Senseo® Original

HD6553/10

Service
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Philips Consumer Lifestyle

ServiceManual

Product information

- 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 : 230 V
- Frequency : 50 Hz
- Power consumption : 1450 W
- Standby power consumption : < 0.5 W
- Stand-by time : 30 min
- Contents reservoir : 750 cc
- Colour setting : Star white
- Functions :
  - Coffee boost technology
  - Crema improvement
  - Strength select
    (only for HD6554, HD6555, HD6556)

- **Materials**
  - Housing : PP
  - Housing : ABS (only for HD6556)
  - Water container : PP
  - Brew chamber : PA
  - Spout : POM
  - Hoses : Silicon
  - Drip tray & Driptray cover : PP
  - Drip tray cover : Stainless steel
    (only for some HD6556)
  - Lever : PC
  - Lever (Chrome painted) : ABS
    (only for some HD6556)

- **Consumer Replaceable Parts**
  - HD5009/01 Podholder 1-cup Black
  - HD5010/01 Podholder 2-cup Black
  - HD5011/01 Water container Sepia grey
  - CP0216/01 Water container Translucent
    (specific models)
  - CP0220/01 XL Water container Sepia grey
    (only for HD6555)
  - CP0217/01 Driptray cover Black
  - CRP116/01 Driptray cover Metal
    (only for HD6556)
  - CP0602/01 Spout
  - CP0603/01 Spout cover Black

Optional (accessories)

- No specific issues

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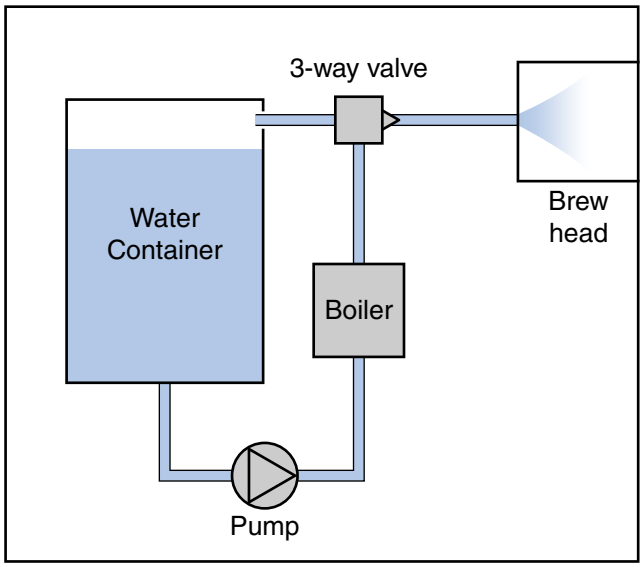
General coffee specifications:

In-cup volume (mL) Coffee	1-cup (ml)	1-cup Strength select (ml)
General version	122	60
French, Spanish version	100	60

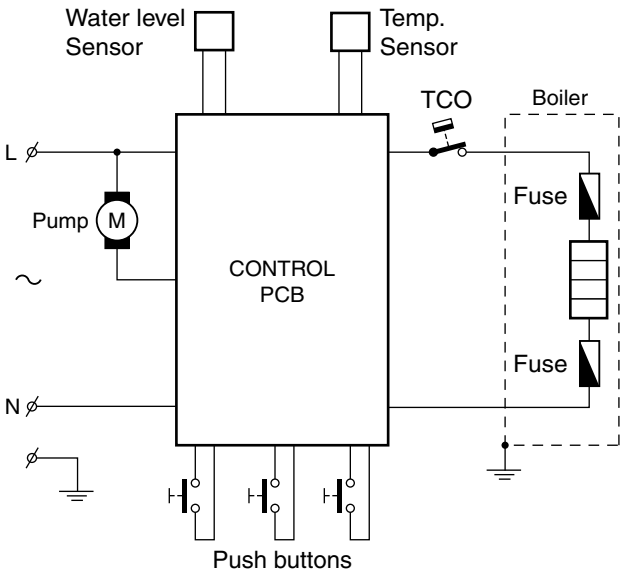
Temperature indication (°C)	1st cup temperature	2nd and further cup temperature
General version (122 ml)	>74 °C	>76 °C
French, Spanish version (100 ml)	>69 °C	>73 °C

Water specification in (mL) (without coffee pod)	1-cup (ml) (with 1-cup pod holder)	2-cup (ml) (with 1-cup pod holder)
General version (normal cup 122 ml)	133 ± 10	266 ± 10
French, Spanish version (normal cup 100 ml)	109 ± 20	218 ± 20
All countries (short cup 60 ml)	71 ± 10	142 ± 10
Difference between left/right volume:	<10ml	<10ml

Functional diagram



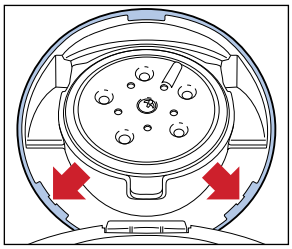
Electical diagram



Disassembly information

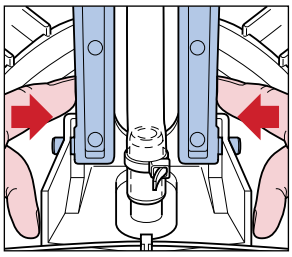
To remove the brew chamber lid cover handle as follows:

- Place the screwdriver on the positions (see picture 1) and lift the cover over the snap locks on both positions.



picture 1

- The cover lid can now be lifted up a little and to remove the complete cover including lever and push rod squeeze strongly with two fingers both legs of the push rod (see picture 2) to each other, so that the two pins will get out of the hinge position on the brew chamber.



picture 2

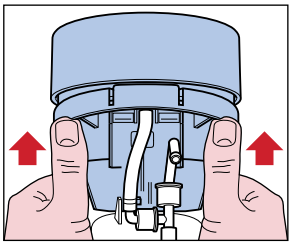
- To remove lever from lid cover, take a screwdriver and bend carefully the two lips/ribs in the lid cover outwards and push the lever with force out of the hinge.
- Reassemble follow steps backwards, without using a screwdriver.

To remove the back cover handle as follows:

- Remove valve outlet.
- Start at the upper side of the back cover and stick a screwdriver into the 2 snap locks positions and gently pull the back cover from the appliance so that a little chink between back cover and brew chamber becomes visible.
- Put the screwdriver in to the 4 rectangular holes (snap locks) at the back and gently pull the screwdriver such away that the lips of the snap locks are bent outwards.
- If all clicks positions are loose, it is possible to remove the back cover.
- Reassemble follow steps backwards.

Removing Brew chamber head handle as follows:

- Disassemble back cover!
- Place the appliance such a way that you are looking at the boiler.
- First remove the boiler from the snap lock position of the brew chamber.
- To remove the brew chamber, use your both thumbs (see picture 3) and push strongly with a little distortion (rotation) until the brew chamber comes loose.



picture 3

- Reassemble follow above steps backwards.

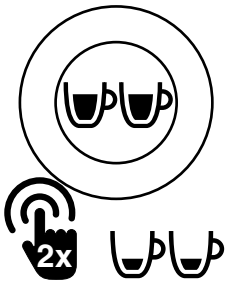
To reach the components placed on the base handle as follows:

- First remove back cover, brew chamber and 3-way valve.
- Remove both Torx T15 screws see exploded view in the near of position **A**.
- Bend the 2 click snap locks with a screwdriver (see base), and the housing can now be removed.
- To remove the rest of the housing unlock the last 4 snap locks at the base and gently pull of the front cover.
- To reassemble follow above steps backwards.

The new PCBA has an extra feature onboard “Intensity select”, which need to be enabled for the following type numbers (HD6554, HD6555 & HD6556).

Intensity select how does that work:

- Select the strong short coffee recipe by double tap on the 1-cups button for 1 cup of strong short coffee.
- Press the 1-cup button once for one large mild cup of coffee.



- Select the strong short coffee recipe by double tap on the 2-cups button for a double cup of strong short coffee.
- Press the 2-cup button once for two large mild cups of coffee.

Selecting the right PCBA modus.

Enable/Disable the “Intensity select” feature.

The PCBA is standard delivered with the “Intensity select” feature **disabled**, this for easy servicing the existing SENSEO® Original HD78xx & HD6553 range with OPR Boiler installed.

The “Intensity select” function can be simple enabled/disabled:

1. Hold the 2-cups button while applying power to the appliance.
2. Release the 2-cups button.
3. Press the 1-cups button to confirm the action of changing the “Intensity select” functionality.
4. Release the 1-cup button.

Once changed, please check functionality by making a coffee and double press the 1-cup coffee button, the volume of the coffee should be ±60ml. (water 61 – 81 ml)

To change back the “Intensity select” function again, simply repeat steps 1 to 4.

Volume adjustment procedure:

If you have replaced the PCBA for whatever reason, you always need to check/adjust the volume setting from this new PCBA. The PCBA coming from service has standard the WEU volume setting pre-installed.

Specification table, water specification normal/strong 1-cup SENSEO recipe:

In-cup volume (ml) water	1-cup (ml) (lower limit)	1-cup (ml) (upper limit)
General version	123	143
French, Spanish version	101	121
All countries	61	81

Due to the "Intensity select" function, the volume programing procedure has changed.

For proper coffee volume adjustment, for both volumes normal/smooth cup 122/100ml and short/strong cup 60ml two parameters need to be (re-)programmed.

1. Coffee volume 122 ml (WEU) / 100 ml (French/Spain)
   (Hall sensor should be activated, make sure a filled water tank is placed on the machine)
2. Scale factor (this scale factor, need adjustment to ensure that for both version 122/100 ml the small cup volume remains 60 ml.)
   (Hall sensor should be de-activated, make sure water tank is removed from the machine)

First setup, check current water specification:

1. Make sure boiler, is filled with water.
2. Switch appliance on and wait until the unit is ready to brew.
3. Place a 1-cup **pod holder without** a Coffee POD. (only adjusting with **plain** water)
4. Place a cup on the drip tray cover and push the one-cup button.
5. When the appliance has finished, you are able to perform the volume adjustment.

Adjusting the normal 1-cup volume (WEU or French/Spain)

6. Empty the cup, podholder and push again for one cup setting, measure the volume output with a graduated beaker. In the table above you can find the requirements for the minimum / maximum water volume output cc/ml values.
7. Unplug the appliance from the mains.
8. Make sure the **water tank** is **filled** and **placed** on the machine.
   (for adjusting the right parameter, the internal **SW** will check if the **water level sensor** is **activated** yes/no.)
9. Press the 1- and 2-cup button simultaneously and plug the mains on.
10. When above step succeeded the led will turn on continuously.
11. Depending if the volume has to de- or increase you have to push the one- or two-cup button.
    Every time you push the 1- or 2 cup button the LED will turn off for 0.5 second (feedback to user) and the pump time will be shortened or lengthened for 0.5 seconds depending which button was pushed.
    Pushing 1-cup button pump, time will be **shorten** with 0.5 sec is approximately - 3.5 cc/mL (less coffee)
    Pushing 2-cup button pump, time will be **lengthen** with 0.5 sec is approximately + 3.5 cc/mL (more coffee)
    When the volume has to increase with 10 cc for example, push the **2-cup** button 3 times.
    The new value will be stored when you switch the appliance off by pushing the on/off switch. (LED will turn off)
12. Turn appliance on again and brew one cup, measure the volume. In case the volume is not within specification repeat steps 6 - 12.

Adjusting the scale factor for the strong/short (60ml) cup volume.

13. Remove the **water tank** from the machine. (for adjusting the right parameter, the internal **SW** will check if **the water level sensor** is **activated** yes/no)
14. Press the 1- and 2 cup button simultaneously and plug the mains on.
15. Release the 1- and 2 cup button, if successful, the on/off LED will switch on less bright/intense as normal, indicating the scale factor reprogramming has entered.
16. Depending if the volume has to de- or increase you have to push the one- or two-cup button.
    Every time you push the 1- or 2-cup button, the LED will turn off for 0.5 second (feedback to user) and the scale factor will be shortened or lengthened depending which button was pushed.
    Pushing 1-cup button, scale factor will be **shorten** approximately - 1 cc/ml (less coffee)
    Pushing 2-cup button, scale factor will be **lengthen** approximately + 1 cc/mL (more coffee)
    The new value will be stored when you switch the appliance off by pushing the main switch. (LED will turn off)
17. Turn appliance on again and brew one strong coffee cup by pressing the 1-cup button twice, measure the volume. In case the volume is not within specification repeat steps 13 – 17.
18. End

Example table, switching from WEU to French/Spain specification or vice versa, you need to execute below:

Change volume setting	Adjusting normal/smooth 1-cup volume step 6- 12	Adjusting short/strong 1-cup volume step 13 - 17
WEU => French/Spain	Push 7x 1-cups with water in tank	16x 2cups without tank
French/Spain => WEU	Push 7x 2-cups with water in tank	16x 1cups without tank

Restoring the Boiler_empty flag to production default:

Sometimes it is needed, that the boiler of the SENSEO have to be emptied.

This for instance in wintertime were the possibility exists that the boiler becomes frozen during transport e.g.

For those occasions, it is handy to restore the **Boiler_empty_flag** again to production default.

Bringing the SENSEO back into production status, has the benefit the flush routine will be activated automatically when installed by the consumer, see topic **Automatic filling procedure**.

How to **SET** the **Boiler_empty_flag**:

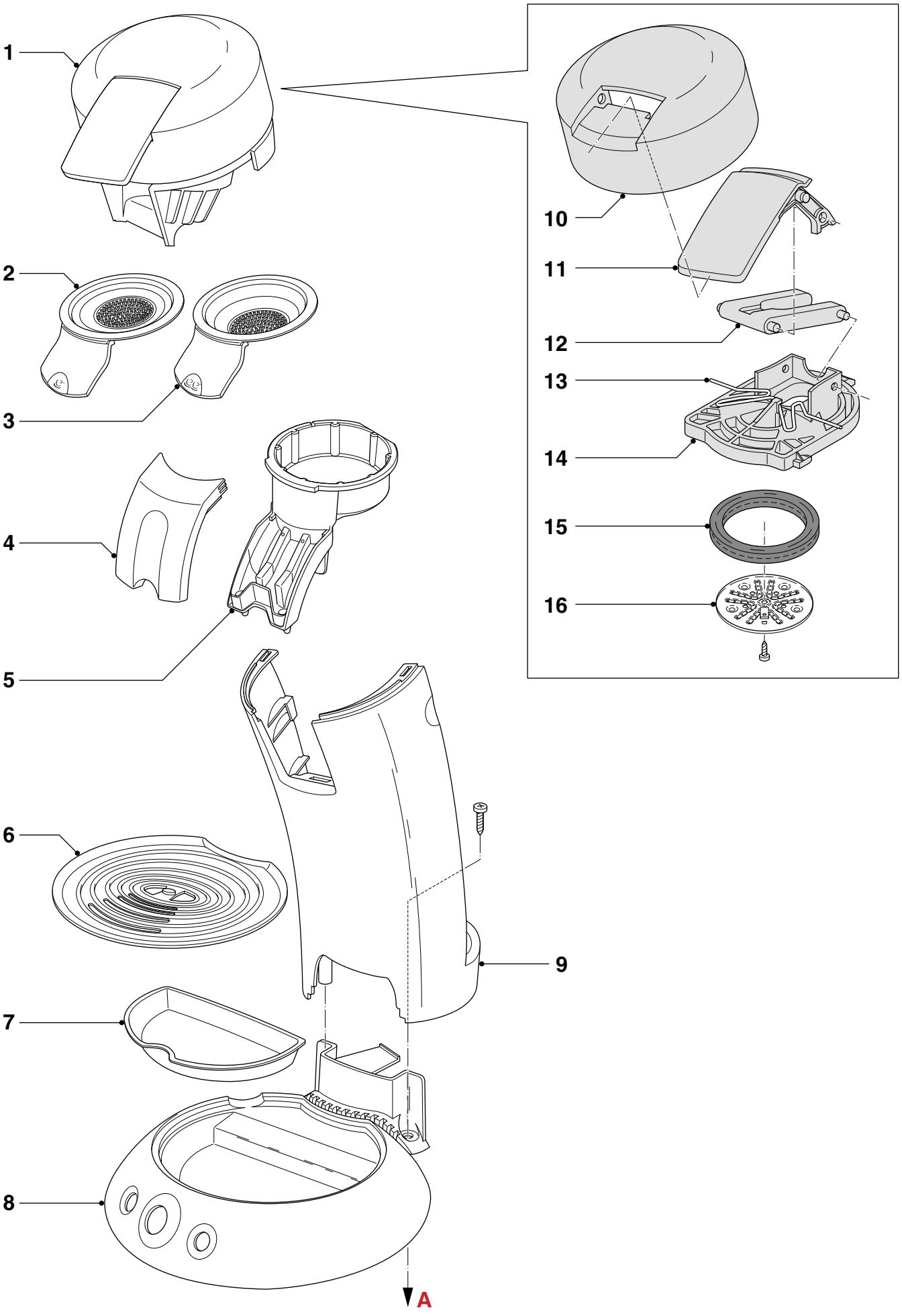
Keep the 1-cup button pressed while plugging in the power plug of the appliance in the mains socket.

The main switch LED will blink very rapidly for approximately 1 second.

To check if the **Boiler_empty_flag** is really set, reconnect the power plug to the mains a second time and push the main switch. The main switch LED should light continuously.

Pos	Service code	Description	Remark
1	4222 259 67811	Brew chamber assy Coffee boost	Star white
2	4222 259 62781	Pad holder assy 1-cup	Black
3	4222 259 62791	Pad holder assy 2-cup	Black
4	4222 247 77141	Spout cover	Black
5	4222 247 77131	Spout	Black
6	4222 247 66481	Drip tray cover	Black
7	4222 247 72531	Drip tray	
8	4222 247 74491	Front cover	Star white
9	4222 247 74501	Housing	Star white
10	4222 259 63611	Brew chamber lid printed	Star white
11	4222 247 74091	Lever	Black
12	4222 247 72881	Pushrod	
13	4222 240 06812	Slider spring	
14	4222 247 35835	Slider	
15	4222 247 07461	Brew chamber seal	
16	4222 259 67751	Distributor assy	Coffee boost
17	4222 259 59541	3-way valve	
18	4222 259 65481	Boiler assy OPR	230 V
19	4222 247 75271	TCO cap for OPR boiler	
20	4222 247 43690	Boiler pin cap	
21	4222 247 72551	Suspension bracket	
22	4222 247 06511	Pressure hose	
23	4222 259 68451	PCB assy OPR/Intensity select	230 V
24	4222 259 68401	Button frame printed	Black
26	4222 259 63422	On/off button printed	
27	4222 247 72932	Base plate	Black
28	4222 247 05130	O-ring	(NTC)
29	4222 259 39372	NTC assy	
30	4222 247 39963	Sensor housing	
31	4222 259 48665	Water container	Sepia Grey
32	4222 247 40982	Valve outlet	Black
33	4222 259 60151	Back cover assy	Black
34	4222 259 37244	Pump	230 V / 50 Hz
35	4222 247 05191	Pump damper	
36	4213 247 05256	Foot	
100	4222 244 50680	Ty-wrap	

[1)] When you replace the PCB the coffee volume has to be re-set to your country specific setting. Please carry out the Volume Adjustment Procedure to align the volume to your local specification (see table).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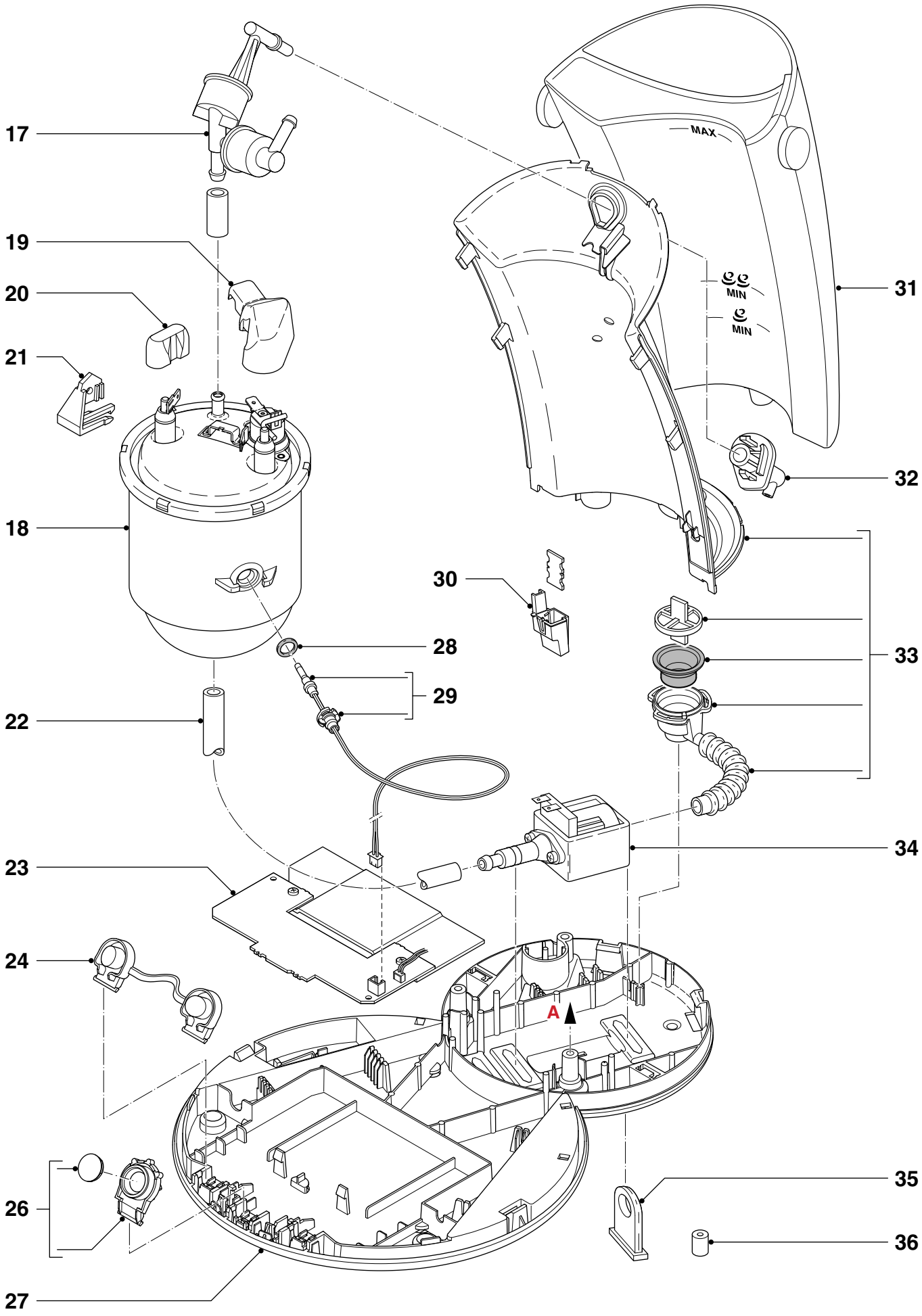

Version history

17/07 Version 1.1 : HD6553/10 initial release.