VESTEL

WASHER-DRYER
SERVICE MANUAL

1. Specifications

1.1. Product Specifications

| Lt		60
Capacity	Washing	9 Kg
	Drying	6 Kg
Rpm		1400
Energy Consumption		A
Drying Class		A
Washing Class		A
Spinning Class		B
Control Panel		LCD Screen
Program Quantity		15 Programs
Voltage		220V/50 Hz
Amperage		10 A
Dimensions	Height	84,5 cm
	Width	59,7 cm
	Depth	58,2 cm
Other Features		Key Lock
		Süre Erteleme

1.2. Name Plate
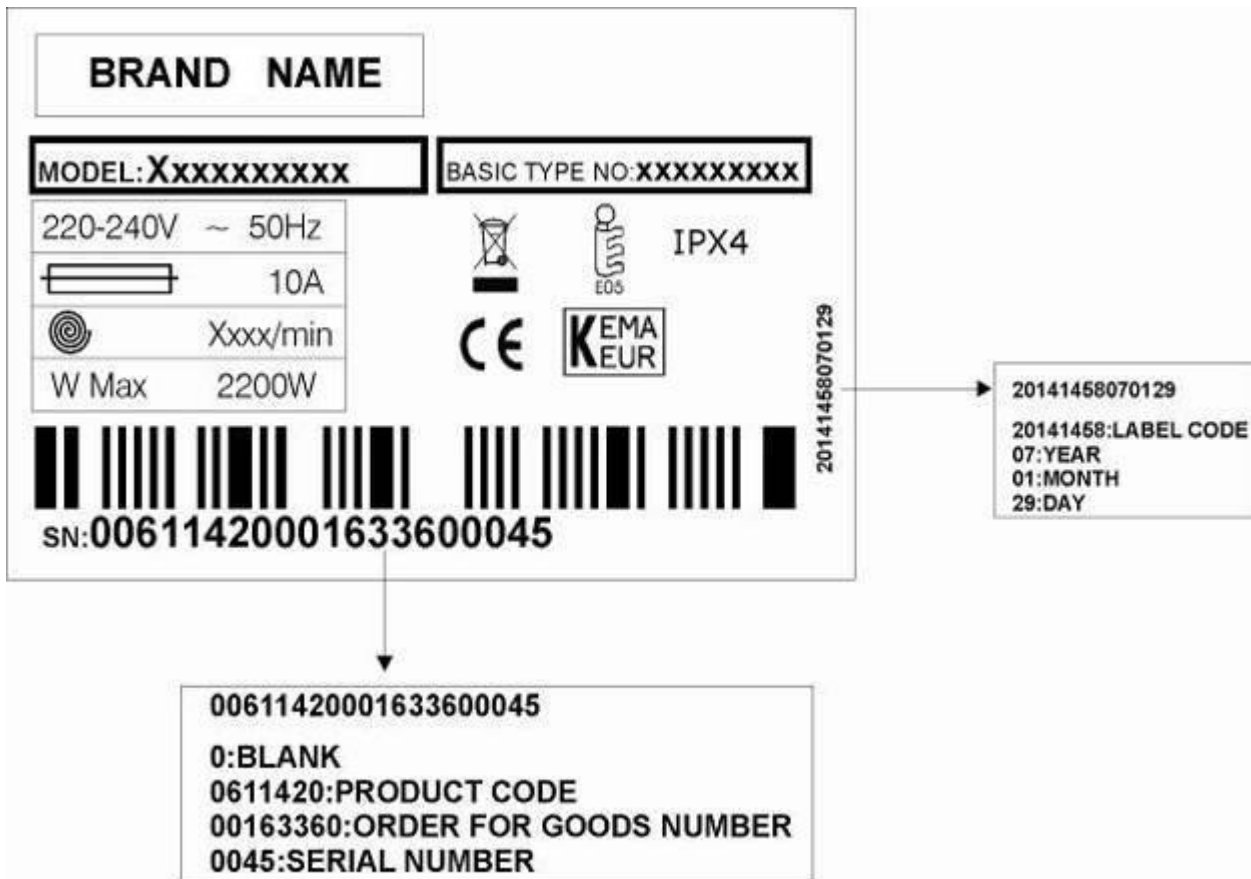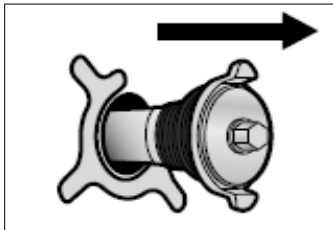
2.   Installation Instructions

2.1.   Moving and Installing

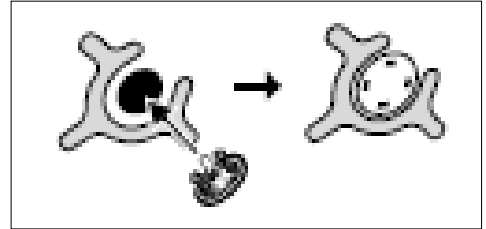### 2.1.1.   Removal of Transportation Screw

1. Transportation screws, which are located at the back side of the machine, must be removed before running the machine.
2. Loosen the screws by turning them anticlockwise with a suitable spanner.
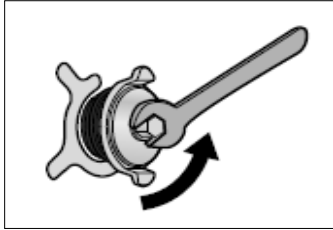
3. Pull out the screws and rubber washers.

2.1.2.   Foot Adjustment

1. Do not install machine on rugs or similar surfaces.
2. For machine to work silently and without any vibration, it should be installed on a flat, non-slippery firm surface. Any suspended floor must be suitably strengthened.
3. You can adjust the level of machine using its feet.
4. First, loosen the plastic adjustment nut away from the cabinet base.

2.1.3.   Electrical Connection

1. Washing machine requires a 50Hz supply of 220-240Volts.
2. A special earthed plug has been attached to the supply cord of washing machine. This plug must be fitted to an earthed socket. The fuse value fitted to this plug should be 13 amps. If you have any doubts about electrical supply, consult a qualified electrician.

4. The holes where the transport screws have been removed should be covered with the plastic transport caps found in the accessories bag.
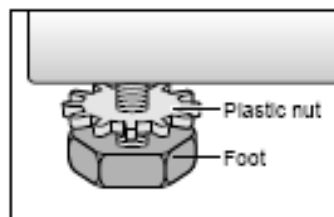

5. The transportation screws that have been removed from the machine must be re-used in any future transporting of the machine.

5. Change the level by adjusting the feet upwards or downwards.
6. After level has been reached, tighten the plastic adjustment nut again by rotating it upwards against the base of the cabinet.
7. Never put cartons, wooden blocks or similar materials under the machine to balance irregularities of the floor.

THIS APPLIANCE MUST BE EARTHED.
Insert the machine's plug to a grounded socket which you can easily reach.

2.1.4. Water Supply Connection

1. Washing machine is supplied with a single (cold) water inlet.
2. To prevent leakage from the connection joints, a rubber washer is included in the hose packing. Fit this washer at the end of water inlet hose on the tap side.
3. Connect the hose to the water inlet valve. Tighten the plastic connector by hand. Please call a qualified plumber if you are unsure about this.
4. Water pressure of 0,1-1 MPa from tap will enable machine to work more efficiently.(0,1 MPa pressure means water flow of more than 8 litres in 1 minute from a fully opened tap)

2.1.5. Drain Connection

1. Make sure that water inlet hoses are not folded, twisted, crushed or stretched.
2. The drain hose should be mounted at a minimum height of 60 cm, and a maximum height of 100 cm from the floor.

3. The end of the drain hose can be connected directly to a drainage stand-pipe or alternatively to a specific connection point designed for that purpose on the waste outlet of a sink unit.
4. Do not extend the drain hose or guarantee will be invalidated.

5. After connection is complete, check for leakage by turning on tap completely.
6. Make sure that water inlet hoses can not become folded, damaged, stretched or crushed when the washing machine is in its final position.
7. Mount the water inlet hose to a ¾" threaded water tap.

3. Operating Instructions

3.1. LCD Screen, Function Buttons & Knobs
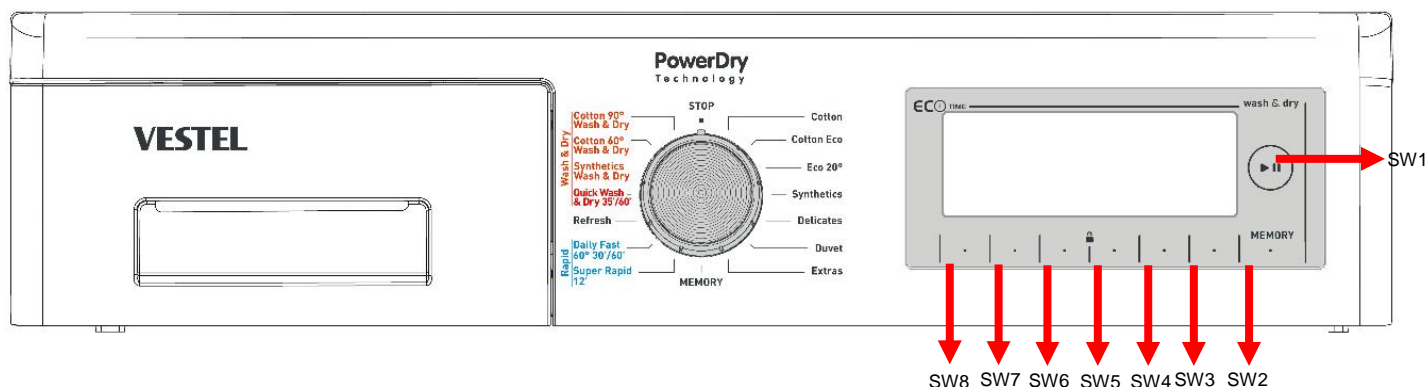
1st Menu
- **SW 1** — Start/Pause
- **SW 2** — Memory
- **SW 3** — Options
- **SW 4** — Settings
- **SW 5** — Drying with Time Adjustment
- **SW 6** — Drying with Modes
- **SW 7** — Spin Adjustment
- **SW 8** — Temperature Adjustment

2nd Menu
- Start/Pause
- Memory
- Options
- Delay timer
- Eco Time
- Easy Ironing
- Extra Rinse
- Pre-Wash

3.2. Program List

Position	Program Name	Maximum Load (kg)	Duration (hour) (Low Load)	Duration (hour) (Half Load)	Duration (hour) (Full Load)
1	Cotton	9	1:48	2:36	3:18
2	Cotton ECO	9	2:04	2:40	3:30
3	ECO 20°C	4	1:52		
4	Synthetics (Synthetics)	3,5	2:06		
4	Synthetics (Curtain)	3,5	2:11		
5	Delicates (Wool)	2,5	1:18		
5	Delicates (Silk)	2,5	1:31		
6	Duvet	1 duvet***	1:42		
7	Extras**	6	Cotton Dry		
7		3,5	Gentle Dry		
7		9	0:50 (Rinse)		
7		9	0:25 (Spin)		
7		9	0:03 (Drain)		
7		-	1:30 (Drum Clean)		
8	Memory	-			
9	Super Rapid12 min.	2	0:12		
10	Daily Fast 60°C 60'	4	0:30	0:30	1:00
11	Refresh	1	0:30		
12	Quick Wash & Dry	0.5kg./1,5kg.	0:35	0:35	1:00
13	Synthetics Wash & Dry	6	4:46		
14	Cotton 60°C Wash & Dry	6	7:10		
15	Cotton 90°C Wash & Dry	6	6:58		
0	STOP				
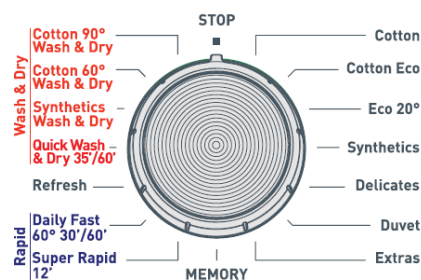
3.3.   Program Details

Position No.	Program	Duration (min)			Temperature (°C)			Water Consuption (lt)			Energy Consumption (kwh / program)		
		Full Load	Half Load	Low Load	Full Load	Half Load	Low Load	Full Load	Half Load	Low Load	Full Load	Half Load	Low Load
1	Cotton	198	156	108	81			83	46	39	2,69	1,76	1,00
2	Cotton ECO	210	160	124	57			49	46	39	0,89	0,67	0,55
3	ECO 20°C	112			20			46		39	0,24		0,20
4	Synthetics (Synthetics)	126			55			61		52	1,12		0,53
	Synthetics (Curtain)	131			40			86			1,07		
5	Delicates (Wool)	78			37			80		65	0,5		0,49
	Delicates (Silk)	91			27			80		65	0,3		0,27
6	Duvet	102			38			84		75	0,65		0,43
7	Cotton Dry	Refer to Duration of Drying Programs			-			63			3,2		
	Gentle Dry	Refer to Duration of Drying Programs			-			5,5			1,89		
	Rinse	50			-			67			0,15		
	Spin	25			-			-			0,2		
	Drain	3			-			-			0,02		
	Drum Clean	90			80			60			0,9		
9	Super Rapid12 min.	12			30			27			0,07		
10	Daily Fast 60°C 60'	60	30	30	60	30	30	32		25	0,87	0,60	0,55
11	Refresh	30			-			5			0,21		
12	Quick Wash & Dry	60	35	35	30			40	32		0,94	0,55	
13	Synthetics Wash & Dry	418			81			146			5,89		
14	Cotton 60°C Wash & Dry	430			57			112			4,09		
15	Cotton 90°C Wash & Dry	286			55			67			3		

Duration of Drying Programs

Program	Load (kg)	Iron (hour)	Hanger (hour)	Cupboard (hour)
Gentle	1	0:40	0:50	1:00
	2	1:10	1:40	2:00
	3,5	2:10	2:20	2:40
Cotton	1	0:50	0:55	1:00
	2	1:20	1:25	1:30
	3	1:50	1:55	2:00
	4	3:30	2:54	3:40
	6	3:30	2:59	3:40

When the Cotton-Hanger Dry program is selected with a washing program, the drying period after the Washing phase takes 3 hours and 35 minutes.
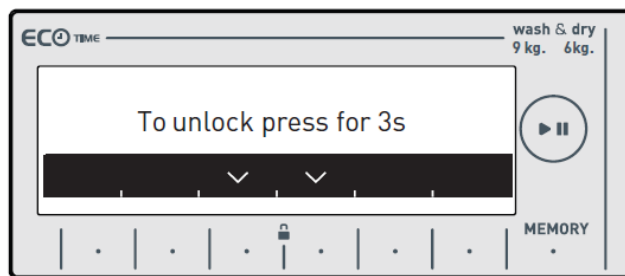
3.4.   Key Lock

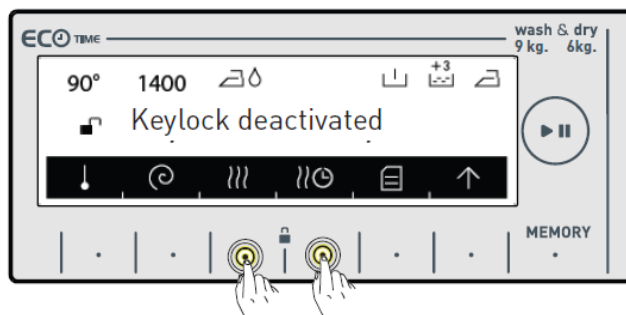**Activation**

Press the buttons for 4-5 seconds.
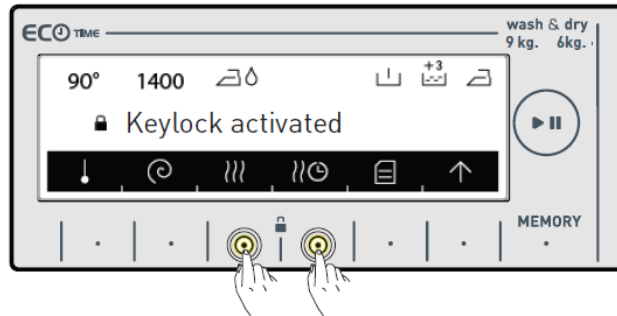
The following text will be displayed if any buttons are pressed while the child lock is engaged.

If the child lock is engaged while any programme is running and the programme knob is switched to the CANCEL position and another programme is selected, the programme previously selected continues from where it left. No change will occur.

Deactivation

Press the buttons for 4-5 seconds.

3.5. Symbols

Selection Mode	No spin
Pre Wash	Mode Drying
Extra Rinse	Time Drying
Easy Ironing	Cupboard Dry
Eco Time	Hanger Dry
Delay Time	Iron Dry
Temperature	Options
Cold Wash	Settings
Spin speed	Language

Clock	Door closed and locked
Sound	Door closed but unlocked
Sound ON	Door open
Sound OFF	2/3 Dosage indicator
Brightness	– – No selection
Contrast	Paused
Factory Settings	– Decrease selection
Reset	+ Increase selection
	< Previous selection
	> Next selection
	Select
	X Cancel

4. Programs and Special Functions

4.1. Loading

• There is a load detection system in your machine. The load detection system measures the weight of the laundry inside your machine and informs you by the moving sticks on the electronic screen and automatically adjusts the programme features (programme duration, energy consumption, water consumption etc.) according to the load amount.

• If you continue to operate your washing machine whilst overloaded, washing and drying performances will be affected.
Additionally, your washing machine can be damaged and you may see your clothes get yellow after drying programs.

4.2. Overload

- The loading should be executed **after** choosing a program.
- If detected load is higher than the maximum load capacity of selected program, user is warned as shown below:
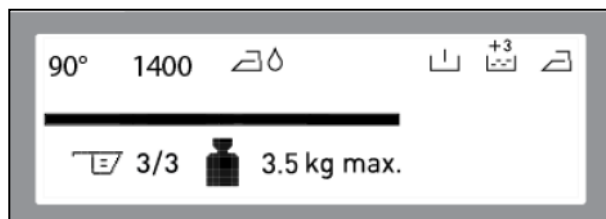

4.3. Temperature Selection

- Using SW8, temperature set point of the programs can be changed.

- When SW8 is pressed, the navigator line under the symbols is activated, also the maximum allowable temperature value is visualized on screen.

- If no selection is done for 5 sec the navigator line under the symbols is removed and program name is visualized instead

- Each time SW 8 is pressed, set value decreases according to program specification. If button is once more pressed during lowest alternative, counter goes back to beginning. Also, continuous press of temperature button rapidly changes display view.

- To illustrate, for Cotton program, default value is 90°C. If temperature button is pressed display view is "60°C". The other alternatives are 40°C, 30°C and cold. If user once more presses button during cold option, counter goes back to 90°C.

- During temperature selection, pressing any other button sets the temperature, and selected value is visualized on LCD.

- The symbol is not active on ECO 20 °C.

9
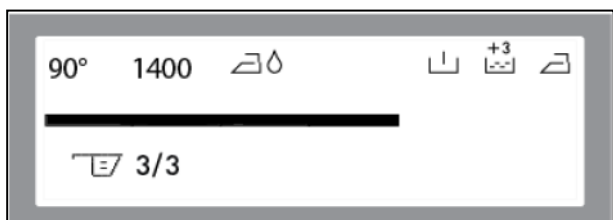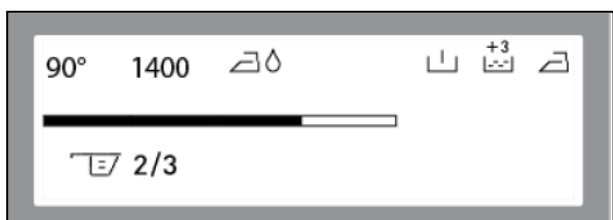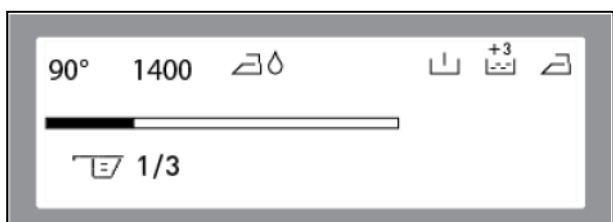
4.4.   Drying Modes
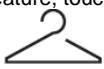
- You can select the drying setting you wish to use by touching the ⦚⦚⦚ symbol button.

A. ⊡ **Cupboard Dry**

- If you want to select the cupboard dry feature, touch the ⦚⦚⦚ symbol button until you see the ⊡ symbol on the screen.
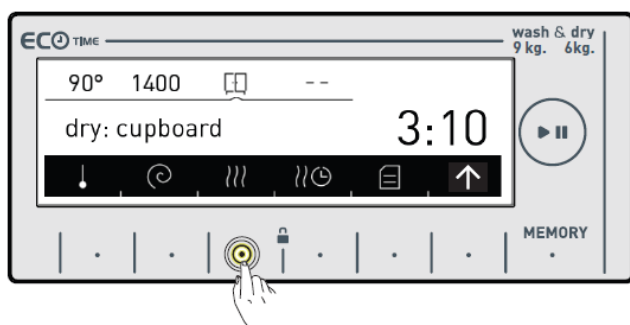
B. ⌒ **Hanger Dry**

- If you want to select the hanger dry feature, touch the ⦚⦚⦚ symbol button until you see the ⌒ symbol on the screen.
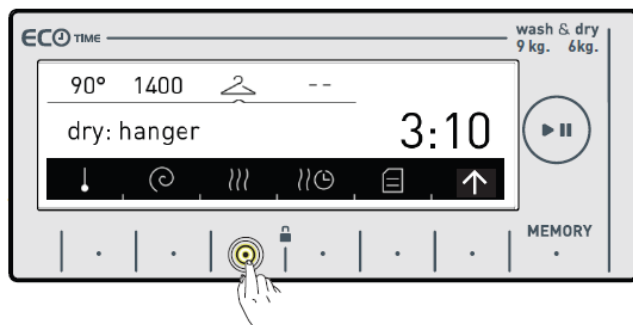
C. ⊿⬦ **Iron Dry**

- If you want to select the hanger dry feature, touch the ⦚⦚⦚ symbol button until you see the ⊿⬦ symbol on the screen.
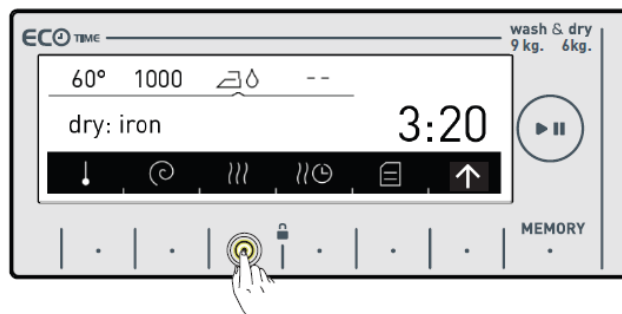
D. ⦚⦚⦚⊕ **Drying with duration**

- Touch the ⦚⦚⦚⊕ symbol on the screen.
- • Drying selections will be displayed on your machine screen as 30, 60 and 120 minutes.
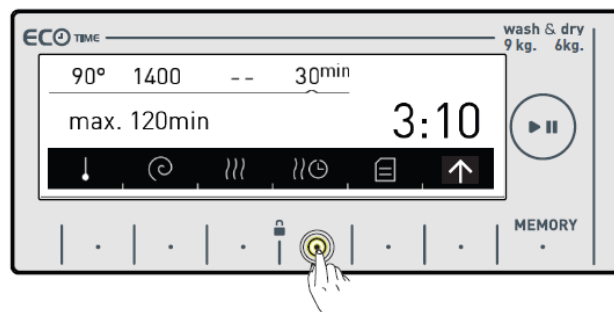
5.   Test

5.1.   Service Mode Menu

- In order to activate this mode, user should press settings button 🔲 for 5 sec.

- In this menu there are Autotest, Service Autotest and Counter Mode.
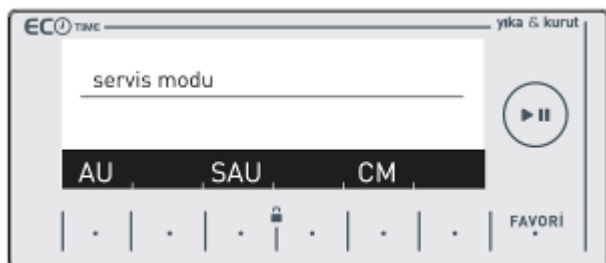
- Press the button underneath "AU" to start Autotest.
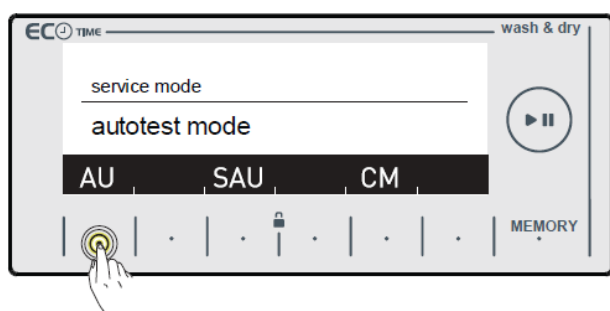
- After the machine enters autotest, the door is locked and it applies algorithm of autotest.

The test steps are as below;

Step1
The pump is activated for 3 seconds and there is EPS check , the frequency value should be between the 46.04 Hz and 43.40 Hz. It checks the EPS and if it is OK it continues the autotest; if it is NOK then it should give E10 ERROR & cancels the autotest (goes to the selection mode). Also if any frequency can not be detected, then it means there is problem with connecion or EPS, so it gives E10 which is EPS error and cancels the autotest.

Step2
The motor ramps to max spin for 20 seconds. While its speed rising up to the maximum speed the EV1 (prewash valve) is activated for 5 seconds and then the EV2 (wash valve) is activated for 5 seconds.

Step3
The motor reduces speed to stop (depends on the motor stop time) for 5 seconds. While it is slowing down it activates EV1 and EV2 valve, concurrently.

Step4
The motor turns to right. Also, dryer valve is activated between sec46-50 for 5 sec.

Step5
The motor turns to left for 5 seconds.
Test is stopped and following message is visualized: "Press the button to continue"

Step7
TJ is activated for 3 sec

Step8
Twin Jet will be activated for 3 sec.

Step 9
EV1 and EV2 valves are activated concurrently for 9 sec. 237 pulse should be recorded to pass to next step. If measured pulse is less than 237, flow meter error is visualized.

Step10
Software will detect NTC's resistance value and will check if the temperature is between 5°C < Tdetected < 40°C . If it is inside the range, heating step will be done. If temperature value is outside the range, then it means NTC is detecting the temperature in a wrong way and heating step will be skipped.

Step 11
Software will detect NTC's resistance value and will check if the temperature is between 0°C < Tdetected < 50°C . If it is inside the range, autotest continues. If temperature value is outside the range, then it means NTC is detecting the temperature in a wrong way , autotest is canceled and error is released. (E18)

Step 12
Fan is activated for 5 sec.

Autotest ends and "End" screen is visualized.

AUTOTEST																				
Time in seconds (to be adjusted)	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Entering autotest																				
Changing power to 220 50Hz																				
Main Voltage 50 Hz																				
Door Lock Powered (Depends on door lock)																				
Pump																				
EPS measurement																				
3D sensor (SW check)																				
Motor Ramp to max spin (max. is 20 sec.)																				
EV1 (flow rate dependent of washer)																				
EV2 (flow rate dependent of washer)																				
Dryer valve																				
Time until motor is stopped (Depends on the motor stop time)																				
Motor Preferred Run (Direction to Right)																				
Motor Inverse Run (Direction to Left)																				
Test stopped until option 1 is pressed (REMOVED)																				
Twin Jet																				
EV1 + EV2 valves (flow meter check)																				
Washer NTC check																				
Washer heater resistance																				
Dryer resistance I																				
Dryer resistance I + II																				
Dryer NTC																				
Fan																				
End Visualization																				

5.2. Service Autotest

Press the button underneath "SAU" to start Service Autotest

	SELECTOR POSITION 1	SELECTOR POSITION 2	SELECTOR POSITION 3	SELECTOR POSITION 4	SELECTOR POSITION 5	SELECTOR POSITION 6
	Result	Result	Result	Result	Result	Result
	WASHER HEATER ON	PUMP ON	DRYER HEATER 1 & FAN ON	DRYER HEATER 2 & FAN ON	SUPER RAPID 12' Program	Drying program
Comments:	When entering the service test, door will be locked. If any error is detected **E01** is visualized. Then 3D will be checked. If any error is detected **E12** is visualized.					TEST IS OVER Door will be unlocked, machine will go to END state.

- The first 6 levels of the program knob are used for the Service Autotest.

Step1
Selector position 1 will be "WASHER HEATER ON"
Before heating it should take water till 1185 flow meter count then start heating.
Heater will be on max. 8 minutes. After 8 minutes if the temp. doesn't change more than 2ºC ,it will release NTC failure. (E05).
Or if the NTC connection is broken then it should give again E05 NTC failure.
At the end of heating, following message is visualized to indicate that the step is over; "Press the button to continue"
*During this step if EPS detects high water level, overflow algorithm is applied and E04 is released.

Step2
Selector position 2 will be "PUMP ON"
Temperature will be measured, if it is higher than 50°C, it should take 80sec. cooling water , and then make "Drain+ 5sec.) If pump error is detected E03 will be released.
At the end of pumping, following message is visualized to indicate that the step is over; "Press the button to continue"

Step 3
Selector position 3 will be "DRYER HEATER 1 & FAN ON "
At the beginning of the step, dryer NTC should detect and record the temperature.
Dryer Heator 1 and fan should be activated for 3 min. At the end of 3 min dryer NTC should again detect the temperature, if
ΔT< 10°C, it will release E14 failure.
If ΔT≥ 10°C, following message is visualized to indicate that the step is over; "Press the button to continue"

Step 4
Selector position 4 will be "DRYER HEATER 2 & FAN ON "
At the beginning of the step, dryer NTC should detect and record the temperature.
Dryer Heator 2 and fan should be activated for 3 min. At the end of 3 min dryer NTC should again detect the temperature, if
ΔT< 10°C, it will release E14 failure.
If ΔT≥ 10°C, following message is visualized to indicate that the step is over; "Press the button to continue"

Step 5
Selector position 5 will be "SUPER RAPID 12' "
So machine will make exactly the same algorithm of Super Rapid 12'.
So, time for selector position 5 is 12 minutes.
During Super Rapid program if EPS detects high water level, overflow algorithm is applied and E04 is released.

Step 6
Selector position 6 will be "Drying 5" Step.
Machine will make below algorithm;
So, time for selector position

5.3. Counter and Program Parameters

- During any one of the programs, pres memory button for 10 seconds and the program parameters screen will appear (live mode):
- Temperature
- Voltage
- Spin value
- Hz value of the EPS
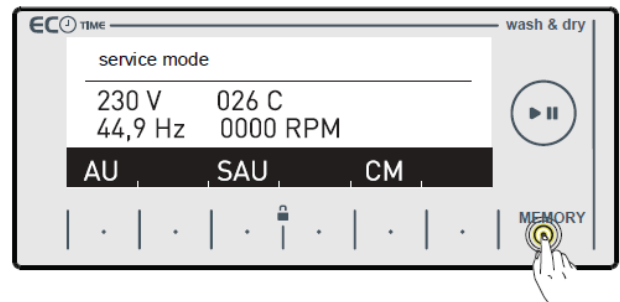
- Press the same button for 10 seconds again to return back to the normal screen.
- For the counter mode press thebutton underneath CM while in Service Mode.
- The counter mode shows the history for the program that the program knob shows. Change the knob position to see the histroy for other programs. For the programs with sub-menus, first select the program and then enter the Service Mode, then select counter mode to see the history.
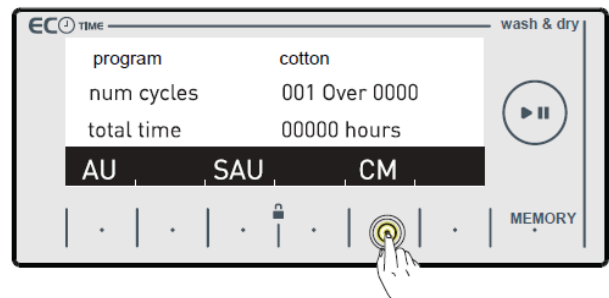
5.4.   Error Codes

The codes that can be seen during Service Autotest

Error Code	Description	Error Code	Description
E01	Door Lock Error	E10	EPS Error
E02	No water Error	E12	Communication Error 3D module
E03	Pump Error	E14	Heater Fuse Error
E04	Overflow Error	E15	Waterjet Error
E05	Washer NTC Error	E16	Dryer Overheat
E08	Motor triac Error	E17	Flowmeter Error
E09	Voltage Error	E18	Dryer NTC Error

The error codes that the end user can see:

E01
Door Lock Error
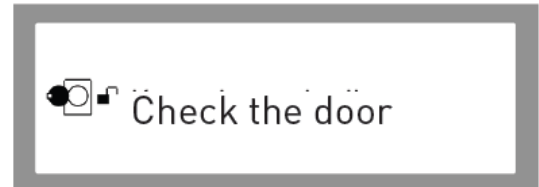
E02
No water Error
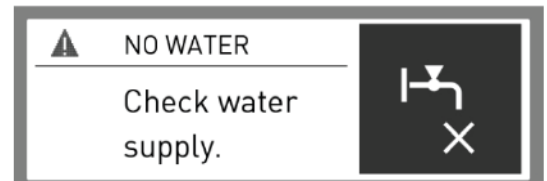
E03
Pump Error
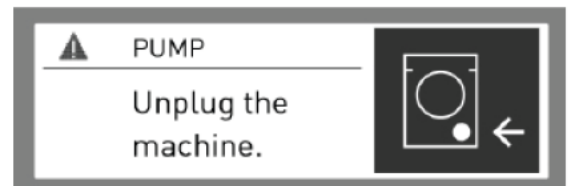
E04
Overflow Error
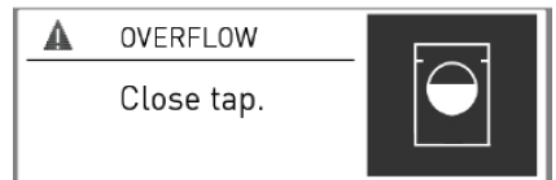
E09
Voltage Error
(Min: 170V – Max:260V)

14

6. Component Specifications

6.1. Dryer Component Specifications

Dryer Components are:

- Fan Group
- Dryer Valve
- Dryer heaters
- Dryer NTC
- 3D Sensor
- Dryer Board

6.1.1. Fan Group

The dry air from the condenser area is directed to the heater group with a velocity of 2700 RPM.

Specifications

Power	: 34 W
Socket Connection	: Flag Terminal
Rpm	: 2700 rpm
Air flow capacity	: 70 m³ / hour

Component Control :

Fan motoru resistance value is checked with a multimeter as shown.
Resistance value 82.7 ± 3 Ω

6.1.2.   Washer Valves ve Dryer Valve

Washer Valves

Dryer Valve

Component Control :

Valve resistance value is checked with a multimeter as shown.
Washer vave resistance value (each) 3750 Ω +10 %
Dryer valve resistance value ise 5190 +10 % aralığındadır.

Washer Valf Control

Dryer Valf Control

6.1.3.   Dryer Heaters

There are two heaters in the heater group.

The power rating: 2x750W

750 W, nickel diffusion

The air is heated up to 130 °C . By the help of the dryer NTC, when the temperature is reached to 130 °C, one of the heaters stop working until the temperature is cooled down to 110 ° C. Then, both heaters start working again.

Component Control :

Common part

First heater: 70 Ω ±%5

Second heater: 70 Ω ±%5

Both heaters: 140 Ω ±%5

6.1.4. Dryer NTC

Checks the air temperature inside the drum. As the temperature rises, the NTC resistance value decreases.

Component Control :

The measurement is done from the socket at the very bottom of the dryer board.

T°C	R(KΩ) MIN	R(KΩ) CEN	R(KΩ) MAX
25	19.40	20.00	20.60
30	15.56	16.11	16.67
40	10.19	10.64	11.10
50	6.819	7.176	7.544
60	4.653	4.933	5.225
70	3.246	3.466	3.697
80	2.322	2.495	2.679
90	1.688	1.825	1.972
100	1.244	1.353	1.471
110	0.9296	1.017	1.112
120	0.7042	0.7747	0.8516
130	0.5404	0.5976	0.6603
140	0.4198	0.4665	0.5180
150	0.3296	0.3681	0.4107
160	0.2614	0.2932	0.3286
170	0.2092	0.2357	0.2653
180	0.1690	0.1912	0.2161

6.1.5.   3D Sensor

3D Sensor:

- • Realtime load information on user interface

- • Prolonging the life of the product by preventing the machine from being overloaded

Component Control :

Check the component by loading the drum and observe the load bar.
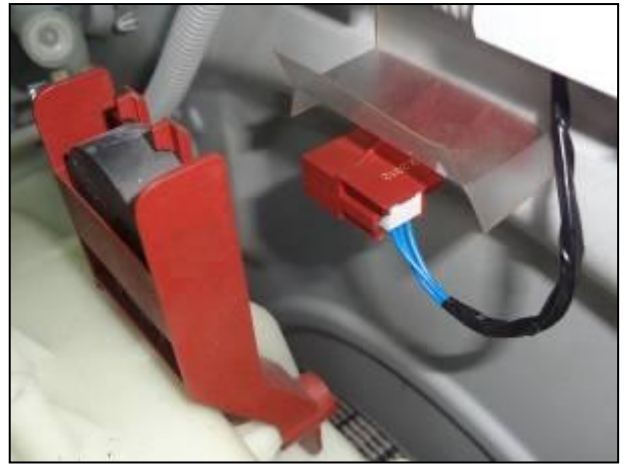
6.1.6.   Dryer Board

* 2 relays: Controls the heaters on the Dryer heaters

* 2 triacs: One controls the dryer valve, the other controls the fan motor.

* 1 NTC socket: NTC checks the temperature change of the air inside the drum
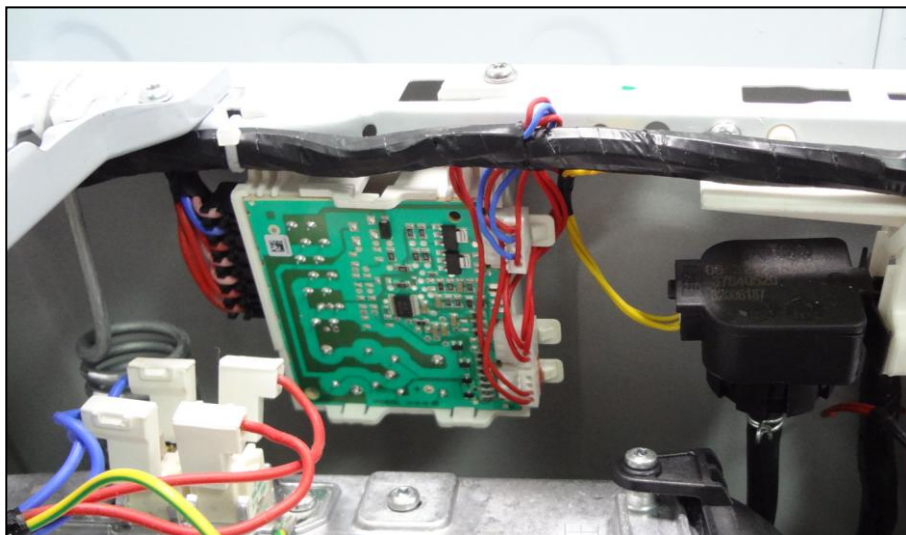
6.2. Washer Component Specifications

Washer Components:

- Main Board
- Graphic LCD Board
- DC Module Board
- Motor
- Valves
- Heater
- NTC
- Pump
- Circulation Pump
- Door lock
- EPS

6.2.1. Main Board

Includes all the Washer board functions, as well as supplies data communication with the other boards.

6.2.2. Display and User Interface Board

Contains 8 touch buttons, graphic LCD and the buzzer.

6.2.3. DC Module Board

Contains the circuit elements which build up the DC part of the washer board. It is separate, because:

* Gives space for the main board
* Functions in a cooler environment than before

6.2.4. Motor

The washing machine has an asynchronous motor. It is controlled by the PCB.

It is essential to check the motor for correct diagnosis and quick servicing. In the below picture, socket points on the motor is shown to measure with multimeter.
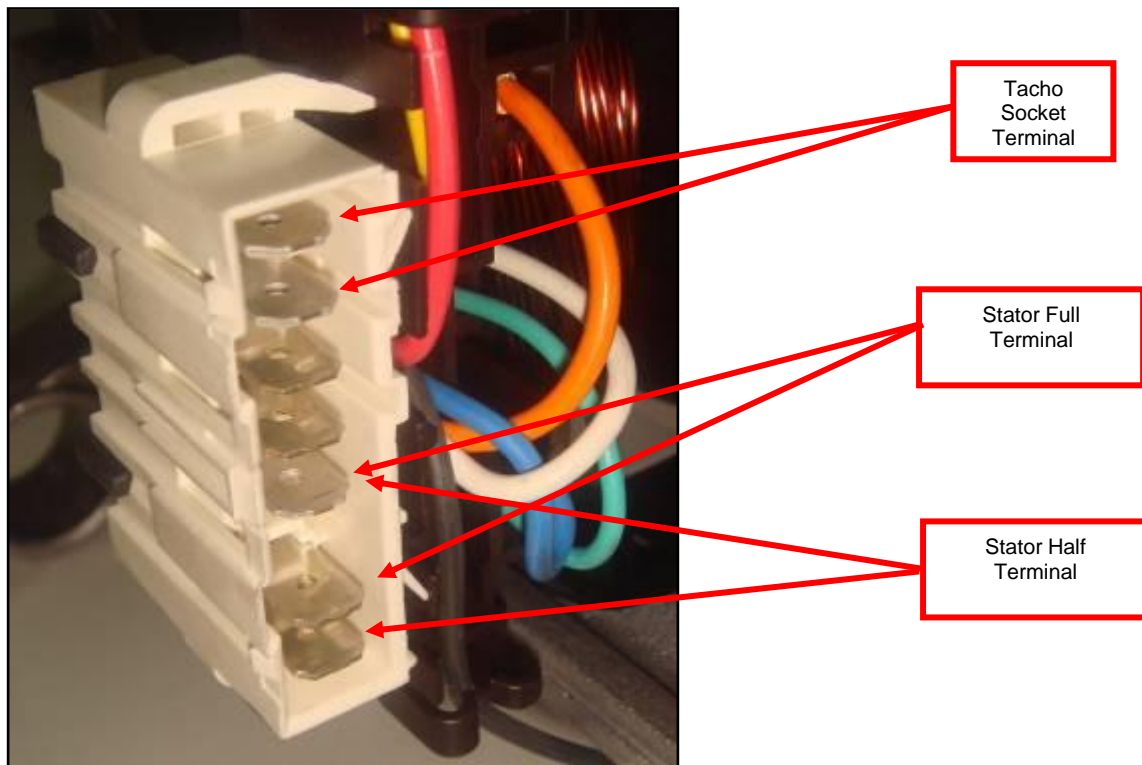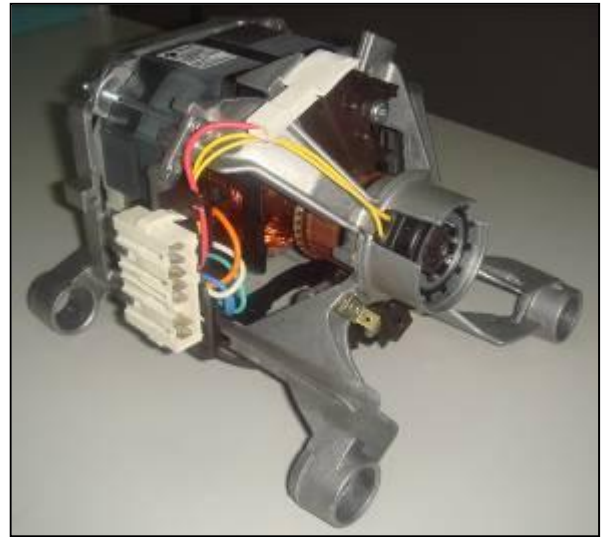
Motor Socket Terminals

Resistance values :

MOTOR CODE	BRAND	STATOR (FULL) (ohm)	TACHO (ohm)	STATOR (HALF) (ohm)	TEMPERATURE
32003986	ACC	3.30-/+ 7%	184-/+7%	1.20-/+7%	20 °C

Motor Resistance values

6.2.6.   Heater

Heating element (Resistance) is a component which is desingned to regulate temperature of water inside the drum. It has three connections: Phase, notral and ground connections.

Specifications

Kind of Heating	Tubular heating element with NTC – sensor
Nominal Voltage	230 V
Nominal Power	2000 W (±5%)
Thermal Fuse	2 – sided

Component Control

Resistance value is checked with a multimeter as shown.

Resistance value should be between 24- 30 Ω.

Component Control

6.2.7.   Washer NTC

NTC resistance value is checked with a multimeter as shown. NTC resistance values are checked by using the table below.

Tem (°C)	R min (kΩ)	R max (kΩ)
-10	54,9	62,6
-5	43,0	48,6
0	33,9	38,1
5	27,0	30,1
10	21,6	23,9
15	17,4	19,1
20	14,1	15,4
25	11,5	12,5
30	9,4	10,2
35	7,8	8,3
40	6,4	6,9
45	5,4	5,7
50	4,5	4,7
55	3,8	3,9
60	3,2	3,3
65	2,7	2,8
70	2,3	2,4
75	1,9	2,0
80	1,7	1,8
85	1,4	1,5
90	1,2	1,3
95	1,1	1,1
100	0,9	1,0

Washer NTC resistance values

6.2.8.   Drain Pump

Drain pump is both a mechanical and elektrical component which is used to drain water inside the washing machine. It has an synchronous motor inside. For better performance maintanance, pump filter should be cleaned regularly.

Specifications

Voltage	220 - 240 V
Amperage	0.28 A (±10 %)
Power	37 W
Frequency	50 Hz
Waterflow	17 L/min

Component Control

Drain Pumpresistance value is checked with a multimeter as shown.

Drain Pump resistance value should be between 125- 140 Ω.

Component Control

6.2.9.   Circulation Pump

The component is used for circulation of water inside the drum in order to increase washing performance.

C
Circulation Pump

Specifications :

Nominal voltage   230 V
Frequency   50 Hz
Direnç (bobin)   170 Ω (±7%)

Component Control :

Circulation Pump resistance value is checked with a multimeter as shown.

Circulation Pump resistance value: 140 – 200 Ω

Circulation Pump Control

6.2.10.   Door Lock

Door lock is activated at the beginning of the program in order to prevent the door from opening. Locking is generated by supplying power to PTC-bimetal, after max 6sec (220V), the bimetal will be warm and ready to close the contacts. Thus the first impulse to the solenoid will allow the contact to close and consequently the slider will be locked by the pin of the slider-lock. The second impulse causes no electrical and mechanical modifications. It can be unlocked by the third impulse; the contact is opened even if the PTC-bimetal remains energized.

Emergency Opening System (PTC-Bimetal) In Case of Lack of Electric Energy

-In case of lack of electric energy during a washing cycle, the PTC-bimetal assembly will cool down and after minimum 60 sec (considering previous power supply of 30 sec min and T=20°C) the door will be unlocked and thus can be opened.
-In case the door is closed when current comes back, the PTC-bimetal assembly will heat again, the slider-lock will lock, the contact will close and the program will continue from where it stopped.
.

Specifications :

Nominal voltage	250 V
Nominal amperage	16 (4) A

Component Control :

Resistance value is checked with a multimeter as shown.
Resistance values : 240Ω ±20% (25 °C)
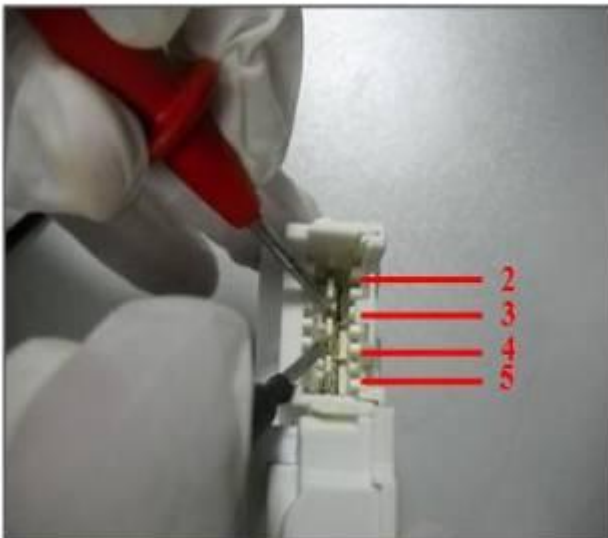
Component Control

6.2.11.   Electronic Pressure Switch (EPS)
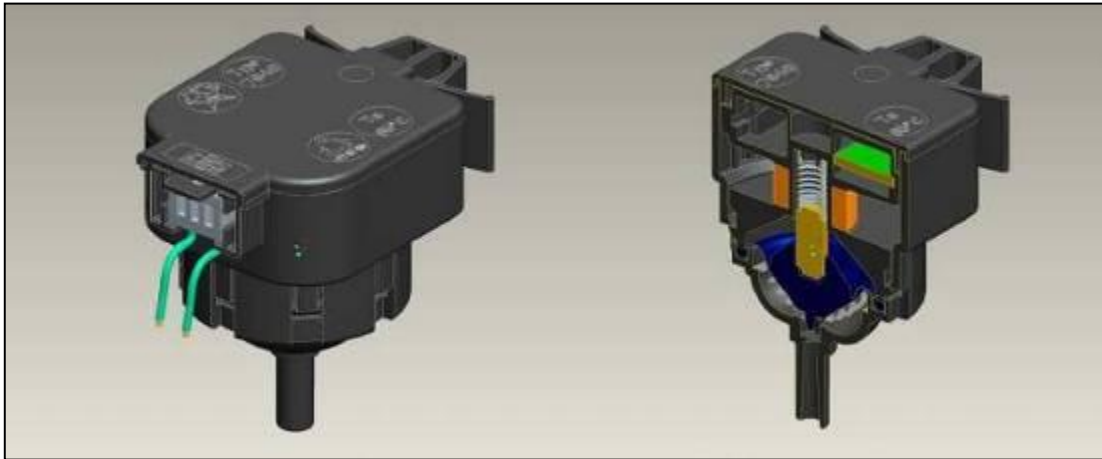
Electromagnetic field occurs as a result of the vibration of the membrane which is under pressure in the coil. The nucleus part is moved up and down by the electromagnetic field. The water level is regulated by the frequency which is controlled by the PCB and changes according to the movement of the nucleus part.

Component Control

1. Push the door lock slider with screwdriver.

2. Start the machine.

3. Cut off the energy input when the water intake finishes and drum begins to rotate.

4. Water level should be 6 cm ±1

6.3.   Component Control on PCB

Sockets on the PCB

Display board

Dryer Board

3D Sensör

NTC

EPS

Flowmetre

Circulation Pump

Yıkayıcı valfleri

DC Kart

Tahliye pompası

Kapı kilidi

Scokets on the Dryer Board

Thermostat and the dryer heaters

Kurutucu valfi

Fan motoru

Ana kart haberleşme

Kurutucu NTC
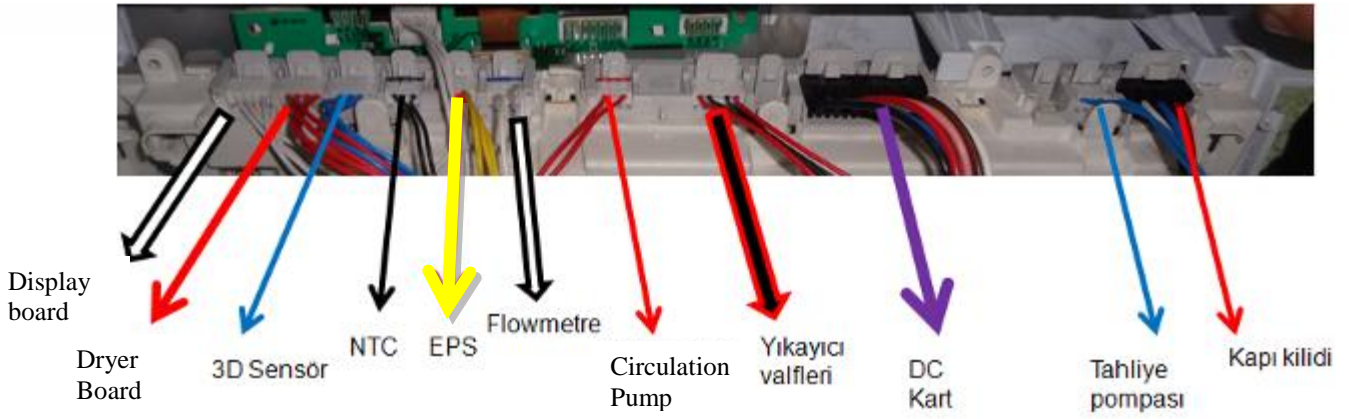
6.3.1.   Washer NTC

NTC resistance values are checked (black cables) as shown.

Refer to the relevant table for the NTC resistance values.

28
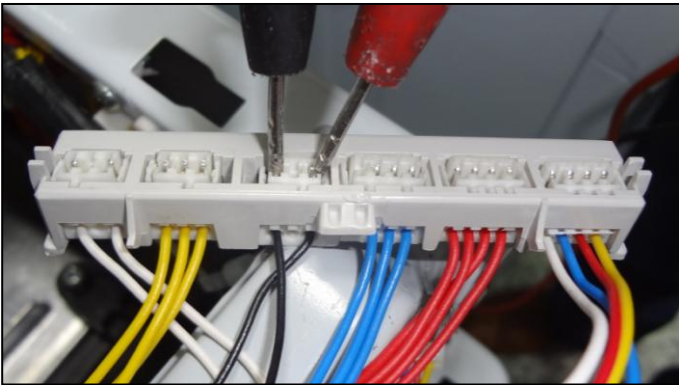
6.3.2. Circulation Pump

Resistance values are checked (red cables) as shown.

Circulation Pump resistance value :140 – 200 Ω

6.3.3. Washer Valves

Valve resistance value is checked with a multimeter as shown.
Washer valves resistance values : 3750 Ω +10 %

Pre-Wash Valve:

Check the red cables

Main Wash Valve:

Check the black cables

6.3.4. Drain Pump

Check the blue-blue cables

Drain Pump resistance value: 125 - 140 Ω
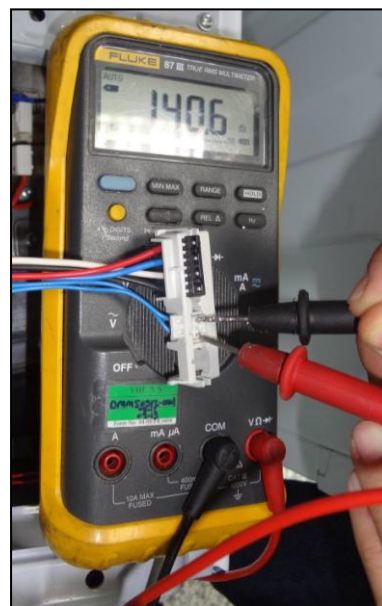
6.3.5. Door Lock

Resistance value is checked with a multimeter as shown.

   Check the white and blue cables

Resistance values 240Ω ±20% (25 °C)
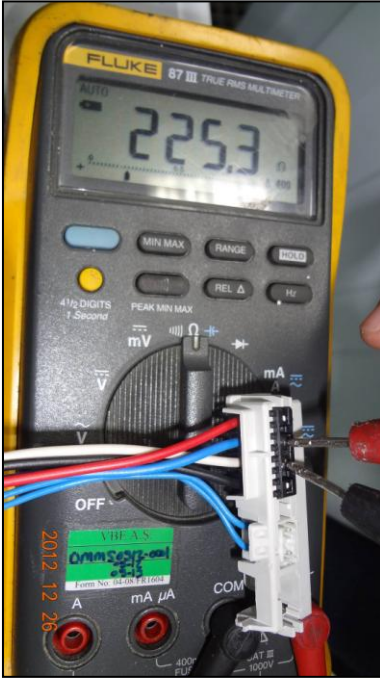
6.3.6. Dryer NTC

Component Control :

Check the socket at the bottom of the dryer board as shown.

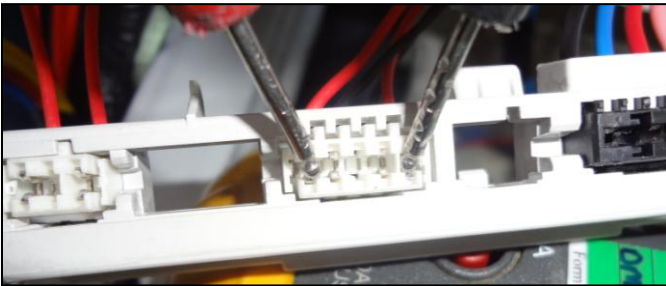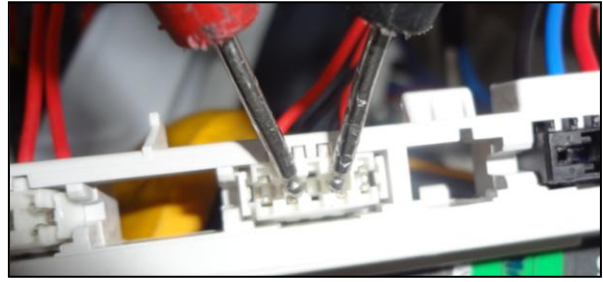| T°C	R(KΩ) MIN	R(KΩ) CEN	R(KΩ) MAX
25	19.40	20.00	20.60
30	15.56	16.11	16.67
40	10.19	10.64	11.10
50	6.819	7.176	7.544
60	4.653	4.933	5.225
70	3.246	3.466	3.697
80	2.322	2.495	2.679
90	1.688	1.825	1.972
100	1.244	1.353	1.471
110	0.9296	1.017	1.112
120	0.7042	0.7747	0.8516
130	0.5404	0.5976	0.6603
140	0.4198	0.4665	0.5180
150	0.3296	0.3681	0.4107
160	0.2614	0.2932	0.3286
170	0.2092	0.2357	0.2653
180	0.1690	0.1912	0.2161

Dryer NTC values table

7. WASHER DRYER PARTS

7.1 – CONTROL PANEL PARTS

7.1.1. Exploded View
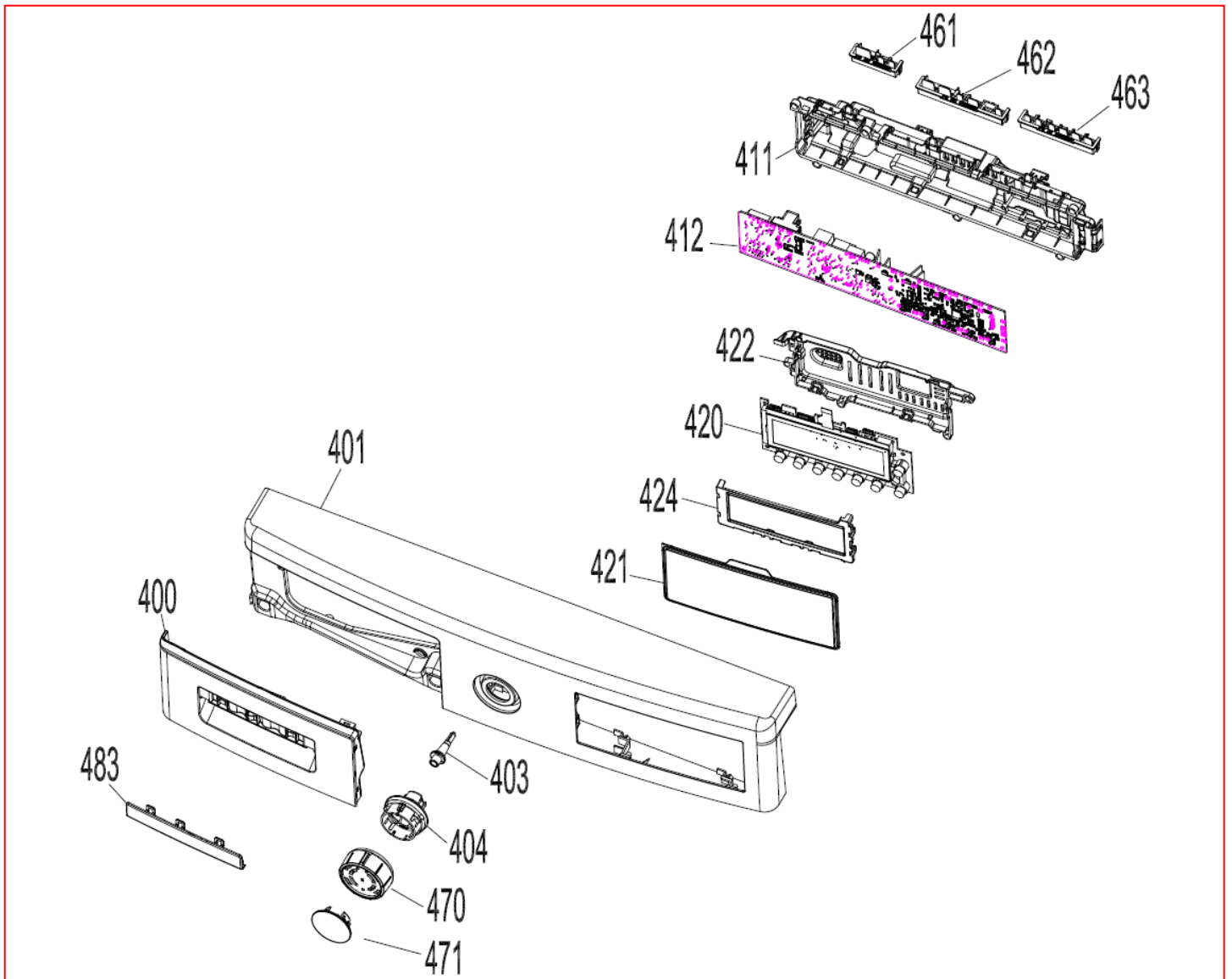
7.1.2. Spare Part List

NO	PART NAME	QTY	NO	PART NAME	QTY
400	DETERGENT DRAWER COVER	1	422	LCD CARD BOX	1
401	CONTROL PANEL	1	424	LCD FRAME	1
403	PROGRAM ADJUSTMENT SHAFT		461	SOCKET HOLDER-F1	1
404	PR.SELECTION KNOB INS.PART	1	462	SOCKET HOLDER-F2	1
411	PCB BOX	1	463	SOCKET HOLDER-F3	1
412	ELECTRONIC CARD	1	470	PR.SELECTION KNOB BODY	1
420	LCD CARD	1	471	PROGRAM SELECTION KNOB COVER	1
421	LCD DISPLAY	1	483	DET.DRAW.COV.INSERT	1

7.2 - FRONT PANEL PARTS

7.2.1. Exploded View
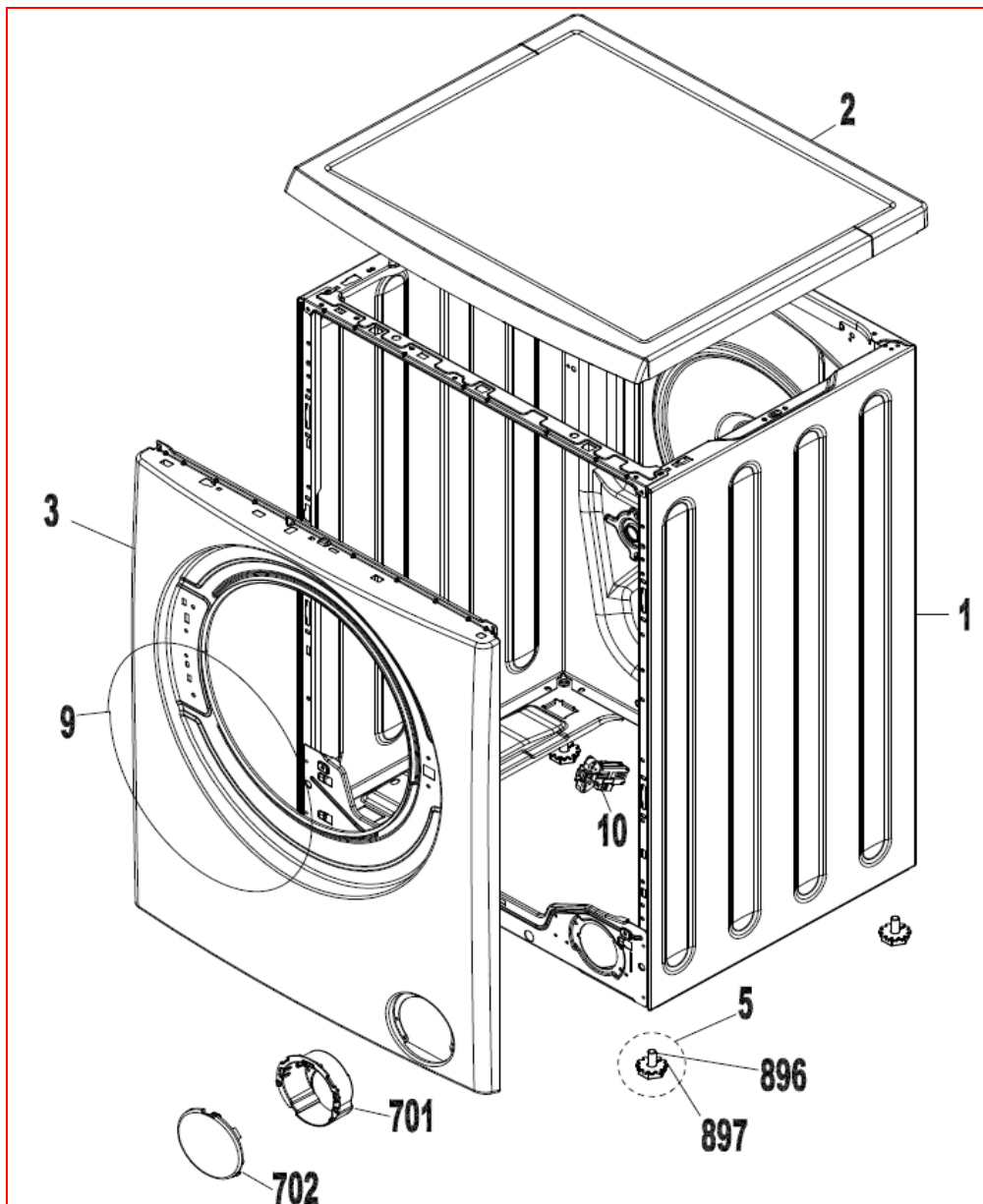
7.2.2. Spare Part List

NO	PART NAME	QUANTITY
1	BODY GROUP PAINTED	1
2	UPPER TRAY GROUP	1
3	FRONT PANEL GROUP	1
4	PLINTH GROUP (includes 22+23)	1
5	ADJUSTABLE FEET	4
9	BODY-GASKET CLAMP	1
10	DOOR LOCK	1
701	PUMP COVER HOUSING	1
702	PUMP COVER	1
896	SCREW M10*30	4
897	ADJUSTED FOOT ADJUST STAMP PLS.	4

7.3 – WASHING DRYER GROUP PARTS

7.3.1. Exploded View
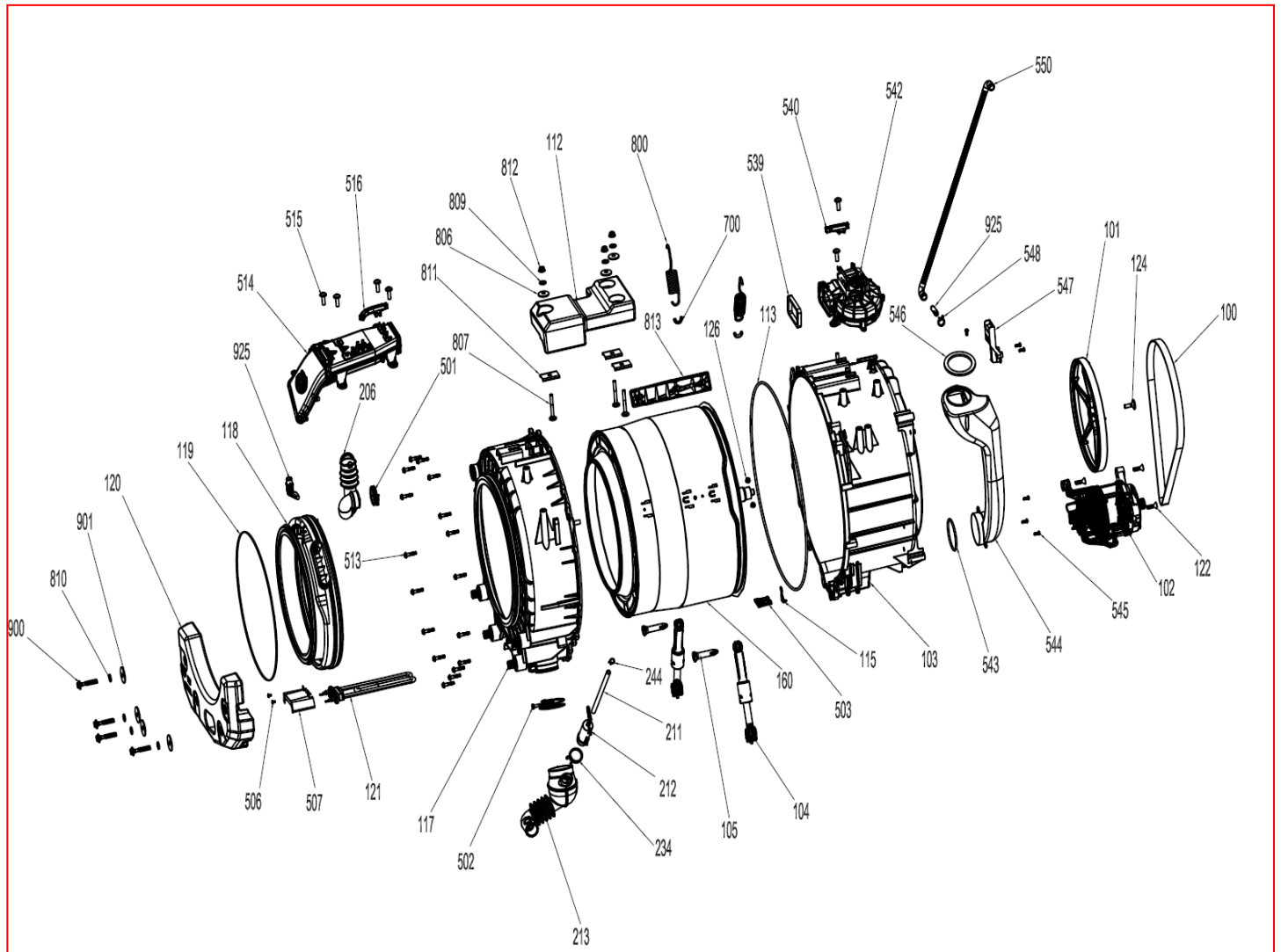
7.3.2. Spare Part List

NO	PART NAME	QUANTITY
100	BELT	1
101	PULLEY	1
102	MOTOR	1
103	REAR TUB GROUP	1
104	SHOCK ABSORBER	2
105	SHOCK ABSORBER PIN	2
112	UPPER COUNTERWEIGHT	1
113	TUB SEAL	1
115	RESISTANCE FIXING WIRE / DRYER	1
117	FRONT TUB	1
118	TUB BELLOWS SEAL	1
119	TUB BELLOWS CLIP	1
120	FRONT COUNTERWEIGHT	1
121	RESISTANCE GROUP	1
122	COUNTERSUNK HEAD BOLT8X25 TORX	4
124	COUNTERSUNK HEAD BOLT M 8X29	1
126	COUNTERSUNK HEADBOLT M6x22 INOX	6
160	DRUM GROUP	1
206	TUB ENTERANCE WITH BELLOW HOSE	1
211	PRESSURE SWITCH HOSE	1
212	PRESSURE SWITCH WATER RESERVOIR	1
213	TUB EXIT WITH BELLOW HOSE	1
234	SPRING TYPE HOSE CLAMP ø32.7	1
244	SPRING TYPE HOSE CLAMP ø9.6	1
501	SPRING TYPE HOSE CLAMP ø44.4	1
503	RESISTANCE FIXING WIRE HOUSING PLASTIC PART	1
502	SCREW CLAMP ASSEMBLY	1
506	SCREW 3,5x7 PAN HEAD WITH COLLAR CROSS RECESS	2
507	RESISTANCE PROTECTION FOIL 1-C	1
513	HEXAGON HEAD BOLT 6X30 PT TYPE-3	17
514	HEATER HOUSING ASSEMBLY GROUP	1
515	SCREW 8X30 PAN HEAD WITH COLLAR TORX	6
516	HEATER HOUSING CABLE ROUTER PLASTIC PART	1
539	BLOWER HEATER HOUSING SEALING FOAM	1
540	FAN HOUSING CABLE ROUTER PLASTIC PART	1
542	FAN GROUP	1
543	CONDENSER TUB GASKET	1
544	CONDENSER	1
545	SCREW 5x14 PAN HEAD TORX	6
546	CONDENSER FAN GASKET	1
547	MAGNET HOUSE	1
548	SPRING TYPE HOSE CLAMP ø18.2	1
550	VALVE CONDENSER HOSE	1
700	TUB HANGER SPRING PART-2	2
800	TUB SPRING	2
806	WASHER 8,5X35X3	3
808	MUSHROOM HEAD SQUARE NECK BOLT M8X65	3
809	UPPER COUNTERWEIGHT WASHER 9x30x3	3
810	CONICAL SPRING WASHER 8.4X18X2	4
811	UPPER CONCRETE SUPPORT SHEET IRON PART	3
812	M8 NUT	3
813	PLASTIC LIFTER	3
900	HEXAGON HEAD BOLT 10X52	4
901	WASHER 10.5X40X2.5	4
925	DRYER NOZZLE	1

7.4 – DETERGENT DRAWER GROUP PARTS

7.4.1. Exploded View
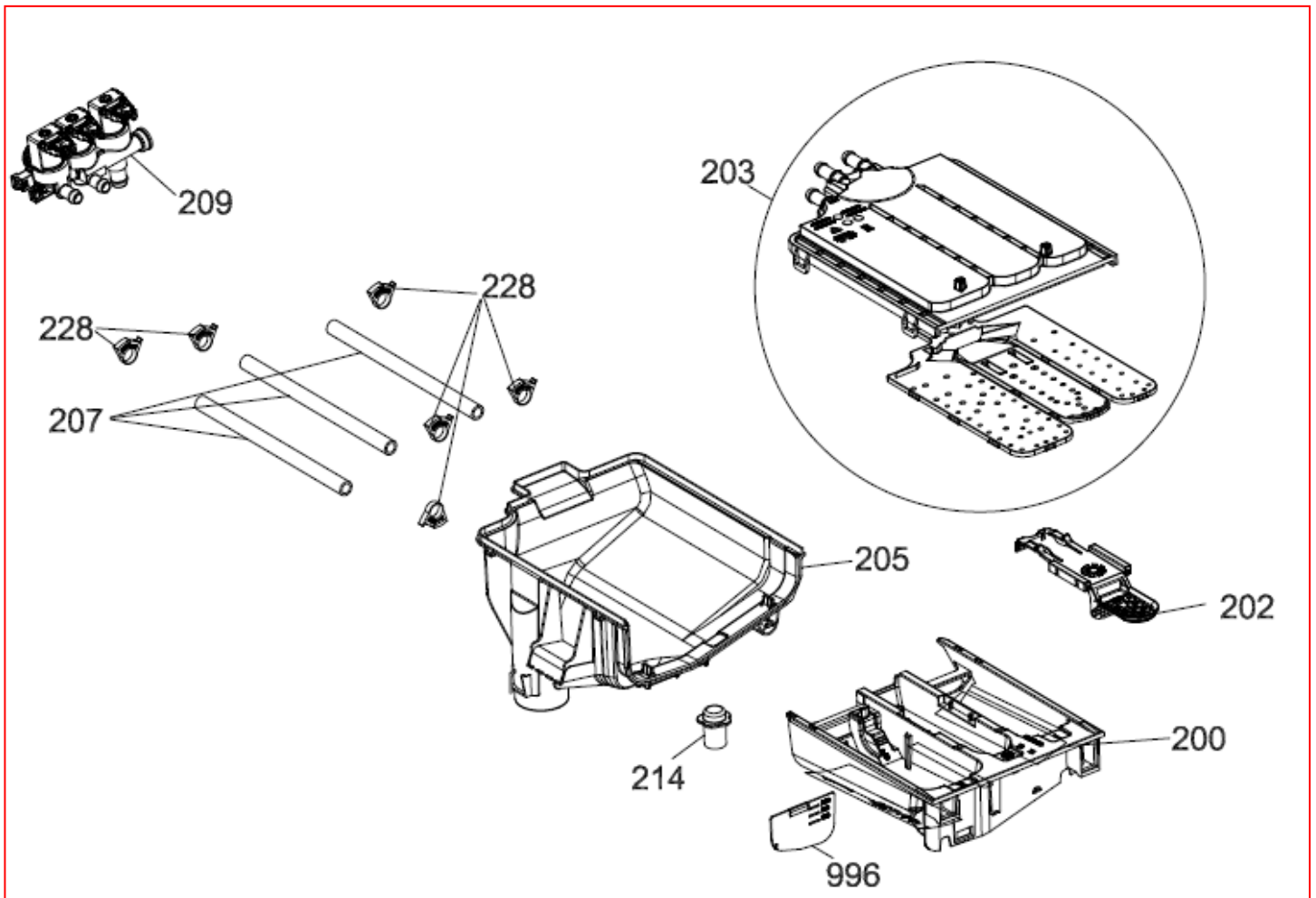
7.4.2. Spare Part List

NO	PART NAME	QUANTITY
200	DETERGENT DRAWER	1
202	SIPHON COVER	1
203	WATER DISTRIBUTION PLATE GROUP	1
205	DETERGENT DRAWER HOUSING	1
207	VALVE-DETERGENT BOX HOSE	1
209	VALVE(TWO EXIT)	1
214	DETERGENT DRAWER LOCKING PART	1
228	PLASTIC HOSE CLAMP	6
996	LIQUID DETERGENT LEVEL PLATE	1

7.5 – BODY GROUP PARTS

7.5.1. Exploded View
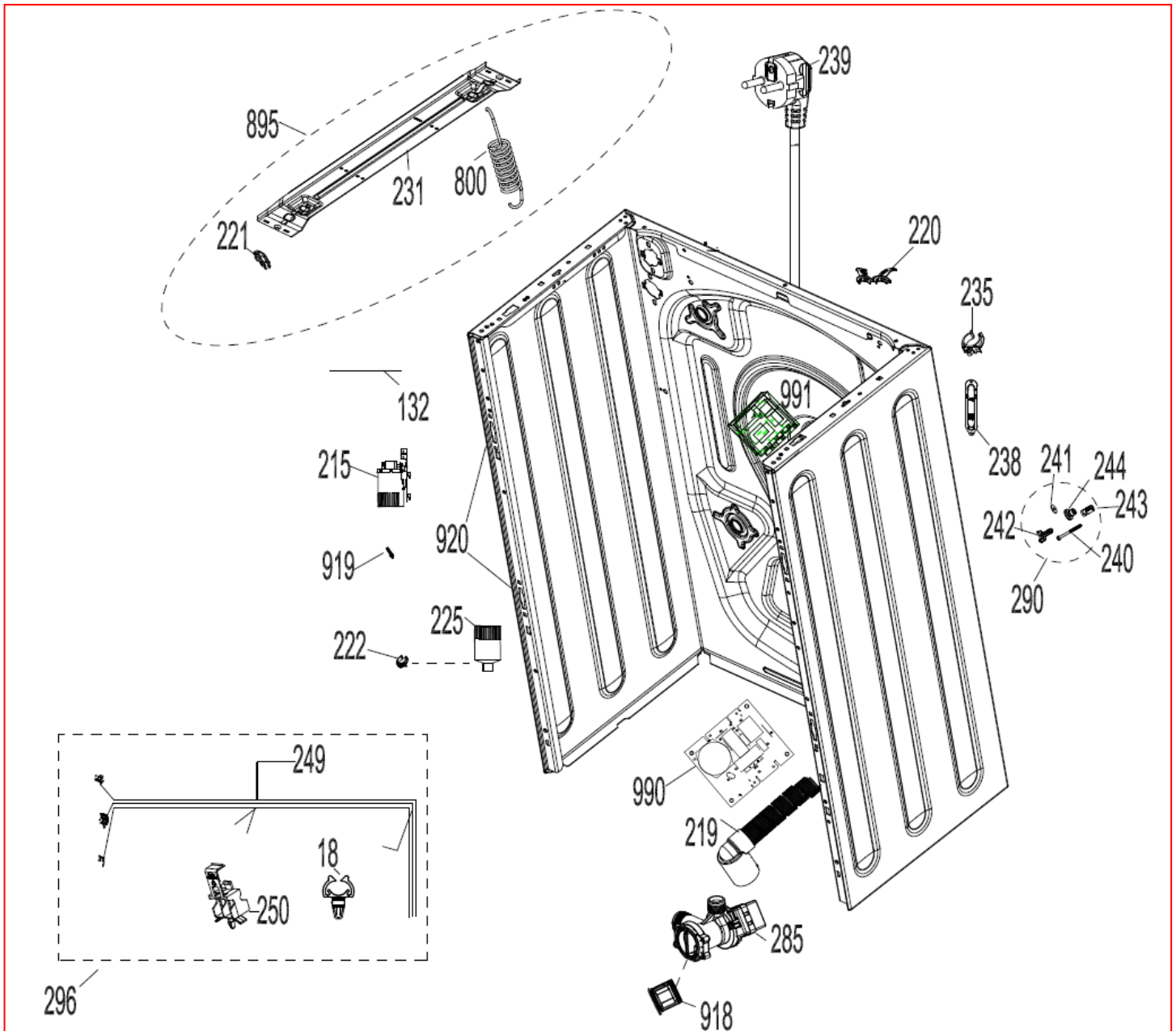
7.5.2. Spare Part List

NO	PART NAME	QUANTITY
285	PUMP GROUP	1
220	DRAIN HOSE ROUTER PLASTIC	1
219	DRAIN HOSE	1
225	PRESSURE SWITCH	1
215	PARASITE FILTER	1
296	CABLE GROUP	1
249	CABLE HARNESS	1
250	CABLE HARNESS HOLDER PLS	1
251	CABLE HOLDER AND ROUTER PLASTIC-L	1
252	PCB BOX SOCKET HOLDER-S1	1
253	PCB BOX SOCKET HOLDER-S2	1
254	PCB BOX SOCKET HOLDER-S3	1
800	HANGER SPRING	2
221	HANGER SPRING SHEETIRON PLS.	2
231	SPRING HANGER SHEETIRON	1
236	DRAIN HOSE AND CABLE HOLDING PLS.	2
235	DRAIN HOSE HOLDING PLS	2
239	POWER CORD GROUP	1
222	PRESSURE SWITCH MOUNTING CLIP	1
238	SPEED CONTROL HOLE STOPPER	1
242	TRANSPORT SCREW PLASTIC A	4
243	TRANSPORT SCREW PLASTIC B	4
240	TRANSPORT SCREW	4
241	WASHER 8,6*36*2	4
231	TUB HANGER SPRING PART	1
237	TRANSPORT SCREW STOPPER	5
290	TRANSPORT SCREW GROUP	4
920	FRONT PANEL DROP FIXING PLASTIC	4
990	DC CARD	1
991	DRYER BOARD	1

7.6 – DOOR GROUP PARTS

7.6.1. Exploded View
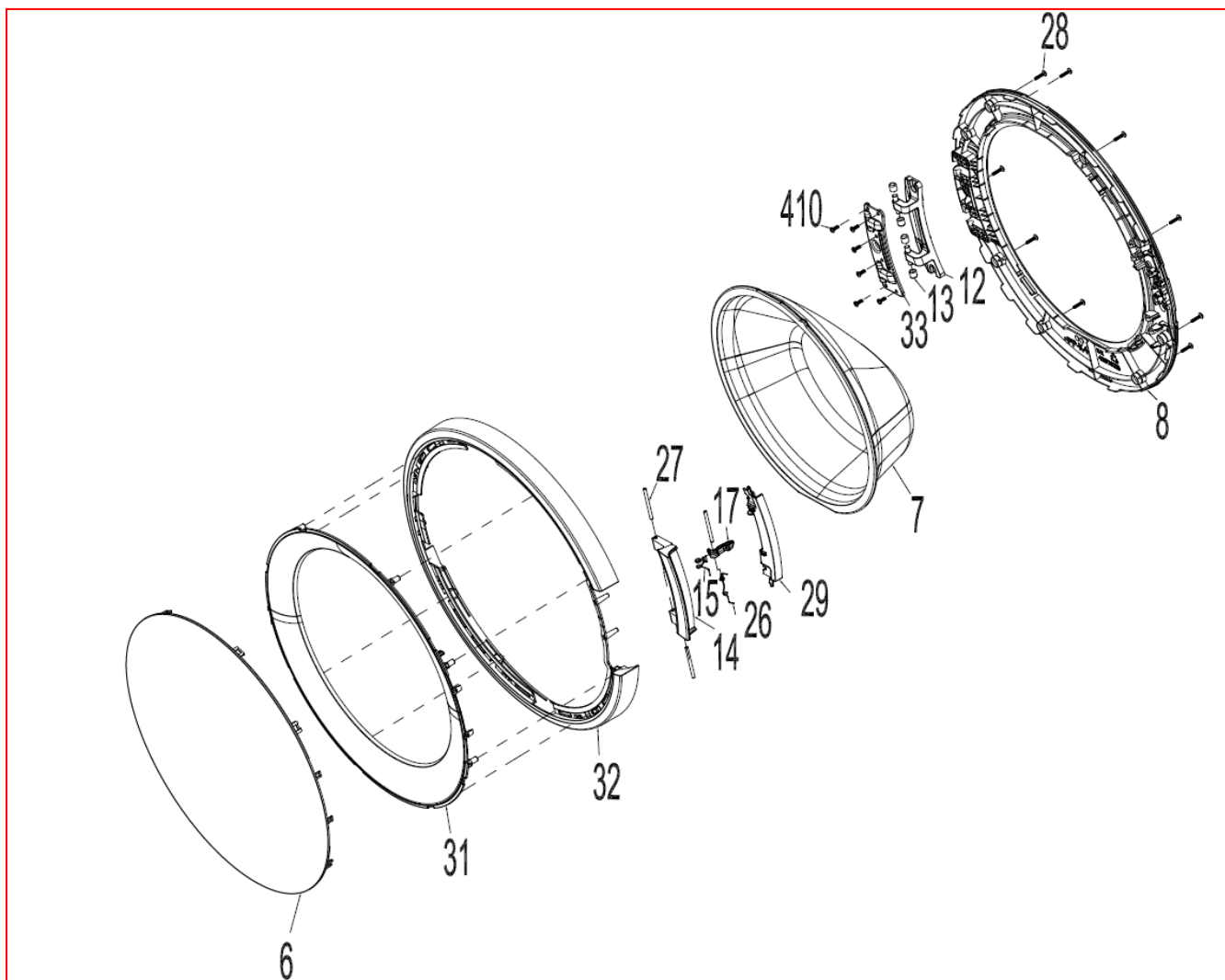
7.6.2. Spare Part List

NO	PART NAME	QUANTITY
6	FRONT DOOR COVER	1
7	DOOR GLASS	1
8	INNER DOOR PLASTIC	1
12	HINGE	1
13	HINGE BUSH	4
14	DOOR HANDLE	1
15	HOOK SPRING	1
26	HANDLE SPRING	1
27	HANDLE PIN	3
28	SCREW 3,5X16 PAN HEAD WITH COLLAR UNDER HEAD SERRATED	9
29	OUTER DOOR PLASTIC INSERT PART	1
31	OUTER DOOR PLASTIC INNER FRAME	1
32	OUTER DOOR PLASTIC	1
33	DOOR HINGE SUPPORT SHEET	1
410	SCREW 4X12 PAN HEAD WITH COLLAR UNDER HEAD SERRATED	6
50	PORTHOLE GROUP (all parts)	1

8. Wiring Diagram