SERVICE MANUEL NO:00

BX B7S BL ARCD CONTROL SYSTEM
(WASHING MACHINE
SERVICE HANDBOOK

3. . COMPONENTS

3.1. Mechanical Parts

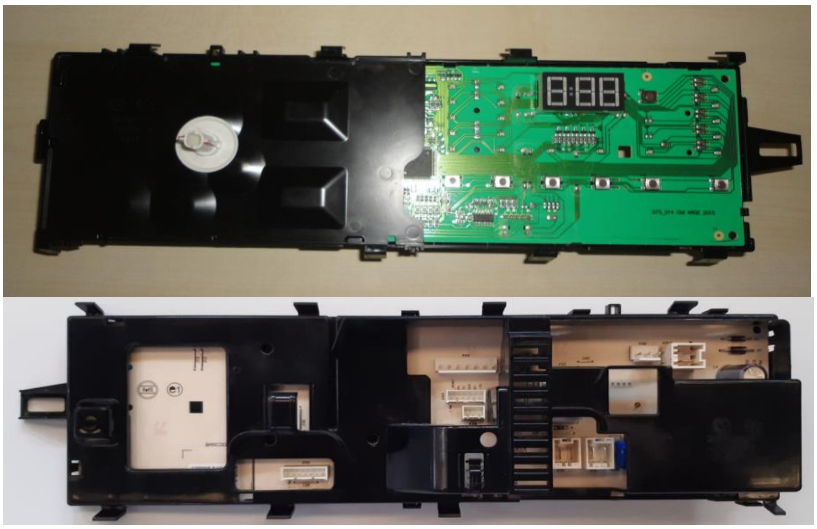
- All drums are made of a special plastic which is made of high-resistant plastic and reduces the level of the sound strength and does not have a oxidation problem. Drum cover which is used in the YOC series machines is also made of plastic and attached to the drum with special clips. There is one concrete counterweight each for upper and lower part of the drum. Motors are connected and screwed with two rubber bushing and bolts in the YOC series machines. There are transport safety bolts at the rear of the drum. Drum group is hung onto the body from the sides with two springs and fixed to the underside of the body with the two horizontal friction shock absorbers. Drum is made of stainless steel.

3.2. Shock Absorber System

- Body is hung onto the body with 2 springs. Also the drum is fixed to the body from its underside with 2 friction shock absorbers. Springs and shock absorbers transmit vibrations which are created inside the drum to the body and prevent the machine to move and operate with noise. Shock absorbers are connected to the chassis and the drum with the plastic pins instead of bolts.

3.3. Electronic Control and Visual Card

- By means of the control and visual card which is designed to have a single face and manufactured by ARÇELİK; the wash programs which are written onto the microprocessor, washing and spinning motor profiles, protection algorithms and components (motor, heater, pump, valves, door safety lock, ntc, water level selection switch, spinning/temperature selection potentiometer) are controlled.
- There are feeding circuit on the front face of the card (smps), motor and other component control circuits -triac and relays - and component connection terminals and on its rear face there are microprocessor, function and time delay button and LEDs and program tracking LEDs.
- Necessary wash program is operated in line with the information read from the program selection switch which is connected to the card (rotary switch), spinning/temperature setting potentiometer, auxiliary function and Time Delay switches.
- From the card, auxiliary function, speed/temperature and time delay options and functions can be selected.



Picture 3.1 Electrnic control card ARCD

3.4. Safety Switch (Door Lock)

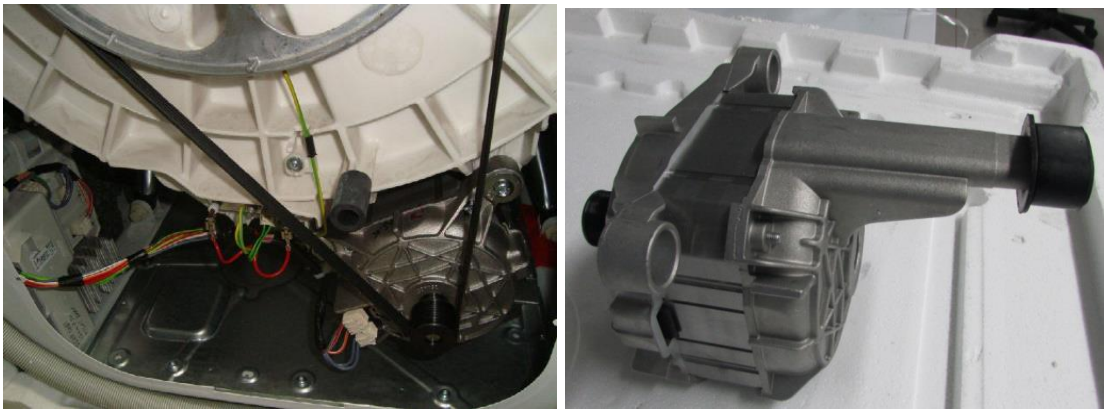
Rated Operating Voltage	: 250V 50-60Hz
Operating Current	: 10-50 mA
PTC Resistance	: Min. >=50 ohm
Contact Locking time	: <=8s
Contact Engaging time	: 35...70s
Operating Temperatures	: T85

Picture 3.2 Safety switch

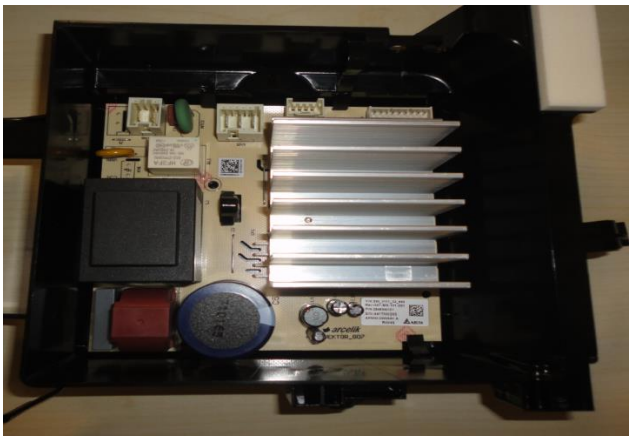
PTC door safety lock was used. When any wash program is started after the door is closed, PTC disk is heated and the door is locked and it is prevented to be opened when the program is in progress.
After the program finishes, PTC cools down in 70s and the door is unlocked.
Current of all components passes over the door safety lock. Machine will not work in case it is faulty.
When 220V is supplied between the contacts numbered 3 and 1, the distance between the contacts numbered 3 and 2 should switch to closed position.

3.5. Motor

3.5.1. Atlas Motor



Picture 3.3 Motor



Picture 3.4 Motor (Atlas motor and vektör card)

Brushless motor is used. Motor stator consists of 3-phase coil and magnets are on the rotor. Rotor position is detected from askoll-type hall sensor, stator windings are enegized with the help of an inverter. In Atlas version,
Rotor position is detected without using hall sensor and stator windings are enegized with the help of an inverter.

Along with the main board, there is an askoll-type motor driver card integrated on the motor. However, motor card is discrete in Atlas type. While the motor and the motor card can give service separately in Atlas type, service can be given in groups in the Askoll type as the motor and the motor card are integrated. Motor speed is provided through communication of the motor card and the main board with each other. Main board is the prevailing unit; what the motor reference speed will be is determined by the main board.

However, all other control algorithms required for motor drive are realized by the motor driver card. While the motor speed measurement is performed with the help of hall sensor in askoll type, speed is detected thanks to software in atlas type without using an additional sensor.

Under abbnormal conditions (such as permanently locked rotor), thermic element is used to protect the motor from overheating. Also, locked rotor condition is detected by the software to ensure protection

3.6. Heater

It is used to heat the water inside the drum.
Since it is an electronically controlled machine, there is a double thermocouple at each of the heater inlets.
When the heater operates dry, the overheated thermocouple open circuits the heater. Open circuited heater cannot be used again. In order to prevent the heater to operate without water “during heating”, heater safety water level is defined to the microprocessor (Psafety). When the water level which is measured by the water level sensor comes under the defined Psafety level, heater is disabled.
When the water temperature which is read by NTC reaches to the “selected temperature”, heater is disabled by the microprocessor.

Operating Voltage : 230VAC 50-60 Hz
Power : 1950W
Resistance : 26W ± 3Ω

When the resistance is measured from both ends with multimeter, approx. 26Ω should be read.

Picture 3.5 Heater

3.7. Water Inlet Valve (with water meter)

It is used to take water inside the machine in required amounts when needed.

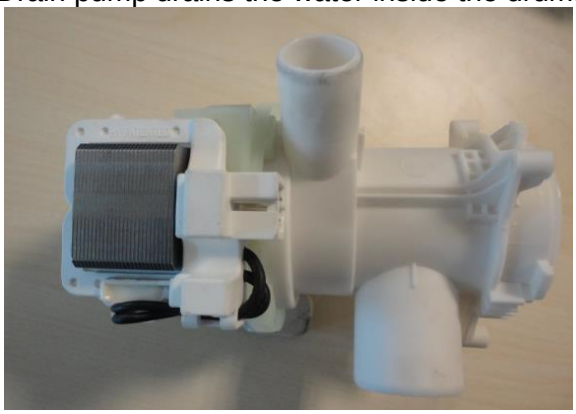
Picture 3.6 Water inlet valve

Operating Voltage	: 220 / 240VAC 50-60 Hz
Nominal Power	: 5 – 8 W
Flow	: 10 L/min
Operating Temperatures	: T85ºC
Coil resistance	: 3400 – 4850 Ω

3.8. Drain Pump

It is a synchronous motor equipped with a mono-phase bipolar magnet rotor. At the draining step, electronic control card is activated by the triac on it. It is protected by impedance for continuous operation and blocking situation of the rotor.

Drain pump drains the water inside the drum.



Picture 3.7 Drain pump

Rated Voltage	220-240 V 50Hz
Resistance	145 ohm
Current	<0.2A
Flow	>14 l/min
Starting performance	<=4s (160V)

3.9. Ntc

It is a component which is used to measure the water temperature inside the drum and resistance of which decreases when the temperature increases.

When the water temperature reaches to the adjusted temperature, heater is disabled by means of the heater relay on the card.

Picture 3.8 NTC

Resistance (25 °C)	: 4773 ohm (±4.2%, Siemens)- 4837 ohm (±3.2%, elth)
Operating Temperature	: -10°C...+100°C
Thermal time constant	: 16 ±2 s

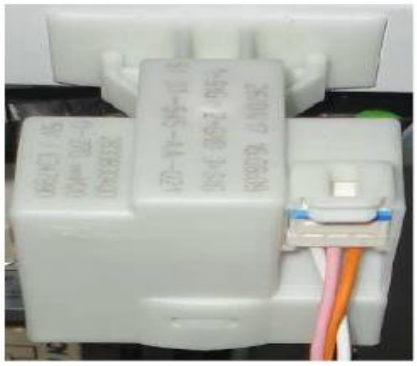
Resistance values which are read from the NTC ends by means of multimeter are compared to the below table. These approximate values should be read.

Sıcaklık Temperature (°C)	Nom.Direnç RNom (Ω)
-10	26424
-5	20205
0	15589
5	12119
10	9499
15	7498
20	5962
25	4773
30	3846
35	3118
40	2544
45	2087
50	1721
55	1428
60	1190
65	996.9
70	839
75	709.4
80	602.4
85	513.7
90	439.9
95	378.1
100	326.3

Table 3.1 NTC values

3.10. Water Level Sensor

An analog water level sensor which is fed by 5 V voltage is used. This sensor ensures that the water level is determined instantly with the frequency values which it generates against the pressure created. There are frequency values corresponding to the all pressure values. An infinite number of levels can be determined in the analog water level sensor. Water levels change according to the wash criteria of the designed program depending on the selected program, temperature and auxiliary function.
Analog water level sensors are pressure – displacement inverter components in general. Analog water level sensors generate frequency modulation as output.
There are basically 2 capacitors, 1 coil and an inverter circuit on itself or the control system to which it is connected.
Pressure increase pushes a ferrite part inside the sensor into the coil. Therefore L (inductance) value of coil winding changes and the output value of the sensor – inverter system changes. Therefore pressure value can be measured in an analog manner.
The amount of water to be taken in for the programs is controlled by the water meters. Water level sensor serves the basic functions of deciding to take in water again, control the heater safety level, door opening level or foam level.
Also, if there are any error in the water meters or its connections, water is taken in with the water level sensor.



Picture 3.9 Water level sensor

Cable inputs
5VDC / Data / GND.
Operating Voltage : 5 VDC
When it is empty, 625 ± 2 Hz frequency value should be read from the Data and GND terminals.

4. Service Mode Steps:

Following important points should be considered in service testing:

- **Method for Entering to Service Mode:**

To enter “Service” mode, the first program adjacent to the Rotary “ON/OFF” position in clockwise direction (CW) should be selected while pressing "Start/Pause".

- To activate the components being controlled at each step of the service mode, the door must be mechanically locked, that is, components must be energized. For example, to have the motor rotate, the door must be locked; in other words, power should be supplied to the motor.

- If the door contact is not closed for any reason when switched into the service mode (if the door lock is out of order or in case of door lock triac failure), i.e., if the driven components (heater, motor, pump, etc.) cannot be energized although the electronic board has power:

a) in Models with LED: “Ready” follow-up LED is lit constantly. Meanwhile, if there is an "**Error Code**” in EEPROM;

It is coded in “**Speed Phase**” LEDs (in DECIMAL base (in BCD format)). If no error is present, all of the “Speed Phase” LEDs will be off. Moreover, in case of pressing the “**Start/Pause**” key, there will be no change in the above-mentioned points and as the door is not actually locked, no progress will be made in “Service Mode” steps and it will remain in the continuous “Error Code” display step.

b) in 7S Models: If there is an “Error Code” in the EEPROM, this error shall be shown as "**E??**" on **7S display**.

If there is no error, **"E—"** shall be written on the **7S display**. Moreover, in case of pressing the “**Start/Pause**” key, there will be no change in the above-mentioned points and as the door is not actually locked, no progress will be made in “Service Mode” steps and it will remain in the continuous “Error Code” display step.

- If the power of the machine is cut off in any service test step for any reason (as a result of “ON/OFF” or in case of power failure), it will go back to “Selection Mode” again when the WM is re-energized.

- When the machine **waits more than 2 minutes in any service test step**, WM will go back to the selection mode.

Components are activated one by one by pressing the Start/Stop key in the service mode. **Respectively:**

1)
During the initial entry, the “Error Code” which occurred last and recorded in EEPROM will be displayed.

Following points should be considered while an "**Error Code**" is being displayed:

I. In 7S Models:

➢ If there is any "**Error Code**" present, the code corresponding to this one on decimal basis will be displayed on 7S (in BCD format) with an "**E**" preceding it. E.g., "**E09**" or "**E13**".

➢ If there is no **"Error Code"** present, this will be shown on 7S as **"E--"**.

II. Only in models with LED:

➢ If there is an **"Error Code"** present, corresponding code of this one on decimal basis (in BCD format) will be coded to "Spin Phase LEDs" which is constant in all appearances. Step weights from the lowest to the highest while coding must be 2^0=1, 2^1=2, 2^2=4, 2^3=8, 2^4=16 respectively. According to this, for example, if the "**Error Code**" is "**03**", **1st** and **2nd** Spin LEDs from bottom **will be lit** and others will be turned off. If the "**Error Code**" is "**08**", only **4th Spin LED** from bottom will be lit and the others will be turned off.

➢ If there is no **"Error Code"** present**,** all spin LEDs must be off.

You may go to the next step by pressing the "**Start/Pause**" key;

2)

The "Error Code" and the other data stored in EEPROM (resume on data) will be deleted from EEPROM and

➢ In **7S** models, **3-digit software version is shown on the display** and "**Start/Pause**" key is pressed to switch to the next step;

➢ **Only in models with LED, next step** is switched **automatically** (without pressing the "Start/Pause" key).

3)

"Display" test is performed by flashing all segments of 7S and all LEDs. "Display" test is finalized by turning off all segments of 7S and all LEDs when "Start/Pause" key is pressed and the mode is switched to the next step.

4)

Turn right (CW) 52rpm. Meanwhile;

➢ In **7S** models, "Service mode step number" of this step, "**4**" is shown in display;

➢ In models with **LED**, **3rd LED from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

You may go to the next step by pressing the "**Start/Pause**" key;

5)

Turn left (CW) 52rpm. Meanwhile;

➢ In **7S** models, "Service mode step number" of this step, "**5**" is shown in display;

➢ In models with **LED**, **1st** and **3rd LEDs from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

You may go to the next step by pressing the "**Start/Pause**" key;

6)

Motor movement in the previous step is stopped and the person conducting the test is informed in various ways after performing the following controls:

a) If the Water Level Value read on the Water Level Sensor is out of limits (if Water Level Sensor socket is not mounted properly or if there is loose contact), mode is switched to the next step "7". Therefore, if there is not any drum movement in step 6 so that step 7 is switched automatically, the person performing the test will perceive this situation as a "Water Level Sensor Error".

b) If the Water Level Value read on the sensor is above "Safety Level" although it is within the limits of Water Level Value, the pump is operated and when the level drops below the "Safety Level", actual controls of this step will be carried out (drain pump is active at this time). According to priority sequence, these are;

I. In case of NTC Error, turn it 100rpm;

II. If there is no NTC Error, but if the values read on the Mains Supply Voltage Reading Inputs (Line_Voltage_ADC) are below 185 Volts or above 265 Volts, turn it 140rpm. Two conditions can cause this error: Either the microprocessor's ADC inputs are failed, or the mains supply voltage is actually out of limits.

III. If there is not an NTC error and also any error at the Line_Voltage_ADC inputs, it is rotated at a speed of ~~**"MAX_RPM / 2"**~~ **MAX_RPM (Rev03_28112012): MAX_RPM**

Meanwhile, "**6**", which is the service mode step

- number is shown in display in **7S** models.
- In models with **LED**, **2nd** and **3rd LEDs from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

You may go to the next test step by pressing the "**Start/Pause**" key.

7)

Motor movement that was started in the previous step is stopped and the pump is turned off. "ON_YIKAMA_VANASI" (FRONT_WASH_VALVE), which is the actual test in this step is opened and checked.

Meanwhile, "**7**", which is the service mode step

- number is shown in display in **7S** models.
- In models with **LED**, **1st**, **2nd** and **3rd LEDs from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

You may go to the next test step by pressing the "**Start/Pause**" key.

8)

FRONT_WASH_VALVE, which was opened for test purpose in the previous step, is closed.

MAIN_WASH_VALVE, which is the actual test in this step is opened and checked.

Meanwhile, "**8**", which is the service mode step

- number is shown in display in **7S** models.
- In models with **LED**, **4th LED from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

You may go to the next test step by pressing the "**Start/Pause**" key.

9)

MAIN_WASH_VALVE, which was opened for test purpose in the previous step, is closed.

SOFTENER_VALVE which is the actual test in this step, is opened and checked.

Meanwhile, "**9**", which is the service mode step

- number is shown in display in **7S** models.

- In models with **LED**, **1st** and **4th LEDs from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

You may go to the next test step by pressing the "**Start/Pause**" key.

10)

SOFTENER_VALVE, which was opened for test purpose in the previous step, is closed.
HOT_WATER_VALVE which is the actual test in this step, is opened and checked (if there is no hot water valve, this step will be skipped automatically).

Meanwhile, "**10**", which is the service mode step

- number is shown in display in **7S** models.

- In models with **LED**, **2nd** and **4th LEDs from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

You may go to the next test step by pressing the "**Start/Pause**" key.

11)

HOT_WATER_VALVE, which was opened for test purpose in the previous step, is closed.
HEATER test, which is the actual test in this step, will be performed as follows:

a) If the Water Level Value read on the Water Level Sensor is out of limits (if Water Level Sensor socket is not mounted properly or if there is loose contact), mode is switched to the next step "12". Therefore, if there is not any increase in the current drawn by the washing machine in step 11 so that the step 12 is switched automatically, person performing the test can perceive this situation as a "Water Level Sensor Error".

(Rev02_07102011):
b) If the Water Level Sensor is OK but the water level is NOT above "Safety_Level + 20 units", all valves
are opened. When the water level is above "Safety_Level + 20 units", all valves are automatically closed.
Then the following checks are performed according to washing machine configuration:

i) If the washing machine does NOT have "Main Valve Flow Meter":
The HEATER is turned on automatically, and the motor is started to turn with 52 rpm clockwise direction. (REV_04_04042014 -- Motor movement is canceled.)The person performing the test checks if there is any increase in the current drawn by the WM and controls the heater.

ii) If the washing machine has "Main Valve Flow Meter":
Just before turning on the heater, The Main Valve Flow Meter pulse value is checked as follows:

If the pulse value is greater than 50, the HEATER is turned on automatically, and the motor is started
to turn 52 rpm clockwise direction. Person performing the test checks if there is any increase in the
current drawn by the WM and controls the heater.

If the pulse value is NOT greater than 50, the HEATER is NOT turned on and service mode is switched to the next step (step 12). So, by this way, the person performing the test can perceive this situation as a "Main Valve Flow Meter Error".

Meanwhile, "**11**", which is the service mode step

- number is shown in display in **7S** models.

- In models with **LED**, **1st**, **2nd** and **4th LEDs from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

You may go to the next test step by pressing the "**Start/Pause**" key.

12)

"HEATER", which was opened for test purpose in the previous step, is turned off. At the same time, motor movement which was started in the previous step is also finished and all valves are closed.

"PUMP", which is the actual test in this step, is turned on and the water in the WM is drained until the water falls below "Safety_Level". Pump is turned off when the water level falls below the "Safety_Level".

At the beginning of this step, **MAIN_WASH_VALVE" and HOT_WATER_VALVE)** are **opened (ON) for 5 seconds and then closed (OFF). (Rev01_22072011)**

Meanwhile, "**12**", which is the service mode step

- number is shown in display in **7S** models.

- In models with **LED**, **3rd** and **4th LEDs from the bottom among the "Program Follow-up LEDs"** on the **"Start/Pause"** key is lit (step weights from the bottom towards uppermost are 2^0=1, 2^1=2, **2^2=4**, 2^3=8, and 2^4=16);

Since this step is the last step of the Service Test, if the "Start/Pause" key is pressed one more time, the mode will go back to step 1.

5. COMPONENT ASSEMBLY / DISASSEMBLY

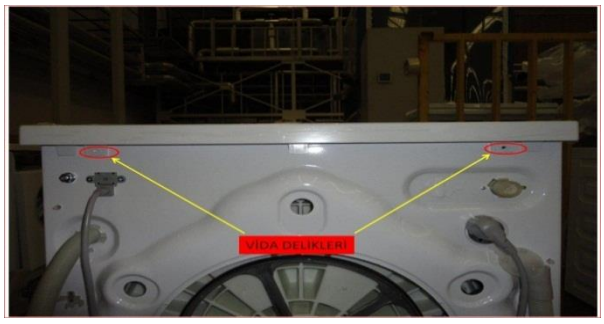
Front view of the machine is given in the Picture 5.1.

Picture 5.1 General appearance

5.1. Upper Table Assembly / Disassembly

2 sheet metal screws fixing the upper table to the body are removed.

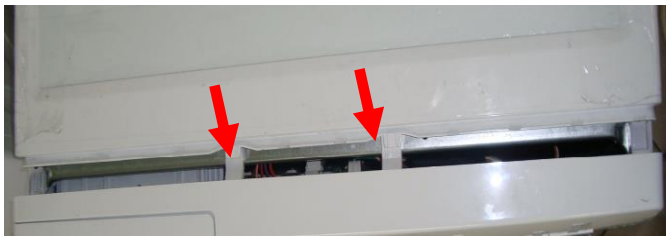
Upper table is removed by being lifted to backwards and then upwards.



2 screws shown in Picture 5.2 are removed.

Picture 5.2 Upper table Disassembly/Assembly

Picture 5.3 Upper table Disassembly/Assembly



Upper table is pulled back and removed from the tabs which are shown in the Picture 5.4.

Picture 5.4 Upper table Disassembly/Assembly

5.2. Dispenser panel

Dispenser is pulled backwards from the detergent compartment.

Picture 5.5 Disassembly/Assembly of Detergent Dispenser

Dispenser is removed by pressing on the area shown with arrow on the siphon.

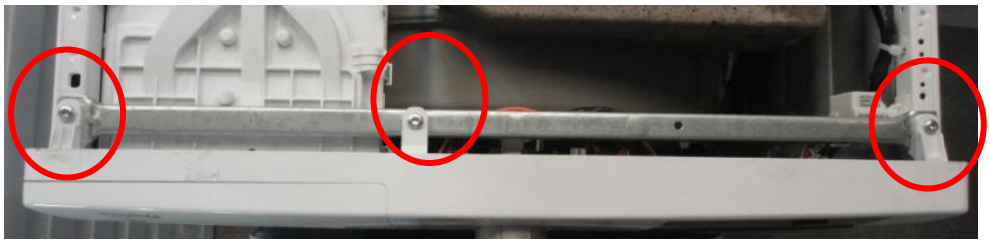
Picture 5.6 Disassembly/Assembly of Detergent Dispenser

5.3. Panel

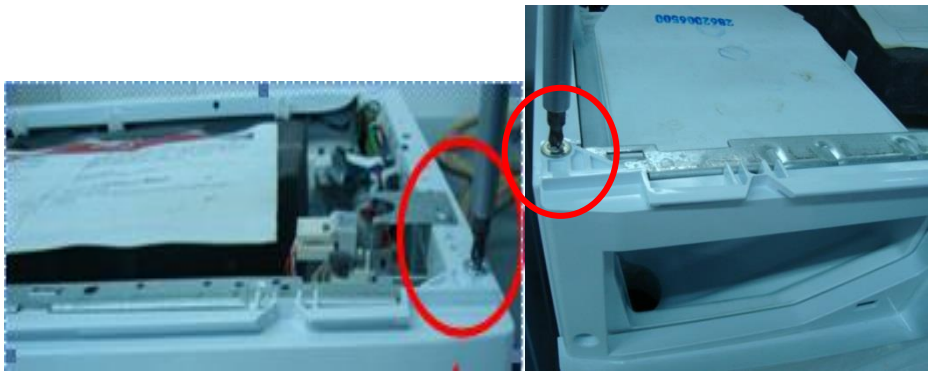
Dispenser is removed.

Picture 5.7 Panel Disassembly/Assembly

3 pt screws which fix the panel to the panel reinforcement bracket and the detergent compartment and shown separately in the following pictures are removed. Tabs fixing the panel to the reinforcement bracket are released and the panel is detached from the reinforcement bracket.



Picture 5.8 Panel Disassembly/Assembly



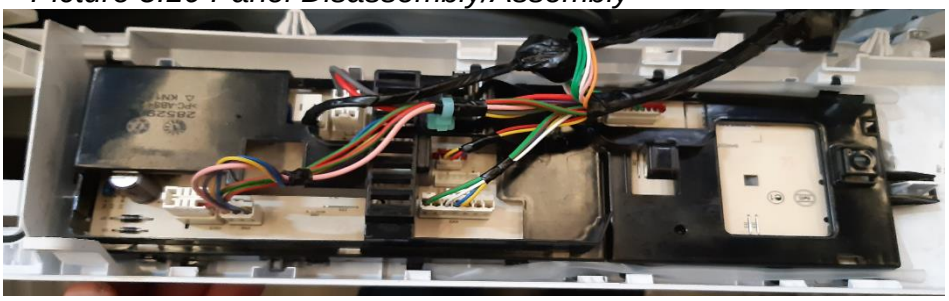
1 pt screw fixing the panel to the panel reinforcement bracket is removed.

1 pt screw fixing the panel to the panel reinforcement bracket is removed.

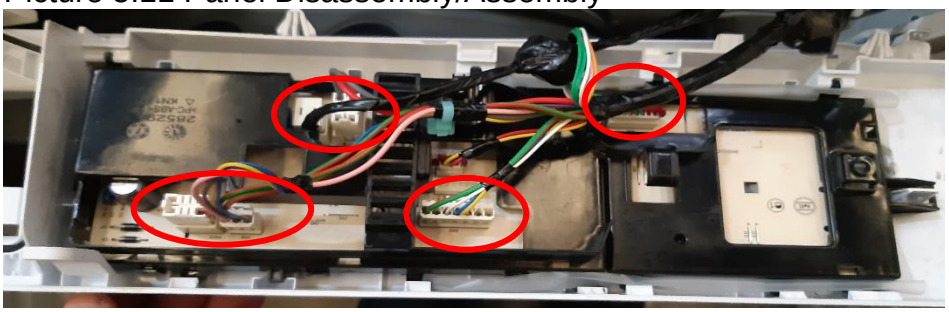
Picture 5.9 Panel Disassembly/Assembly

3 pt screw fixing the panel to the panel reinforcement bracket is removed.

Picture 5.10 Panel Disassembly/Assembly

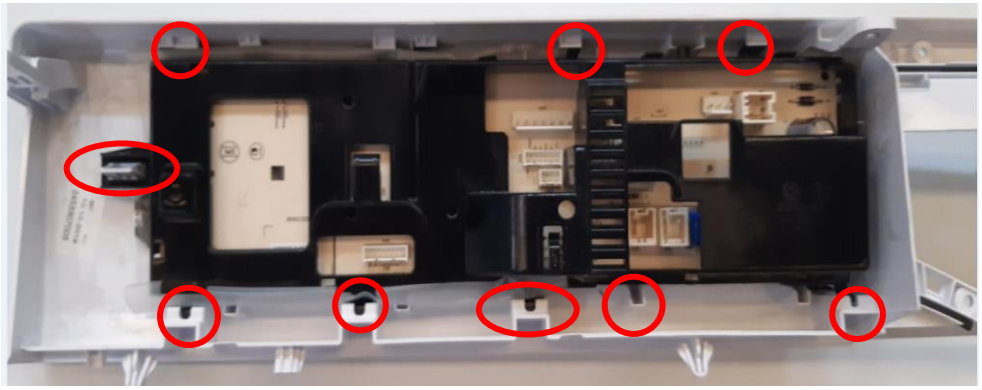


Picture 5.11 Panel Disassembly/Assembly



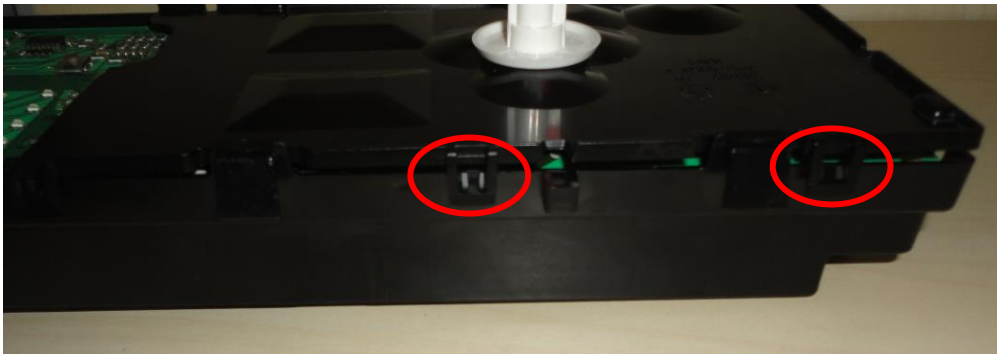
Picture 5.12 Panel Disassembly/Assembly

5.4. Program Control Card



Picture 5.13 Control card Disassembly/Assembly

Picture 5.14 Control card Disassembly/Assembly



Picture 5.15 Control card Disassembly/Assembly

Picture 5.16 Control card Disassembly/Assembly

5.5. Pump cover assembly/disassembly

Pump cover which is located on the right bottom side of the front wall is opened by being pushed from the tab.

Picture 5.17 Pump cover Disassembly/Assembly

5.6. Front Door Group Assembly/Disassembly

Front door is opened.

2 screws of the hinge holder that serves as front door holder by the hinge are unscrewed and the holder is removed. Front door is separated from the hinge.

2 hinge screws fixing the hinge to the front door are removed and hinge is removed from the front door.

Picture 5.18 Front door disassembly /assembly

Picture 5.19 Front door disassembly /assembly

5.7. Front Wall Disassembly/Assembly

Front door group is removed.

Body bellows clamp fixing the drum bellows to the front door is removed by use of a special bellows clamp pliers.

Door locking screws are removed.

Lock is pushed from its place inwards.

At the upper position of the panel connection, 2 screws ensuring the connection of the ears are removed.

Picture 5.20 Front Wall Disassembly / Assembly

Picture 5.21 Front Wall Disassembly / Assembly

Picture 5.22 Front Wall Disassembly / Assembly

Picture 5.23 Front Wall Disassembly / Assembly

Picture 5.24 Front Wall Disassembly / Assembly

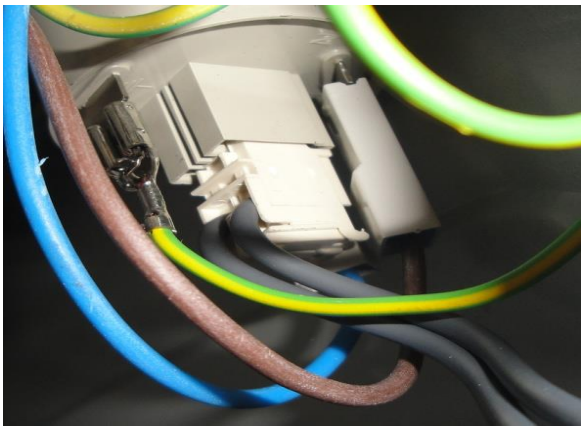
5.8. Parasite Filter

Upper table is removed.

Parasite Filter cable terminals are removed.

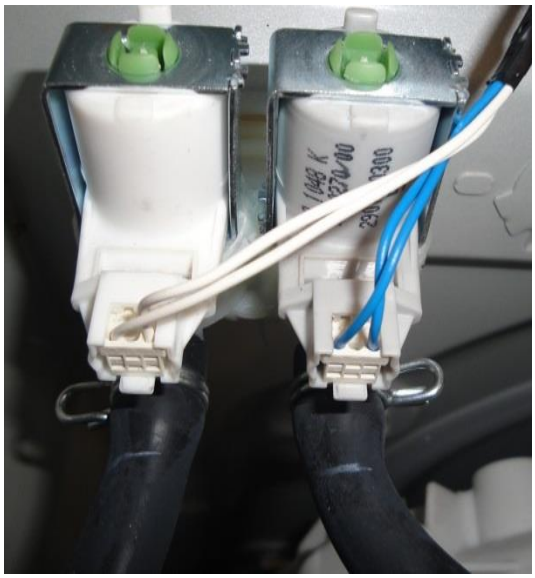
2 screws, at the back of the body, attaching the terminal group to the body are removed.

M8 nut which attaches the parasite filter to the terminal group is held by double-ended wrench and the parasite filter is removed by turning manually.



Picture 5.25 Disassembly/assembly of parasite filter

5.9. Detergent Compartment Connection Group



Picture 5.26 Detergent compartment connection group

5.10. Single Valve

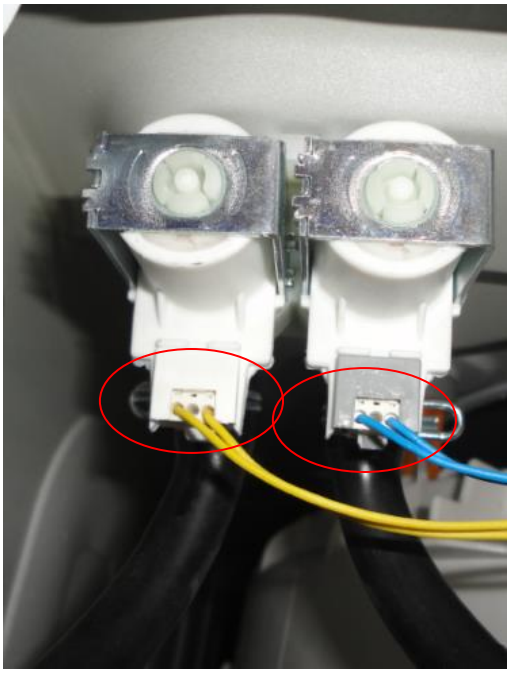
Upper table is removed.

Single valve cable terminals are removed.

Single Valve Hose clamp is pulled back over the hose.

Hose is ejected from the end on the valve.

At the back of the body, the tab fixing the valve to the body is pushed inside with a screwdriver and the valve is turned towards left.



Picture 5.27 Disassembly/Assembly of Two-way Valve

5.11. Water Level sensör Disassembly/Assembly

The fountain attached to the body of the water level sensor is removed by removing it. The water level sensor socket and the vent line are removed.

Resim 5.28 Water Level sensör Disassembly/Assembly

5.12. Safety Switch

Door is opened by pulling from the handle.

Drum bellows clamp fixing the drum bellows is removed.

2 screws fixing the safety switch to the front door are removed.

Safety Switch cable ends are removed.

Picture 5.29 Disassembly/assembly of safety switch

5.13. Heater

Front wall or back wall is removed.

Heater cable terminals are removed.

By loosening the M6 nut, heater is pulled and removed from the back part of the drum.

(It should be checked that the heater is attached to the Heater Fixing Wire inside the Drum. Also, before the M6 nut is tightened, NTC should be grabbed securely and installed to its place on the heater, later M6 nut should be tightened.)

Picture 5.30 Disassembly/assembly of Heater

5.14. Drain Pump Attachment / Detachment

- Upper table is removed.
- Panel is removed.
- Front wall is removed.
- Screws on the body are removed
- Clamp at the pump inlet of the discharge hose is pulled backwards.
- Remove cable.
- Pump is removed.

Picture 5.31 Drain pump Attachment/Detachment

Remove wire clamps on pump.

Picture 5.32 Drain pump Attachment/Detachment

5.15. Drum Bellows

Front wall is removed.

Spiral spring connecting the bellows to the drum is removed.

Bellows is pulled and removed manually from the front door.

Picture 5.33 Disassembly/Assembly of Drum Bellows

5.16. Drum Bellows Assembly

The areas marked with arrows on the bellows and the drum cover are superimposed as to face each other.

The large area on the bellows water drain and the drum front cover (marked areas in the picture) are combined in a balanced way and the bellows is stroked from below to the upper part to perform the assembly. There should be no bending on the bellows when the operation is finished.

Picture 5.34 Disassembly/Assembly of Drum Bellows

5.17. Water Inlet Hose

Front wall is removed.

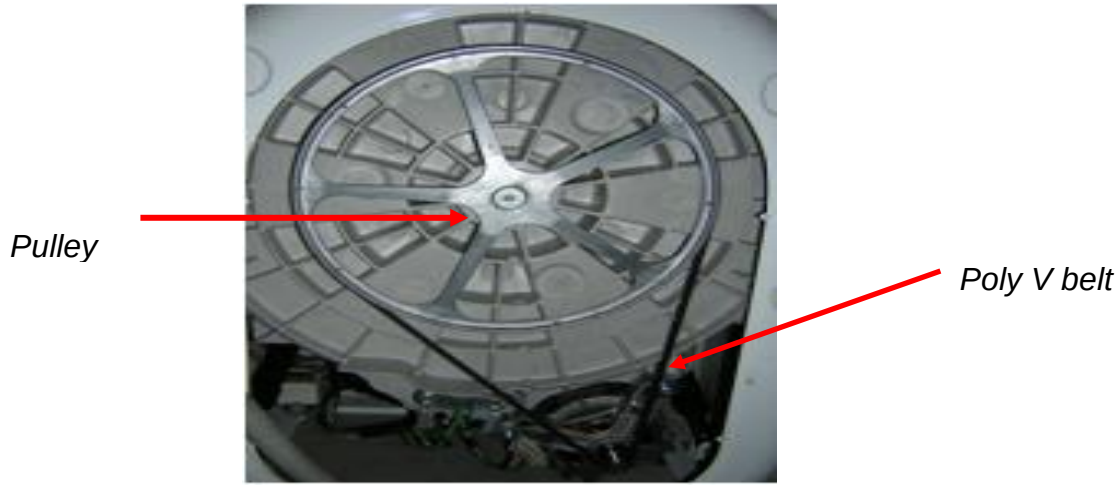
The clamp attaching the other end of the water inlet hose to the drum is removed.

The nozzle connecting the water inlet hose to the detergent compartment is seated well into its place in the compartment and the rubber hook is fixed to the tab in the compartment.

5.18. Poly V Belt

Rear cover is removed.

Poly V belt is turned and removed from over the drum pulley.



Picture 5.35 Disassembly/assembly Poly V Belt

5.19. Pulley

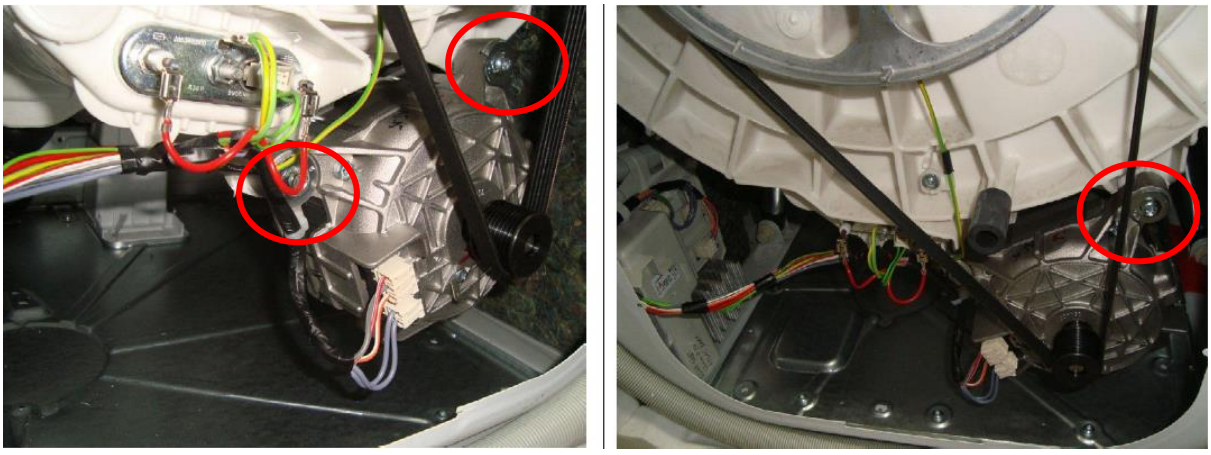
Rear cover is removed.

Poly V belt is turned and removed from over the pulley.

Bolt attaching the pulley to the drum shaft is removed.

Pulley is removed from the drum shaft.

5.20. Atlas motor



Picture 5.36 Motor

- Rear wall is removed. Poly-V belt is taken out.
- Motor-Drum connection screws are removed (2 pieces).
- Motor is connected to the drum at three points; 2 in the front and 1 at the back.
- power and communication connections are removed.
- Check that the rear connection and the rubber gasket on it seat well during mounting.

5.21. Power Cable

Cable Holder Screw is removed.

Power Cord is removed with its terminals being detached from the parasite filter.

Picture 5.37 Disassembly/assembly of Power Cable

5.22. Upper Counterweight

Upper table is removed.

Upper Counterweight is removed with its retaining bolts detached.

Picture 5.38 Disassembly/assembly of upper counterweight

5.23. Lower Counterweight

Front wall is removed.

Lower Counterweight Retaining Bolts are removed. (When the upper and lower counterweights are assembled, torque value should be 2100 Ncm (-900 Tolerance).

Picture 5.39 Disassembly/assembly of lower counterweight

IMPORTANT: When the machine is required to be serviced by being tilted to the front, its transport safety bolts should be installed, if this is not necessary, lower counterweight bolts should not be fully removed.

5.24. Discharge Hose

Front Wall is removed.

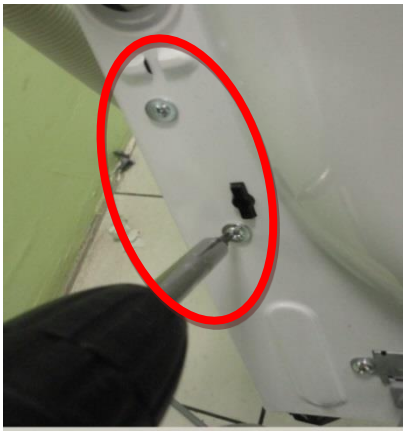
Clamp at the pump inlet of the discharge hose is pulled backwards.

Discharge Hose is removed from the Pump.

Hose at the back of the body is removed from the holding tabs.

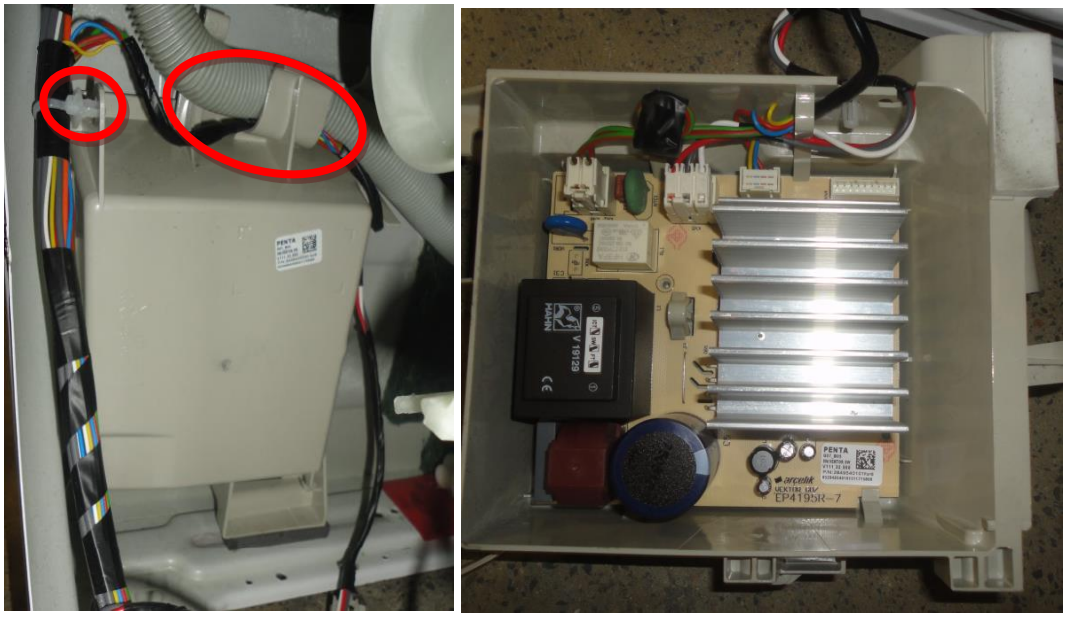
Hose is removed from front of the machine.

5.25. Atlas Vektör card disassembly / assembly

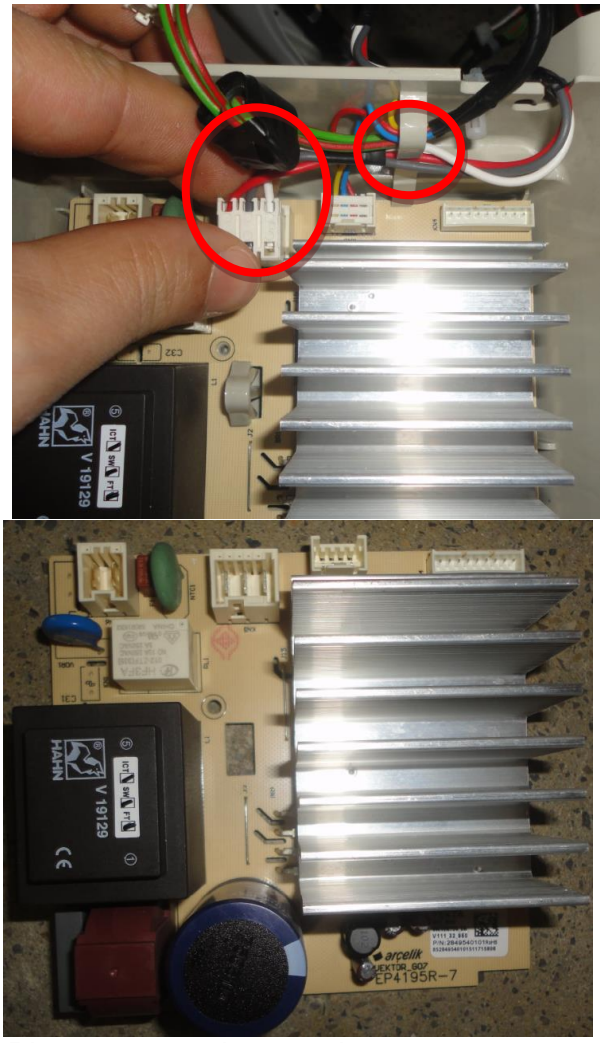


Picture 5.40 Atlas motor card vektör

Input impedance coil is not used in products with atlas motor. Motor card is assembled on the chassis at the lower left corner of the body.
Motor card is attached to the body with 2 sheet metal screws and the sockets on the main cable are connected.
Cable sockets are disconnected in order to remove the motor card, and clamps are cut.
The cables are detached from the tabs, 2 screws installed on the body are removed, and the motor card is separated from the body.



Picture 5.41 vektör card



Picture 5.42 vektör card

6. Part List

SAP should be taken as a basis for the part list.

7. List of Figures and Pictures

8. Table List