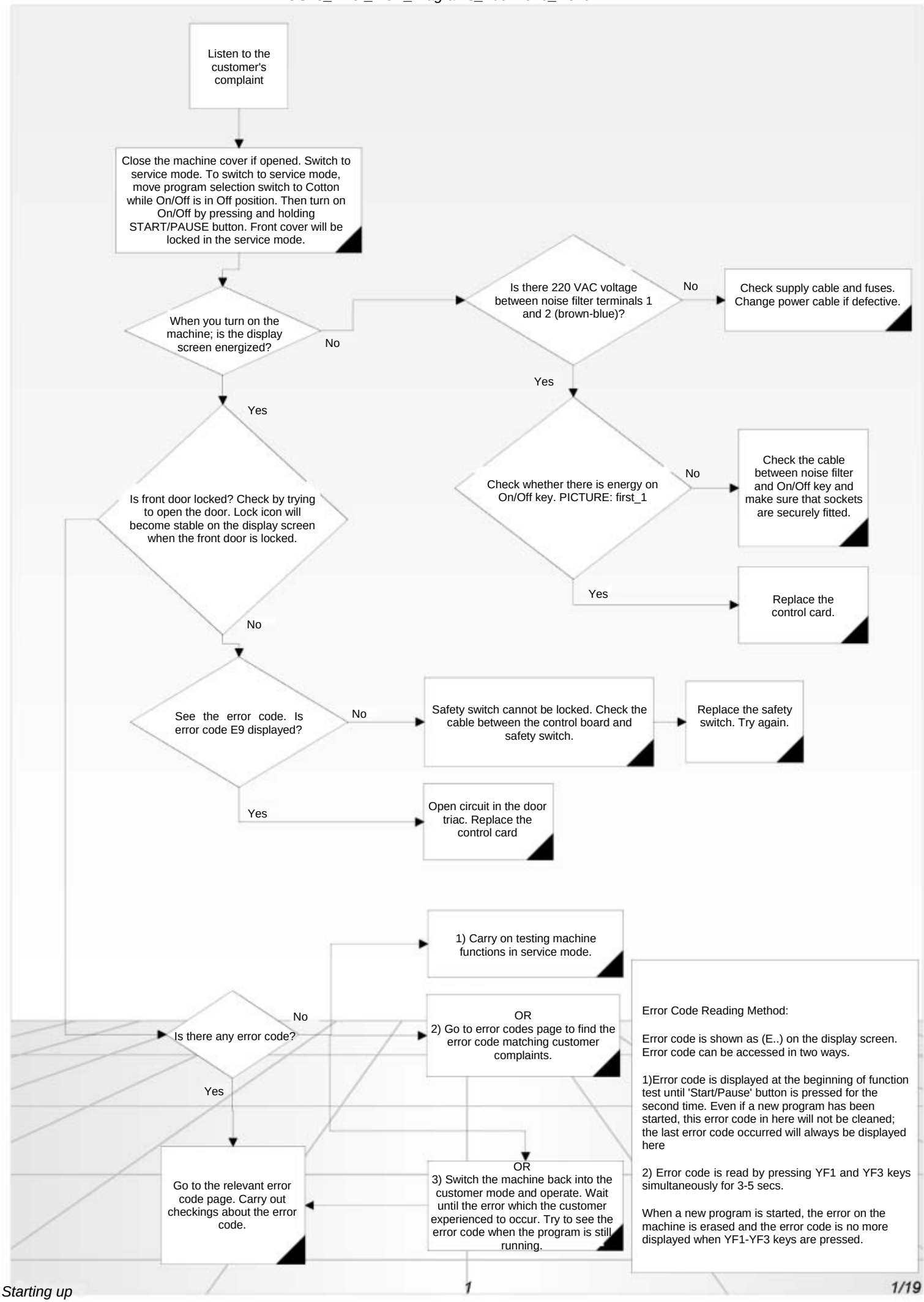
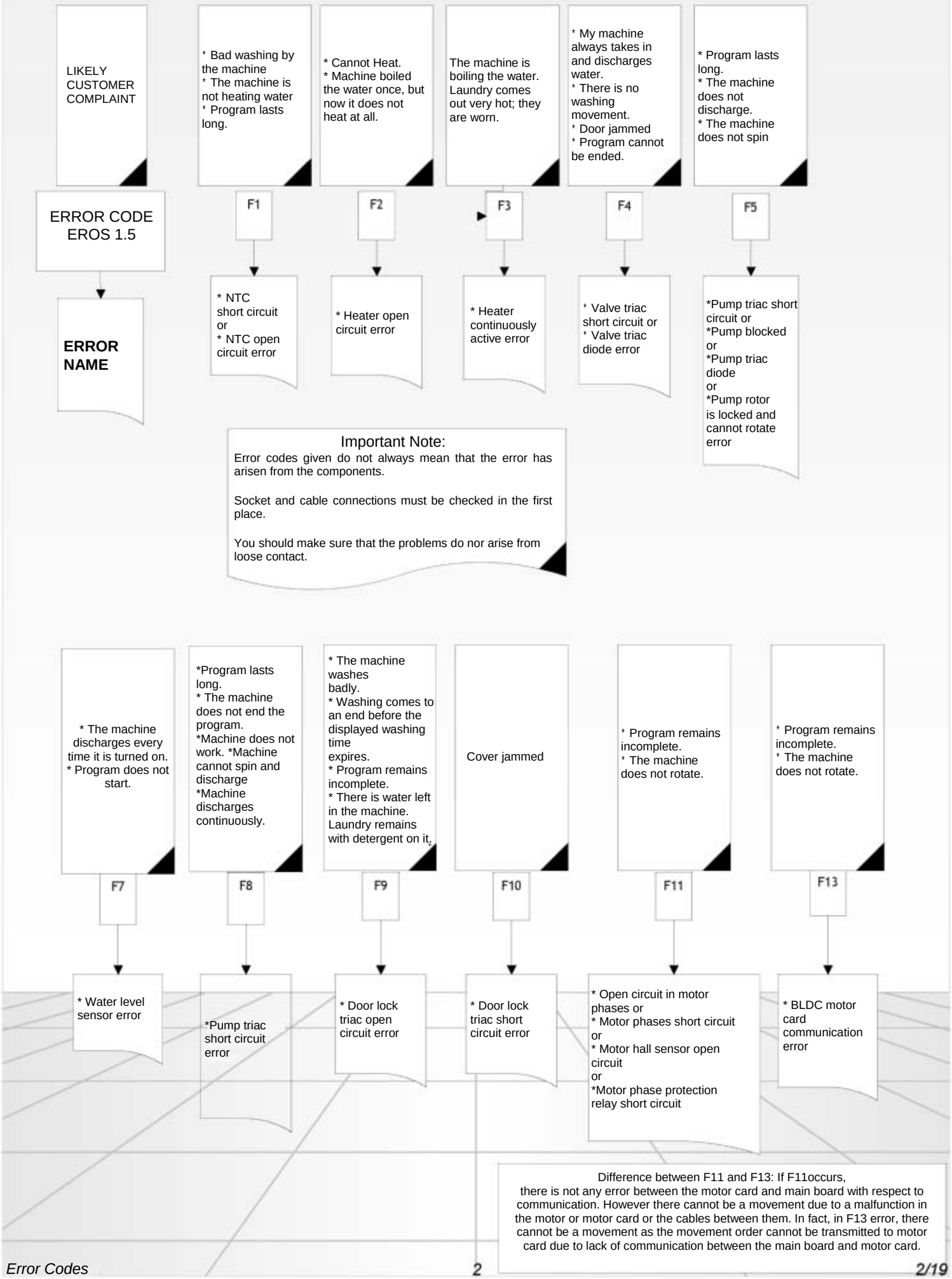

Listen to the customer's complaint
Close the machine cover if opened. Switch to service mode. To switch to service mode, move program selection switch to Cotton while On/Off is in Off position. Then turn on On/Off by pressing and holding START/PAUSE button. Front cover will be locked in the service mode.
When you turn on the machine; is the display screen energized?
No
Is there 220 VAC voltage between noise filter terminals 1 and 2 (brown-blue)?
No
Check supply cable and fuses. Change power cable if defective.
Yes
Yes
Is front door locked? Check by trying to open the door. Lock icon will become stable on the display screen when the front door is locked.
Check whether there is energy on On/Off key. PICTURE: first_1
No
Check the cable between noise filter and On/Off key and make sure that sockets are securely fitted.
Yes
Replace the control card.
No
See the error code. Is error code E9 displayed?
No
Safety switch cannot be locked. Check the cable between the control board and safety switch.
Replace the safety switch. Try again.
Yes
Open circuit in the door triac. Replace the control card
1) Carry on testing machine functions in service mode.
OR
2) Go to error codes page to find the error code matching customer complaints.
No
Is there any error code?
Yes
Go to the relevant error code page. Carry out checkings about the error code.
OR
3) Switch the machine back into the customer mode and operate. Wait until the error which the customer experienced to occur. Try to see the error code when the program is still running.
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.


LIKELY CUSTOMER COMPLAINT
* Bad washing by the machine
* The machine is not heating water
* Program lasts long.
* Cannot Heat.
* Machine boiled the water once, but now it does not heat at all.
The machine is boiling the water. Laundry comes out very hot; they are worn.
* My machine always takes in and discharges water.
* There is no washing movement.
* Door jammed
* Program cannot be ended.
* Program lasts long.
* The machine does not discharge.
* The machine does not spin
ERROR CODE EROS 1.5
F1
F2
F3
F4
F5
ERROR NAME
* NTC short circuit or * NTC open circuit error
* Heater open circuit error
* Heater continuously active error
* Valve triac short circuit or * Valve triac diode error
*Pump triac short circuit or *Pump blocked or *Pump triac diode or *Pump rotor is locked and cannot rotate error
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 nor arise from loose contact.
* The machine discharges every time it is turned on.
* Program does not start.
*Program lasts long.
* The machine does not end the program.
*Machine does not work. *Machine cannot spin and discharge
*Machine discharges continuously.
* The machine washes badly.
* 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.
Cover jammed
* Program remains incomplete.
* The machine does not rotate.
* Program remains incomplete.
* The machine does not rotate.
F7
F8
F9
F10
F11
F13
* Water level sensor error
*Pump triac short circuit error
* Door lock triac open circuit error
* Door lock triac short circuit error
* Open circuit in motor phases or
* Motor phases short circuit or
* Motor hall sensor open circuit or
*Motor phase protection relay short circuit
* BLDC motor card communication error
Difference between F11 and F13: If F11occurs, 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.

F1

* NTC short circuit or
* NTC open circuit error

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?

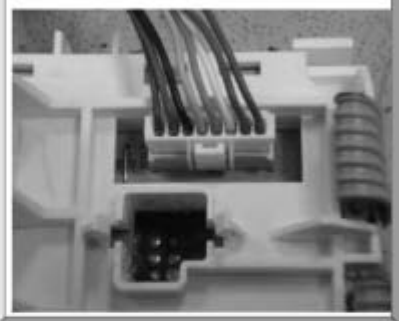
Yes

Is KN2 socket on the control card attached?

No

Attach KN2 socket. (Picture F1-1)

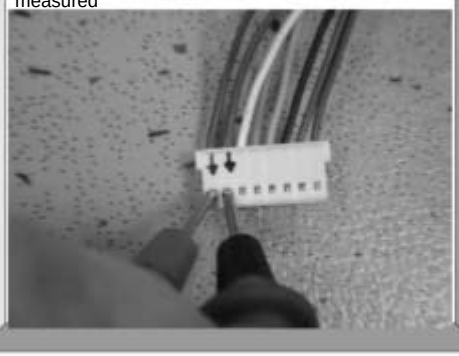
Picture F1-1:Is the KN2 socket fitted?



Yes

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

PICTURE F1-2: The socket connected to KN2 connector is removed and NTC resistance is measured



PICTURE F1-3: The NTC socket on the heater is removed and NTC resistance is being measured

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

Yes

Replace the control card.

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)

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

Yes

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.

No

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

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.

F2

* Heater open circuit error

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?

Yes

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

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

Picture F2-2: KN7 socket on the card is removed.

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

No

Yes

Replace the control card.

Picture F2-3: There should not be a short circuit between the 1st pin of KN8 socket and the 3rd pin of KN7 socket

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)

Yes

No

Replace the heater

Does the heater operate although there is no water?

No

You may start the washing program.

Yes

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)

PICTURE F2-4: Once of the cables on the heater is removed (left one) and heater resistance is being measured.

PICTURE F2-5: Water level sensor is being checked

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?

Yes

Yes

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)

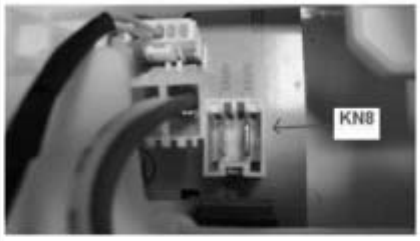
Open the back cover of the machine.
Measure heater resistance by removing at least one of the heater terminals; is the resistance 25 Ohms? (Picture F3-4)

No

Replace the heater

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.

Picture F3-1: Heater socket on the KN8 connector is removed

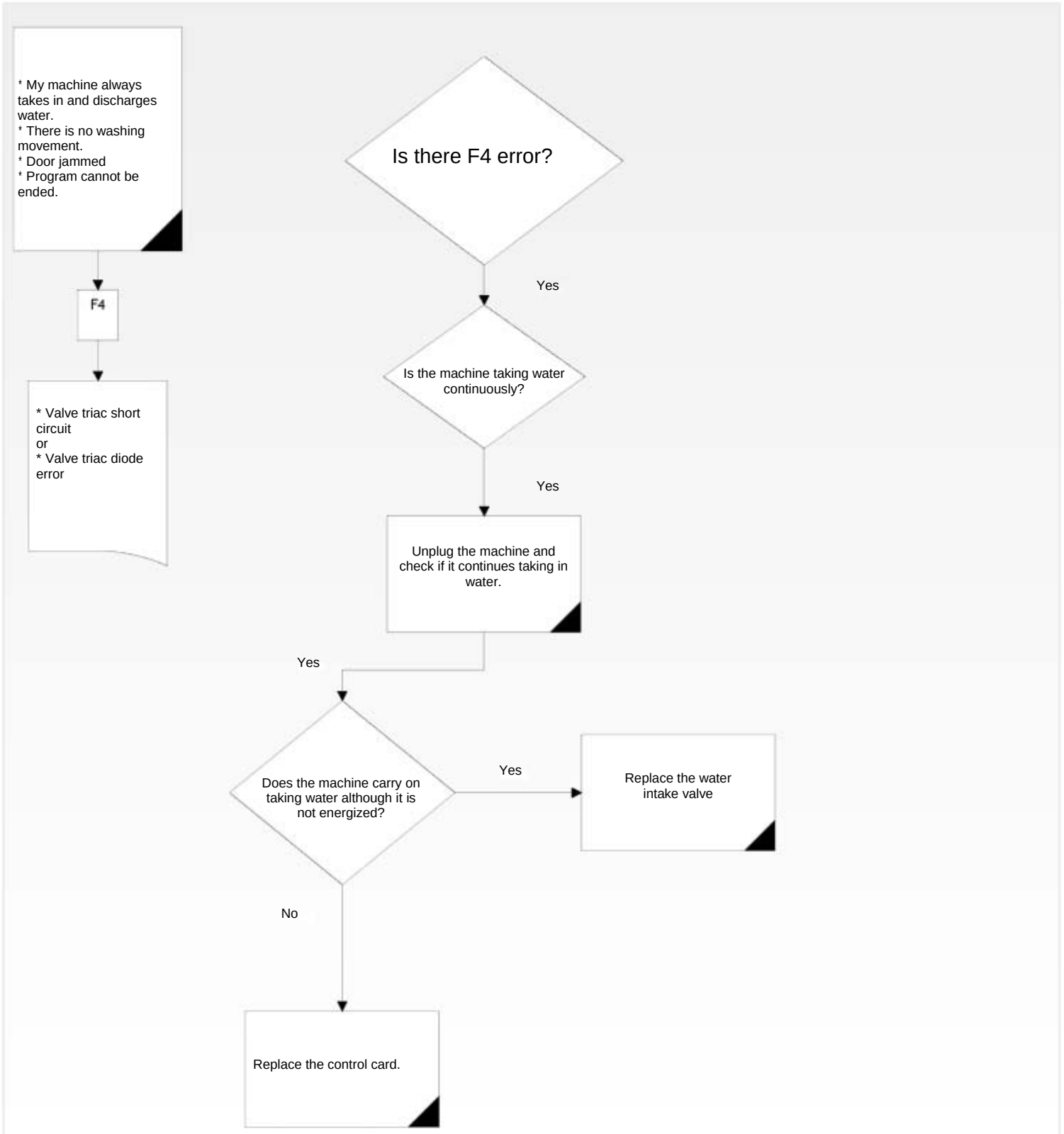


Picture F3-2: Remove the KN7 connector

Picture F3-3: There should not be a short circuit between the 1st pin of KN8 connector and the 3rd pin of KN7 connector.

Picture F3-4 Heater resistance measurement

Picture F2-5: Water level sensor control


* 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
Is there F4 error?
Yes
Is the machine taking water continuously?
Yes
Unplug the machine and check if it continues taking in water.
Yes
Does the machine carry on taking water although it is not energized?
Yes
Replace the water intake valve
No
Replace the control card.

*Program lasts long.
*The machine does not discharge.
*The machine does not spin

F5

*Pump triac open circuit
or
*Pump blocked
or
*Pump triac diode
or
*Pump rotor locked and does not rotate error

Is there F5 error?

Yes

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

Start the machine after switching into pump program.

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

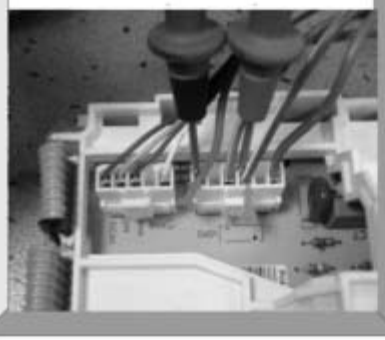
Yes

* 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.
Intake water and restart the pump program

No

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

Picture F5-1 measuring the Pump ends of KN7 connector



Check the 220VAC between KN7 (purple) (6th pin) and KN7 (red-white) (3rd pins) without removing control card or any socket while the pump program is running. No Picture F5-1

Is there 220VAC voltage?

No

Replace the control card.

Yes

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

Turn off the machine. Remove the front wall of the machine to check pump coil resistance. There should be approx. 147 Ohms between the two pins of the pump connector. Picture F5-2 Check. There should't 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?

Yes

Repair the cables and/or cable terminals

Group and restart the machine

No

No

Replace the pump.

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

F7

* Water level sensor error

Is there F7 error?

Yes

Does the machine have AQUASTOP function?

Yes

No

Is there water around the aquastop sensor on the lower table of the machine?

Yes

No

Is the styrofoam of the Aquastop sensor in right position?

Yes

No

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

No

Yes

Replace the level sensor

Repair the socket and cables

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.

F8

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

Is there F8 error?

Yes

Is the machine taking in water?

Yes

No

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.

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

Picture F8-1:Are the valve connectors fitted?

Picture F8-2: Is the KN6 connector on the card fitted?

Picture F8-3: There is 220VAC on KN6 connector on the card

Make sure that the valve connectors (Picture F8-1) and control card KN6 (Picture F8-2) are fitted. Are the connectors fitted?

No

Attach the connectors and try again.

Yes

Is there 220VAC between the connectors of the valve that has to operate?

No

Replace the valve. Try again.

Yes

Is there 220VAC between KN6 connector's 1st pin (white) on the control card and the valve pin that has to operate? (Picture F8-3)

No

Replace the control card and try again.

Yes

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

Yes

Correct connections and check. Try again

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.

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

F13

*BLDC motor card communication error

Is there F13 error?

YES

Are the KN1 communication socket on main board (Picture F13-T) and the KN6 communication socket on the motor card (Picture F13-2) fitted?

Fit the sockets into their places.

YES

Check the cables and other components. (See page F13_2)

YES

Close the machine cover. Press the On-off key, adjust the Spin program, push start button and then switch to pause mode. Make sure that the door is not opened.

NO

YES

Is there 5Vdc between 3rd pin and 2nd pin of the KNT socket (Picture F13-3) and between 3rd pin and 1st pin of the KN1 socket (Picture F13-4)?

NO

Replace the main control card

YES

Is 220VAC read on KN1 socket on the motor card?

NO

Check the cables and other components. (See page F13_2)

YES

Is 220VAC read on KN1 socket on the motor card?

NO

Check the cables and other components. (See F13_2)

YES

Take out sockets on motor card to measure easily.

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)

YES

NO

Picture F13-1: Is the communication socket on the main board fitted?

Picture F13-2: Is the KN6 communication socket on the motor card fitted?

Picture F13-3: 5Vdc control between the 2nd pin and the 3rd pin of the KN1 socket on main board

Picture F13-4: 5Vdc control between the 1st pin and the 3rd pin of the KN1 socket on main board

Picture F13-5: 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

Is there 220VAC on socket?

NO → Check the fuses.

YES

Is there 220VAC in the inlet of the noise filter (between L-N ends)? (Picture F13-1)

NO → Replace the supply cable.

YES

Is there 220VAC on U outlet ends of the noise filter ? (Picture F13-2)

NO → Replace the noise filter.

YES

Is there 220VAC between On-off inlet ends? (Picture F13-3)

NO → Check the cables.

YES

Is there 220VAC between On-off outlet ends while the key is pressed? (Picture F13-4)

NO → Replace the On-off key.

YES

Close the machine cover. Adjust spin program, push start button and then switch to pause mode. Is the door closed?

NO → Replace the safety switch.

YES

Is there 220VAC between KN1 ends on motor card? (Picture F13-5)

NO → Is the inlet impedance coil ends open circuit? (Picture F13-6)

YES → Check the cables.

YES → Replace the inlet impedance coil.

Resume flow from page F13_1.

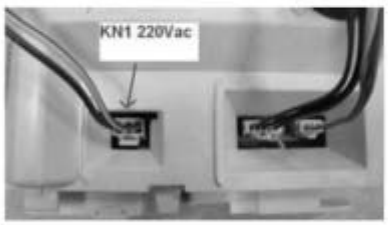
Picture F13-1: 220VAC control on L-N ends of the noise filter

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

Cancel the program and start spinning.

Yes

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)

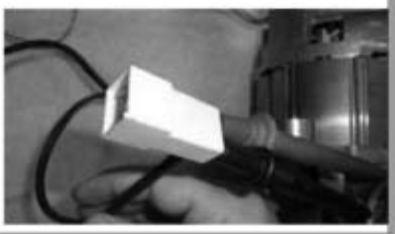
No

Yes

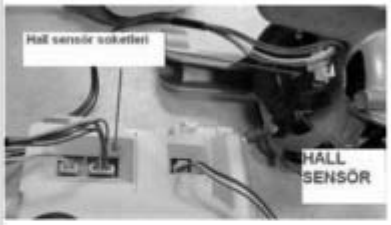
Check the cables and other components. (See page F13_2)

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

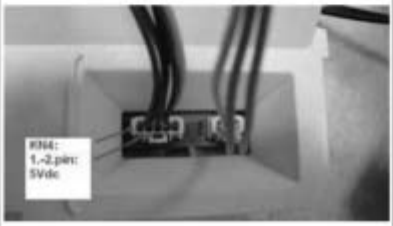
Picture F13-2: Open circuit control on Motor thermic



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

Can you select a program?

No

Program Selection Switch does not function.

No error code

Does the (Softener) icon flash on display screen?

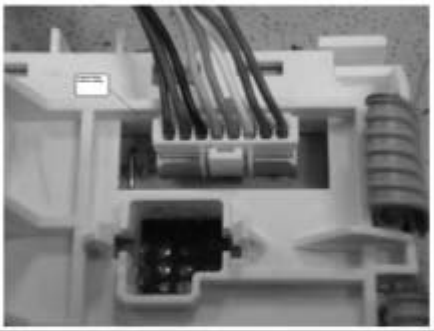
Yes

No

Picture PSA-1:Is the KN2 connector fitted on its place on the card?

Yes

Picture PSA-1:Is the KN2 connector fitted on its place on the card?



Picture PSA-2: Is the the socket from the KN2 connector fitted to the program selection switch?

No

Picture PSA-2:Is the socket from KN2 connector connected to the program selection switch?

Yes

Picture PSA-1: Fit the KN2 socket and socket from the KN2 connector on the program selection switch

Replace the control card.

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.

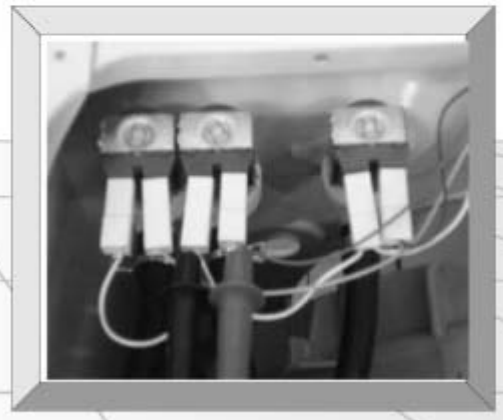
Yes

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?

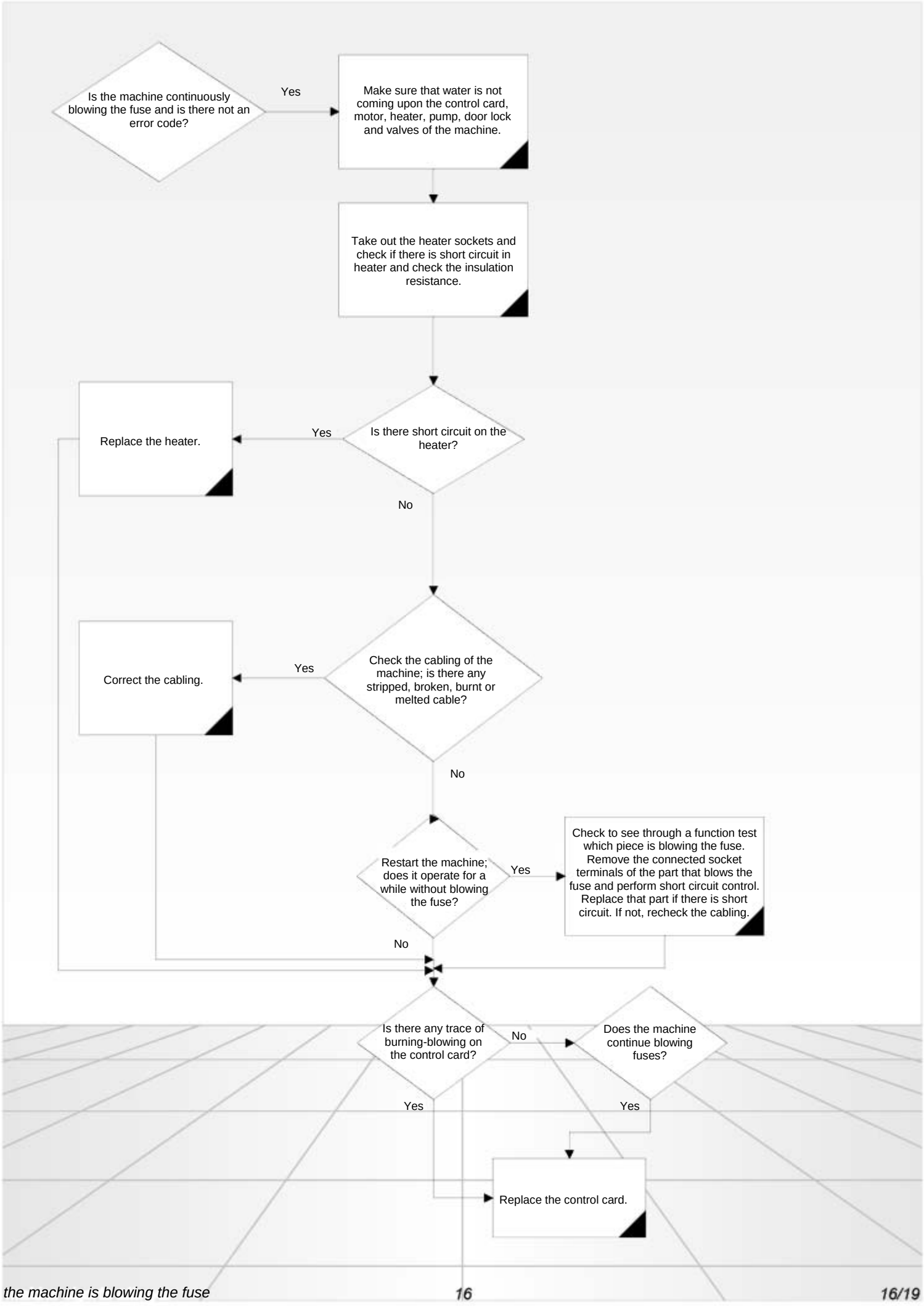
Yes

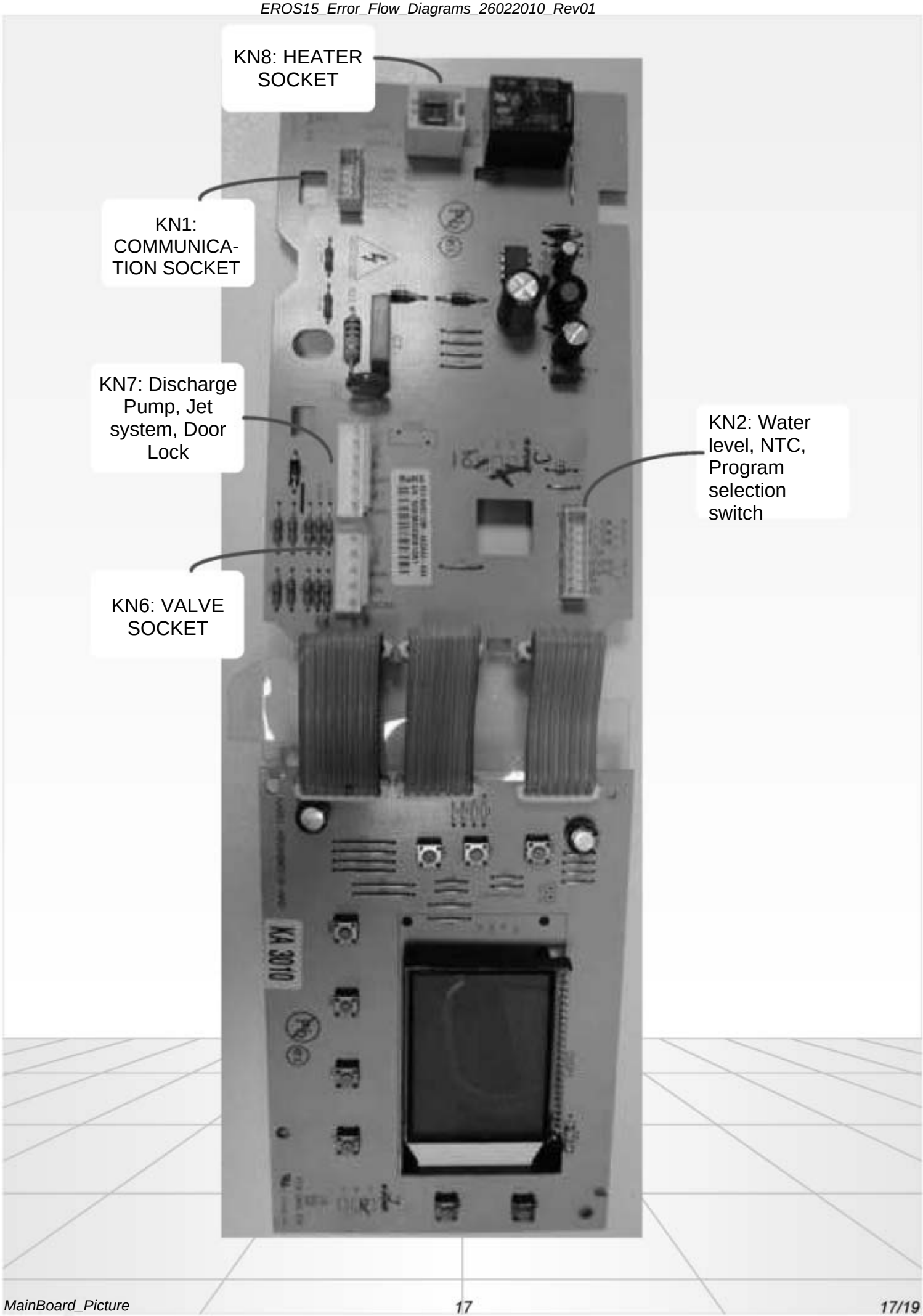
Replace the valve

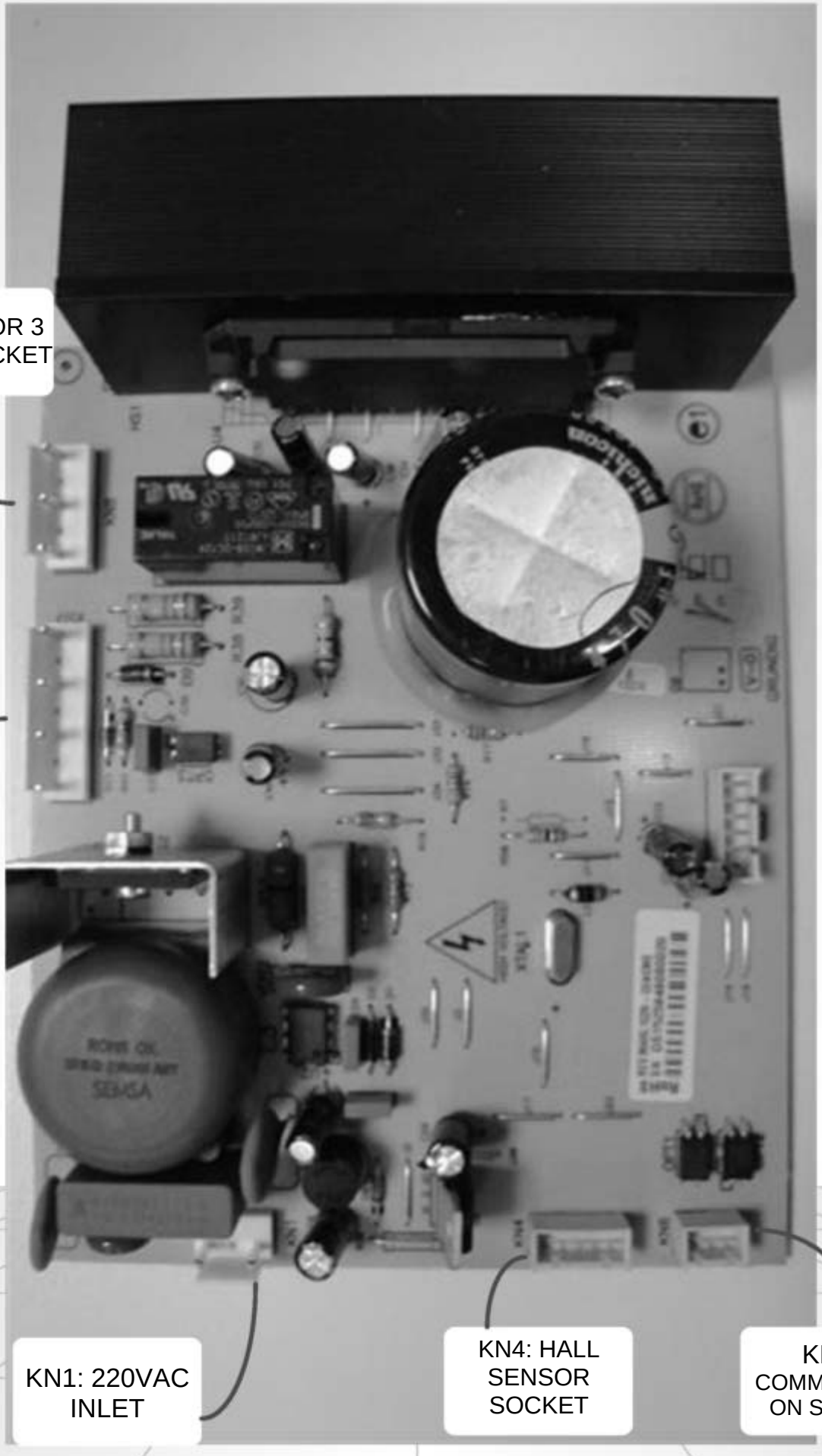


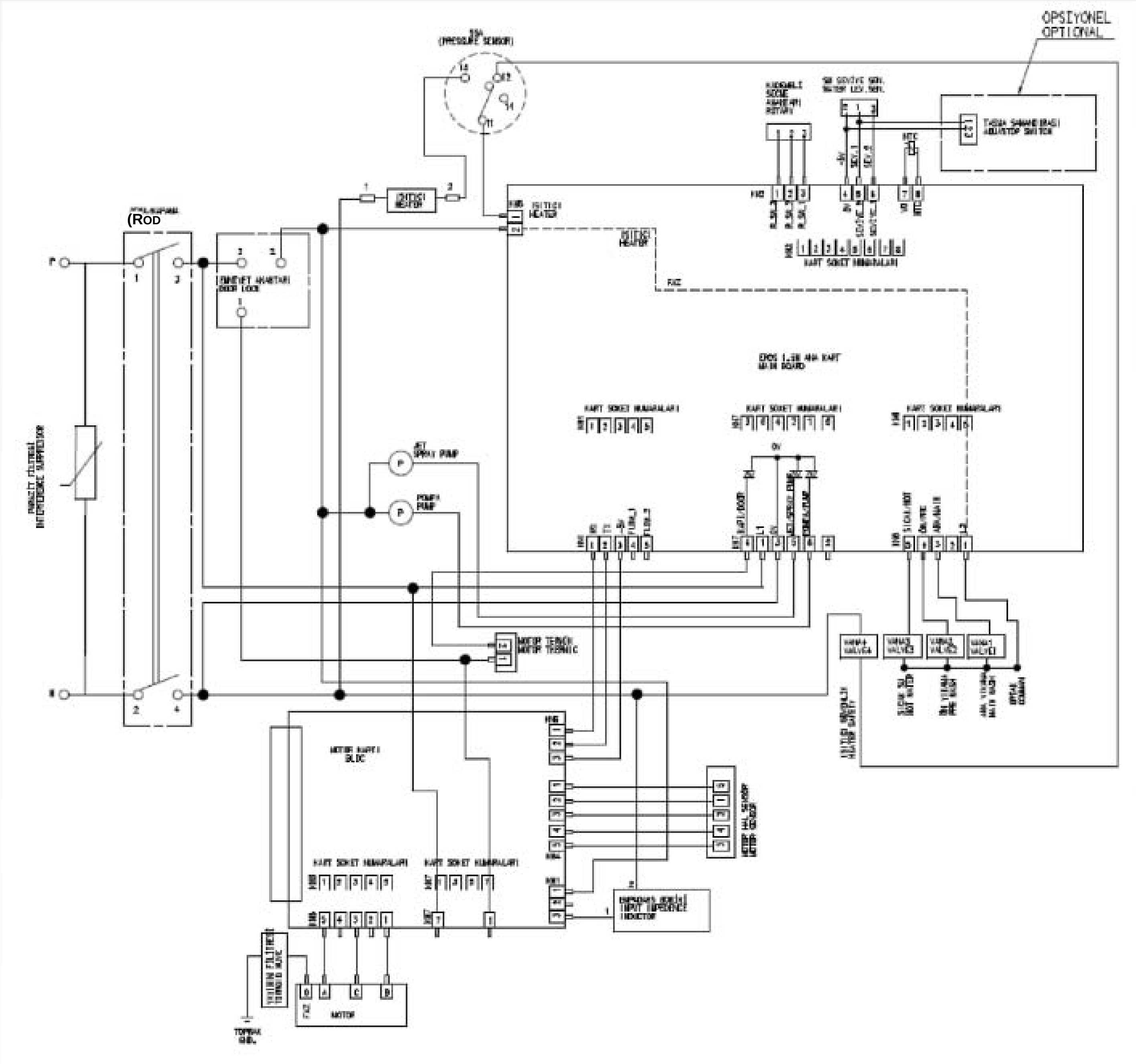
No

Replace the control card.


Is the machine continuously blowing the fuse and is there not an error code?
Yes
Make sure that water is not coming upon the control card, motor, heater, pump, door lock and valves of the machine.
Take out the heater sockets and check if there is short circuit in heater and check the insulation resistance.
Is there short circuit on the heater?
Yes
Replace the heater.
No
Check the cabling of the machine; is there any stripped, broken, burnt or melted cable?
Yes
Correct the cabling.
No
Restart the machine; does it operate for a while without blowing the fuse?
Yes
Check to see through a function test which piece is blowing the fuse. Remove the connected socket terminals of the part that blows the fuse and perform short circuit control. Replace that part if there is short circuit. If not, recheck the cabling.
No
Is there any trace of burning-blowing on the control card?
No
Does the machine continue blowing fuses?
Yes
Yes
Replace the control card.


KN8: HEATER SOCKET
KN1: COMMUNICA-TION SOCKET
KN7: Discharge Pump, Jet system, Door Lock
KN2: Water level, NTC, Program selection switch
KN6: VALVE SOCKET
KA 3010


KN8: MOTOR 3 PHASE SOCKET
KN7 SOCKET
KN1: 220VAC INLET
KN4: HALL SENSOR SOCKET
KN6 : COMMUNICATION SOCKET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