Coffeemaker Grind & Brew

HD7766/00/D





Philips Consumer Lifestyle

ServiceManual

PRODUCT INFORMATION

Safety

- This product meets the requirements regarding interference suppression on radio and TV.
- After the product has been repaired, it should function properly and has to meet the safety requirements as officially laid down at this moment.

TECHNICAL INFORMATION

•	Voltage	:	220-2 4 0∨
	Frequency	•	50 Hz
	Power consumption	•	1000W
		•	Black / Metal
	Color setting	:	BIACK / Metal
•	Dimensions		
	Appliance $H \times W \times D$		
	F-Box L x W x H	:	320 x 280 x 505 mm
•	Cord length	:	0,8 m
•	Filter size	:	lx4
•	Contents		
	Jug (max.)		: 1320 mL
	Water container (min.)		: 264 mL (2 cups)
	Water container (max.)		: 1320 mL (10 cups)
	Avg. water loss during br	ew	v process : 10%
•	Materials		
	Appliance	:	PP
	Metal wrap	:	Stainless steel
	Jug	:	Glass
	Hoses	:	Silicon
•	Brew time (max.)	:	10 min
•	Temperature (full jug)		> 80 °C
•	Keep warm time	:	120 minutes
	-	:	30 min per WK1501
			for EU countries only
			•

• Auto Shut-off time

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Subject to modification



: 30 mins

TECHNICAL INFORMATION

HD7766/00/D

De-scaling

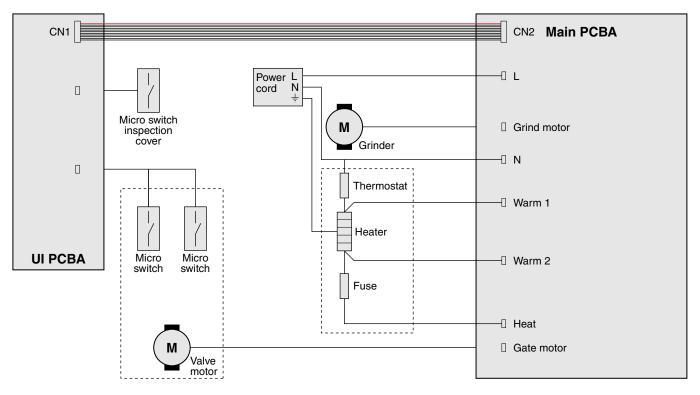
When the appliance indicates it needs to be descaled, operate the coffeemaker a few times with vinegar or with a 10-15% solution of either vinegar (acetic acid), citric acid or tartar acid, into cold tap water.

Use a paper filter to catch any particles coming out. Do not use other de-scaling agents as these may harm the appliance.

If this procedure does not restore the function, then switch off the coffeemaker when the acid is passing through. Keep the appliance in this condition overnight and continue/ repeat the cleaning operation.

After the de-scaling procedure, operate the coffeemaker twice with tap water in order to rinse any residual substances.

Schematics



TECHNICAL INFORMATION

Self-Check mode

The appliance is equipped with a self-check mode, this enables you to quickly check the function of the main components of the unit.

	Keep the On/Off button pressed while plugging the mains cord into the socket.	Left side display	Right side display
	Hardware version	СН	201
Press any other button		СП	201
	Software version	СН	0004
Press any other button			
	Heating element enabled	СН	T
Press any other button			
	Heating element disabled	СН	2
Press any other button			
	Grinder motor enabled	СН	3
Press any other button		СН	4
Press any other button	Grinder motor disabled + 6 Beeps	Сп	7
These any other button	Microcontroller check	СН	5 = ok EI = Nok
Press any other button			
·	Zero-cross detection	СН	6 = ok E2 = Nok
Press any other button			
	Valve micro switches	СН	CLO = valve is closed
Press any other button		СН	= valve is working
		СН	OPE = valve is open
	Inspection window micro switch	L- = Closed	8
Press any other button	_	H- = Open	8
Press any other button	Thermostat	СН СН	= Thermostat closed 0000 = Thermostat open
Tress any other button	Rotary knob	2	9
Press any other button		-	
·	Rotary knob rotate clockwise	Increasing	9
	Rotary knob rotate anti-clockwise	Decreasing	9
	LED check	All digits on	All digits on
Press any other button			
	LED check	All digits off	All digits off
Press On/Off button			
	Stand-by		

REPAIR INSTRUCTION

Repair of this appliance should be carried out on part and or assembly level, most repairs can be allocated to a couple of main components:

• Bean container and duo-bean mechanics

Disassembly instructions until Step 1.

• User interface assy

Disassembly instructions until Step 4.

When in the UI panel itself has been disassembled, please make sure the wire and flat cable seal is properly installed. Upon reinstallation of the complete panel, please make sure the seal underneath the UI panel is put back.

Main PCBA

Disassembly instructions until Step 4.

When only the PCBA needs replacement, skip steps I - 3. Upon reinstallation of the PCBA, please make sure the PCBA holder slides back into its guiding recesses. Please note the position of the Grinder (DC-motor), and Synchro-motor (AC-motor) leads, when reversed the appliance will not start up.

• Grinder

Disassembly instructions until Step 6, skip step 3 and 5.

It is not advisable to disassemble the grinder, as this will disrupt the grinders' calibration. In production special tools are used to adjust the grind-fineness to the optimal level.

• Synchro motor + valve and seal

Disassembly instructions until Step 6, skip step 3 and 5.

When the valve and or seal have been removed, please make sure that the seal does not get damaged, and that the seal gets reinstalled correctly. The seal is critical to seal the grinder from steam coming from the coffee filter.

• Heater, bottom water supply

Disassembly instructions Step 4 and 5.

It is not advisable to disassemble the heater from the keep-warm plate. Heat-conductive paste should be applied to ensure optimal heat transfer from the element to the plate, jug and coffee.

Top water supply

Disassembly instructions Step I and 2.

The Silicon hose between the elbow joint and the showerhead does not need to be removed to uninstall this component, when the hose does need replacement, make sure the hose clamps are put back properly, this is to prevent leakage. When the showerhead has been removed it should be cleaned from any residual liquid gasket and new liquid gasket (supplied in tubes of 45 g.) should be applied to ensure a proper seal.

• Complete Base, incl. metal wrap

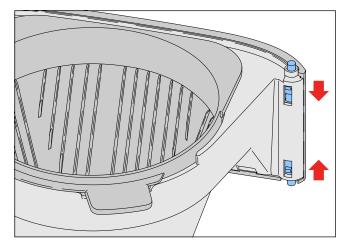
Disassembly instructions Step 4 and 5.

The main PCBA and Heater assy need to be taken out completely, the base is screwed to the top by means of 6 screws.

DISASSEMBLY INSTRUCTIONS

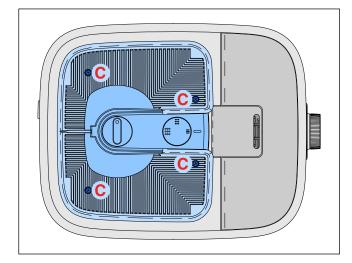
HD7766/00/D

Remove all removable and detachable items like the Bean container lid, jug, filter holder and brush. The filter door can be removed for convenience by undoing both latches on the top and bottom side of the hinge.



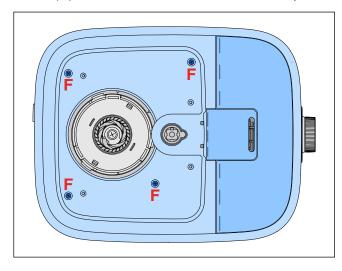
Step I: Bean container removal

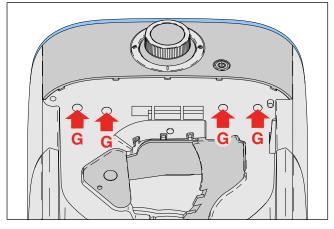
To remove the complete bean container, including Duo-Bean feature, remove the 4 screws (C) inside the bean container.



Step 2: Top cover removal

The top cover can be opened by removing the four screws (F) located underneath the Bean container and the four screws (G) accessible from the underside of the UI panel.

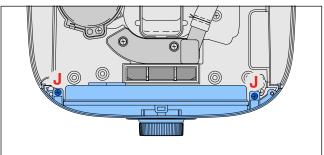




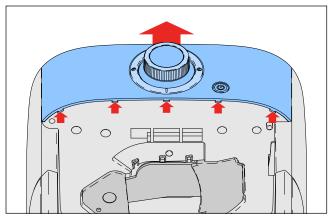
Please note the cable connecting to the Inspection window detection switch. The Water Level Indicator (WLI) cannot be removed without damaging the Top cover. When the top cover needs to be replaced the WLI can be reused, when the WLI needs to be replaced a new top cover needs to be ordered as well.

Step 3: UI panel removal

To be able to remove the UI panel, you need to disconnect the leads to the Synchro motor, and the flatcable to the main PCBA. The UI panel is held in place by two screws accessible from the top side of the appliance, and 5 clicks accessible from the bottom side of the UI panel. Unscrew both screws (J).



Undo the snaps by tracing the curve of the UI panel with a flat-head screwdriver, while pulling the UI panel upwards.



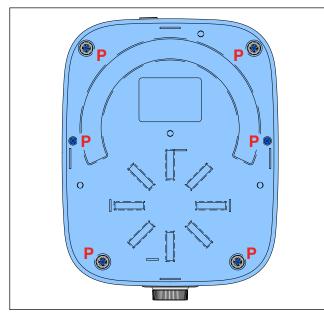
The UI panel can be disassembled, the rotary knob can simply be pulled off, the rotary encoder is secured by a single nut, remove the nut. The PCBA cover is held in place by six screws (L), once unscrewed the PCBA can be taken out. Please mind the rubber seal, preventing steam from reaching the UI PCBA.

DISASSEMBLY INSTRUCTIONS

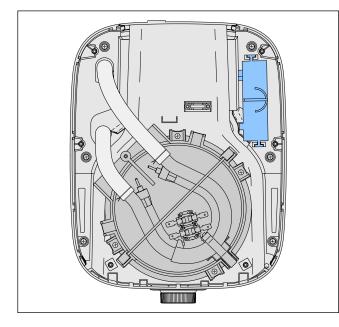
HD7766/00/D

Step 4: Bottom cover & Main PCBA

To be able to replace the components in the top side of the appliance (like the Grinder and Synchro motor), their leads need to be disconnected from the main PCBA. To reach the main PCBA, remove the six screws (**P**) in the bottom cover, four of them are located underneath the rubber feet.

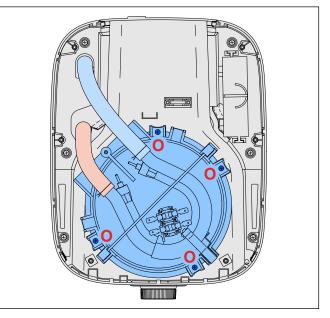


The PCBA is in the plastic box indicated in blue, some leads need to be released before you can take out the PCBA completely.



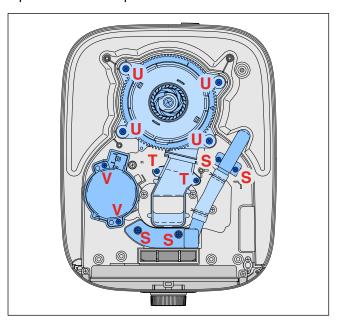
Step 5: Heater assy

To replace the heater assy disconnect the leads from the main PCBA and the Silicon hoses from the pinions on the heater. Only the four screws ($^{\circ}$) indicated below hold the heater assy (incl. keep warm plate) in place. The top silicon hose is the cold water intake, the bottom silicon hose is the hot water output. It connects to the top water supply.



Step 6: Grinder, Synchro motor and Water supply

To remove the Grinder, disconnect its leads from the main PCBA and undo screws (\cup). To remove the Synchro motor remove its leads from the main PCBA and undo screws (\vee). The top water supply, consisting of the shower head, silicon hose, elbow and riser pipe, can be removed by undoing screws (S), only when the Silicon hose needs replacement the clamps need to be undone.



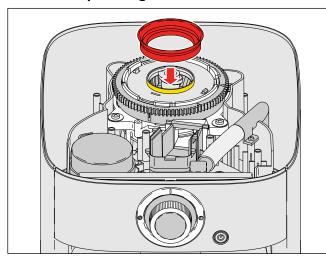
REASSEMBLY INSTRUCTIONS

HD7766/00/D

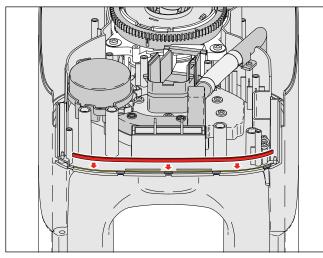
Basically the reassembly needs to take place tracing the steps needed to disassemble the appliance. There are some critical attention points:

All the gaskets in the appliance must be reinstalled properly

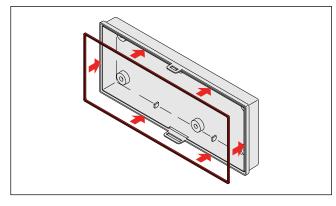
Gasket on top of the grinder



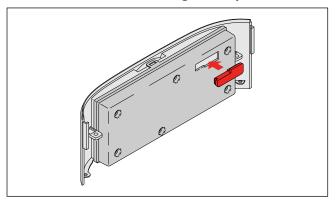
Gasket under the UI panel



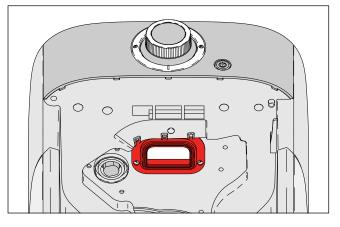
Gasket of the UI panel



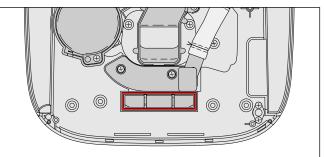
Gasket for the wires entering the UI panel



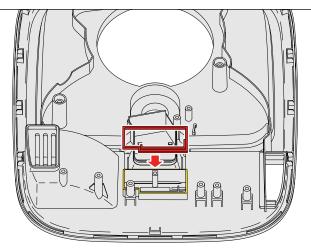
Gasket for the valve / Synchro motor



Gasket for the steam vent



Gasket for the steam base

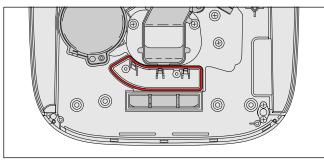


REASSEMBLY INSTRUCTIONS

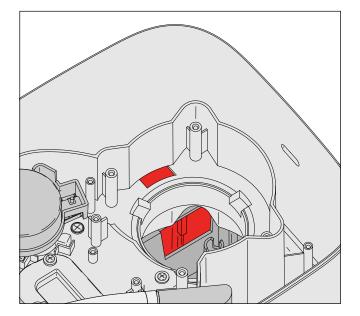
HD7766/00/D

All the liquid seals, when broken, need to be replaced. This includes cleaning the mating surfaces and applying sufficient new liquid sealing.

Gasket of the Shower head

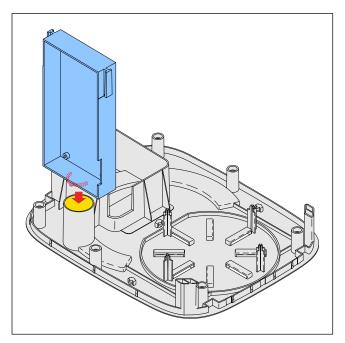


When the UI panel or Synchro motor has been removed, special attention is needed to the proper wire routing from top to bottom. All wires must pass through the slots as indicated in red in the cross section below. They may not be passed through the opening for the Grinder.



Bottom Cover

Upon reinstallation of the bottom cover, please mind that the notch on the PCBA holder fits into the recess of the bottom cover.



PARTS LIST

P	os	Service code	Description	Pos	Service code	Description
	Т		Door assembly	9	9965 100 64754	Steam vent seal
I	10	9965 100 64722	Filterholder assy	10	9965 100 64759	UI assy seal
I	20	9965 100 64767	Filterdoor assy	12	9965 100 71806	PCB assembly in box
	2	9965 100 73714	Jug assy Aroma swirl	13	9965 100 64749	Heater element assembly
	3	4222 459 48951	Brush	1315	9965 100 64719	Thermostat / fuse
	4	9965 100 64753	Bean container cover	14		Base assembly
	5		Bean container assy	4	9965 100 64729	Base plate
5	510	9965 100 64723	Ground fineness knob	1412	9965 100 64736	Foot
5	511	9965 100 64726	Knob cover	15	9965 100 64746	Grinder coarseness adjustor a
5	512	9965 100 64774	Selector knob	16		Water supply assembly
5	513	9965 100 64756	Top localizer	1610	9965 100 64733	Elbow
5	514	9965 100 64745	Bottom localizer	1611	9965 100 73719	Spout hose
5	515	9965 100 64741	Spring	1612	9965 100 73718	Spout /D
5	516	9965 100 64735	Shield	1614	9965 100 64748	Riser pipe
5	517	9965 100 64718	Bean tray	17		Valve motor assembly
5	518	9965 100 64776	Selector axle	1710	9965 100 64761	Valve motor
	6	9965 100 64766	Grinder seal	1711	9965 100 64732	Bracket + switches
	7	9965 100 64752	Top cover assembly	1712	9965 100 64757	Switch actuator
7	710	9965 100 65253	Water lid	18	9965 100 64777	Filter locker kit
7	711	9965 100 65252	Inspection window	19	9965 100 73715	Grinder assy
7	712	9965 100 65255	Seal	20	9965 100 73716	Top housing /D
7	713	9965 100 64742	Water level indicator	21	9965 100 73759	Valve seal kit
7	15	9965 100 75345	Locker assembly	22	9965 100 64768	Valve kit
7	/20	9965 100 65254	Micro switch assy	2310	9965 100 64773	Bottom housing
	8	9965 100 71811	User interface assembly ASO	24	9965 100 71915	Clamp
٤	310	9965 100 64725	Cable seal	25	9965 100 71917	Hose Tank to Heater incl. valve
8	811	9965 100 64721	Back cover	26	9965 100 71844	Shower head seal
ε	812	9965 100 71809	UI PCBA ASO	27	9965 100 71916	Hose Heater to Shower head
ε	313	9965 100 64765	Seal	28	9965 100 72826	Power cord (EU)
٤	314	9965 100 64775	Front cover			
8	815	9965 100 64762	Rubber ring			
٤	816	9965 100 64727	Pin			
٤	817	9965 100 64769	Selector ring			
٤	818	9965 100 64737	Deco ring			
8	819	9965 100 64744	Knob + cover			
8	320	9965 100 64731	On/Off button			

EXPLODED VIEW

