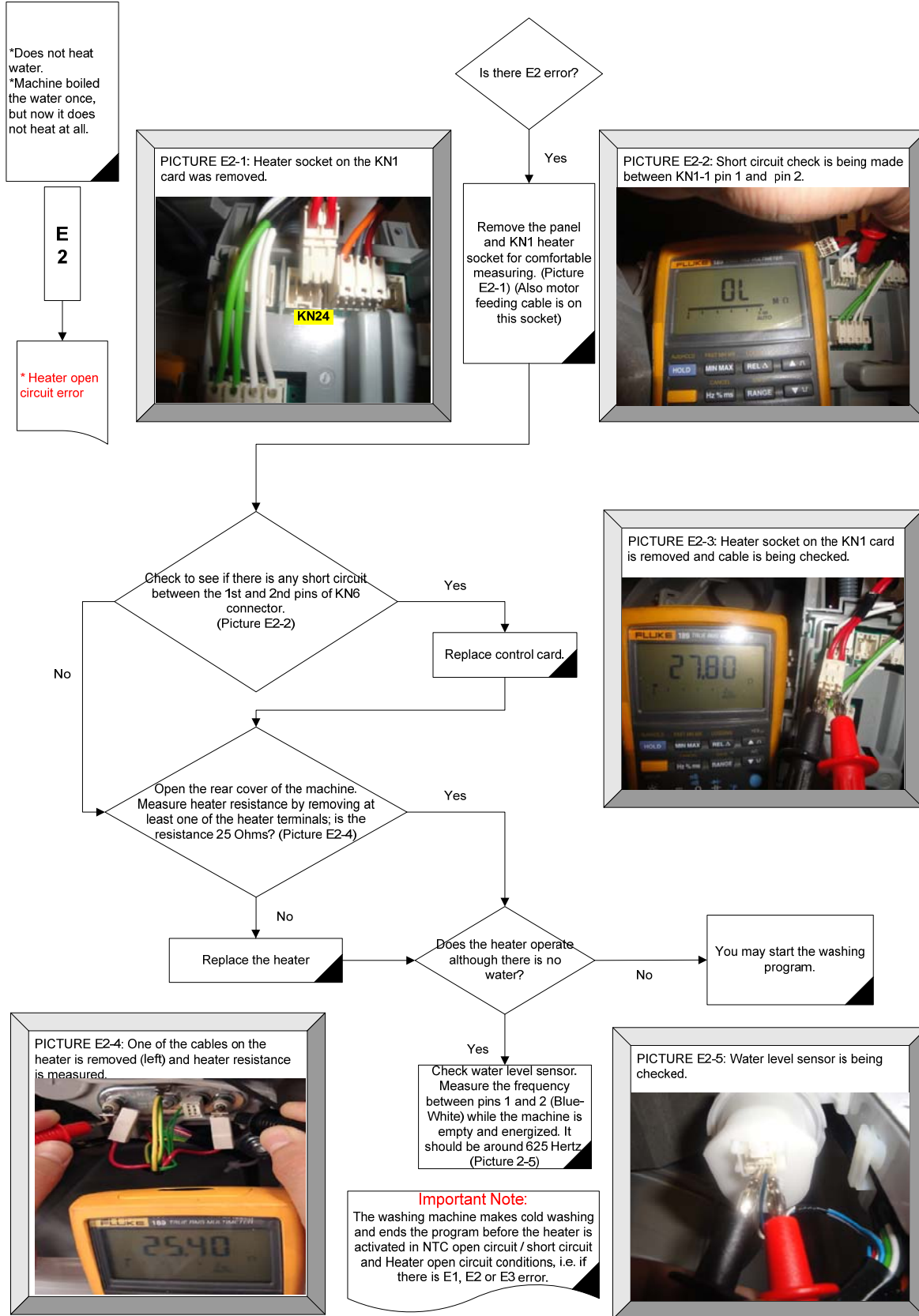




E1



E2



E3

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

**E
3**

* Heater continuously active error

PICTURE E3-1: Heater socket on the KN24 card was removed.

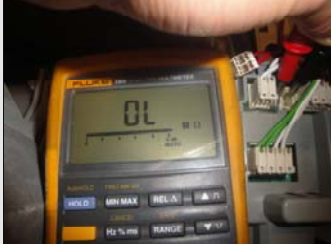


Is there E3 error?

Yes

Remove the panel and heater socket for comfortable measuring. KN24 (Picture E3-1)

PICTURE E3-2: Short circuit check is being made between KN24-1 pin 1 and pin 2.



Check to see if there is any short circuit between the 1st and 2nd pins of KN24 connector. (Picture E3-2)

No

Yes

Replace control card.

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 E3-3)

No

Replace the heater

You may start the washing program.

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 error.

Check water level sensor. Measure the frequency between pins 1 and 2 while the machine is empty and energized. It should be around 625 Hertz. (Picture E3-4)

Yes

Does the heater operate although there is no water?

Yes

PICTURE E3-3: One of the cables on the heater is removed (left) and heater resistance is measured.



PICTURE E3-4: Water level sensor is being checked.

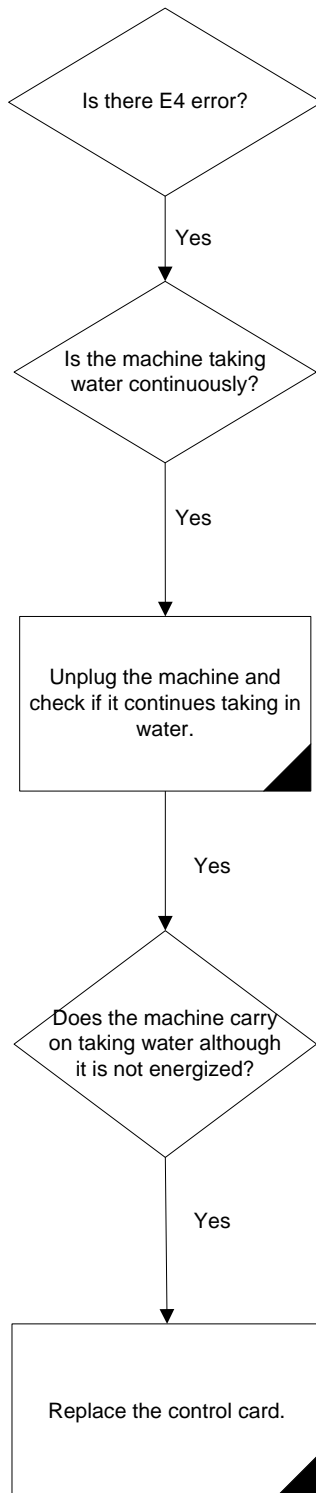


E4

* My machine continuously takes in and discharges water.
* No wash movement action
* Door jammed
* Program does not finish.

**E
4**

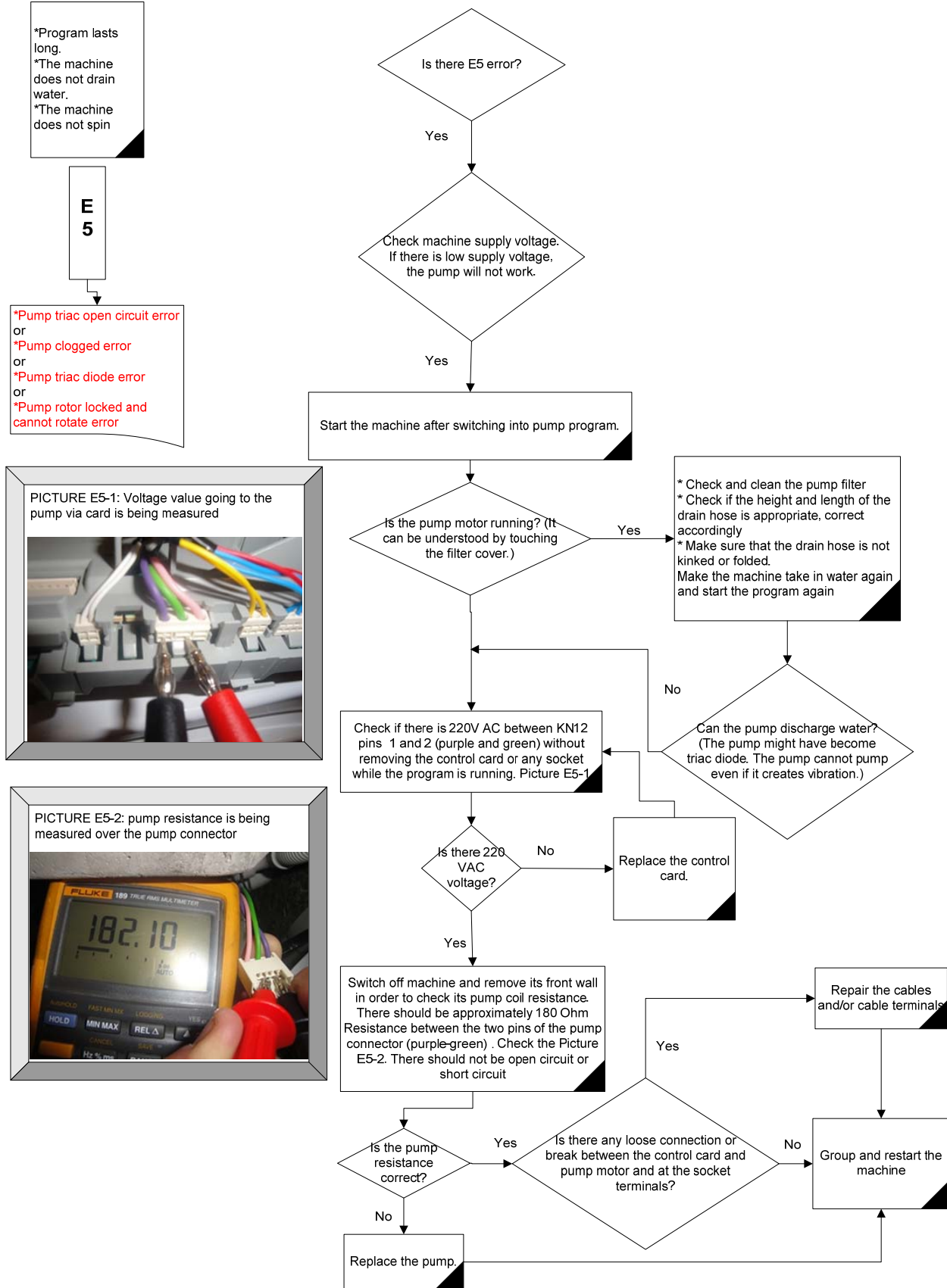
* Valve triac short circuit error
or
* Valve triac diode error



PICTURE E4-1: Water intake valves



E5



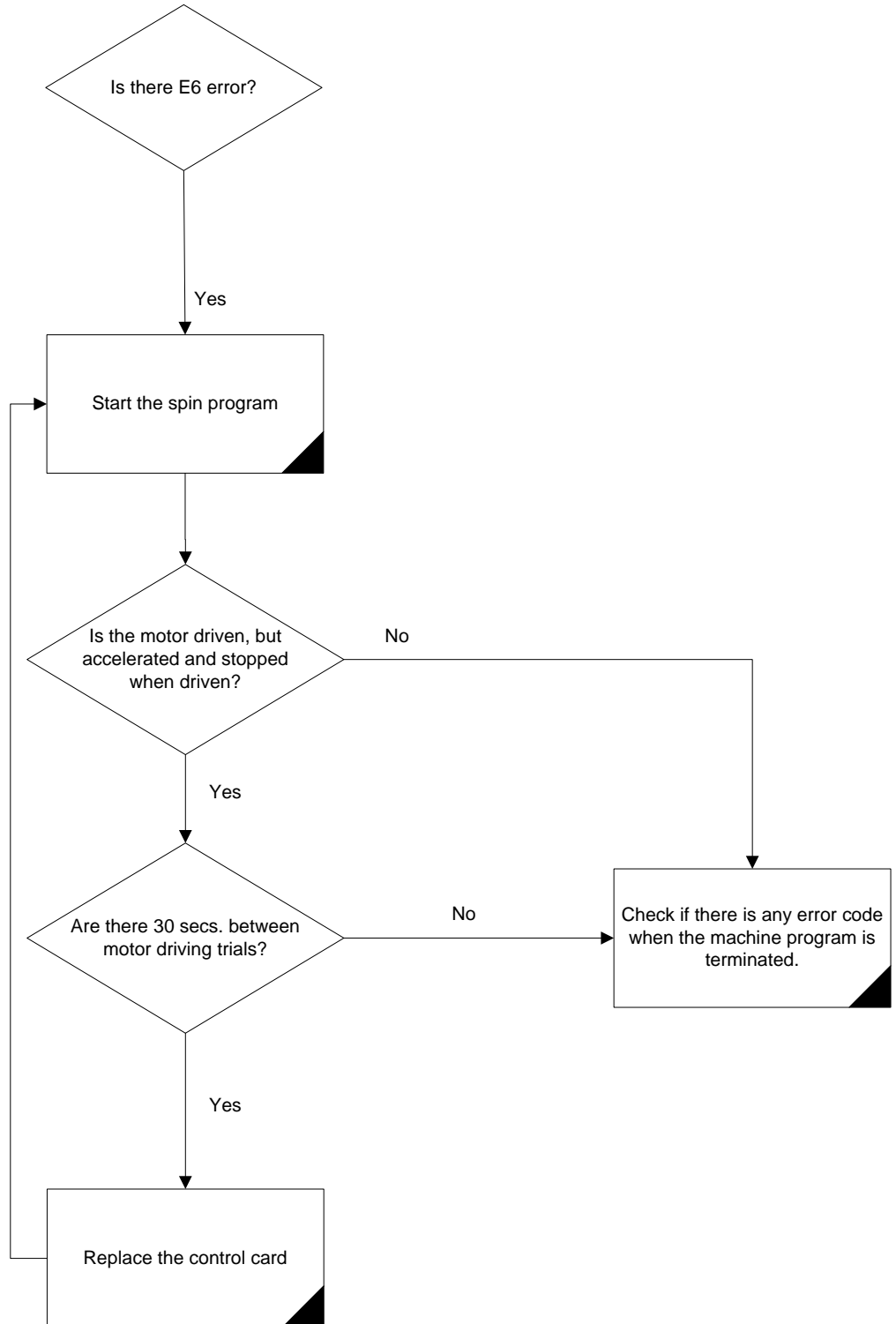
E6

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

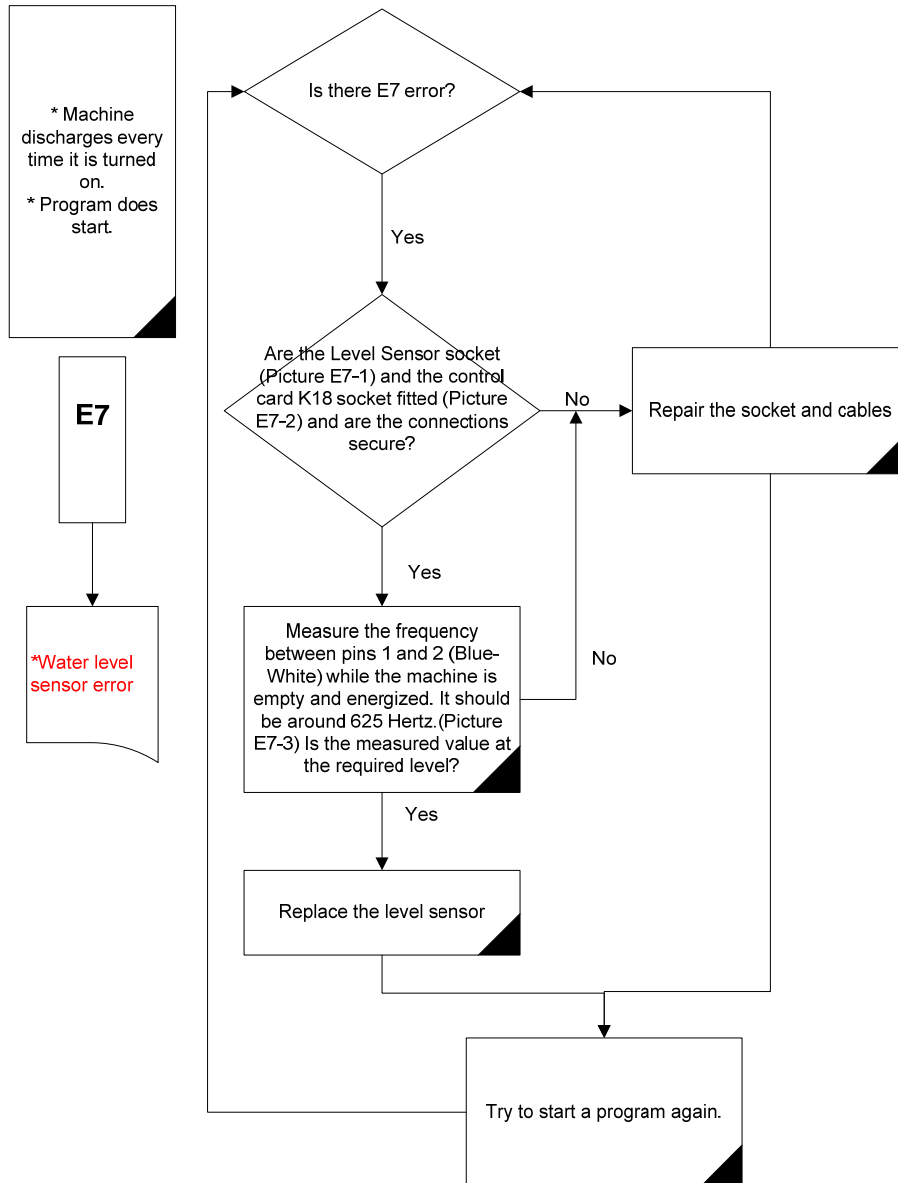
E6

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

**ONLY APPLIES TO THE PRODUCT
EQUIPPED WITH UMDC MOTOR**



E7



PICTURE E7-1: Socket on the level sensor should be fitted.



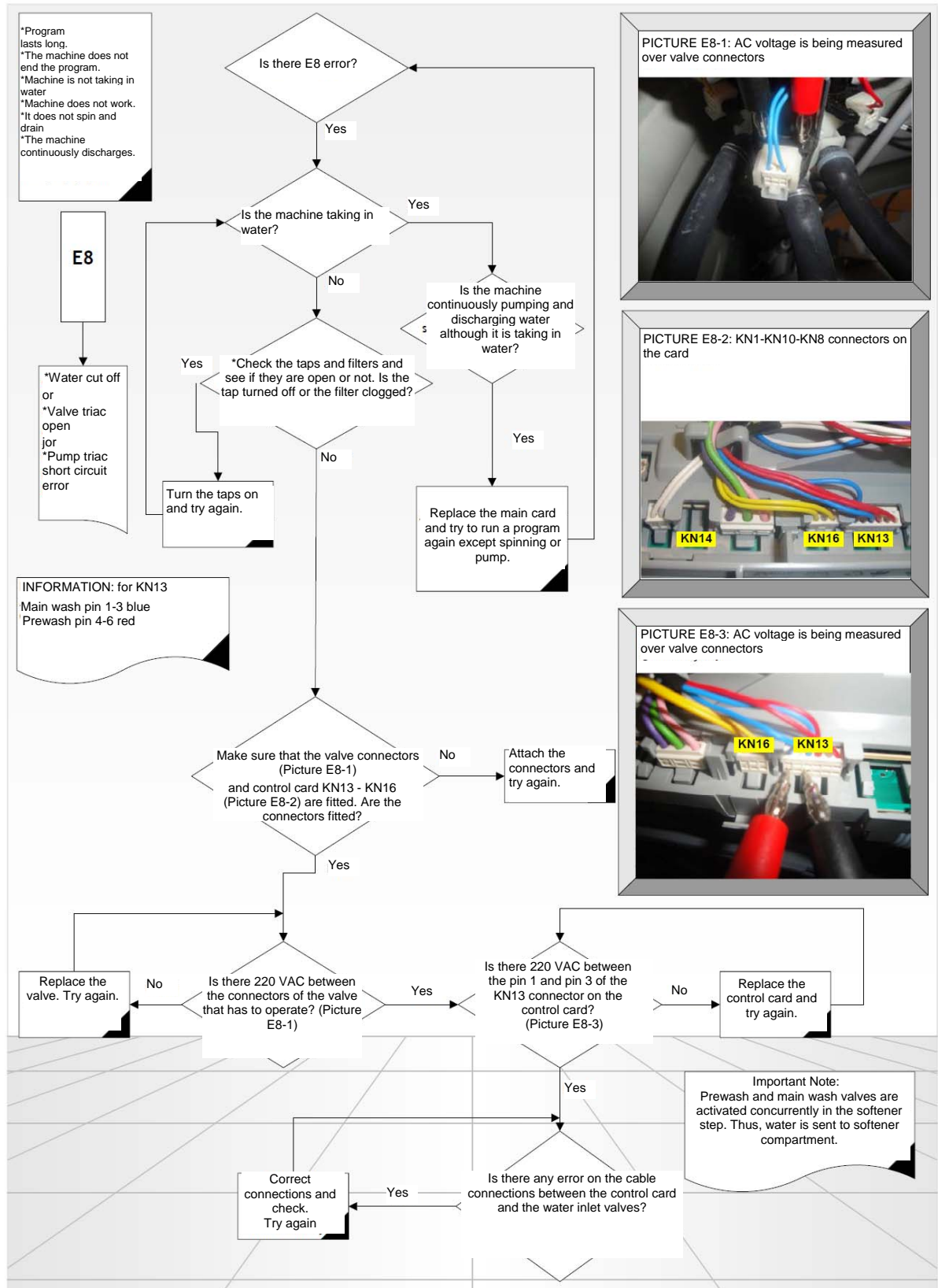
PICTURE E7-2: Socket to which the KN18 level sensor cables are fitted



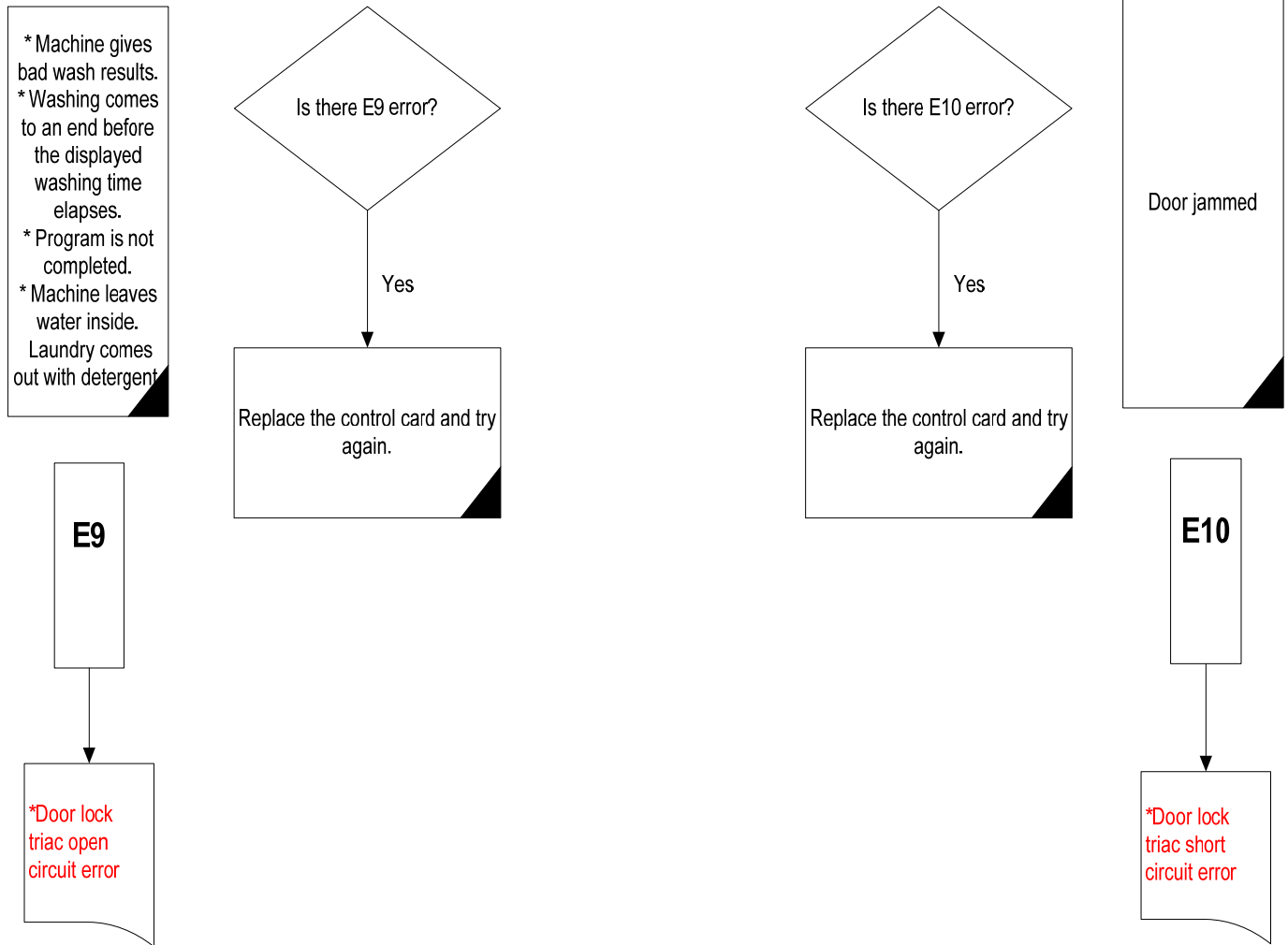
PICTURE E7-3: Water level sensor is being checked.



E8



E9 - E10



E11_1

* Program remains incomplete.
* Machine makes sudden startups.
* Machine drum does not rotate.

E11

*Motor phase open circuit

Is there E11 error?

Yes

Are the cables between the control card and the motor sound?

Yes

Is the motor impedance coil in good condition? (Impedance and coil windings should not be broken)

Yes

Replace the motor
(Picture E11-1)

Try to start a program again.

Picture E11-1: BLAC Motor



Picture E11_1 : Impedance Coil



NOTE: Speed control card of the BLAC motor which is used in this product is assembled on it. For the cases conforming to E11 error definition, motor should be replaced.

E11_2

* Program remains incomplete.
* Machine makes sudden startups.
* Machine drum does not rotate.

E11

*Motor open circuit error .

ONLY APPLIES TO THE PRODUCT EQUIPPED WITH UMDC MOTOR

Is there E11 error?

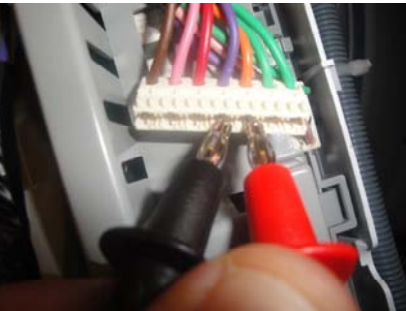
Yes

Start the spin program

PICTURE E11-3: Stator coil resistance is being measured over the KN07 socket



PICTURE 11-4: Rotor is being checked over the KN07 socket.



PICTURE E11-5: DC Module sockets (KN2 – KN12).



Machine will be turned off.
1) Resistance value is measured between the 1st and 2nd pins of the KN07 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 E11-3)
2) Again, the resistance value is measured between pin 4 and pin 5 ends of the KN07 socket and there should not be any open circuit. (Picture E11-4)

Does the motor make sudden movements and stop?

No

Yes

E11_4
Cont'd from B-B

Are both measurement values correct?

Yes

No

Is there a DC module in the machine?

Yes

No

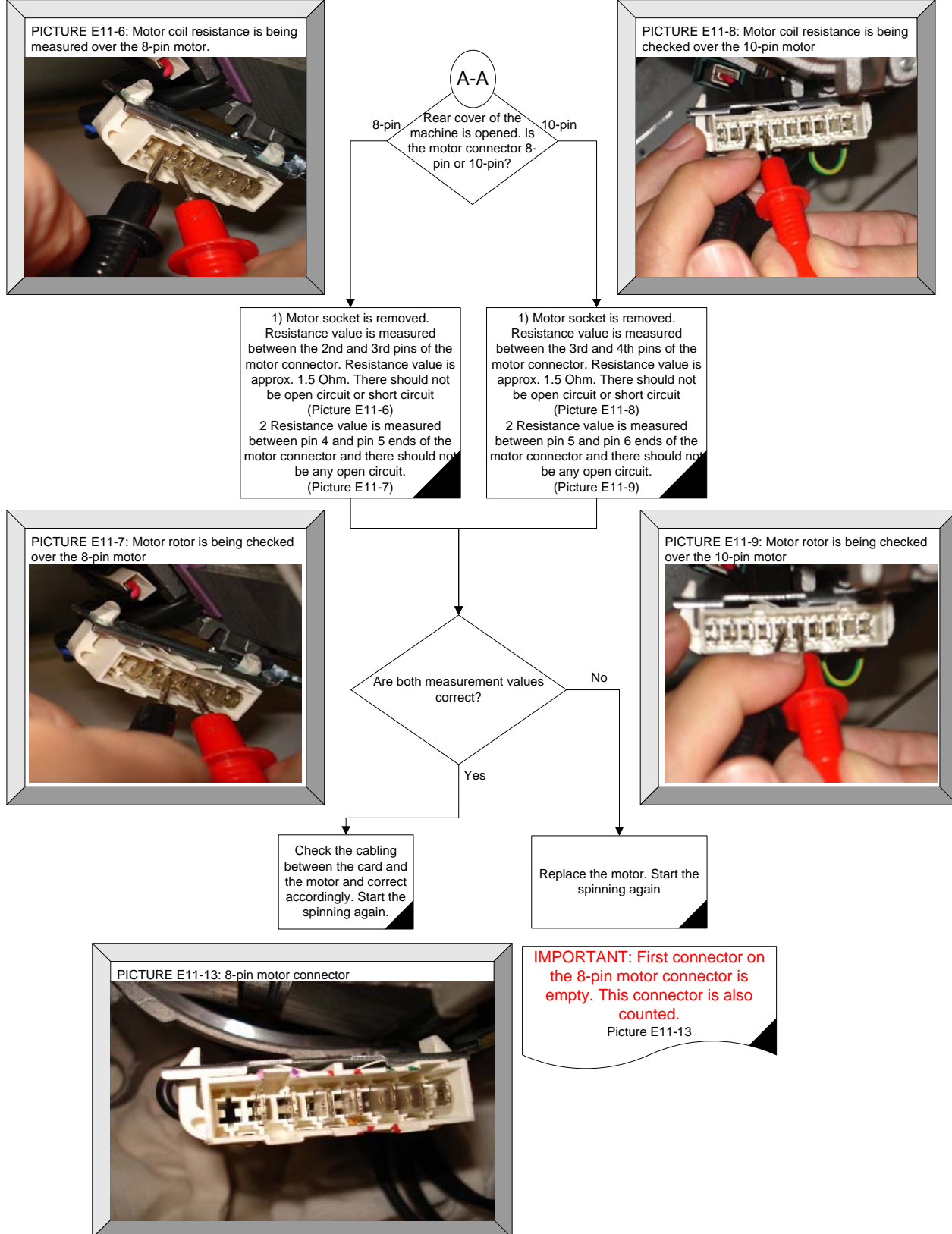
Check the DC module sockets set. If the sockets are at correct place, replace the DC module. (Picture E11-5)
Start the spinning again

Replace the control card. Start the spinning again.

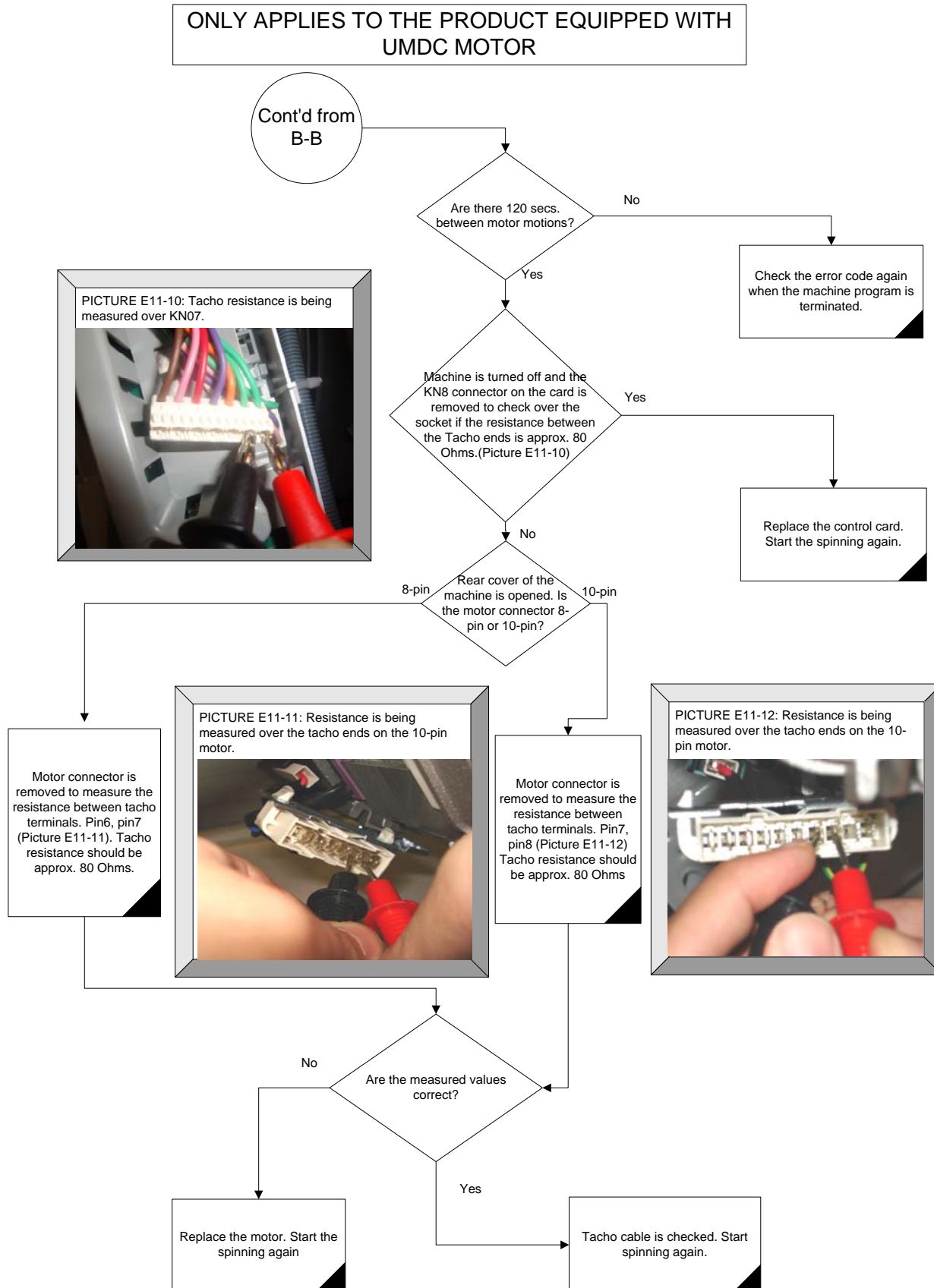
E11_3
Cont'd from A-A

E11_3

**ONLY APPLIES TO THE PRODUCT EQUIPPED WITH
UMDC MOTOR**



E11_4



E12

* Machine discharges every time it is turned on.
* Program does not start.

Picture E12-1: Aquastop connections at the lower section of machine

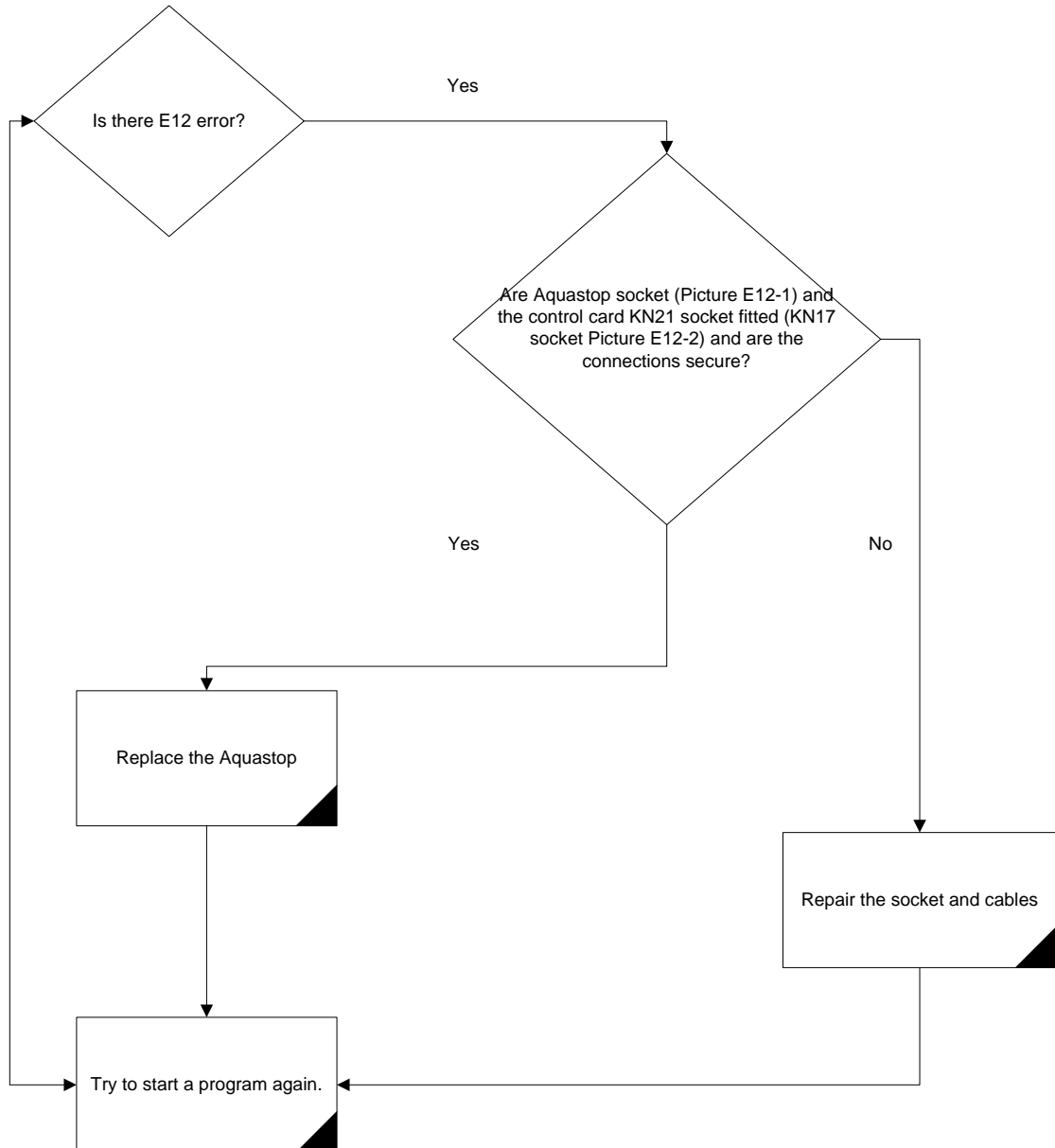


Picture E12-2: KN17 socket Aquastop (White-White) connections



E12

*Aquastop level error



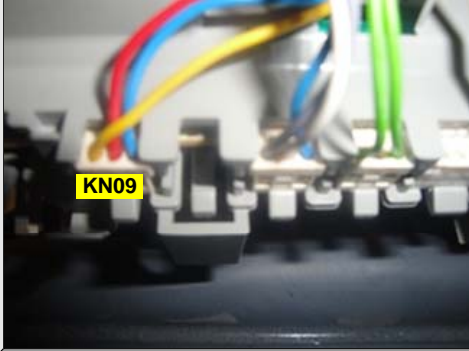
E13

*Poor washing
by the
machine.
* It ends the
program.

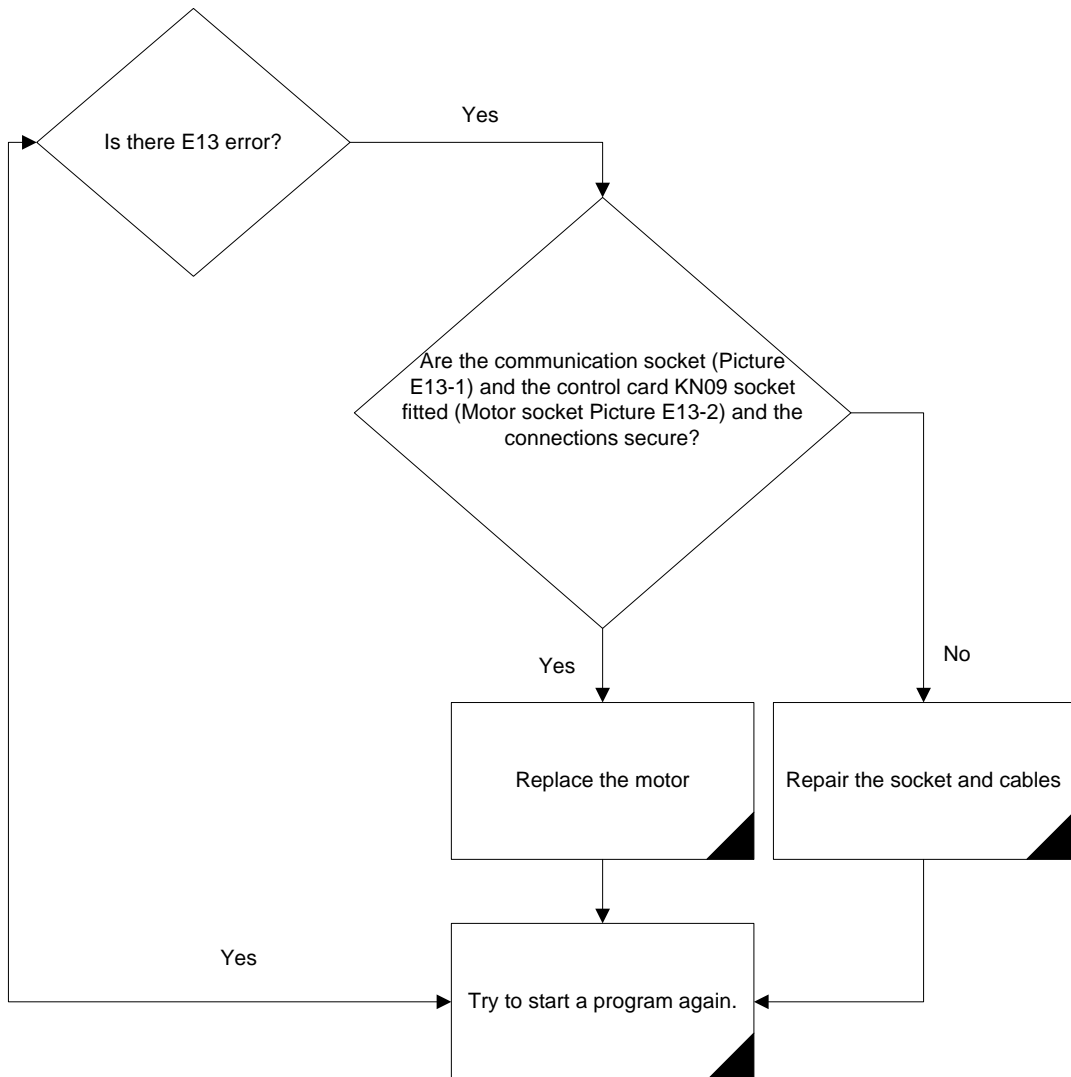
E13

*Communicati
on cable open
circuit.

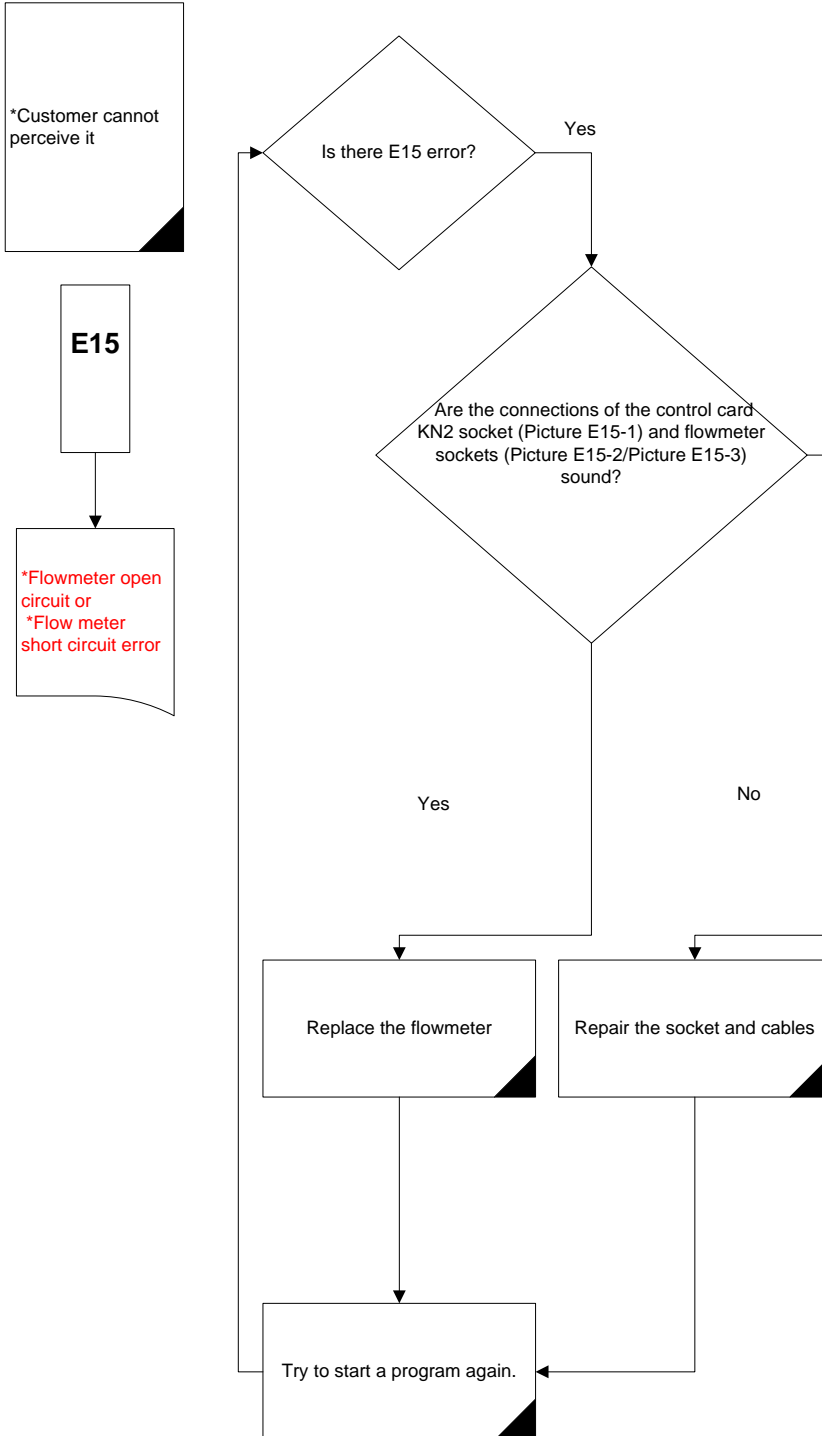
Picture E13-1: KN09 connector connection on the card



Picture E13-2: Communication connector connection on the motor



E15



Picture E15-1: KN20 connector connection on the card



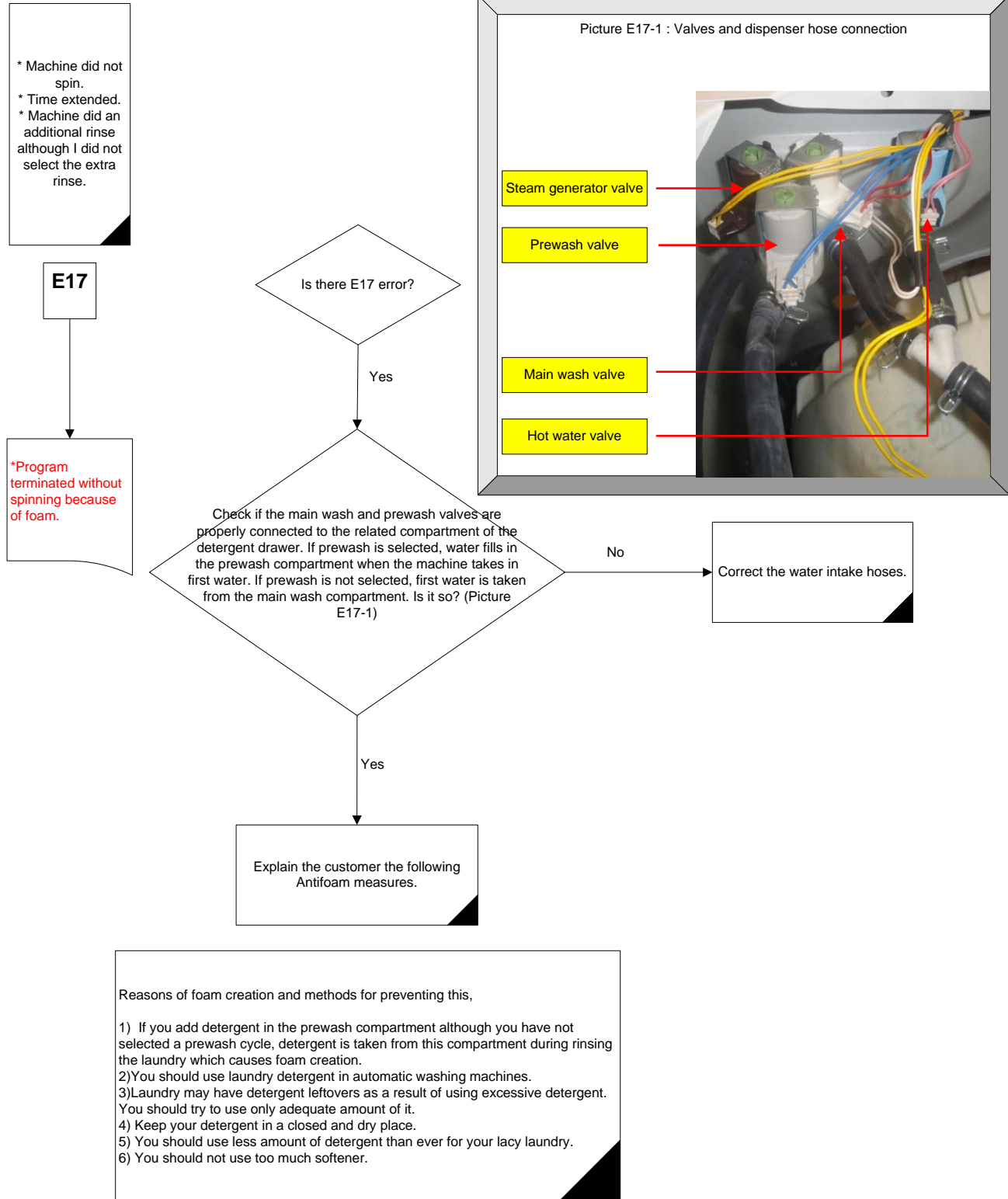
Picture E15-2: Is the flowmeter socket on the water inlet valve fitted?



Picture E15-3: Is the flowmeter socket on the water inlet hose fitted?



E17



E18

* Machine did not spin.
* Time lengthened.

E18

*Program terminated without spinning because of unbalanced load

Is there E18 error?

Yes

Explain the customer the following unbalanced load preventive actions.

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

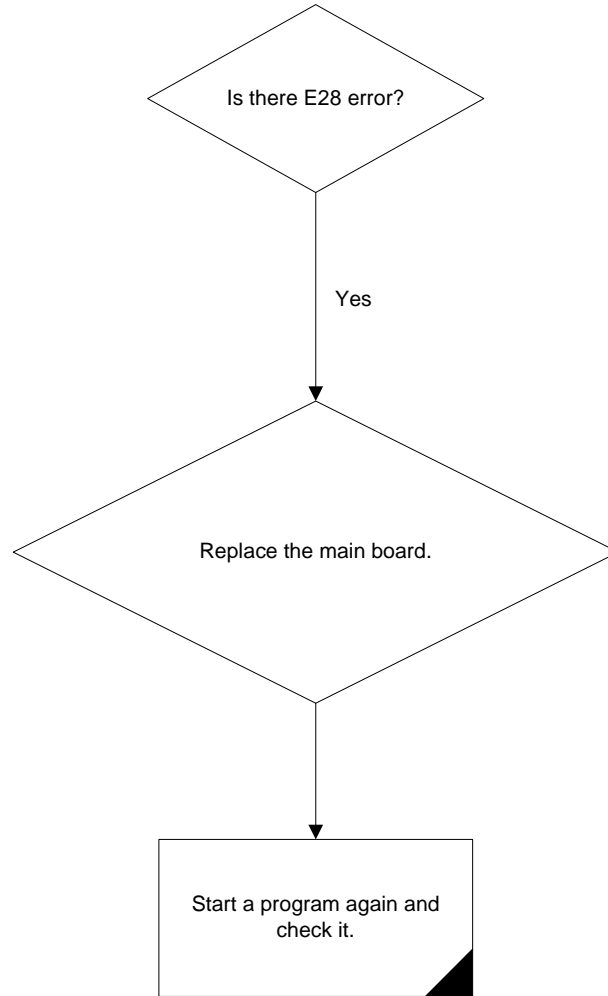
- 1) Laundry may pile up on one side of the drum when you run your machine **with less laundry**. There is the risk of damaging the washing machine when it is operated in higher speeds with unbalanced load. Therefore, when the unbalanced load in the machine is calculated more than the limit value, the 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.

E28

* Machine does not work.
*It does take water in.

E28

*Door locked signal (zero cross) is not received.

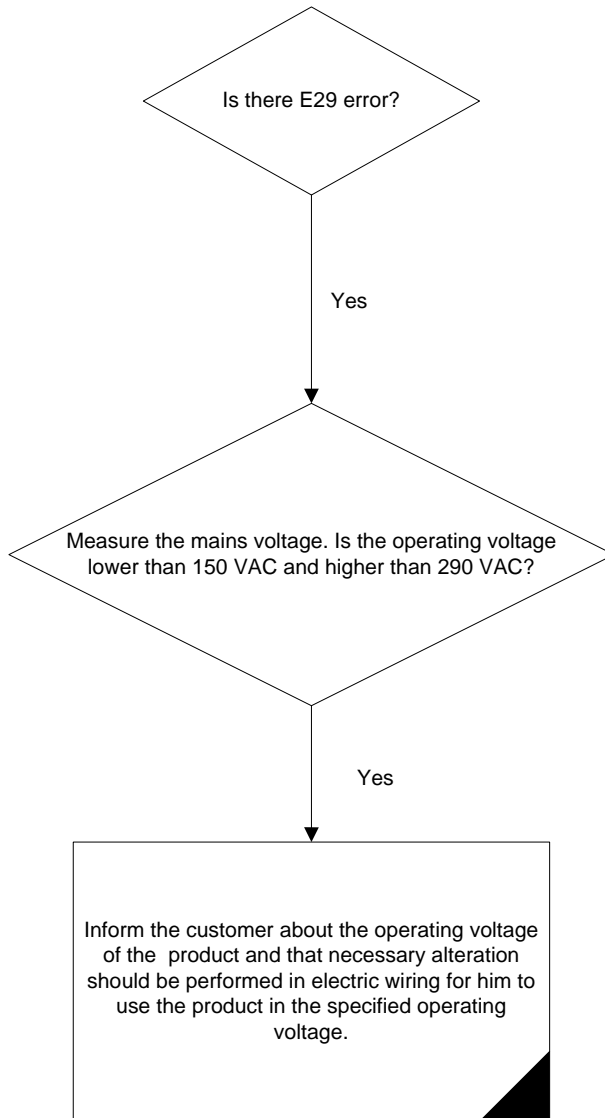


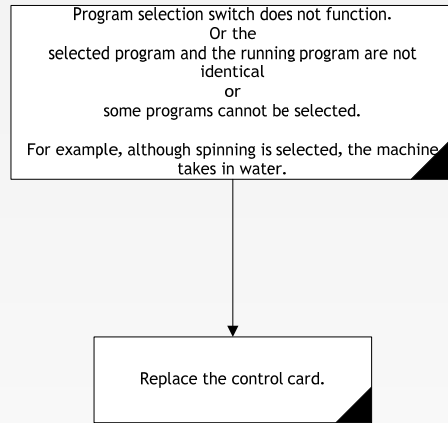
E29

* Program finished
at a longer time.
* Machine did not
heat well.

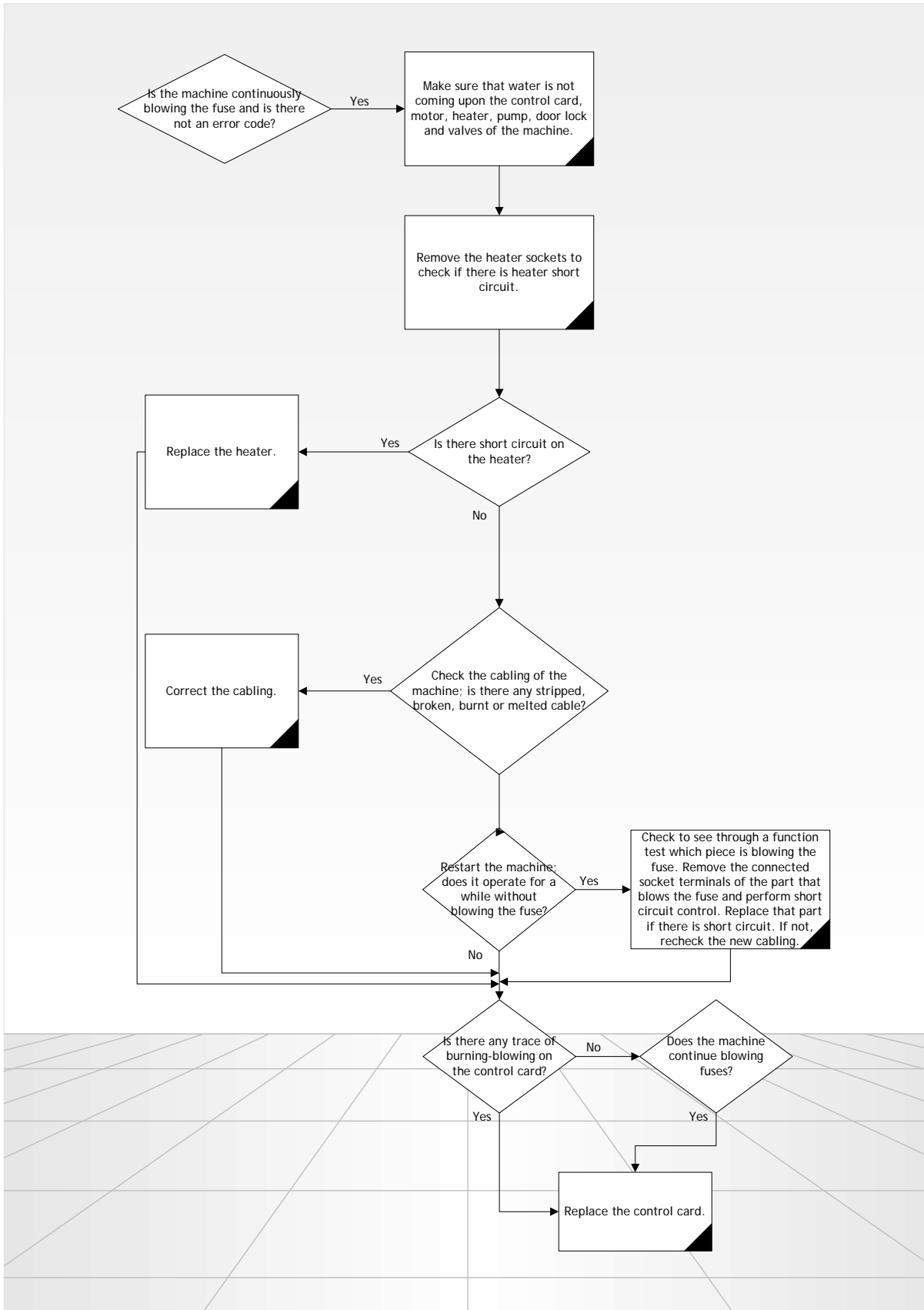
E29

*Operating voltage
out of limit

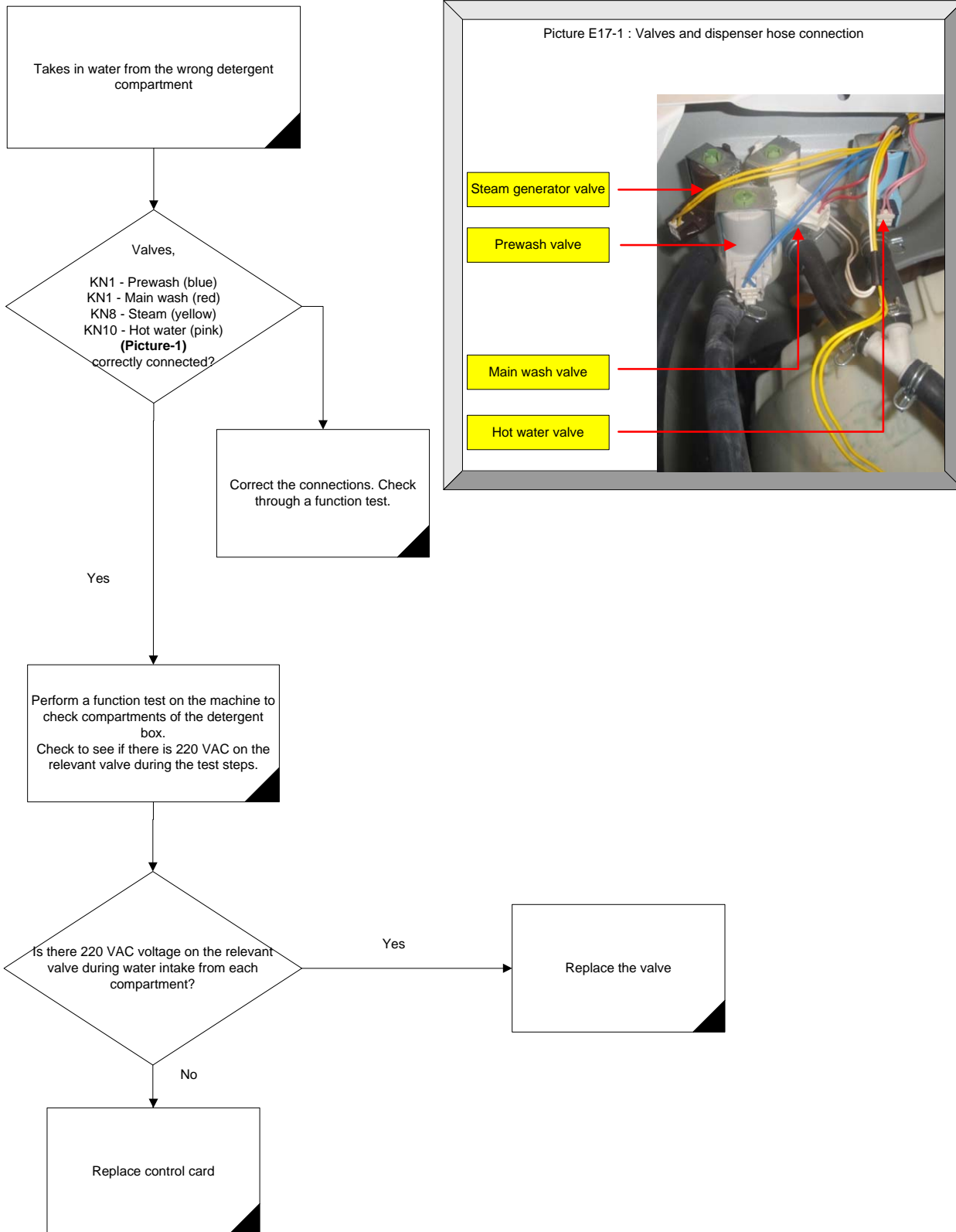


Program Selection Switch does not function

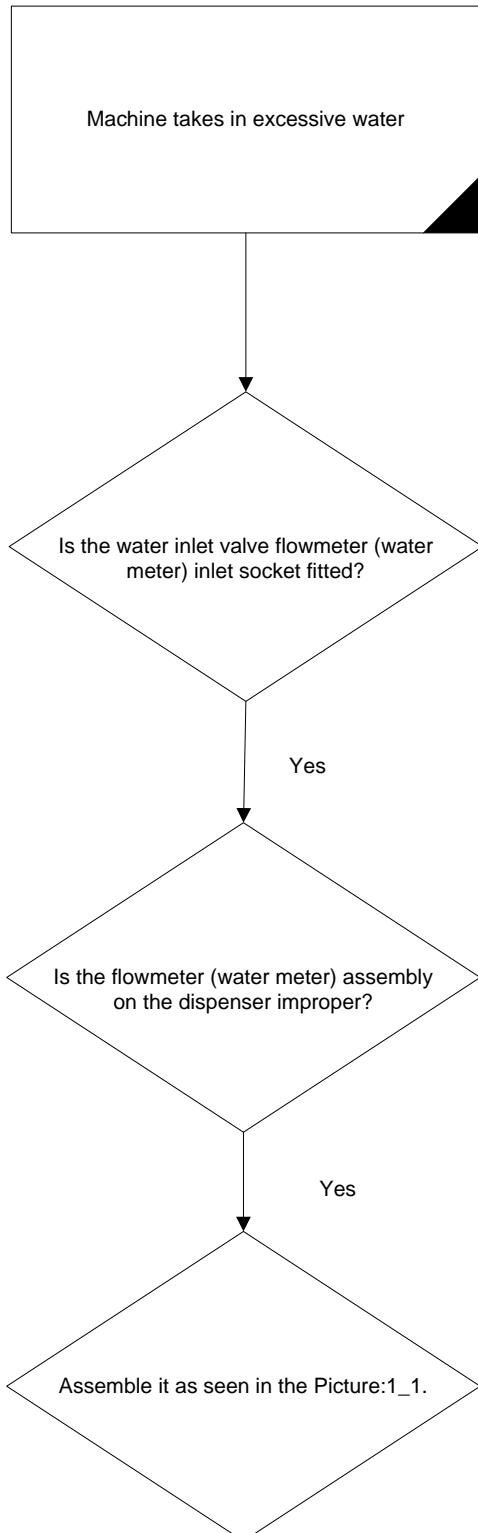
The machine is blowing the fuse



Water taken from the wrong compartment



Machine takes in excessive water



Water inlet valve flowmeter socket inlet



Flowmeter WRONG ASSEMBLY



Picture-1_1 : Flowmeter CORRECT assembly



Steam Generator does not work

