VESTEL WHITE GOODS	VESTEL DISWASHER MACH .	CUSTOMER SUPPORT
	SERVICE MANUAL	

Service Manual

Dishwasher

Electrical Components

Button (On / Off Switch)

Buton is assembled in the control panel unit.
On / Off (two pole)

Voltage	250 V
Currency	50mA

Door Lock

It is a mechanical lock/release system that is closing the door, supplying the connection of electrical parts in the machine and cutting off the connection.

Currency	16 (4) A

HEATER INTEGRATED WASHING PUMP

Washing Pump;

Voltage	220/240 V
Frequency	50/60 Hz
Total Power	72W (230Volt)
Coil _solation Class	F
Main(First) Coil _	95 ± ⁒7 Ω
Sub(second) Coil _	126 ± ⁒7 Ω
Thermal Protector	109 °C
Pump Outlet Pressure	280 mbar

Pump Flowrate 50 lt / dk
Single direction, single phase, asynchronous and two pole.
It turns opposite clock direction.
It is assembled to the basement with rubber hangers.

HEATER INTEGRATED

Voltage	220/240 V
Total Power	1800 +- %5 W (230Vac)
Resistance	27,25-31,8 Ω

It is used to heat the washing water.
Heater is not active during the drying process.
It is assembled to the sump and located to the Supply side of circulation pump.

Capacitor

2,5 μ F – 450 V class P2
Capacitor is permanently connected to the circulation pump coils.

Drain Pump

Voltage	220/240 Volt
Frequency	50/60 Hz
Total Power	30 W
Flowrate	17-21 lt/dk
Coil Resistance	143 Ω % ± 7
Coil _solation Class	F
Thermal Protection	120°

Water Inlet Valve

Voltage	220/240 Volt	
Frequency	50-60 Hz	
Total Power	6 W	
Flowrate	2,5 lt/dk	
Coil _solation Class	F Resistance	120° C

ECO CROSS MEMBER

Between the pool and washer pump
is the piece that connection.

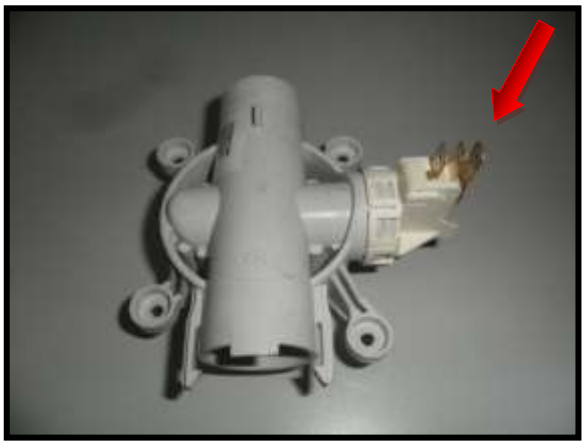
NTC

Temperatures / Resistance characteristic

+25°C	47.200	±1.416 Ω
+30°C	37.500	±1.125 Ω
+40°C	24.900	± 747 Ω
+50°C	17.000	± 510 Ω
+60°C	11.700	± 351 Ω
+70°C	8.280	± 248 Ω
+80°C	5.945	± 178 Ω

Pressure Switch

Voltage 220/240 V
Frequency 50/60 Hz 16 A – 3
Kontaklı



Regeneration Valve

Voltage 220/240 V
Frequency 50/60 Hz
Total Power 6 W
Resistance 4130±_10 _ (25 Cº)

Regeneration valve is assembled on the water softener..

Parasite Filter

Voltage 220/240 V
Frequency 50/60 Hz

0,1 uF (X1) + 2x0,015uF(Y2) + 1M Ω

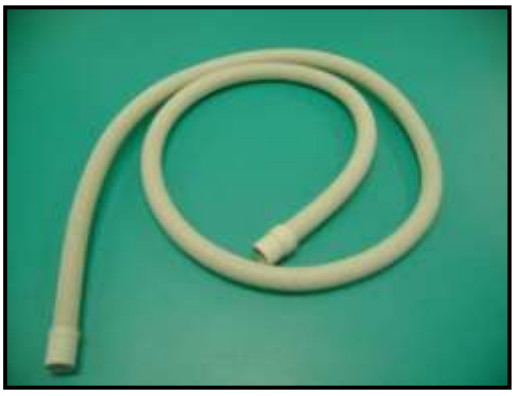
It is used to prevent parasites from the main supply. It has been assemblied to basement.

Power Cord

Type Euro 3'lü 1 $mm_{2, copper}$ conducting
İsolation T S 9 7 6 0 H05VV-F
Plug TS-IEC 60884–1 PVC injected Boy
Length 1800 mm

Drain Hose

Drain hose maximum height 110cm
Drain hose minimum height 50cm
Drain hose maximum length 400cm



Detergent / Rinse Aid Dispanser

Detergant dispenser consists of rinse aid and detergant compartment. It has been assemblied to the inner door by the snap fits. Only one bobbin has been used for operating the system.

Water Softener

Resin Quantity	0,45lt
Capacity of salt compartment	1,5 kg
Total hardness adjustment level	6

DEMOUNTING

1) FRONT PANEL

a) Unscrew the 6 screws located on the front panel.

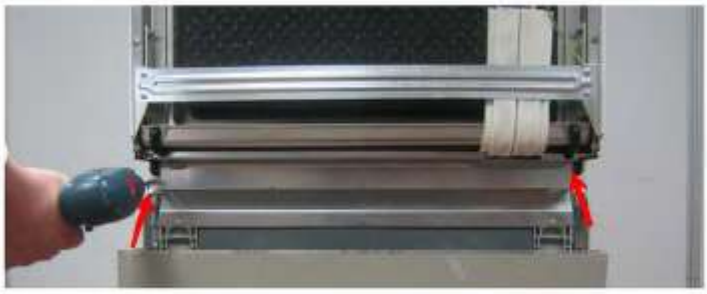


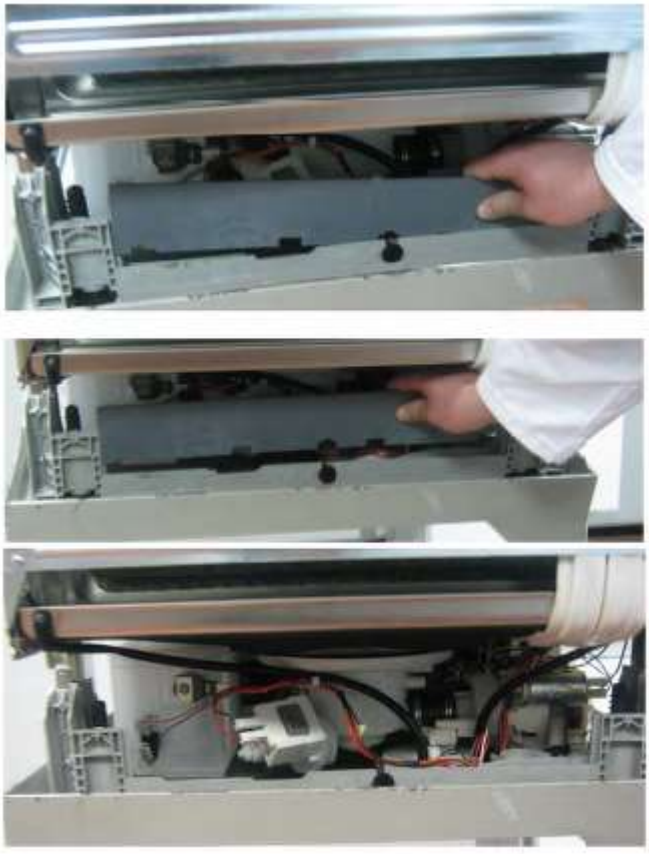

b).Pull down thefront panel as it shown in the Picture.


2) SIDE PANELS

a) Front and rear side panels of the screw assembly.

b) Remove the screws from the kick hair.





3) CONTROL PANEL GROUP

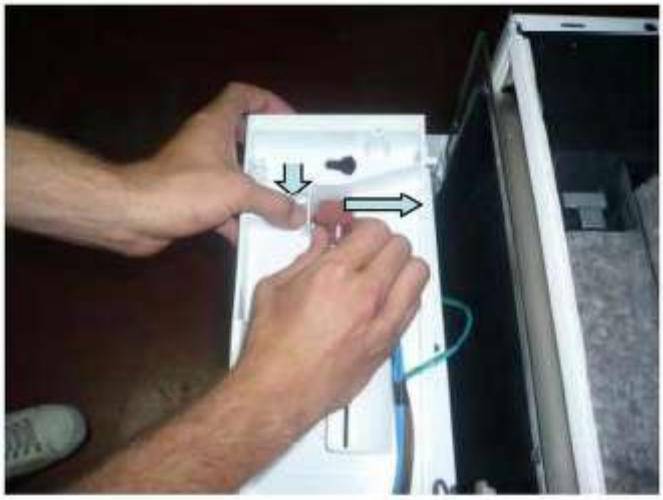
a) Remove the control panel of the screw.

b) Remove the cable harness from the plastic holder.

c) Remove the kontrol panel group carefully as shown in the picture

d) Detach the cable connections of the electronic board.

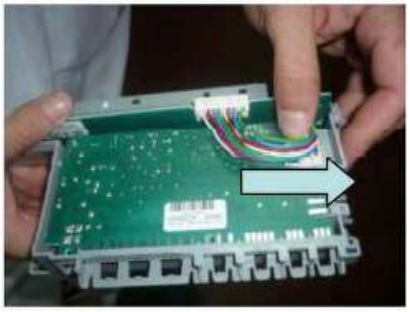
e) **Take the on/off switch off from the lower tab by pushing it downwords, and the same time pulling in the direction of the arrow with your hand as shown in the Picture , perform the same procedure fort he other tab to disassemble.**



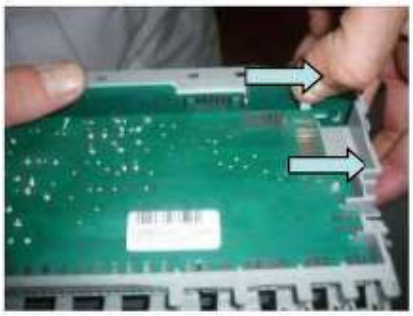
f) **Disassemble by removing the screws retaining the PCB box**

g) Open the tabs of the PCB box (as shown in the Picture) with a flat head screwdriver (take care not to break the plastic part)

h) **Detach the cable connections of the electronic board**

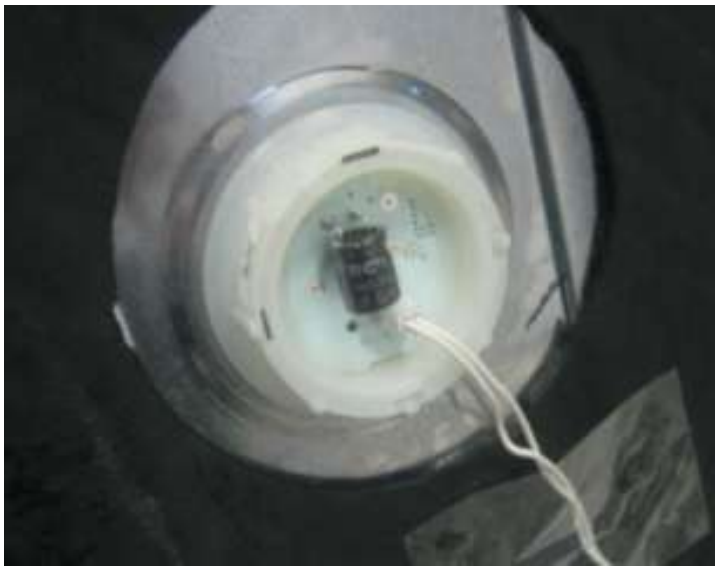


i) Disassemble the board by taking the electronic board off from the tabs retaining it the PCB box as shown in the Picture.

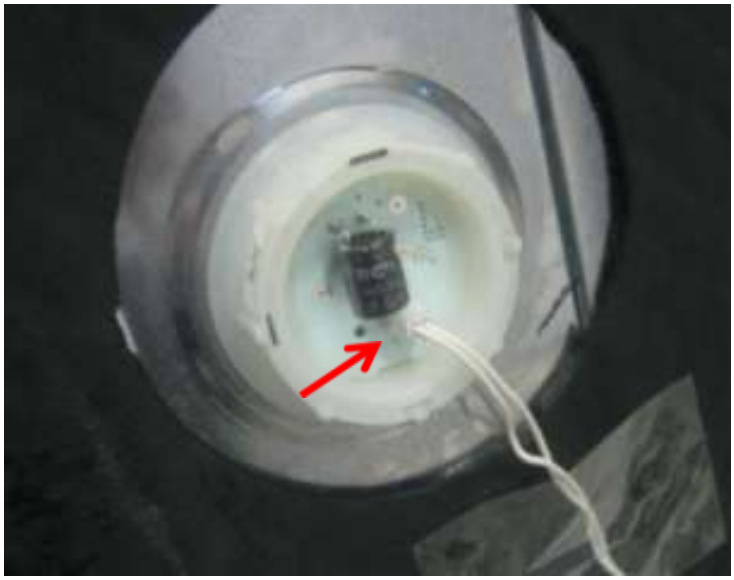


4) LED MODUL (OPSIONEL)

a) Remove the right side panel.



b) Remove the electrical connections as in the picture.



c) LED modules behind the nut by turning it counter-clockwise direction to remove.

5) LOWER PARTS DISASSEMBLY

a) Fold the facing to the back side of your machine.

b) The lower lid of your machine on a flat screwdriver and remove the freeing of the nail shown in the picture.

c) Take the built-in setting front rubber off from the shaft that it is connected by pulling it is shown in the Picture.

d) After removing the built-in setting front rubber, take the built-in setting assembly shaft and built-in setting assembly by pulling it towards you as shown in the picture

e) **Take built-in setting assembly the left tab using a needle nose pliers,and at the same time, take the adjustable lake off the lower base by pulling it down with a screw driver.Perform the same operation for the other tab.**

Warning: Remove built-in setting assembly carefully during disassembly: otherwise may break

f) **Take it off from the lower base by pulling it towards you.**

6) Built-in Hinge Spring Setting Assembly

Built-in hingr spring setting assembly is a mechanism that allows you to adjust the door of your appliance according to the board you have installed the appliance.There are 2 assemblies a left one and right one.

a) **To disassemble the built-in hinge spring setting assembly, you should remove the side panel on the side that you would like to remove.**

b) **Remove the door strap from the hinge spring as shown in the Picture.**

c) Remove 2 screws retaining hinge spring setting assembly to the sink, and release the hinge spring setting assembly.

d) Disassemble the hinge spring, by removing it from the hinge spring setting assembly as shown in the Picture.

Warning: Use work glovers otherwise inside door iron sheet can cut your hands.

7) Door Inside

a) Remove side panels.



b) Remove hinge spring from hinge cord group as it is shown in the picture.


d) Pull the door inside up as it is shown in the picture..

e) remove two screws that fix hinge movement sheet iron to the door inside.

THE INNER COMPONENTS
1.) To Access The Components From Sides

a)Right Sight

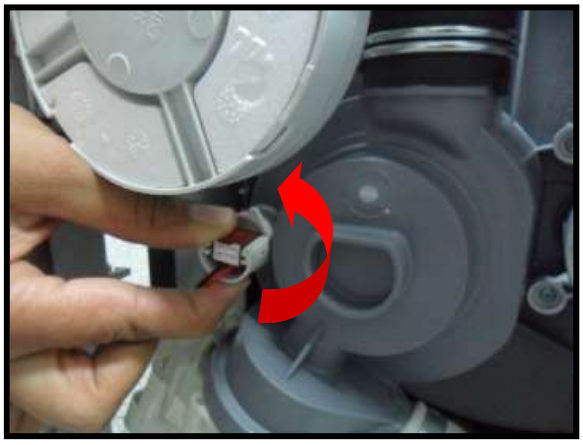
b)Left Sight

2) NTC with Thermal Protector

a) Remove the right side panel. Pool is connected to the NTC will see.

b) Unplug the power cord is connected to the pool of part.

c) NTC after the interests of the cable plug from rotating location.

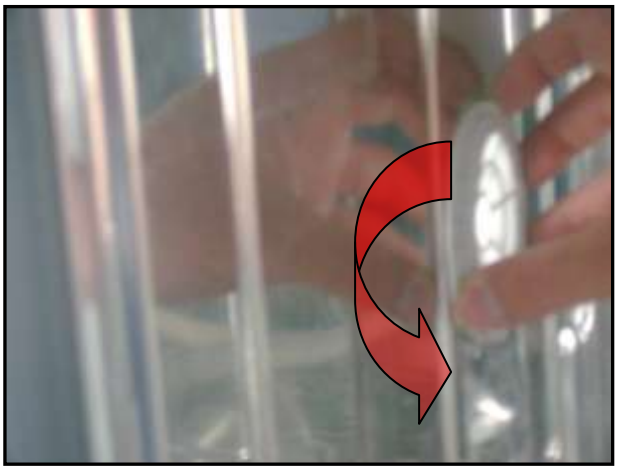


3) Air-Break
Air-Break

a) Remove the left side panel of the Machine.

b) Open machine's door..

c) Rotate counterclockwise air-break nut and remove it.



d) Remove air –break's connections with salt cap as it is shown in the picture.(be careful about plastic hinges)

4) Hose Connection Plastic

a) Remove left side panel.

b)By using flat tip screwdriver remove

hose connection plastic's hinge from the basement as it shown in the picture.

Warning: Sub-base plastic hose connecting the proposed removal does not break.

5) Power Cord

a) Remove hose connection plastic.

b) Remove the lower cover.(see)
c) Remove the wires that is between power cord and parasite filter..

d) Remove the power cord..

6. To Access The Components From _n Front Of The Machine

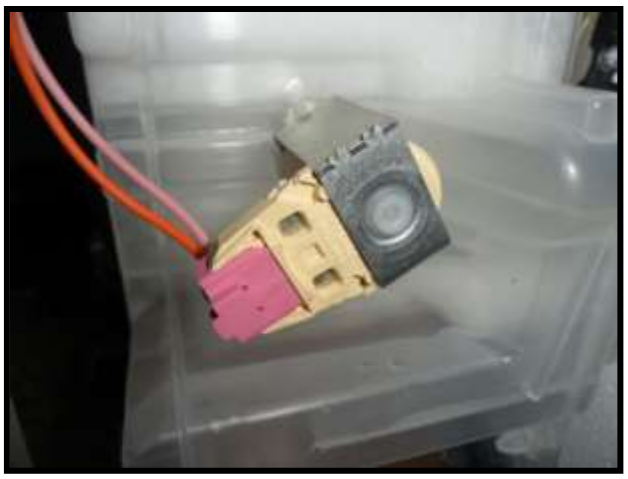
a)Remove Plastic kick plate and .kick plate iron sheet

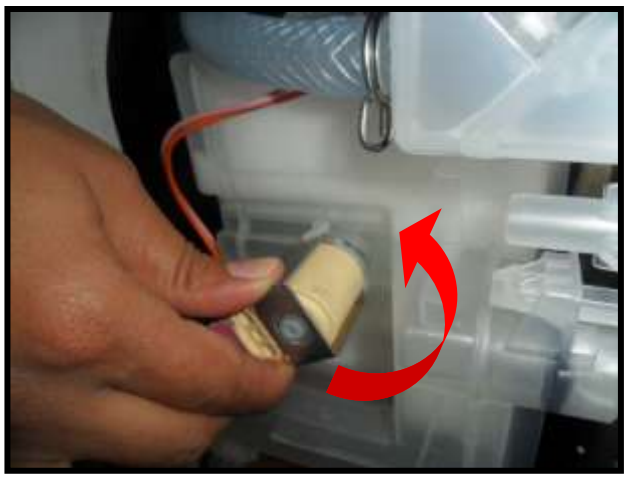
7) Regeneration Valve

a)Remove Plastic kick plate and .kick plate iron sheet.(see 1.3 – 1.5)

b) Remove the wires...

c) To remove regeneration Value rotate counterclockwise and pull it as it is shown in the picture.

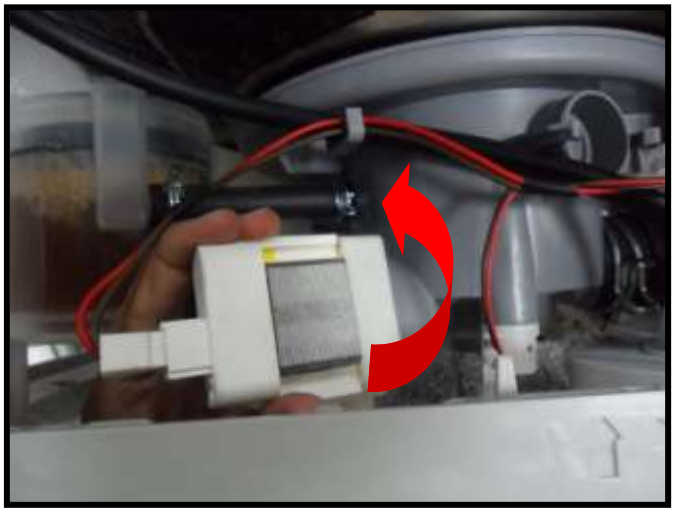




8) Drain Pump

a)Remove Plastic kick plate and .kick plate
iron sheet.
b) Remove the wires..

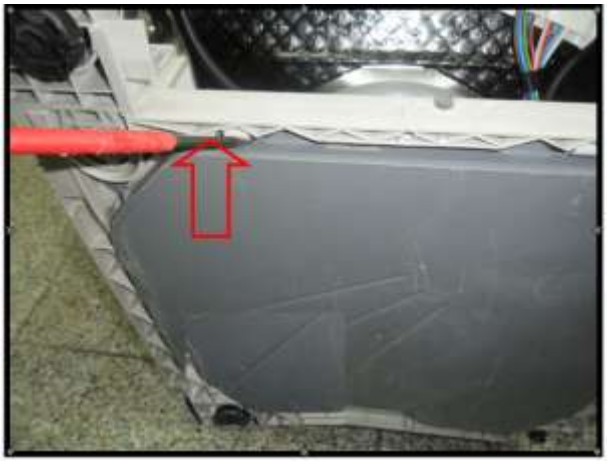
c)To remove the drain pump that fixes to the sump, rotate it in the direction of counterclockwise and pull .



9.To Access The Components from the Lover Cover

a) Lay the appliance on the rear panel.

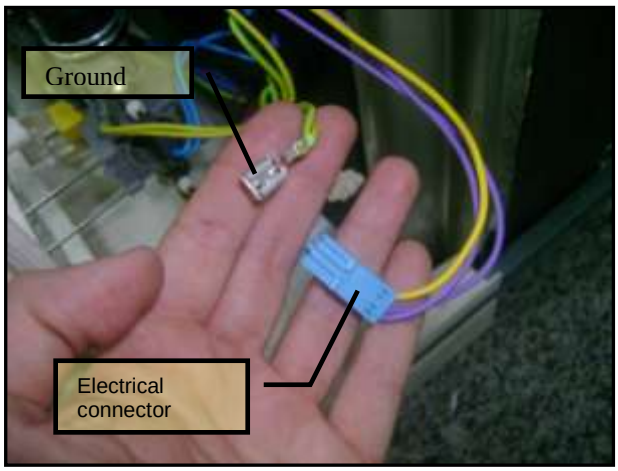
b) Remove lower cover from the places that are shown in the picture.



10) Wash Pump

a) Your machine into place, and remove the bottom cover.

b) Remove the electrical connections on the engine



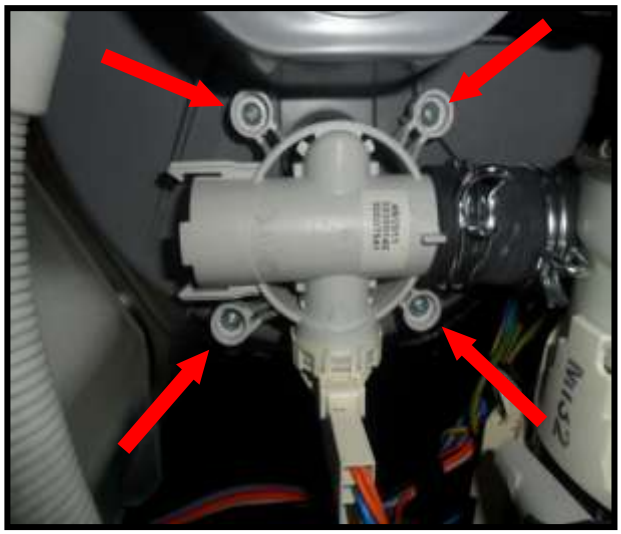
c)Remove two clamps that are shown in the Picture . (Heater casing – circulation pump , sump – Circulation pump)

d) Wash pump mounted on the base of the strap, freeing Remove.

11) ECO CROSS MEMBER

a) Turn on the machine's gold.

b) İnterconnection Eco screws that secure part of the pool (4 pcs) Remove.



12)Water Softener

a)To remove salt cup cover, rotate it in the direction
Of counterclockwise. .

b) To remove salt cup nut, rotate it in the direction of counterclockwise.

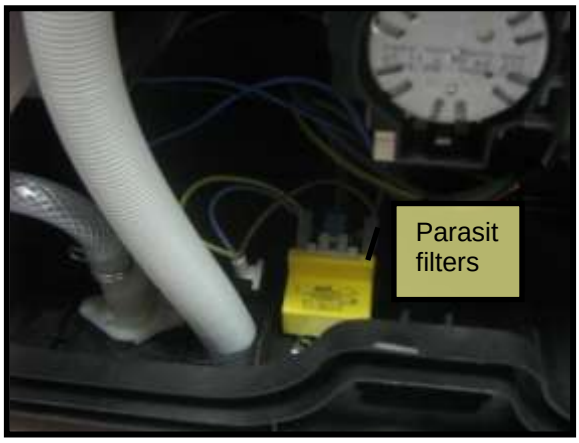
c) Remove left side panel
d) detach the connections which are between water softener and air-break.

e) Remove lower cover.

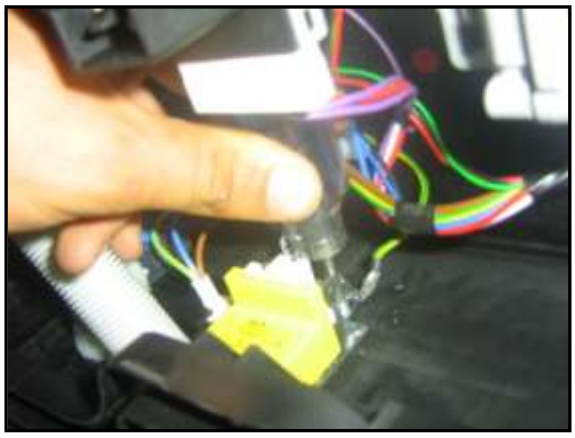
f)Remove the hose that is between sump and salt camp.

4.4) Parasite Fitler

a) Remove lower cover.



b) Remove one screw fixing parasite filter...



c) Remove wires.

d) Push parasite filter as shown in the picture.

4.5) Floater

a) Remove lower cover.

b) Remove two screws that fix floater as it is shown in the picture.

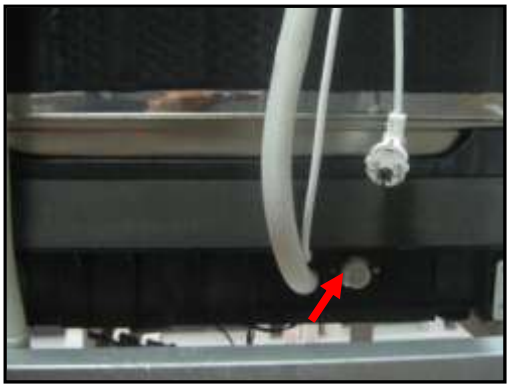
.

c) Remove the two floater hoses.

d)Remove the wire that is connected to the floater.

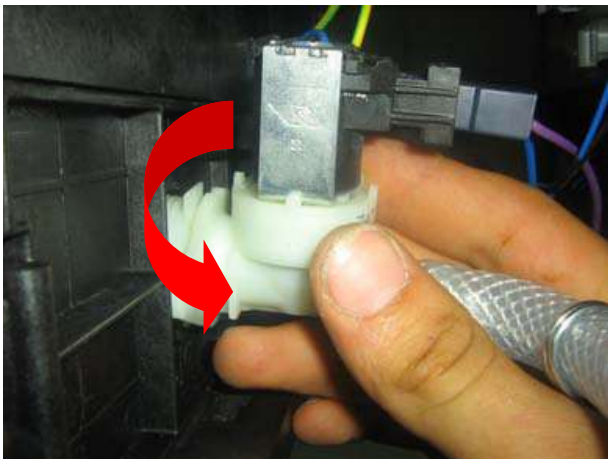
4.6) Water Inlet valve

a) Remove lower cover.

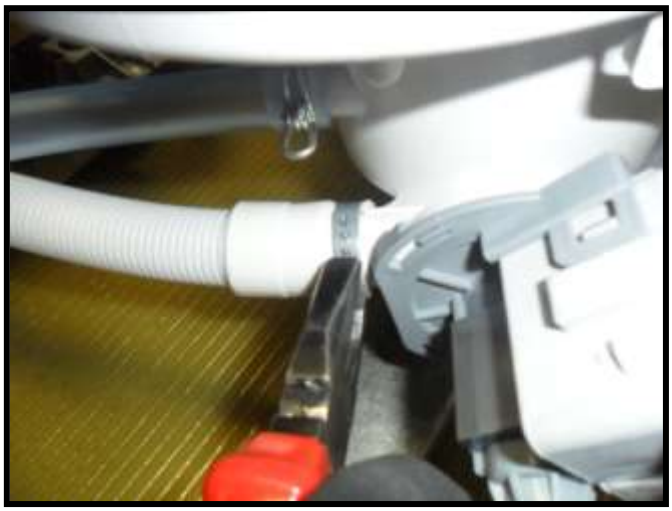


b) Remove the wire that is connected to the water inlet valve.
c) Remove the clamp that connects water inlet valve and air –break as it is shown in the picture.

c) To remove water inlet valve pull it back as it is shown in the direction of Picture then release water inlet valve from the pins that is connected to . and rotate it in the direction of counterclockwise.



4.7) Draining Hose



a) Remove the hose connection plastic.
b) Remove lower cover.
c) Remove the clamp that fixes draining hose to the sump.
d) Remove draining hos

5) Basket Group
5.1) Lower Basket

a) Open machine's door.
b) Pull the basket to yourself

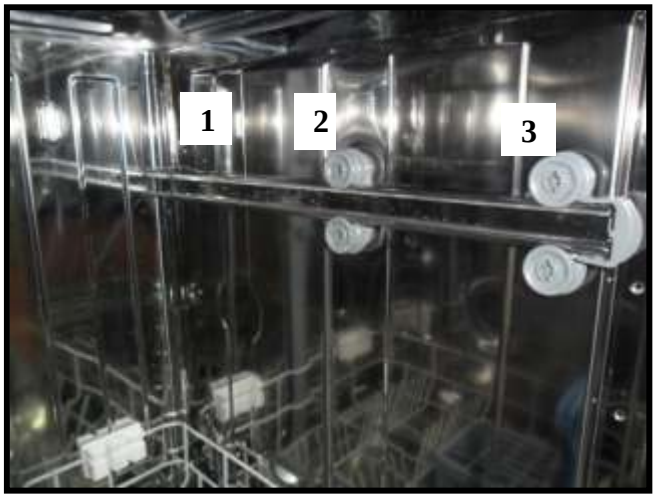
5.2) Upper Basket

a) Open machine's door.
b)Pull the basket to yourself.

c) Open Upper basket rail lock front.
d) Pull the basket to yourself and remove it.

5.3)Basket Rails

1- Upper basket rail stoper rear
2- Upper baket wheels
3- Upper basket rail lock front



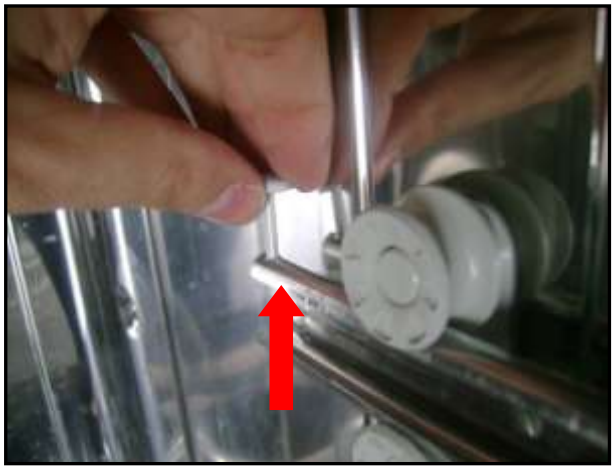
6.) The Components That Are _nside the Tub
6.1) Course, Micro and metal filters
a)Open the door.
b)Remove lower basket.
c) To remove microfilter group rotate them in the direction of counterclockwise and pull them up as it is shown in the Picture.

d)To remove microfilter group (course filter and micro filter) pull them as it is

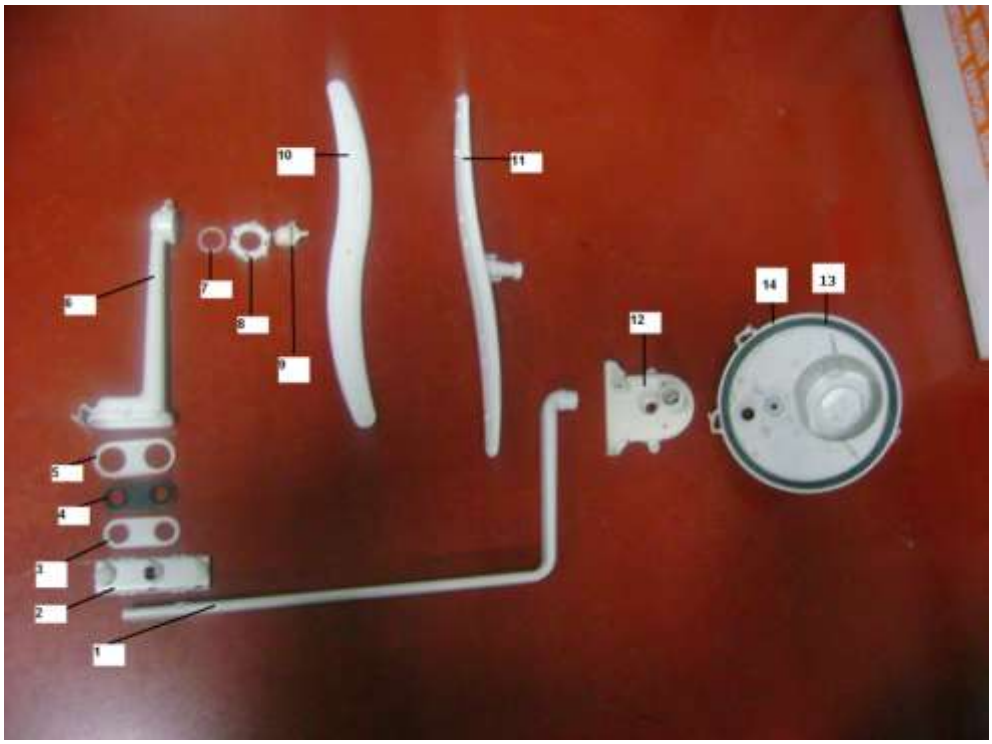
e)to remove the metal filter pull it up as it shown in the picture.

g)To remove the basket rails, open the door and take out baskets.

f) To remove basket rails release the rail from upper basket stopper rear.



6.2) Spray Arm System



1 Upper spray arm feding canal
2 Upper spray arm adjustment link
3 Upper spray arm adaptor flange
4 Upper spray arm adaptor gasket
5 Upper spray arm adaptor

a)After removing the lower basket, pull the spray arm upwards. gripping it by the central hub.

b)To remove upper spray arm adjustment link trought yourself as it is shown in the picture.

c) To remove upper spray feeding canal than pull it up as it is shown in the

6.3) Sump

a) Remove any residual water from the sump by suction so that it does not flow into the tub and the pressure switch tubes, then lay the appliance on the rear panel.
b) Remove lover cover.
c) From inside tub, remove the basket and lower spray arm.
d) Remove the microfilter group and metal filter.
c) Detach all the hoses (sump – draining hose, circulation pump – sump, sump – water softener)

f)Remove the four screws that secure the tumb to the tub.
g) Remove the two screws which secure spray arm support to the sump.
h) detach the drain pump and pull the sump out, taking care not to damage the tub seal.

REPAIR TECHNIQUES

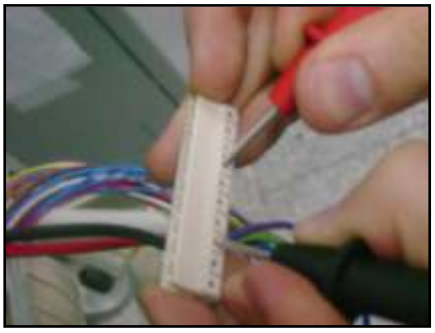
COMPONENTS AND RESISTANCE VALUES

COMPONENTS	REAL VALUES	NOTES
ON / OFF BUTONU	0 Ω KOMPONENT ÜZERİNDEN	ON/OFF BUTTON IS PRESSED
DOOR SWITCH (KAPI KİLİDİ)	CN2.9 – CN2.2 0 Ω	DOOR IS CLOSE
PRESSURE SWITCH	CN2.10 – CN2.2 0 Ω ∞ Ω	FULL FILL WATER NO WATER
DRAIN PUMP	CN2.2 – CN2.4 143 Ω % ± 7	
WATER INLET VALVE	CN2.6 – CN 2.9 3750 Ω ± %10(20C°)	
REGENERATION VALVE	CN2.10 – CN2.7 4130 Ω ± %10(25 C°)	
DETERGENT DISPENSER	1660 Ω ± %10 (25 C °)	MEASURE JUST ON THE COMPONENT
CIRCULATION PUMP	CN2.3 – CN2.9 95 ±%7 Ω 126 ±% 7 Ω	Primary winding Secondary winding (FROM THE COMPONENT)
SET NTC SENSOR	CN 3.2 CN 3.1 +25°C - 47.200 ±1.416 Ω +30°C - 37.500 ±1.125 Ω +40°C - 24.900 ± 747 Ω +50°C - 17.000 ± 510 Ω +60°C - 11.700 ± 351 Ω +70°C - 8.280 ± 248 Ω +80°C - 5.945 ± 178 Ω	
FLOATER (MICROSWITCH)	CN2.1 – CN 2.5 0 Ω	MICROSW_TICH IS INACT_VE (NO WATER)

	CN2.1 – CN 2.4 ∞ Ω	M_KROSWITCH IS ACTIVE (THERE _S WATER))

MEASURING THE COMPONENTS FROM THE ELECTRONICAL CARD

a)



b)

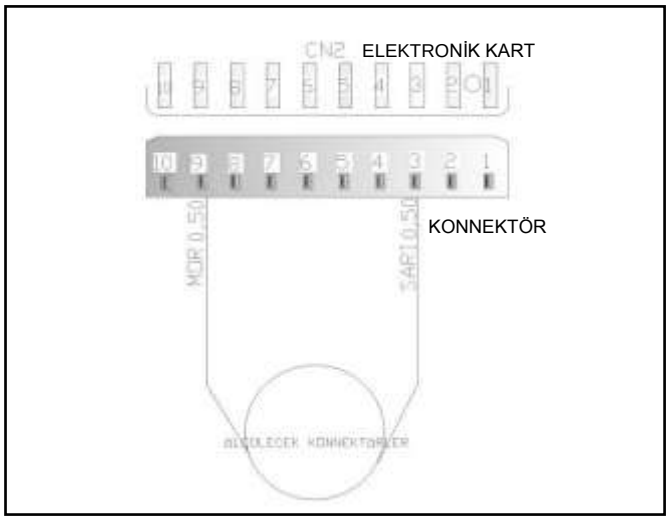
In order to reach the connections of the electronic card; dismantle the control panel (Picture a) and probes of the tester should be applied on to the related connectors of the electronical card; control the values according to the resistance value table. (picture b)

Precaution: Always remove the plug from the power socket before touching internal components.

ANA SARGI	95 ±%7 Ω
YARDIMCI SARGI	126 ±% 7 Ω

Washing pump:

From the electronical card:
You can just measure the primary winding value from the electronical card.
Resistance value of the primary winding must be **95 _ on the connectors CN2.3** –CN2.3 – CN2.9 konnektörleri on 95 Ω dur.



Above sketch show the connectors of the washing pump on the electronical card.
Probes of the tester should be applied on to the related connect

From the component:

Measurement of the primary

Measurement of the secondary

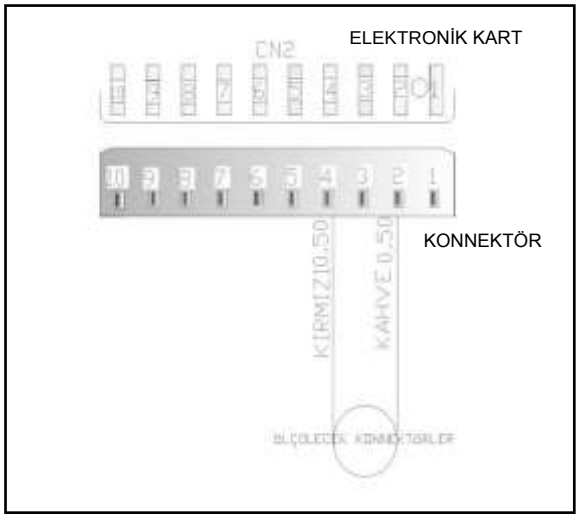
windings of the washing pump

windings of the washing pump (white cable-blue cable)

Probes of the tester should be applied on to the related connectors as shown on the pictures

Drain Pump:
From the electronical card:

CN2.2 – CN2.4	143 Ω % ± 7



Above sketch show the connectors of the drain pump on the electronical card. Probes of the tester should be applied on to the related connectors.
.

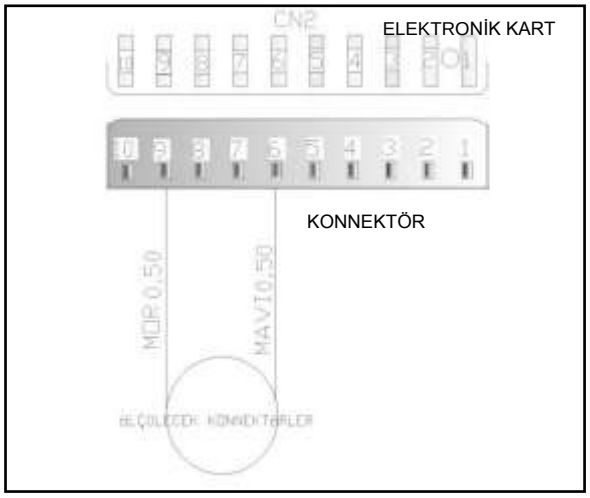
From the component:

Probes of the tester should be applied on to the related connectors as shown on the pictures.

Water inlet valve:

From the electronical card:

CN2.6 – CN 2.9	3750 Ω ± 10 (20 C°)



Above sketch show the connectors of the water inlet valve on the electronical card. probları tutacağınız Probes of the tester should be applied on to the related connectors.

From the components:

Probes of the tester should be applied on to the related connectors as shown on the pictures

Detergent dispenser:

It can't be measured from the electronical card.

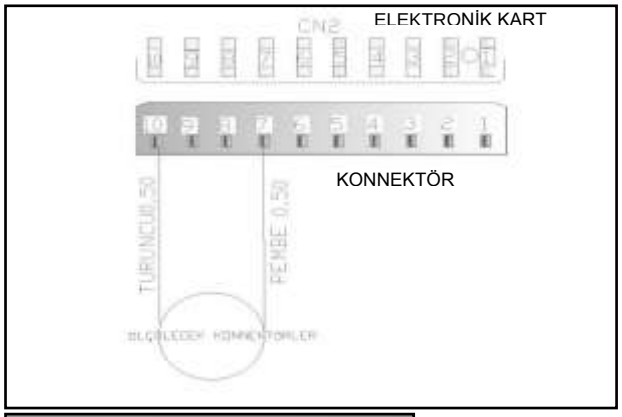
1660 Ω ± 10 (25 C º)

Probes of the tester should be applied on to the related connectors as shown on the Pictures

Regeneration valve:

From the electronical card:

CN2.10 – CN2.7	4130 Ω ± 10 (25 C º)



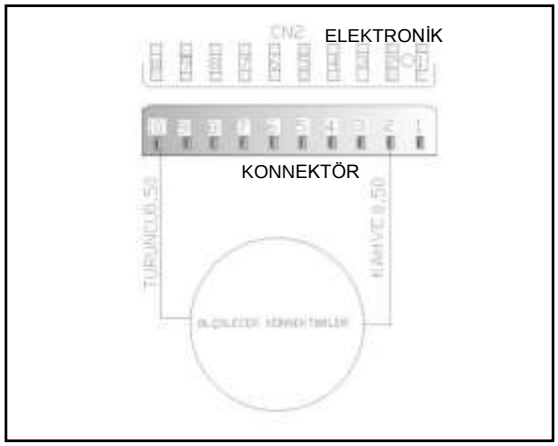
Sketch at the side show the connectors of the regeneration valve on the electronical card. Probes of the tester should be applied on to the related connectors.

From the component:

Probes of the tester should be applied on to the related connectors as shown on the pictures

***Pressure switch*:**
From the electronical card:

CN2.10 – CN2.2	∞ Ω SU VARKEN(DOLU)
	0 Ω SU YOKKEN (BOŞ)

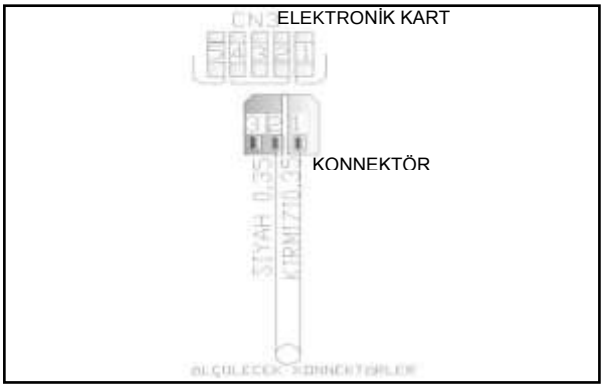


Above sketch show the connectors of the pressure switch on the electronical card.
Probes of the tester should be applied on to the related connectors.

NTC SENSOR:
From the electronical card:

The following diagram of the electronic board and the connector that is attached to it on the part of the NTC shows and describes the connectors you keep probes. Keep to the corresponding terminals in the connector probes

CN 3.1 - CN 3.2	+25°C - 47.200 ±1.416 Ω +30°C - 37.500 ±1.125 Ω +40°C - 24.900 ± 747 Ω +50°C - 17.000 ± 510 Ω +60°C - 11.700 ± 351 Ω +70°C - 8.280 ± 248 Ω +80°C - 5.945 ± 178 Ω



Above sketch show the connectors of NTC sensor on the electronical card. Probes of the tester should be applied on to the related connectors.

From the component:

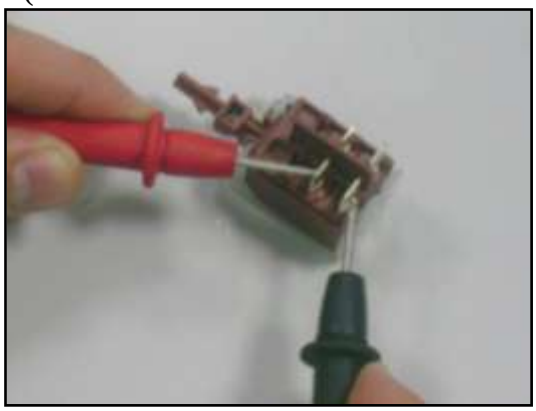
Probes of the tester should be applied on to the related connectors as shown on the pictures

ON/OFF BUTTON

When the buton pressed	0 Ω

(can not be measured from the electronical card)

(Via electronic cards can not be measured)

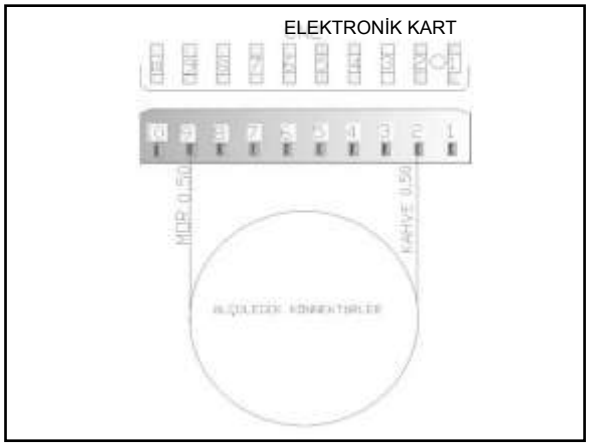


Probes of the tester should be applied on to the related connectors as shown on the pictures.

DOOR SWITCH (KAPI SWITCHI)

From the electronical card

CN2.9 – CN2.2	0 Ω (door is close)



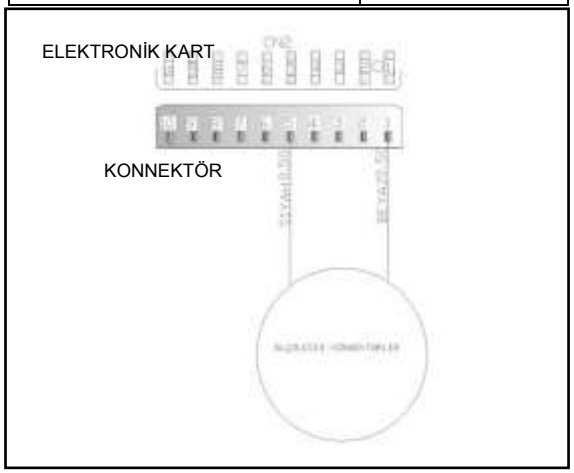
Above sketch show the connectors of the door switch on the electronical car

From the component :

Probes of the tester should be applied on to the related connectors.

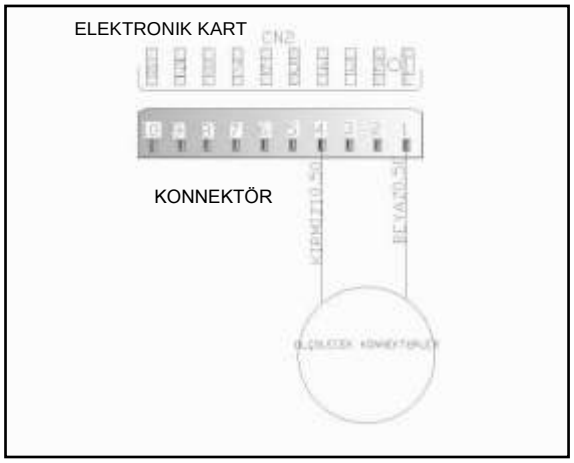
FLOATER

CN2.1 – CN 2.5 (KONUM 1) 0 Ω CN2.1–CN2.4 (KONUM 2) ∞ Ω	(MİCROSWITCH IS INACTIVE (NO WATER) M_CROSWITCH IS ACTIVE (WATER)



From the component :

Position 1: You can check the floater by controlling the specified value intervals..



Position 2: If failure code is occured related with the floater within control the above values; you can figure out whether leakage occurs or not.edebilirsiniz

2 SERVICE TEST (D12 45cm model)

Only service can execute this procedure.
During the first 6" of test, if a failure code is stored in memory, its codification is shown. Also at the end of the test if an error occurs its error code is visualized at both displays by leds.

Service test Procedure			
Step		Time	Tested Load
0	Show Code	6"	Before start, the code of last error in the memory is visualized
1	Drain	6"	Drain Pump
2	Fill (2,5 lt)	~1'	Water inlet valve
3	Fill + Wash (CP ON) (1lt)	~25"	Water inlet valve + Circulation pump
4	Wash + Dispenser activation	1'	Circulation pump + Detergent dispenser
5	Wash + Heat	5'	Heater + NTC
6	Reg. Valve	1'	Regeneration valve + Drain Pump
7	(Resin wash) Water inlet valve + Drain Pump	~1' 20"	Water inlet valve + Drain pump; To wash resin and to drain out any possible salt from the machine
8	Drain	20"	Drain Pump + Circulation Pump (until PSW empty level)
9	END	-	Error code or END led

2.1 Start of service test D12_45cm model

While the door is open and the Machine is switched OFF;
→ By pressing the Program Button, switch on the machine.
→ Continue to press the Program button for 4"
→ the last setted Level will be shown in the display.→ (WATER HARDNESS SET)
→ Continue to press the Program Button for 6sec (without releasing the button)
→ All leds will blink once (release the program button).
→ The service program will start automatically.
Note: To skip the service test, Open door and switch

2 SERVICE TEST (D32_45 cm MODEL)

Only service can execute this procedure.
During the first 6" of test, if a failure code is stored in memory, its codification is shown. Also at the end of the test if an error occurs its error code is visualized at the display.
During the service test, "SP" is shown at the displays.

Service test Procedure			
Step		Time	Tested Load
0	Show Code	6"	Before start, the code of last error in the memory is visualized
1	Drain	6"	Drain Pump
2	Fill (2,5 lt)	~1'	Water inlet valve
3	Fill + Wash (CP ON) (1lt)	~25"	Water inlet valve + Circulation pump
4	Wash + Dispenser activation	1'	Circulation pump + Detergent dispenser
5	Wash + Heat	5'	Heater + NTC
6	Reg. Valve	1'	Regeneration valve + Drain Pump
7	(Resin wash) Water inlet valve + Drain Pump	~1' 20"	Water inlet valve + Drain pump; To wash resin and to drain out any possible salt from the machine
8	Drain	20"	Drain Pump + Circulation Pump (until PSW empty level)
9	END	-	Error code or END led

2.1 Start of service test D32_45cm model

While the door is open and the Machine is switched OFF.
- By pressing the Delay button, switch ON the machine.
- Continue to press the Delay Button for 5sec.
- All leds blink.
- Then press the program button for 5sec.
- All leds will blink once and the "SP" will be shown in both displays for 2secs.
- The service program will start automatically. (After showing the last error code for 6sec like in the freestanding models- "SP" will be shown untill the end of test program)

Note: To skip the service test, Open door and switch off and on machine or open door and press Program Button for 3secs to perform reset.

2 SERVICE TEST (D21_45cm model)

Only service can execute this procedure.
During the first 6" of test, if a failure code is stored in memory, its codification is shown. Also at the end of the test if an error occurs its error code is visualized at both displays.
During the service test, *"SP" is shown in the display.
* SP: firstly "S" will be on 1sec, than "P" will be on 0.5sec and they will be shown sequentially in the display.

Service test Procedure			
Step		Time	Tested Load
0	Show Code	6"	Before start, the code of last error in the memory is visualized
1	Drain	6"	Drain Pump
2	Fill (2,5 lt)	~1'	Water inlet valve
3	Fill + Wash (CP ON) (1lt)	~25"	Water inlet valve + Circulation pump
4	Wash + Dispenser activation	1'	Circulation pump + Detergent dispenser
5	Wash + Heat	5'	Heater + NTC
6	Reg. Valve	1'	Regeneration valve + Drain Pump
7	(Resin wash) Water inlet valve + Drain Pump	~1' 20"	Water inlet valve + Drain pump; To wash resin and to drain out any possible salt from the machine
8	Drain	20"	Drain Pump + Circulation Pump (until PSW empty level)
9	END	-	Error code or END led

2.1 Start of service test D21_45cm model

While the door is open and the machine is OFF:
- By pressing the Program Button, Switch ON the machine.
- Continue to press the Program Button for 8sec.
- All leds will blink once. firstly "S" will be on 1sec, than "P" will be on 0.5sec and they will be shown sequentially in the display for 3secs.
- Select the intensive program.
- Switch OFF the machine.

- By pressing the Program Button, Switch on the machine.
- Continue to press the Program Button for 8sec.

- All leds will blink once.
- The service program will start automatically.

Note: To skip the service test, Open door and switch off and on machine or open door and press Program Button for 3secs to perform reset.

-Start of service test D42_45cm model

Step		Time	Tested Load
0	Show code	6”	Before start, the code of last error is visualized (see below)
1	Drain	6”	Drain pump.
2	Fill (3l/2,5l)*	~ 1’	Flow meter; Inlet Valve;
3/↓	Turb. Calibration		Turbidity Calibration **(only D4)**
4	Fill + Wash (0,5/1lt)**		Flow meter; Inlet Valve; Pressure Switch;
5	Wash	1’	Circulation pump; detergent dispenser. “Deterjan dispanseri tam 1 dk değil; Step 5 in 10. saniyesinde sadece 5 sn boyunca aktif olması yeterlidir.
6	Wash + Heat ***	5’	Heater (PSW); NTC; diverter (position).
8 9	Reg. Valve + Turbo Fan	1’	Regeneration Valve + Turbo Fan **(Turbo Fan only D4)**
10	(Resin wash) water inlet valve + drain pump	~1’ 20’’	Water inlet valve (3 lt)+drain pump;to wash resin and to drain out any possible salt from the machine.
11	Drain	20”	Drain pump + circulation pump (until pressure switch empty level)

-Start of service test D42_45cm model

While the door is open and the Machine is switched OFF.
- By pressing the Delay button, switch ON the machine.
- Continue to press the Delay Button for 5sec.
- All leds blink.
- Then press the program button for 5sec.
- All leds will blink once and the “SP” will be shown in both displays for 2secs.

’’ -- ’’ is shown on screen if it does not have any failure before.
- No fault in service test, the machine goes to END.

-or after showing the last error code for 6sec like in the freestanding models- “SP” will be shown untill the end of test program).
- Close the door then service program will start automatically.

Note: To skip the service test, Open door and switch off and on machine or open door and press Program Button for 3secs to perform reset.

FAILURE CODES AND WHAT TO DO IN CASE OF FAILURE

ERROR CODE	ERROR DESCRIPTION	CONTROL
F5	Inadequate water supply	• Make sure the water input tap is totally open and that there is no water cut. • Close the water input tap, separate the water input hose from the tap and clean the filter at the connection end of the hose. • Restart your machine, contact the service if the error resumes.
F3	Error of continuous water input	• Close the tap. • Contact the service.
F2	The waste water in the machine cannot be discharged.	• Water discharge hose is clogged. • The filters of your machine might be clogged. • Power off-on your machine and activate the program cancellation command. • If the error continues, contact the service.
F8	Heater error	Contact the service.
F1	Alarm is active against water overflow	• Power off your machine and close the tap. • Contact the service.
FE	Faulty electronic card	Contact the service.
F7	Overheating error (temperature in the machine is too high)	Contact the service.
F9	Divisor position error	Contact the service.
F6	Faulty heater sensor	Contact the service.