

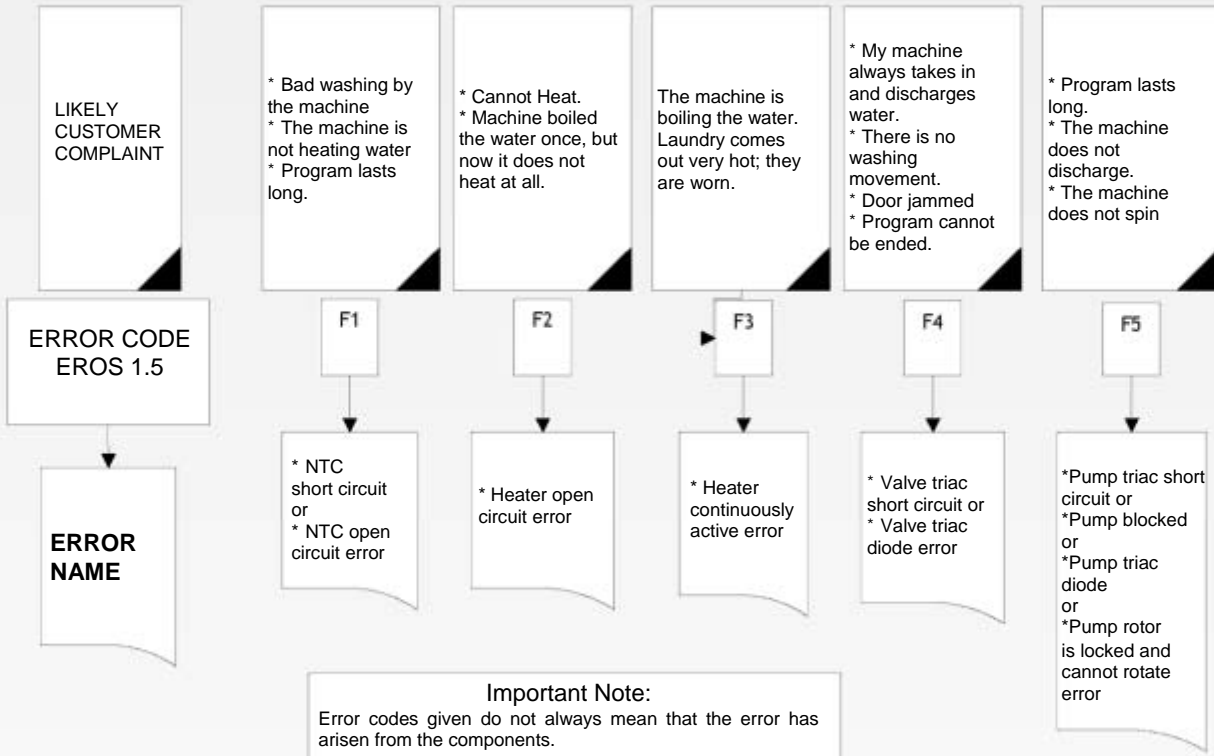
**Error Code Reading Method:**

Error code is shown as (E..) on the display screen. Error code can be accessed in two ways.

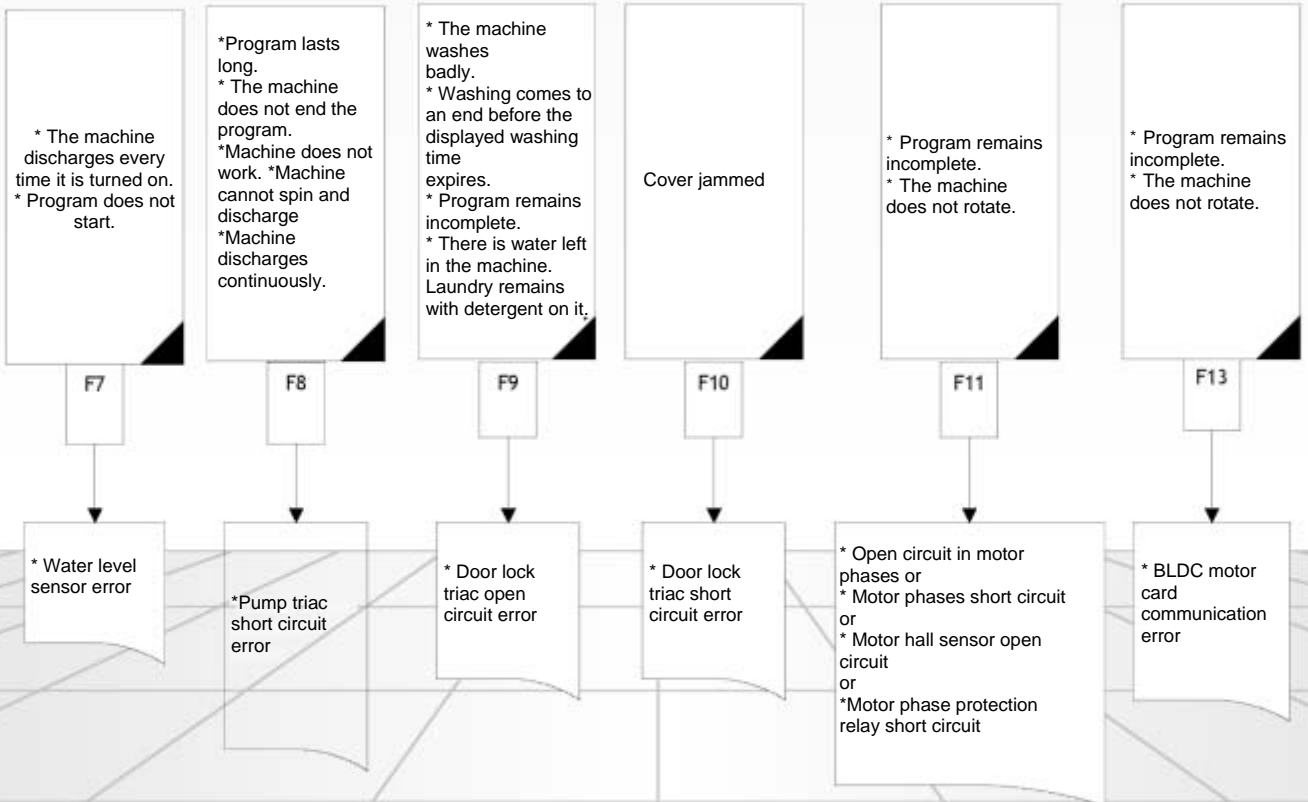
1) Error code is displayed at the beginning of function test until 'Start/Pause' button is pressed for the second time. Even if a new program has been started, this error code in here will not be cleaned; the last error code occurred will always be displayed here

2) Error code is read by pressing YF1 and YF3 keys simultaneously for 3-5 secs.

When a new program is started, the error on the machine is erased and the error code is no more displayed when YF1-YF3 keys are pressed.



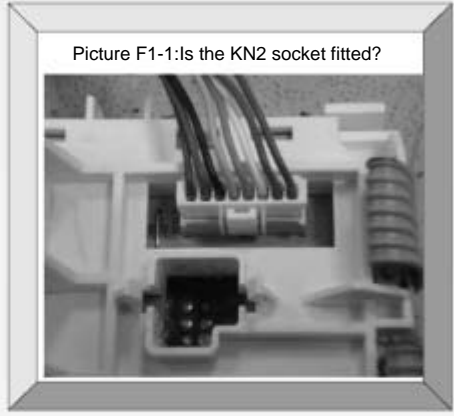
**Important Note:**  
 Error codes given do not always mean that the error has arisen from the components.  
 Socket and cable connections must be checked in the first place.  
 You should make sure that the problems do not arise from loose contact.



Difference between F11 and F13: If F11 occurs, there is not any error between the motor card and main board with respect to communication. However there cannot be a movement due to a malfunction in the motor or motor card or the cables between them. In fact, in F13 error, there cannot be a movement as the movement order cannot be transmitted to motor card due to lack of communication between the main board and motor card.

\* Bad washing by the machine  
 \* The machine is not heating water  
 \* Program lasts long.

**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 F1, F2 or F3 error.



Is there F1 error?

Yes

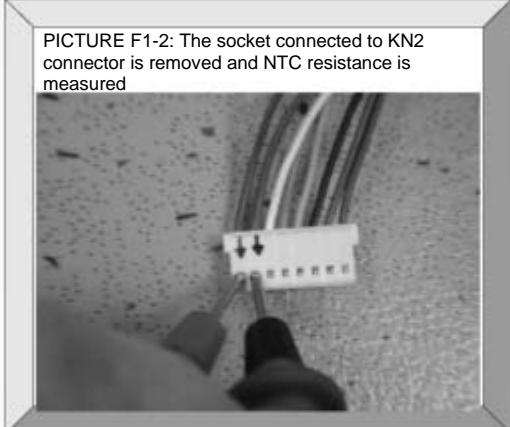
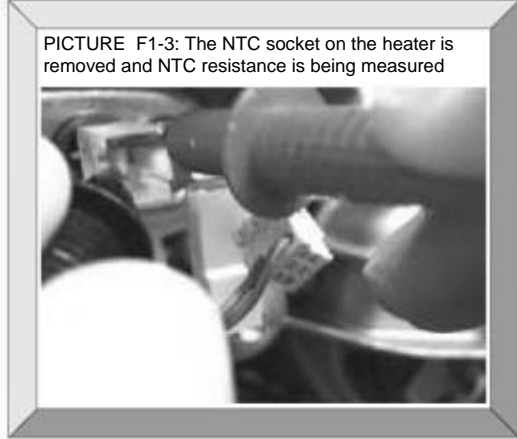
Is KN2 socket on the control card attached?

No

Attach KN2 socket. (Picture F1-1)

Yes

Take out KN2 socket and measure the resistance between the 1st (green) and 2nd (green) pins of the socket (Picture F1-2)



Yes

The measured value is NTC resistance. Does it show under 25°C temperature approx. 4700 OHM? (Picture F1-3) \ (Shouldn't be open circuit / short circuit)

No

Open the back cover of the machine. After removing the NTC socket on the heater, measure the NTC value directly on the NTC. (Picture F1-3)

Yes

Does it show under 25°C temperature approx. 4700 OHM? ( Shouldn't be open circuit / short circuit)

No

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

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

Replace the control 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 F1, F2 or F3 error.

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

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

**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 F1, F2 or F3 error.

Is there F2 error?

Picture F2-1: Heater socket on the KN8 card is removed.



Remove the panel for a comfortable measuring. Remove KN8 (Picture F2-1) Heater socket and KN7 (Picture F2-2) socket.

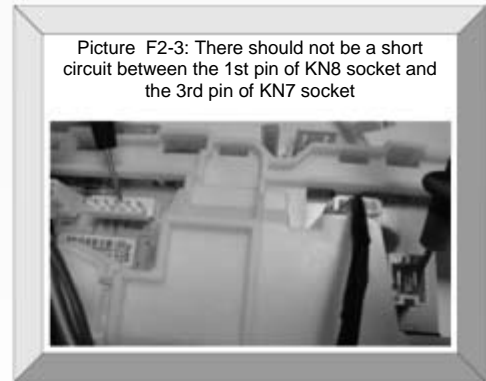


F2

\* Heater open circuit error

Check to see if there is a short circuit between the 1st pin of KN8 and the 3rd pin of KN7. (Picture F2-3)

Replace the control card.

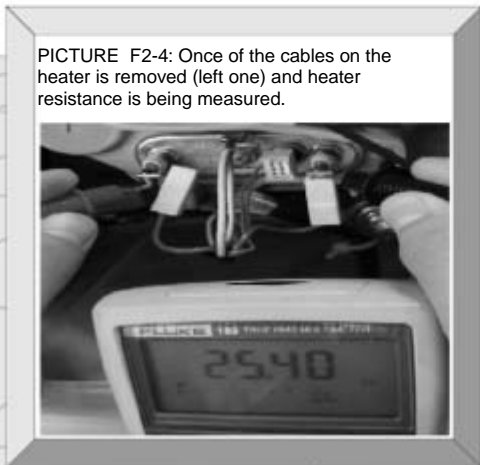


Open the back cover of the machine. Measure heater resistance by removing at least one of the heater terminals; is the resistance 25 Ohms? (Picture F2-4)

Replace the heater

Does the heater operate although there is no water?

You may start the washing program.



Check water level sensor. Measure frequency between pins 1 and 3 while the machine is empty and energized. It should be around 25560 Hertz. (Picture F2-5)



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

F3

\* Heater continuously active error

Is there F3 error?

Remove the panel for a comfortable measuring. Remove KN8 (Picture F3-1) Heater socket and KN7 (Picture F3-2) socket.

Check to see if there is a short circuit between the 1st pin of KN8 and the 3rd pin of KN7. (Picture F3-3)

Does the heater operate although there is no water?

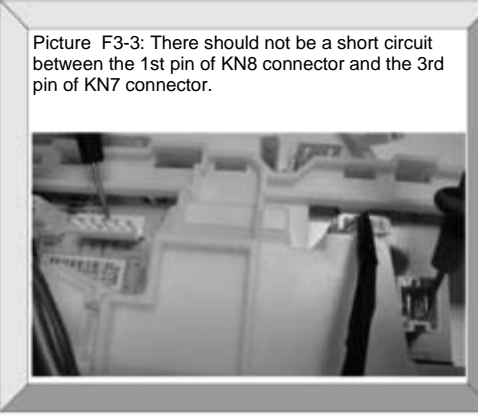
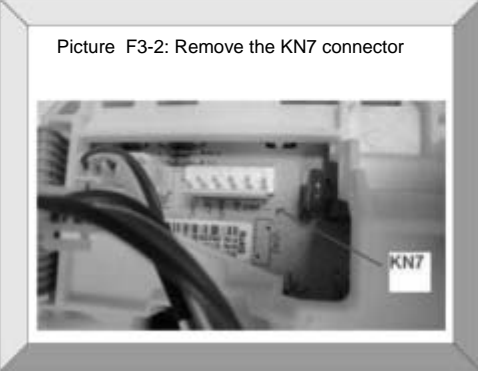
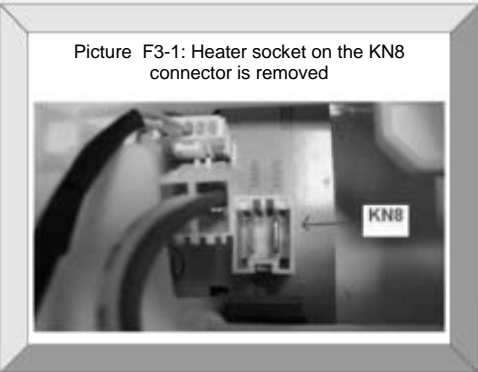
Replace the control card.

Check water level sensor. Measure frequency between pins 1 and 3 while the machine is empty and energized. It should be around 25560 Hertz. (Picture F3-5)

Open the back cover of the machine. Measure heater resistance by removing at least one of the heater terminals; is the resistance 25 Ohms? (Picture F3-4)

**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 F1, F2 or F3 error.

Replace the heater



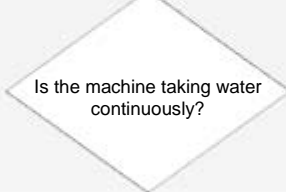
\* My machine always takes in and discharges water.  
\* There is no washing movement.  
\* Door jammed  
\* Program cannot be ended.

F4

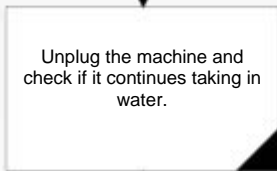
\* Valve triac short circuit  
or  
\* Valve triac diode error



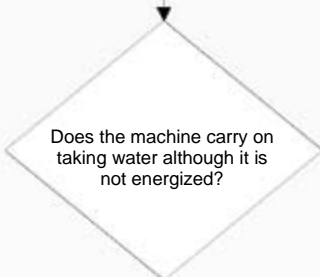
Yes



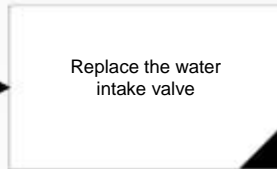
Yes



Yes

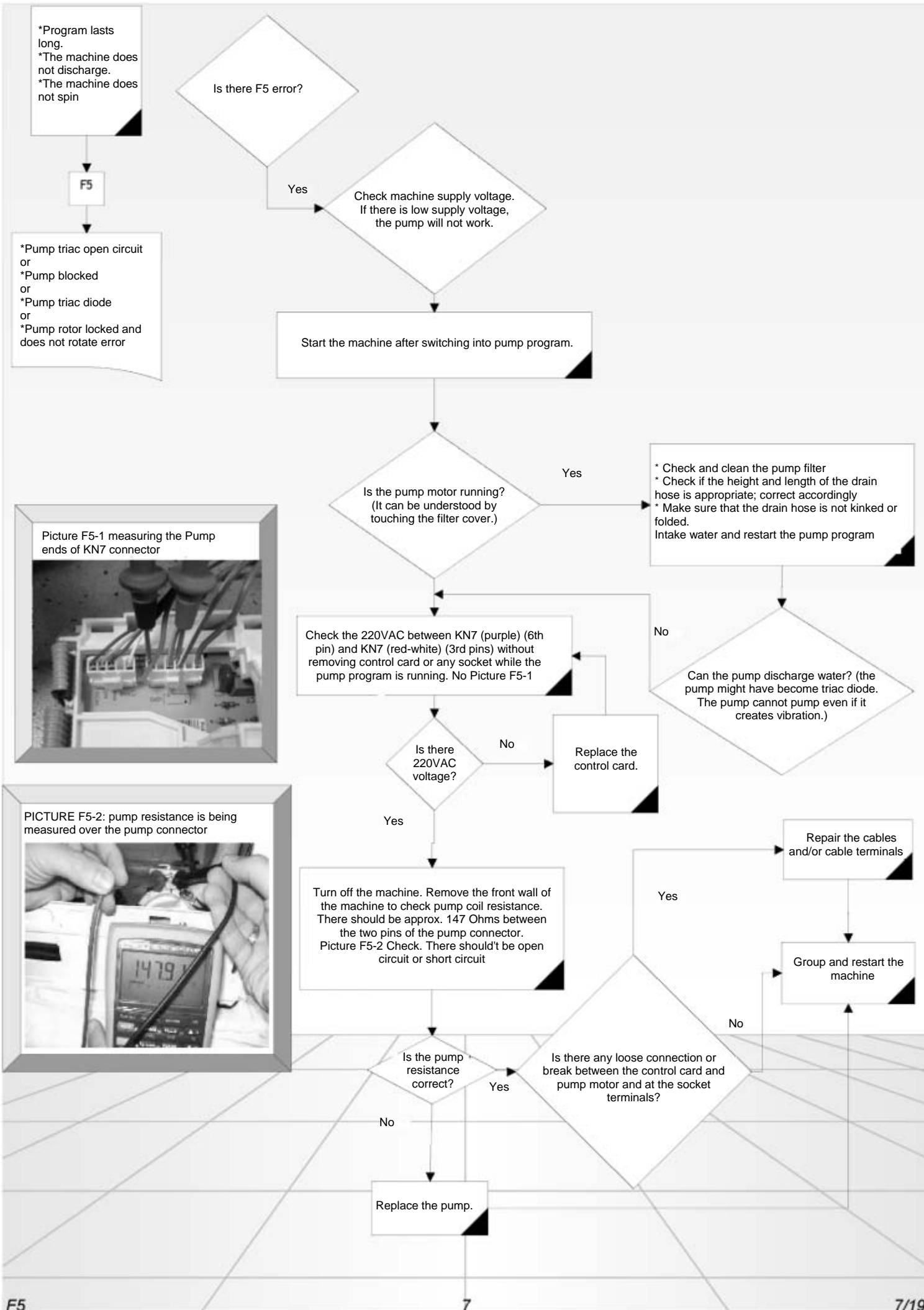


Yes

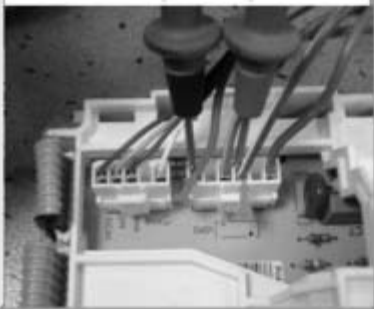


No





Picture F5-1 measuring the Pump ends of KN7 connector



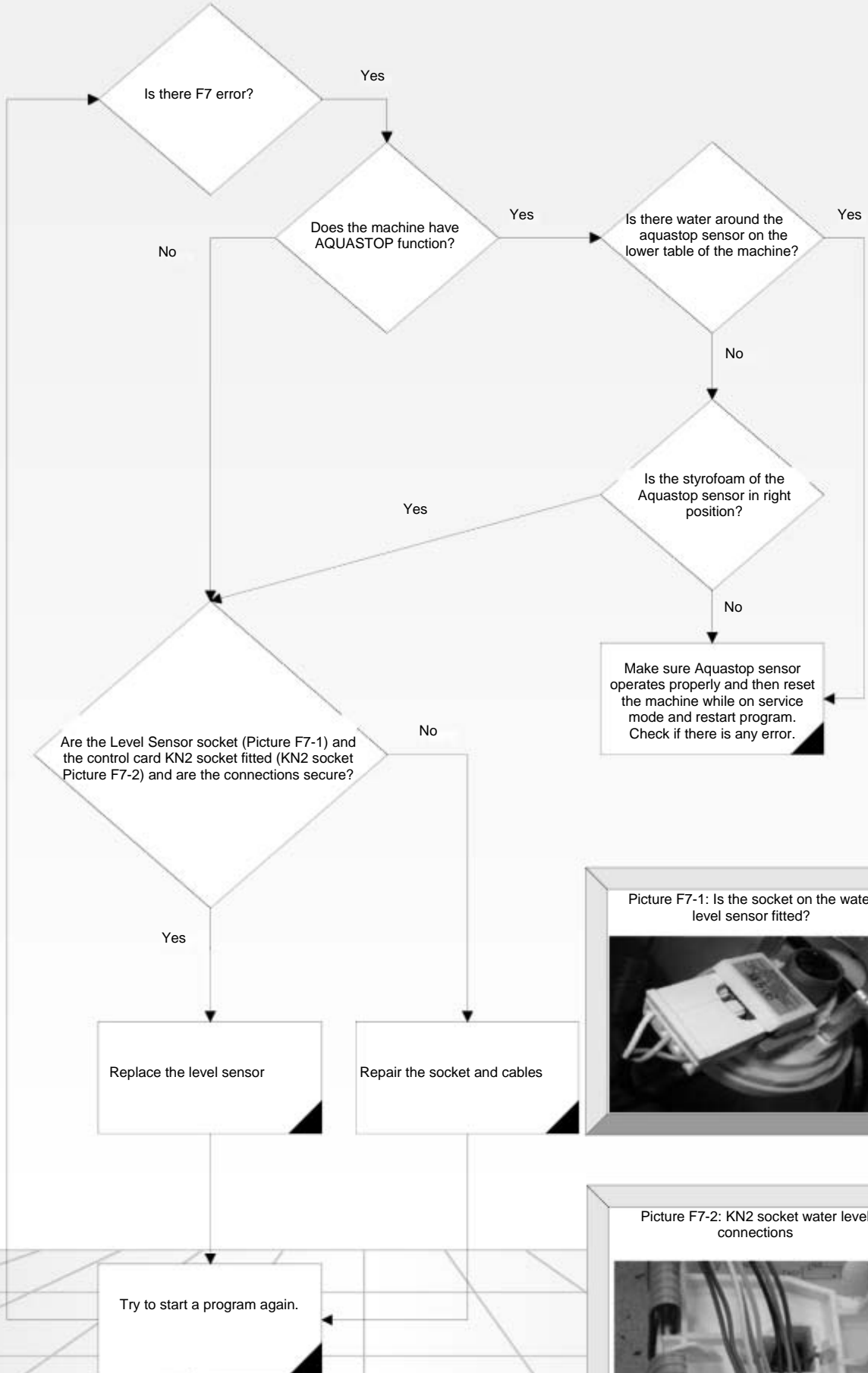
PICTURE F5-2: pump resistance is being measured over the pump connector



\* The machine discharges every time it is turned on.  
 \* Program does not start.

F7

\* Water level sensor error



Are the Level Sensor socket (Picture F7-1) and the control card KN2 socket fitted (KN2 socket Picture F7-2) and are the connections secure?

Make sure Aquastop sensor operates properly and then reset the machine while on service mode and restart program. Check if there is any error.

Picture F7-1: Is the socket on the water level sensor fitted?



Picture F7-2: KN2 socket water level connections



Try to start a program again.

**Important Note:**  
 In washing machines with aquastop function, aquastop circuit is connected to level sensor cable. If aquastop float detects a water level for any reason, the machine will perceive it as a water sensor error.

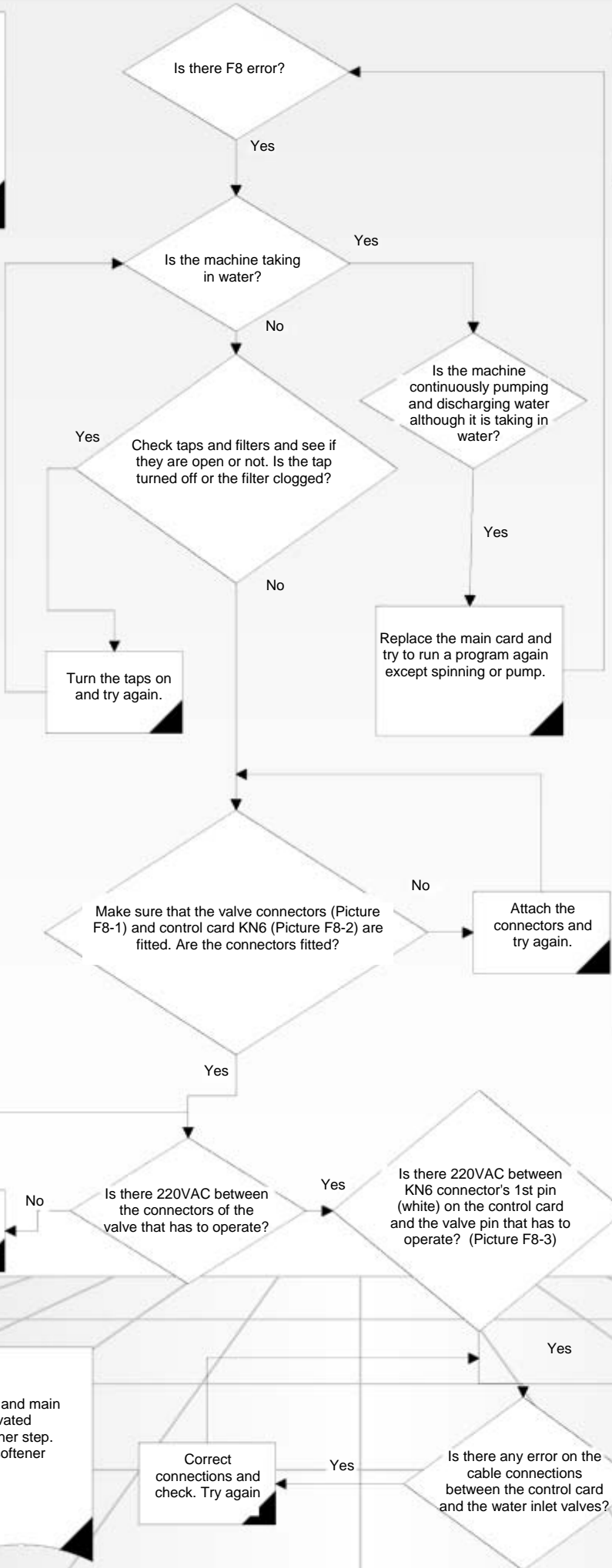
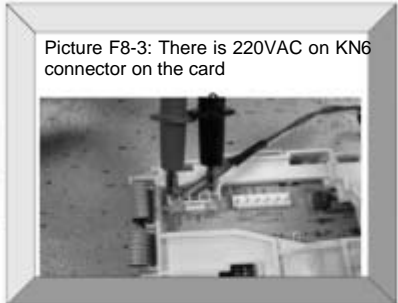
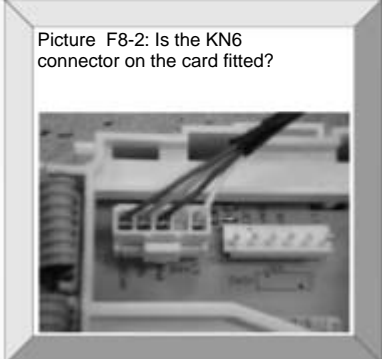
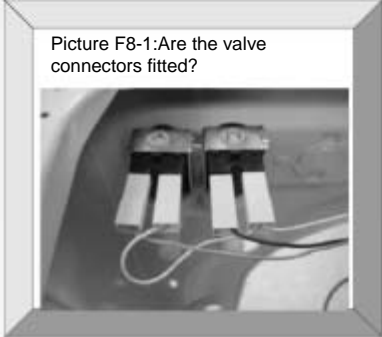


\*Program lasts long.  
 \*The machine does not end the program.  
 \*The machine is not taking water  
 \*The machine does not work.  
 \*It does not spin and drain  
 \*The machine continuously discharges.

**INFORMATION:**  
 Main wash pin 3 blue, Prewash pin 4 pink, Hot wash pin 5 red

**F8**

\*Water cut off or  
 \*Valve triac open or  
 \*Pump triac short circuit error



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

\* Poor washing by the machine  
\* Washing comes to an end before the displayed washing time expires.  
\* Program remains incomplete.  
\* There is water left in the machine. Laundry remains with detergent on it.

F9

\* Door lock triac open circuit error

Is there F9 error?

Yes

Replace the control card and try again.

Cover jammed

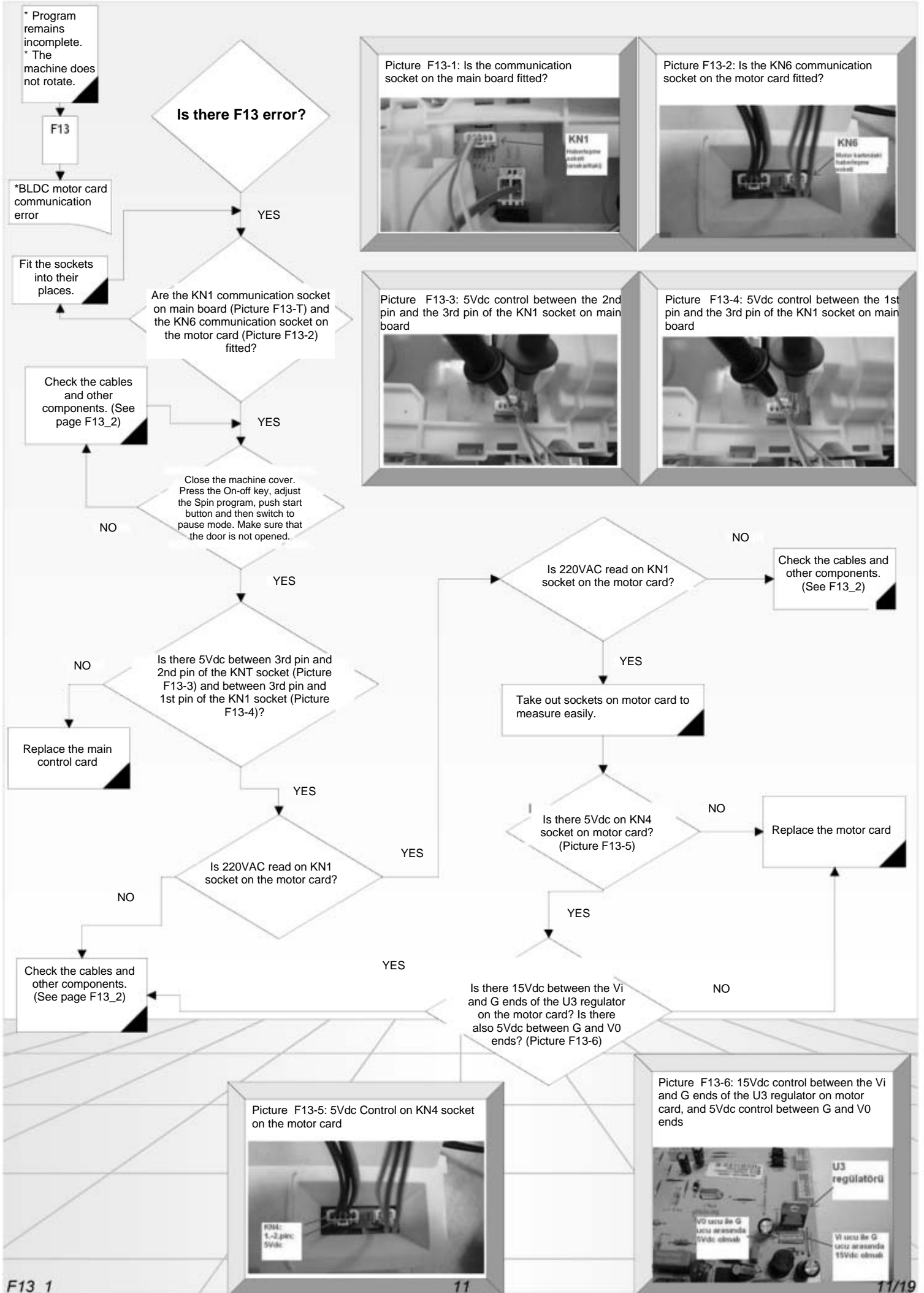
F10

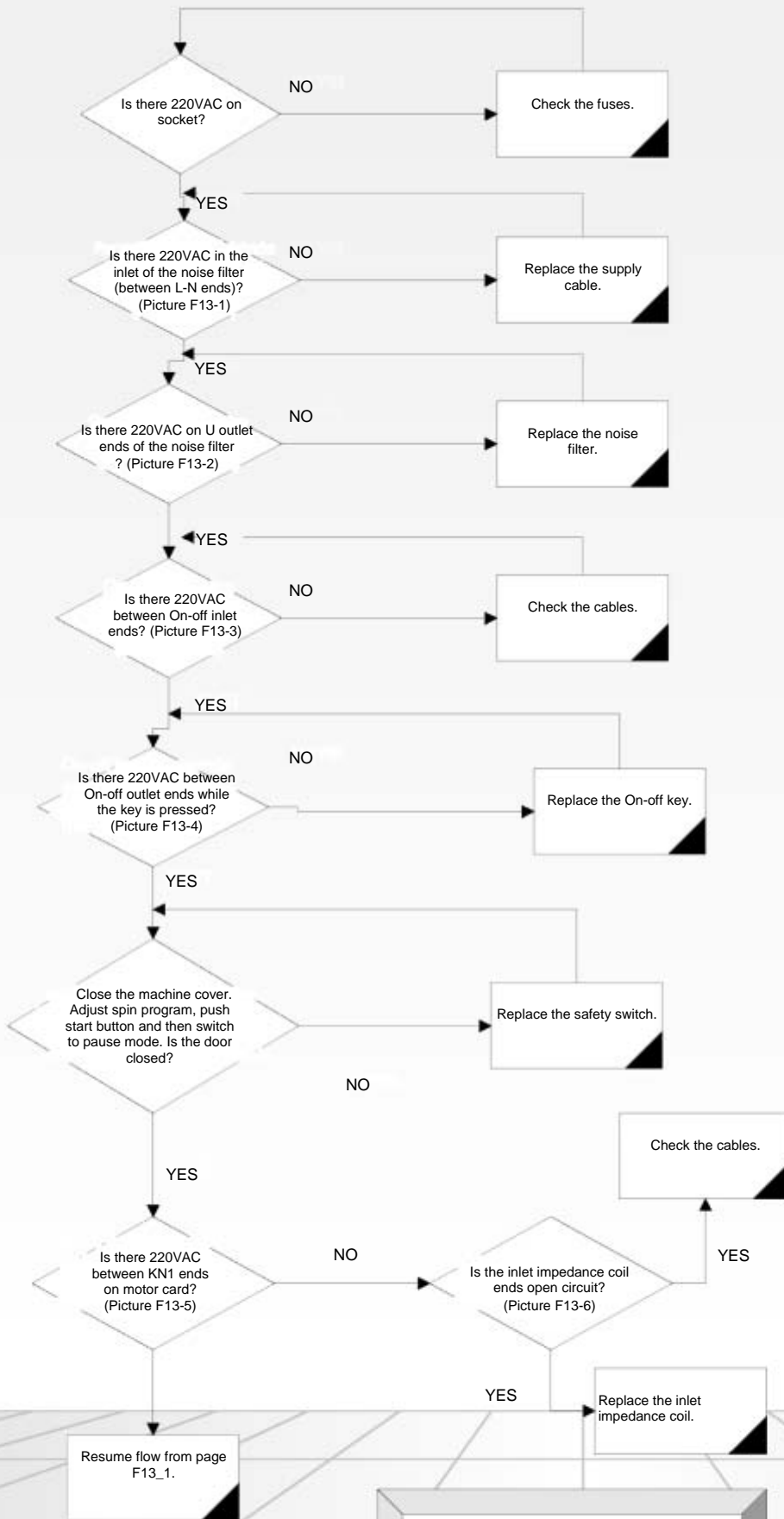
\*Door lock triac short circuit error

Is there F10 error?

Yes

Replace the control card and try again.





Picture F13-1: 220VAC control on L-N ends of the noise filter



Picture F13-2: 220VAC control on U outlet ends of the noise filter



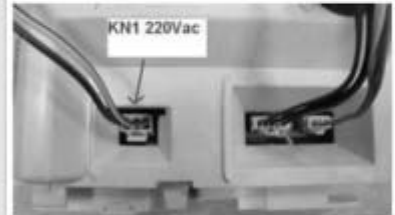
Picture F13-3: 220VAC control between On-Off inlet ends



Picture F13-4: 220VAC control on outlet ends while On-off key is pressed



Picture F13-5: 220VAC control between KN1 ends on motor card



Picture F13-6: Open circuit control of the inlet impedance coil



\* Program remains incomplete.  
\* The machine does not rotate.

F11

\*Open circuit in motor phases or  
\*Motor phases short circuit or  
\*Motor hall sensor open circuit or  
\*Motor phase protection relay short circuit

Is there F11 error?

Yes

Take out the motor phase socket which is connected to KN8 on motor card and check if there any open circuit or short circuit in any of the phases. (Picture F11-1)

Yes

Replace the motor

Hayır

No

Is the Motor thermic open circuit? If the lock icon on display screen is flashing, after a while the door might open even though there is water inside

Yes

Motor thermic might have opened it. Wait for the motor to cool down (15min) and check if the thermic is open circuit. (Picture F13-2)

No

Yes

Cancel the program and start spinning.

Replace the motor

Check the hall sensor cables both on the motor side and motor card side. (Picture F11-3)

Yes

Motor still does not move

Yes

Is there 5Vdc on KN4 socket on motor card? (Picture F13-5)

No

Replace the motor card

Yes

Is there 15Vdc between the Vi and G ends of the U3 regulator on the motor card? Is there also 5Vdc between G and V0 ends? (Picture F13-6)

No

Yes

Check the cables and other components. (See page F13\_2)

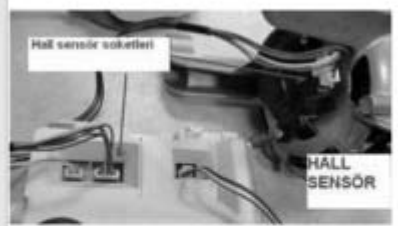
Picture F11-1: Open circuit/short circuit control between the motor phase cables covered with nucleus



Picture F13-2: Open circuit control on Motor thermic



Picture F13-3: Control of the hall sensor cables

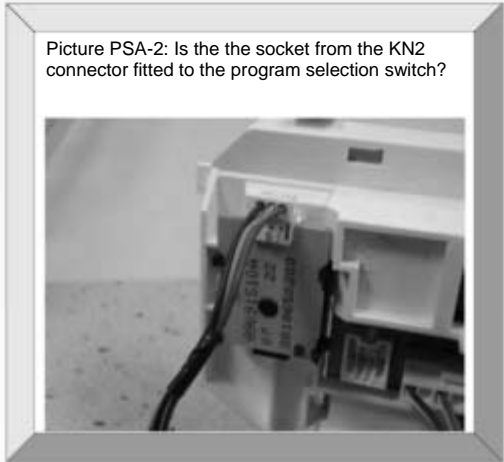
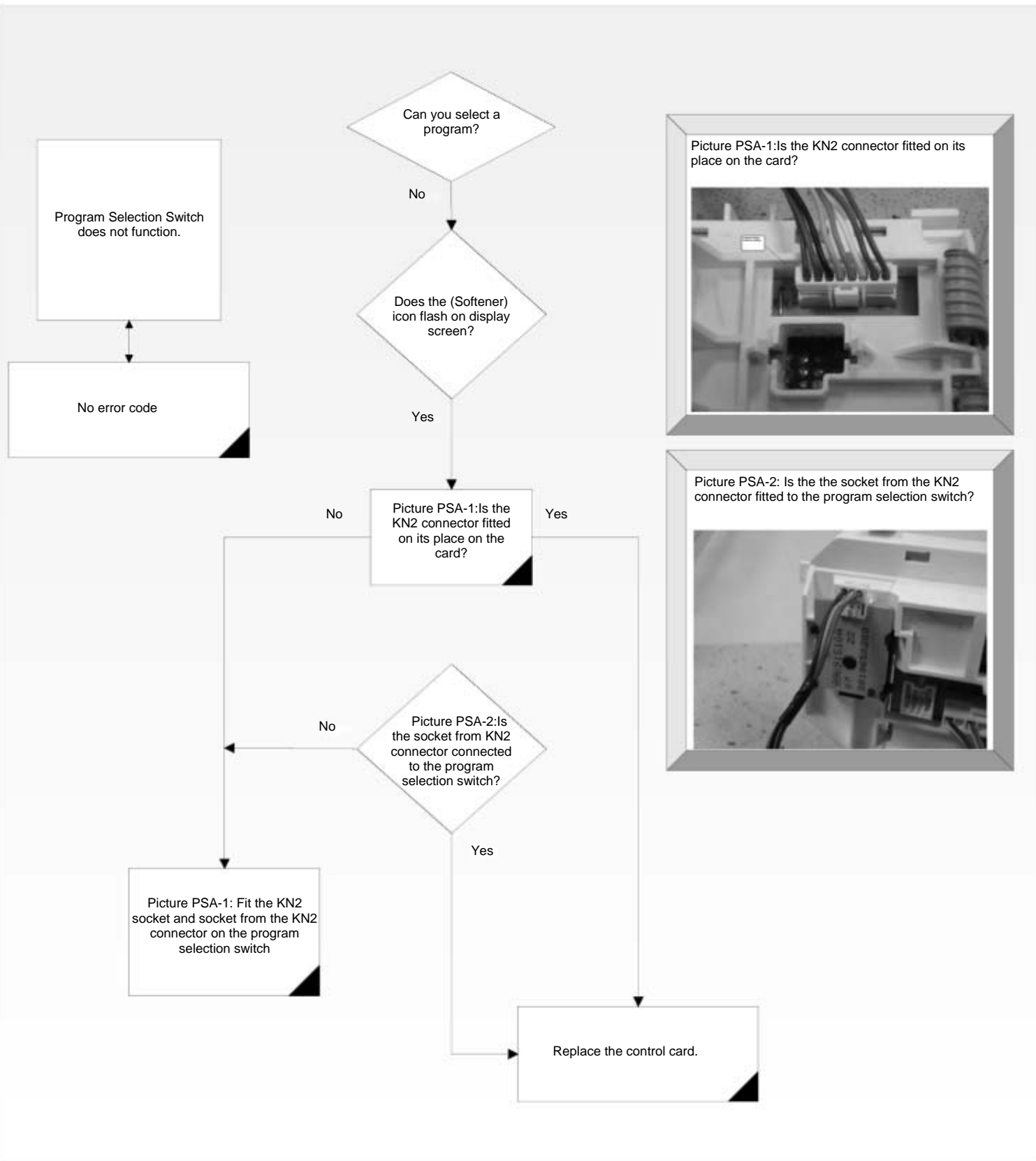


Picture F13-4: 5Vdc Control on KN4 socket on the motor card



Picture F13-6: 15Vdc control between the Vi and G ends of the U3 regulator on motor card, and 5Vdc control between G and V0 ends





Takes in water from the wrong detergent compartment

Valves,  
Are KN6.1 - common (white)  
KN6.3 - Main wash (blue) KN6.4 -  
Prewash (Pink) KN6.5 - Hot  
washing (red)  
ends connected?

No

Correct the connections. Check  
through a function test.

Yes

Perform a function test on the  
machine to check compartments of  
the detergent box. Check to see if  
there is 220 VAC on the relevant  
valve during the test steps



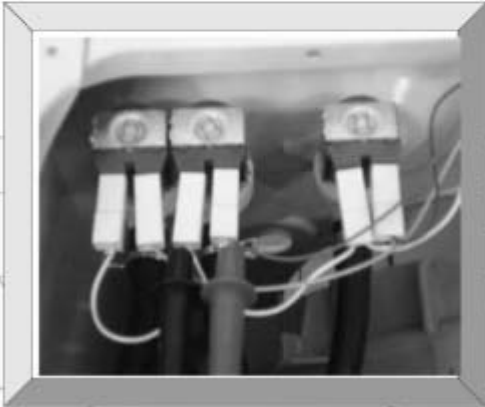
Is there 220VAC voltage on the relevant valve  
during water intake from each compartment?

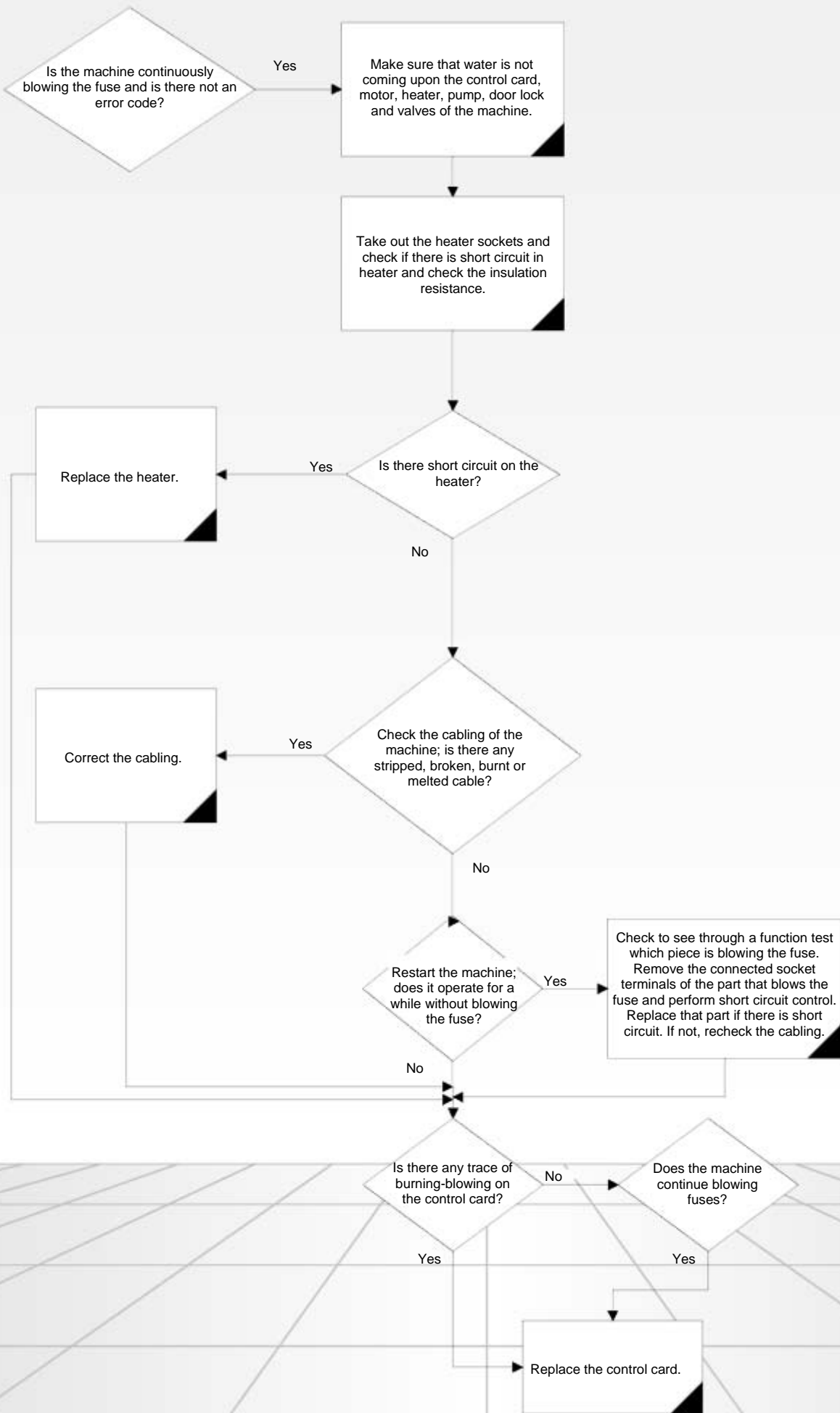
Yes

Replace the valve

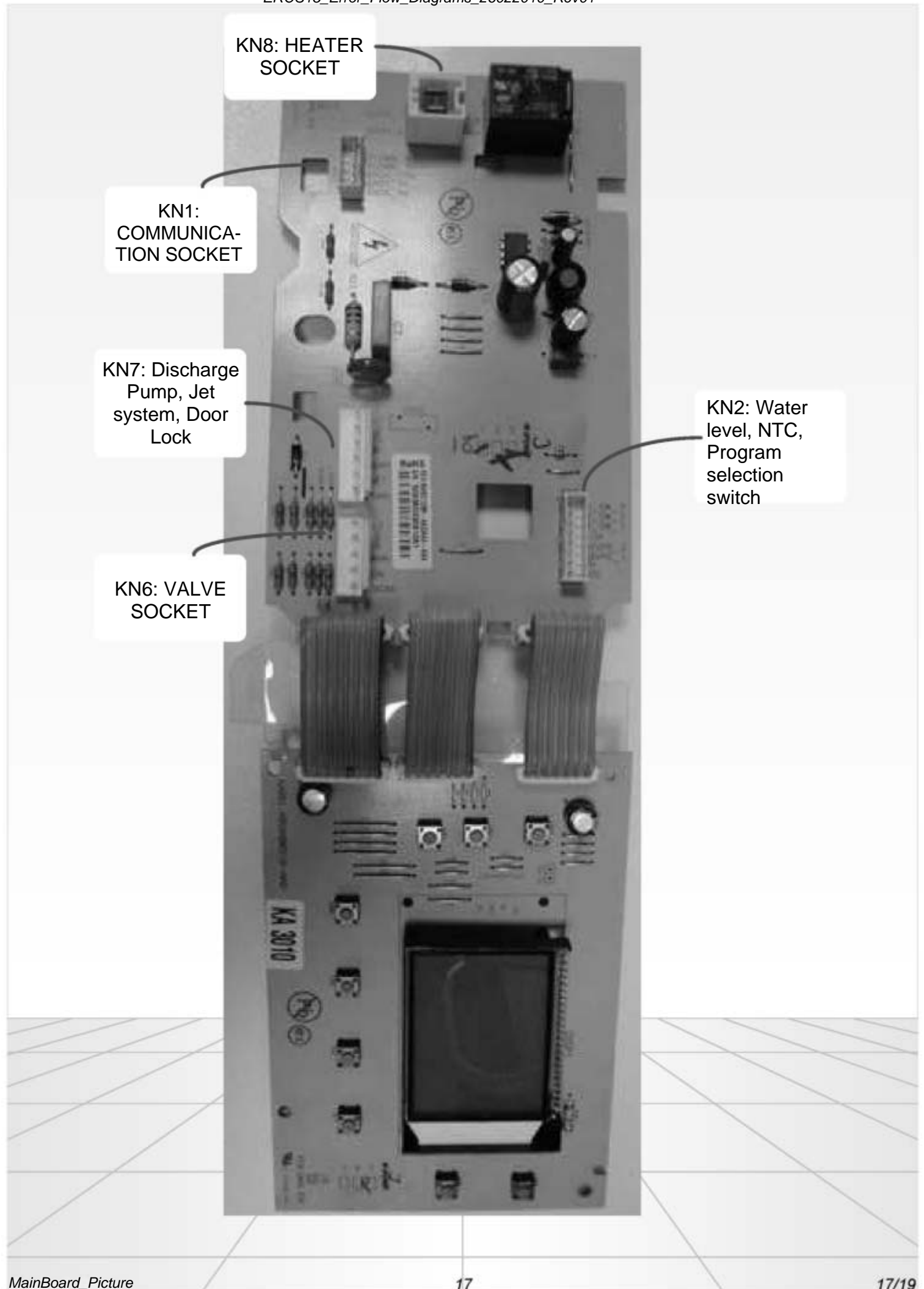
No

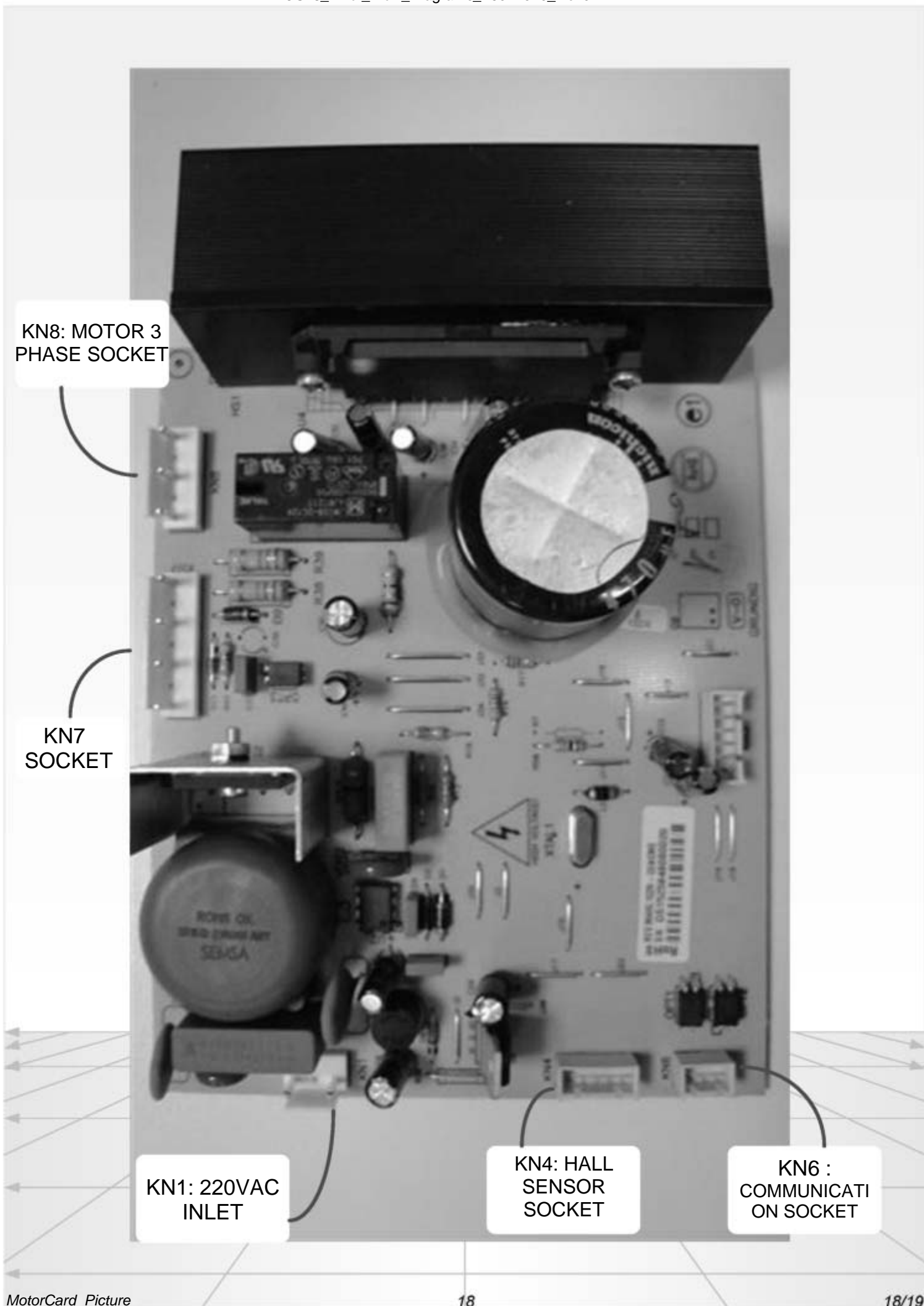
Replace the control card.











KN8: MOTOR 3  
PHASE SOCKET

KN7  
SOCKET

KN1: 220VAC  
INLET

KN4: HALL  
SENSOR  
SOCKET

KN6 :  
COMMUNICATI  
ON SOCKET

