

Service Manual

Dishwasher

ADP 4300 WH

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	Family	WRC - IC LOW 3

This documentation is only intended for qualified technicians who are aware of the respective safety regulations.

Date: 19.07.2005

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Subject to modification

Technical data

Dimension

Height	82.0 - 87.0	cm
Width	59.7	cm
Depth	55.5	cm
Weight	50	kg

Wooden door for Integrable types

Thickness min.	16	mm
Thickness max.	20	mm
Width min.	592	mm
Width max.	595	mm
Height min.	515	mm
Height max.	600	mm
Weight max.	5.5	kg
Max. stick out over lower edge of appliance door	92	mm
Height of plinth min.	93	mm

Electronic boards

Service boards	see spare part list
Serial boards	see on the boards itself
Programmed control board and programming of version , see „ Board Service“ and „ DATA“ on rating plate of inner door:	
UCB	704812
Data set	704802
Basic UCB, not programmed see on the board itself	4619 727 04651

Succession of programs

Programs	see program diagram
Succession	P3a-P5b-P7a

Datas Energy Label

Reference program	P5b
Energy Performance	B
Cleaning Performance	B
Drying Performance	C

Program information

Start indicator

All programs will be locked after start. Changing the program or finishing the program will be possible only after pressing the start button for longer then 1.5 sec. (Break by customer)

A switching off the appliance or unplug the appliance for a while, this will frozen the program step and later on, the program continuos on the same position.

Exception: Switching off the appliance or unplug the appliance during the drying phase, this will lead directly to the end of the program.

Water Volume at permanent spray system

Water	Volume	Level
Regeneration	0.3 l	15 mm
Back rinse 3x	1.0 l	60 mm
Prewash	4.8 l	120 mm
Main wash	4.2 l	118 mm
Intermediate rinse 1	4.2 l	118 mm
Intermediate rinse 2	4.2 l	118 mm
Clear rinse	4.2 l	118 mm
Safety/ overflow	8.5 l	141 mm

Measuring the level

Remove the coarse sieve, put in a measuring meter into the sump, measure the hight of the water level.

Detergent max.

Pre-wash	10	cm ³
Main-wash	40	cm ³
Rinse aid	135	cm ³
6 Dosage steps	1 - 6	ml

Water softener

Saltcontainer	2	kg
Resin container	700	cm ³
Regeneration dosage	300	cm ³

Water pressure

Inlet pressure	0.3 - 10	bar
Spray pump pressure	0.3	bar

Rotations

Spray pump motor	2800	RPM
Drain pump motor	3000	RPM
Spray arm lower	30 - 40	RPM
Spray arm upper	30 - 40	RPM

Technical data

Flow rates/ Inlet volume

Flow meter (at 0.3 bar = quantity 1.1 l/min)	208	lmp/l
Spray pump	65	l/min
Drain pump	16	l/min
Pump height max.	1.1	m
Inlet valve	4	l/min
Spray arm lower	~ 33	l/min
Sprayarm upper	~ 27	l/min
Sprayarm/ Shower top	~ 8	l/min

Electrical base data

Voltage	220/ 240	V
Frequency	50	Hz
Total power	2.0 - 2.2	kW
Fuse	10	A

Spray pump motor - permanent spray system

Voltage	220/ 240	V
Power consumption	80	W
Frequency	50	Hz
Resistance	30	Ω

Drain pump motor

Voltage	220/ 240	V
Power consumption	30	W
Resistance	146	Ω

Heating - 1 Element system

Voltage	220/ 240	V
Power consumption	1.87/ 2.04	kW
Resistance	24.5	Ω
Heating speed	~ 2.0	$^{\circ}\text{C}/\text{min}$
Temperature on surface	~ 115	$^{\circ}\text{C}$
Safety thermostat self reset		
(Temperature of water)	~ 85	$^{\circ}\text{C}$
Fuse	206	$^{\circ}\text{C}$

Water safty options

Waterstop system	Electronic aqua control
------------------	-------------------------

Single electric water inlet valve

Voltage	220/ 240	V
Frequency	50/ 60	Hz
Resistance	3.76	$\text{k}\Omega$

Regenerating valve

Voltage	220/ 240	V
Frequency	50/ 60	Hz
Resistance	3.13	$\text{k}\Omega$

Coil of dispenser

Voltage	220/ 240	V
Frequency	50/ 60	Hz
Resistance	1.3	$\text{k}\Omega$

Reed contacts

flow meter

NTC

20 $^{\circ}\text{C}$	58.1	$\text{k}\Omega$
25 $^{\circ}\text{C}$	47.1	$\text{k}\Omega$
30 $^{\circ}\text{C}$	38.2	$\text{k}\Omega$
40 $^{\circ}\text{C}$	25.4	$\text{k}\Omega$
50 $^{\circ}\text{C}$	17.2	$\text{k}\Omega$
60 $^{\circ}\text{C}$	11.8	$\text{k}\Omega$
70 $^{\circ}\text{C}$	8.3	$\text{k}\Omega$
80 $^{\circ}\text{C}$	6	$\text{k}\Omega$
85 $^{\circ}\text{C}$	4	$\text{k}\Omega$

Regeneration

Volume	300	cm^3
after wash cycles	depending on the water softener setting	
water hardness	0 - 40	$^{\circ}\text{dh}$
	0 - 10.7	mmol/l
	0 - 107	$^{\circ}\text{Fh}$
Salt consumption for regeneration	~ 77	g
Number of cycles with 2 kg salt	~ 26	

Technical data

Water softener setting

To change the water softener setting:

- Push the POWER button on
- Change to program 2
- Hold the START button for 5 seconds until the LED is flashing
- Water softener setting is shown by flashing LED
- By pushing the START button you can change the setting
- Push the POWER button off to save and exit the water softener setting

Water hardness	German degrees °dH	French degrees °fH	English degrees Clarke °e	mmol/l	Water softener setting is shown by flashing LED
1 soft	0 - 5	0 - 9	0 - 6,3	0 - 0.9	1 x
1 - 2 soft/ medium	6 - 10	10 - 18	7 - 12.6	1 - 1.8	2 x
2 medium	11 - 15	19 - 27	13.3 - 18.9	1.9 - 2.7	3 x
3 medium/ hard	16 - 21	28 - 37	19.6 - 25.9	2.8 - 3.7	4 x (DEFAULT SETTING)
4 hard	22 - 28	38 - 50	26.6 - 35	3.8 - 5.0	5 x
4 very hard	29 - 35	51 - 63	35.7 - 44.1	5.1 - 6.3	6 x
4 extremely hard	36 - 60	64 - 107	44.8 - 74.9	6.4 - 10.7	7 x

Accessory

If you need spare parts apart from the spare part list have a look in the Service Bulletin 4812 718 40084.

For higher mounted Dishwashers to prevent the drain off effect - also usable for lower drain pipes and to prevent the failure F8 use Kit 4812 310 18993.

Spare part list

Model ADP 4300 WH
Service No. 851176443810
Version 851176443810

Pos. No.	12NC Code	Description
003 0	4812 440 19594	Traverse
004 0	4812 440 18952	Drip tray assy
004 1	4812 401 18402	Holder
011 0	4812 505 18357	Foot short
022 0	4812 440 10755	Side panel left
022 1	4812 440 10754	Side panel right
024 0	4812 440 10417	Panel, rear
024 5	4812 440 10944	Damper fix Motor synch
030 0	4812 310 18916	Table top cpl. WH
034 0	4812 404 78237	Spacer
040 1	4812 417 18774	Hinge left
040 2	4812 417 18773	Hinge right
040 3	4812 417 19172	Protector f.door (set)
044 0	4812 492 38358	Spring f.door
047 0	4812 404 48746	Brake f.door
047 1	4812 401 18397	Band,brake
047 2	4812 404 68023	Hook
053 0	4812 440 89031	Plinth WH
061 0	4812 466 88672	Counter weight
103 0	4812 440 10758	Door outer
120 0	4812 440 19456	Door,inner
120 1	4812 440 18969	Batten
130 0	4812 417 58373	Tilt lock cpl. bk
131 0	4812 401 18416	Hook lock
191 0	4812 466 68564	Gasket door
192 0	4812 466 68467	Gasket, door lower
241 0	4812 458 19027	Basket upper straight
241 1	4812 458 18324	Holder cups right wh
241 3	4812 528 88068	Wheel,basket upper (set)
241 8	4812 466 68553	Spacer cap set
241 9	4812 528 88101	Wheel,basket basket upper
242 0	4812 310 28134	Basket lower KIT
242 1	4812 528 88069	Wheel,basket lower wh
242 4	4812 466 48091	Fixation grey
243 0	4812 458 18272	Basket cutlery
261 0	4812 462 79831	Rail telescope, inner
261 1	4812 462 79768	Cap rail rear
261 2	4812 310 18972	Cap rail front
263 0	4819 520 18013	Ball cage cpl.
263 1	4812 310 48026	Service kit balls plastic
301 0	4812 453 72769	Control panel ADP 4300 WH
301 1	4812 452 79742	Nameplate Whirlpool
303 1	4812 460 38148	Plate,handle
331 0	4812 413 59155	Knob program cpl. WH
332 0	4812 410 29163	Button Start
332 3	4812 410 29166	Button ON/OFF WH
350 2	4812 381 28068	Light guide
400 0	4812 361 58334	Motor +SP,50Hz,per.HP-PNT
400 1	4812 466 68776	Spacer support motor/sp
421 0	4812 121 18158	Interf.filter
430 0	4812 360 18508	Pump,draining cpl.
430 1	4812 466 68689	Gasket
450 0	4812 259 28684	Heating element
480 0	4812 321 28424	Cable harness (EBL) without LS6
480 3	4812 401 18418	Protector f.wiring

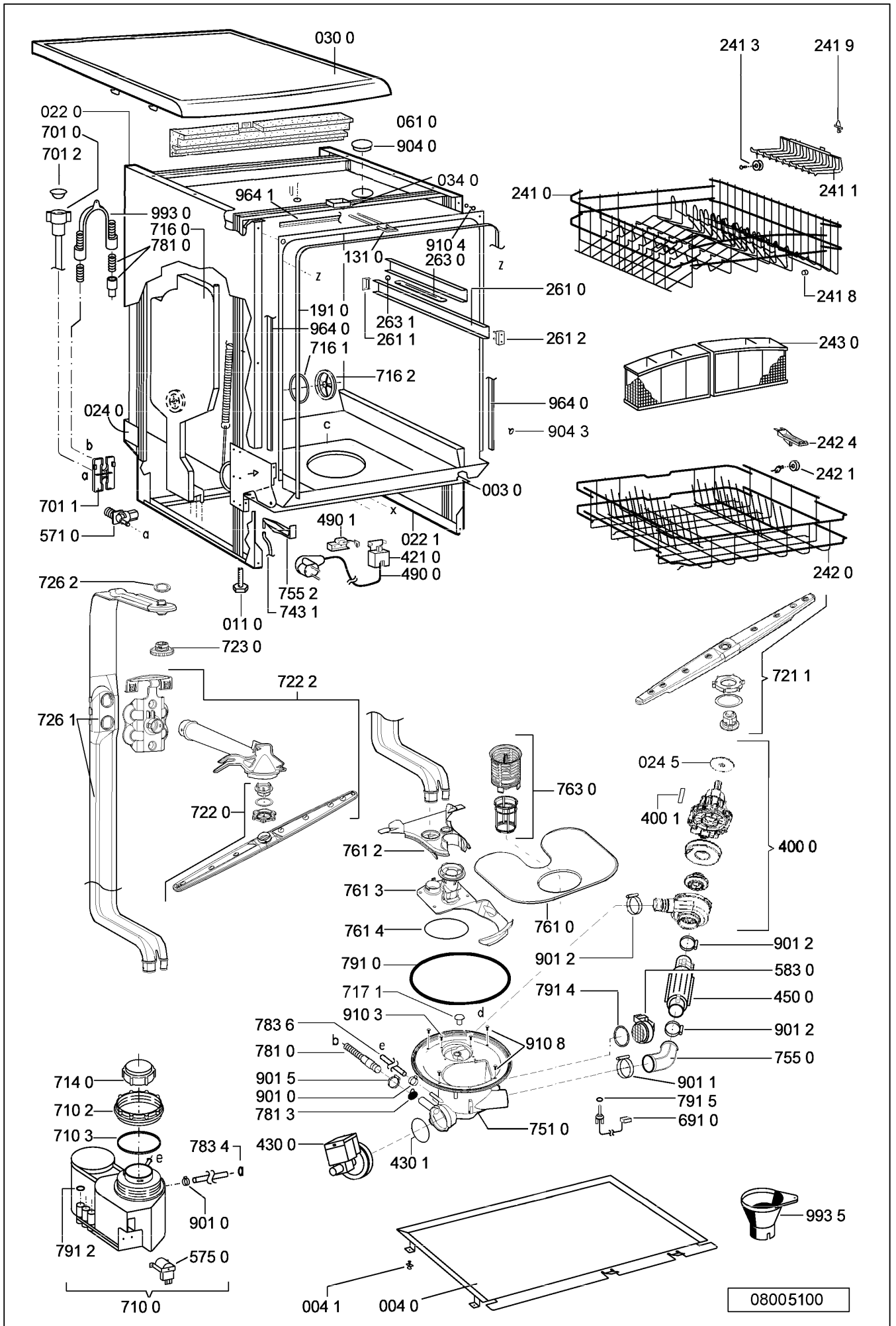
Pos. No.	12NC Code	Description
490 0	4819 321 18136	Cable,mains 2m SA
490 1	4812 321 28367	Strain relief
521 0	4812 218 38218	User board (UCB)
521 8	4812 530 78066	Axle program knob grey
571 0	4812 281 28379	Valve inlet
575 0	4812 281 28361	Regen.valve
583 0	4812 271 28407	Switch diaphragm
621 0	4819 410 29004	Switch ON/OFF
633 0	4812 271 38355	Microswitch door
680 0	4812 418 68332	Combidosage cpl.
680 1	4812 466 68495	Gasket
681 1	4812 466 68497	Gasket
681 2	4812 440 18975	Flap
682 0	4812 466 68496	Gasket
691 0	4812 282 68035	Feeler NTC
701 0	4812 530 28081	Hose, inlet 3/8Z cpl. 5m
701 1	4812 310 18302	Yoke
701 2	4822 480 50159	Sieve inlet
710 0	4812 418 68149	Monoblock
710 2	4812 310 38896	Threaded ring
710 3	4819 466 69562	Gasket set
714 0	4812 462 79906	Threaded cap saph
716 0	4812 418 68147	Reg.dosage with flowmeter
716 1	4812 466 68475	Gasket
716 2	4812 462 78994	Cover
717 1	4812 462 79793	Stopper
721 1	4812 360 68689	Spray arm lower. cpl. sa
722 0	4812 360 68687	Spray arm upper sa
722 2	4812 360 68693	Spray arm 2nd level cpl. saph
723 0	4812 360 68691	Douche ceiling
726 1	4812 530 29331	Tube assembly cpl.saph
726 2	4812 505 18208	Nut
743 1	4812 530 28102	Hose, inlet
751 0	4812 418 18338	Water collector
755 0	4812 530 29119	Bend
755 2	4812 530 48148	Tray,leak
761 0	4812 480 58122	Sieve fine
761 2	4812 418 18337	Cover sieve
761 3	4812 418 18341	Cover
761 4	4812 530 58141	O-Ring
763 0	4812 480 58123	Sieve coarse
781 0	4812 530 29113	Hose,draining
781 3	4812 281 28417	Flap non-return
783 4	4812 530 28888	Hose
783 6	4812 530 28796	Hose 10x3x180+10
791 0	4812 532 68099	Gasket
791 2	4812 530 58093	Gasket
791 4	4812 466 68503	Gasket
791 5	4812 466 68504	Gasket
901 0	4822 401 10258	Clamp,hose 10-18 mm
901 1	4812 401 18424	Strap 050,0
901 2	4812 401 18157	Strap 32-50/9 C61
901 5	4812 401 48573	Strap 028,6
904 0	4812 462 78998	Threaded cap
904 3	4812 462 79636	Cover WH 3,5x4

Spare part list

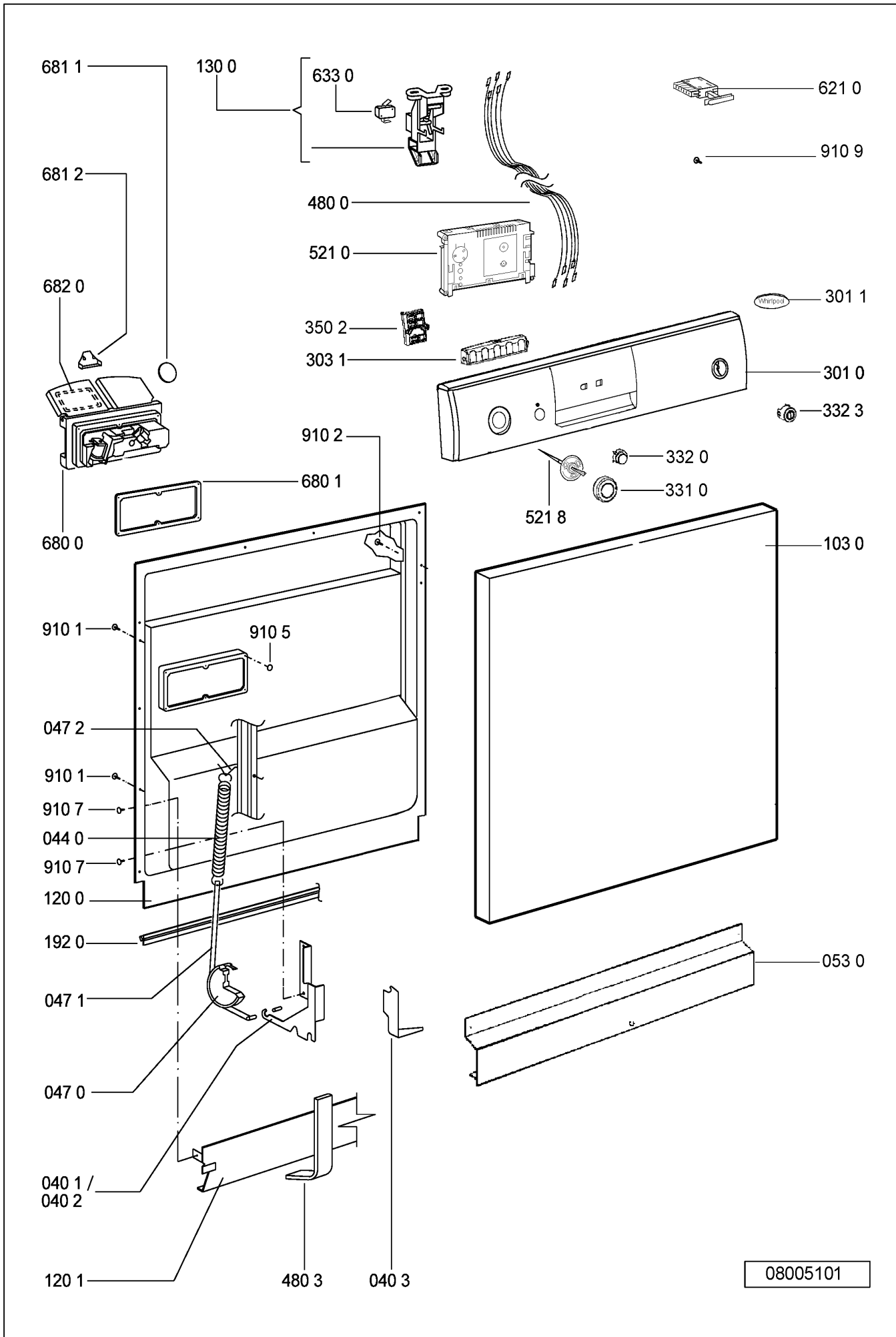
Model ADP 4300 WH
Service No. 851176443810
Version 851176443810

Pos. No.	12NC Code	Description
910 1	4812 502 18394	Screw 3,5x14-H
910 2	4812 502 18363	Screw 4,0x12-H
910 3	4812 502 18527	Screw 4x15 T20
910 4	4812 502 18385	Screw M3,5x8-T15M
910 5	4812 502 18393	Screw 3,5x9-1 Tx15
910 7	4812 502 18397	Screw INOX A2 M 5X12
910 8	4812 502 18389	Screw 5x20 T20
910 9	4812 401 18425	Screw 2,5x18-H
964 0	4812 466 68536	Gasket housing ri/le
964 1	4812 466 68469	Gasket housing upper
993 0	4819 530 29028	Bow
993 5	4822 532 80216	Funnel salt

Exploded view

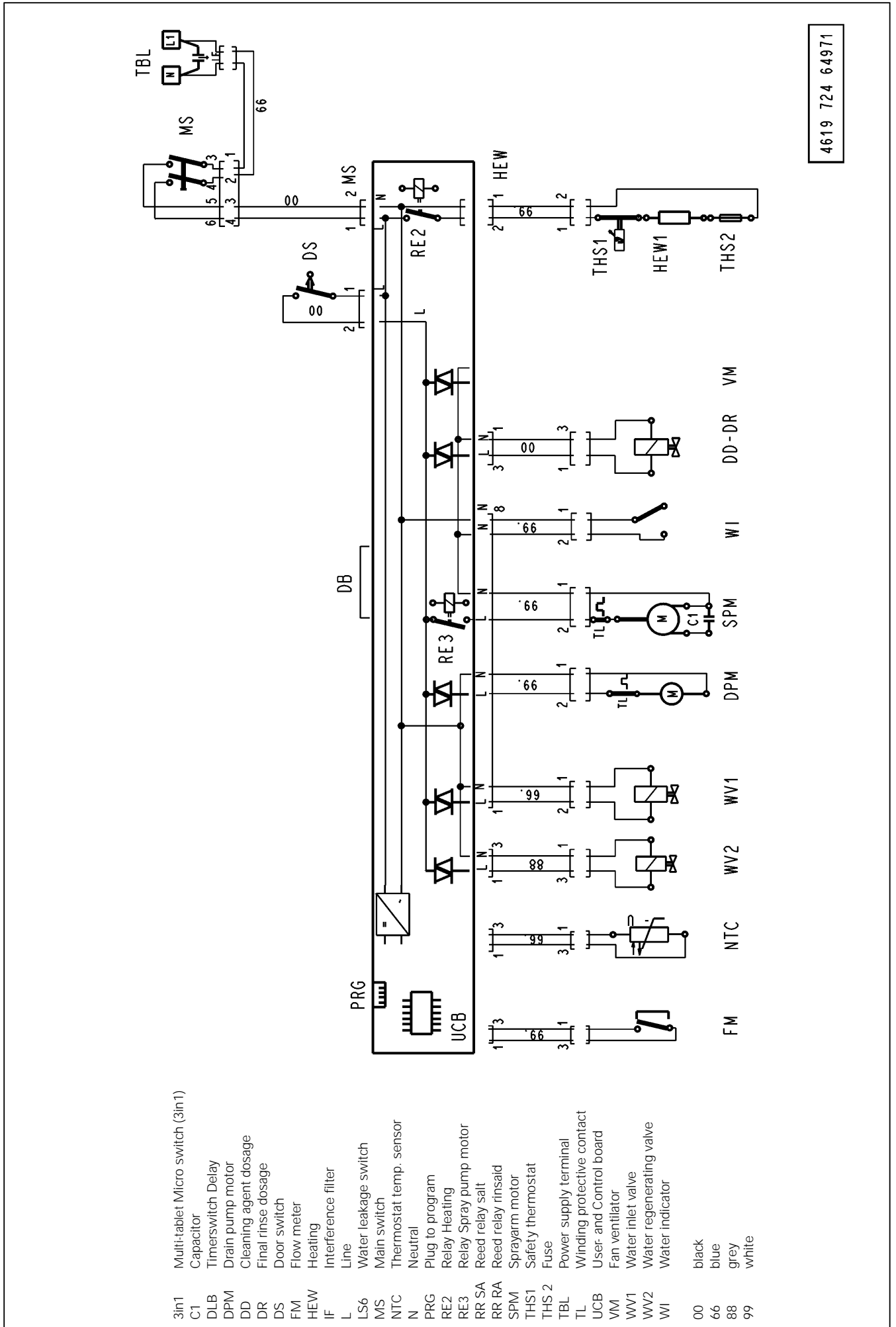


Exploded view



08005101

Circuit diagram



- | | |
|-------|----------------------------------|
| 3in1 | Multi-tablet Micro switch (3in1) |
| C1 | Capacitor |
| DLB | Timerswitch Delay |
| DPM | Drain pump motor |
| DD | Cleaning agent dosage |
| DR | Final rinse dosage |
| DS | Door switch |
| FM | Flow meter |
| HEW | Heating |
| IF | Interference filter |
| L | Line |
| LS6 | Water leakage switch |
| MS | Main switch |
| NTC | Thermostat temp. sensor |
| N | Neutral |
| PRG | Plug to program |
| RE2 | Relay Heating |
| RE3 | Relay Spray pump motor |
| RR SA | Reed relay salt |
| RR RA | Reed relay rinsaid |
| SPM | Sprayarm motor |
| THS1 | Safety thermostat |
| THS 2 | Fuse |
| TBL | Power supply terminal |
| TL | Winding protective contact |
| UCB | User- and Control board |
| VM | Fan ventilator |
| WV1 | Water inlet valve |
| WV2 | Water regenerating valve |
| WI | Water indicator |
| 00 | black |
| 66 | blue |
| 88 | grey |
| 99 | white |

Text/Legend

Test procedure for SERVICE-TEST-PROGRAM Point dishwashers appliances with and without 7 Segment Display and an Integrated Board.

Switch on the appliance.

1. If there is a defective component indicated, open up the control board (CB).
2. Check the component.
Unplug the indicated component from the control board (CB) and check it by using an ohmmeter.
If the resistance is not correct, check the cables to the component and check the component itself.
3. Visually check the control board (CB).
4. At the end of the repair start the appliance and delete the failure (press in the start button for more the 1.5 sec). After this, start the test program again to see that the failure is solved.

More details: see following pages.

Attention:

Danger of short circuit. Short circuits on components can damage the control board (CB).

If electronic boards are wet, do not switch the appliance on.

To check the appliance, plug in the appliance.

Failures, which occurred during the program will be stored and indicated by flashing the start LED.

The failure will be indicated and can be related to the failure table.

To erase the failures, you must push the start button longer than 1.5 seconds.

The failures:

F1 NTC break

F9 continuous water inlet

are checked and indicated immediately after start of the program.

Therefore these failures have to be solved before starting the test program.

When these failures are not solved, the test program does not run.

The electrical components get their voltage via triac from the control board (CB). To test the voltage the voltmeter must be connected in parallel to the component (the component must be connected). If the component is disconnected, then the output voltage from the control board (CB) is reduced.

After starting a program this program is locked. That means neither by unplugging/switching off the appliance nor by setting to another program, the first set program cannot be changed. Changing of the program is only possible by pushing the start button again for longer than 1.5 sec..

Attention: New service control boards start at first with the service test program. This test program is without back rinsing. Dangerous for overfilling the appliance, in case the appliance is not empty. By running the test program or another program a second time, the back rinsing will be carried out as usual.

4619 724 72701-1

Text/Legend

Handling of failures

- F1. NTC break
Temperature out of the normal value (-3°C till +85°C)
- Temperature inside higher than +85°C
- NTC defective
- Dishwasher is frozen, less than -3°C
If the temperature is less than -3°C, fill the appliance with a cup of warm water to warm it up before you start it..
- F2. **Water Leakage**
- Water is in the drip tray
Floater (LS6) switches off the WV1 and the electronic switches on the DPM until WI reports that it is empty.
- F3. Heating System Defective
Indicated after app. 25 minutes (1. check after 5 min., after that follow 2 more checks, before the failure is indicated)
- Heats too slowly (less than 1.5 °C in 10 min.)
- Heating (HEW) defective
- Relays (RE2) on control board (CB) is defective
- NTC - resistance fluctuation
- F4. Draining Failure
Drain pump starts and after 4 min. the WI detects that it is "not empty"
- Drain pump (DPM) defective
- Siphon closed
- Control board (CB) defective
- WI defective. (doesn't switch back anymore)
- F6. Water Tap Closed
Water valve (WV1) is switched on but flow meter (FM) sends no impulses (less than 10 imp. in 10 sec.) and the water indicator (WI) is off (empty)
- Water tap closed
- Water inlet hose blocked
- Water inlet valve (WV1) defective
- F7. Flow Meter Failure
Water inlet valve (WV1) is switched on and the water indicator (WI) is on (full).
- Flow meter (FM) sends too few impulses (less than 10 imp. in 10 sec.)
- Water tap closed during water inlet
- Water inlet hose blocked
- Water inlet valve (WV1) defective
- Flow meter (FM) defective










Text/Legend

- F8. Water Level Failure.
Failures are supervised over the whole program.
Spray pump works, the WI switches more than 20 times in 2 minutes back.
- WI defect? Should switch on after approx. 1 Ltr
- Sieve blocked
- Water strongly foams
- Pot has over turned and has filled with spray water
- No stable spray pump (SPM) pressure.
- F9. Continuous Water Inlet
Water inlet valve (WV1) is switched off, water indicator (WI) on, flow meter (FM) sends impulses (more than 10 imp. in 10 sec.)
- Water inlet valve (WV1) mechanically not closed
- Triac (CB) permanently switched on. (short circuit)
Reaction: interval 30 sec. drain pump on / 20 sec. drain pump off in interval
- FA. WI Failure
If the electronic signal of the Flow meter has been received for the 3.4 Ltr. of water on permanent wash system and the WI signal "Water in the sump" is missing then an failure is recorded.
- FE. EPROM Failure
After the start of the test programme the EPROM is immediately checked for errors and an error is displayed if any are found.

Text/Legend

Failure Display POINT

Appliances with 1 and 2-digit 7 Segment Display and without 7 Segment Display

Alarm / Failure	Failure code, Indication in test program when a failure occurs
	Shown with 7 segment display or without 7 segment display
F1 NTC-Failure	 1 x flash 1s Pause 1 x flash.....
F3 Failure in Heating System	 3 x flashes 1s Pause 3 x flashes.....
F4 Draining Failure	 4 x flashes 1s Pause 4 x flashes.....
F6 Water Tap closed	 6 x flashes 1s Pause 6 x flashes.....
F7 Flow Meter Failure	 7 x flashes 1s Pause 7 x flashes.....
F8 Water Level Failure	 8 x flashes 1s Pause 8 x flashes.....
F9 Continuous Waterinlet	START  9 x flashes 1s Pause 9 x flashes.....
FA WI-Failure	START  11 x flashes 1s Pause 11 x flashes.....
FE EPROM Failure	START  15 x flashes 1s Pause 13 x flashes.....

 LED flashing

Text/Legend

Attention:

If you can't start the test program (Start button doesn't flash), normally there is one of the following failures detected: F1 or F9.

When these failures are not solved before, the test program will not run. After solving the failure you must "sign" (erase) the failure.

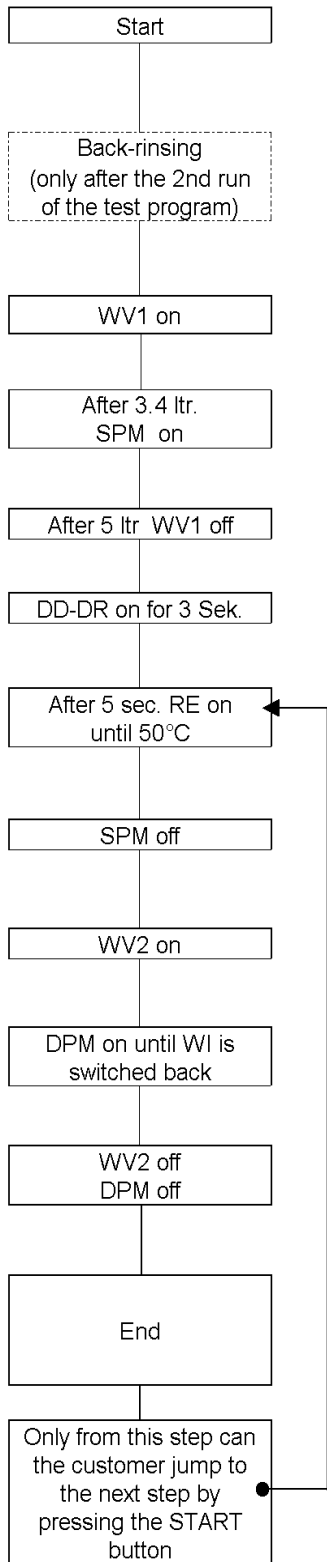
If a failure is indicated directly after you switch on the appliance. Then fix the mistake, erase failure and start the test program again (see following start procedure).

Start procedure**Start the test program if there is no failure indicated**

1. Turn OFF appliance at the Mains.
2. Select program position 1.
3. Push start button and hold it.
4. Turn On appliance still holding the start button.
5. Release the start button when the Start-LED flashes.
6. Start the test program by pushing the start button again.
7. Failure indication.
8. Repair the failure.
9. Solve the failure by pushing the start button for longer than 1.5 sec.
10. Start the test program again, to see, if the failure really is solved.

Text/Legend

Test Programme



Remarks

The test program runs to the failure position and stops or, if there is no failure, it runs to the end.

To leave the test program push the start button for longer than 1.5 second's.

Not enough salt or rinse aid will not stop the running of the appliance.

When the failure position is reached the failure indication is indicated on the page "Failure Codes"

Attention:

If you can't start the test program (Start button doesn't flash), normally there is one of the following failures detected: F1, or F9

When these failures are not repaired, the test program will not run. After solving the failure you must "sign" (erase) the failure.

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