



Philips Consumer Lifestyle

Service Manual

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

- Colour : Deep Black & Basic Blue
- Battery type : Li-Ion
- Battery voltage : 12.8 V
- Charging time : 6 hour(s)
- Runtime : 80 min.

Usability

- Threshold climbing : 13 mm
- 24-hour scheduling
- Infrared sensors
- Types of Floors : Hardfloor
- Smart detection system : 12 sensors

Nozzles and accessories

- Exhaust filter, AC power adaptor, Side brushes (2 pairs)

Dimensions & weight

- Dimensions : 60.1 x 330 mm
- Product weight : 1.53 kg
- with packaging : 2.9 kg

Accessories included

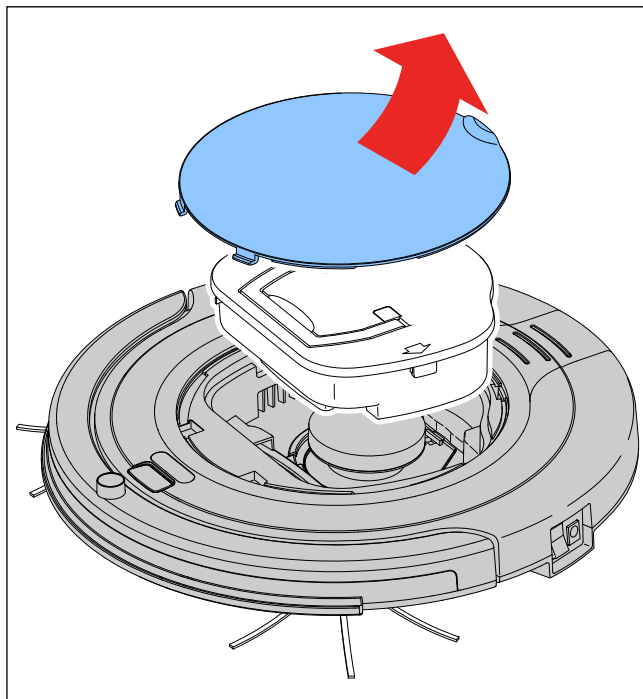
- Docking station

OPTIONAL (accessories)

- No specific issues

DISASSEMBLY - AND RE-ASSEMBLY ADVISE

- First make sure that the appliance is unplugged.
- To empty and/or replace the Dustbin assy, the Top Cover has to be removed (see picture).



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- Turn the appliance upside down .
- The brushes can easily be pulled out and replaced, after hearing the < click> the brush is placed in a correct way.
- Remove the battery cover by removing the 2 screws **A**, the battery can now be removed or replaced.
- To open the appliance:
First remove the cover of the Bumper assy by removing the 4 screws **B**.
Remove the Upper housing by removing the 6 screws **C**, 2 screws are positioned in the battery compartment, **be aware** to unplug the wire.
- Now the wheel can easily be pulled out and be replaced if necessary.
Remark: notice that each wheel assy have different wires to avoid mis-repair.
- To replace the inner parts of the Bumper assy:
Lift the Main PCB by removing the 4 screws **D**, now you can replace the Bumper bracket by removing the 2 screws.
- To replace the Fan motor:
Turn the Bottom housing upside down and remove the 2 screws **F**, unplug the connector. Now the Fan motor can be replaced and re-connected.

REPAIR INSTRUCTION

IR Sensors calibration for replacing PCBA

Purpose: IR Sensors have to be calibrated if replacing PCBA. In order to avoid to move backward and abnormally.

Calibration Steps:

Step 1: Power off device and short calibration enable pin to ground pin with jumper(wire) shown as Fig. 1 and Fig. 2.

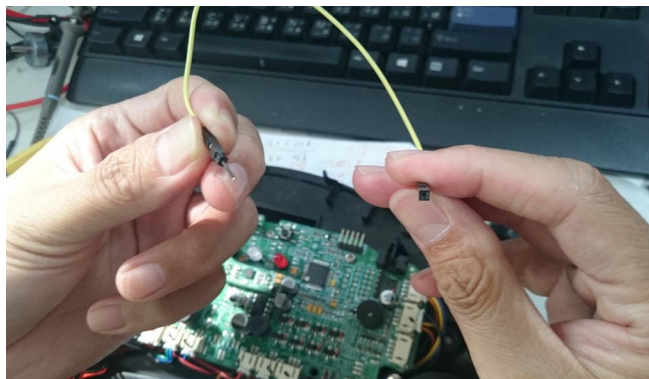


Fig. 1

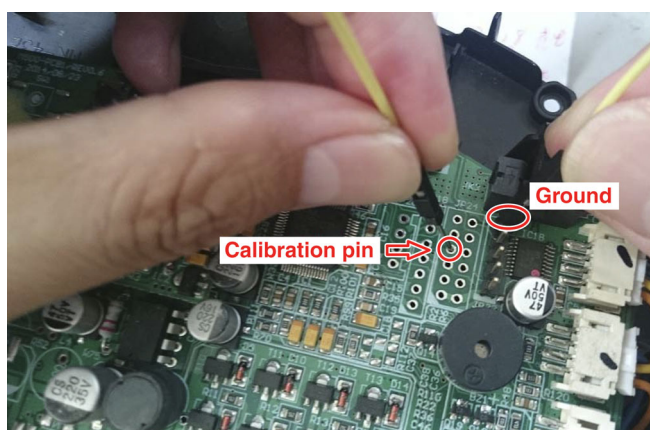
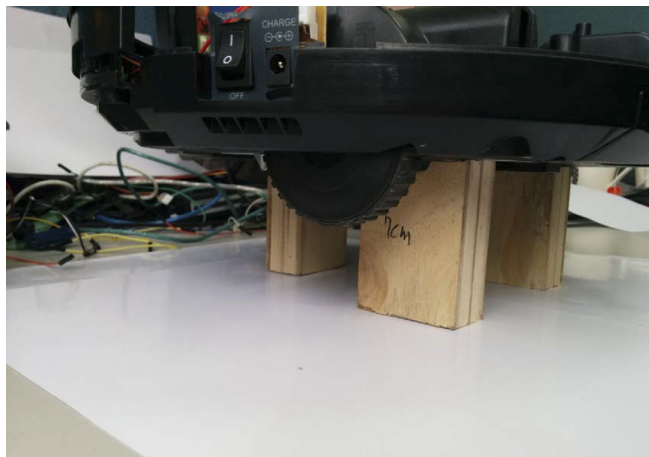


Fig. 2

Step 2: Put robot 7 cm height above calibration surface (AA papers).



Step 3: Power on Robot cleaner wait 5 seconds. Then the calibration is done. After finished the calibration, remove the jumper(wire).

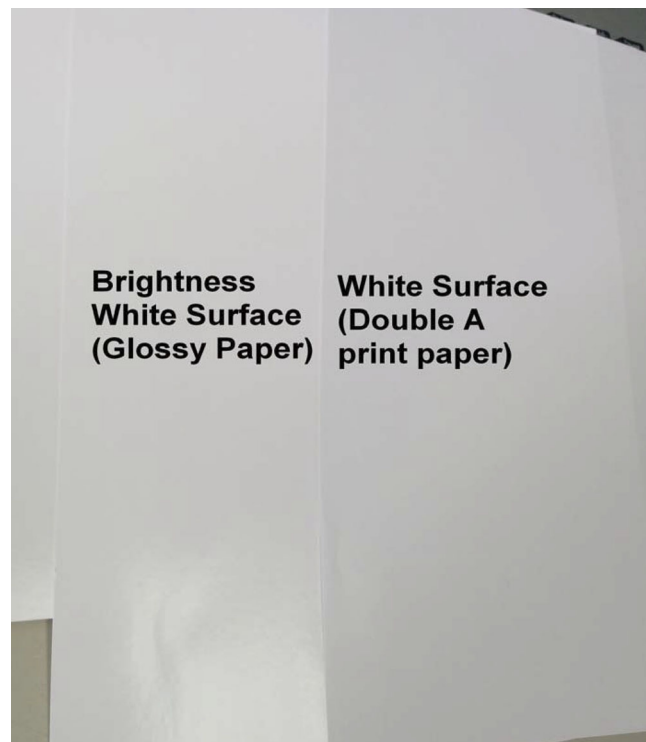
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After calibration the robot need to be tested for the drop-down sensors: This can be done on a table. If the robot does not fall from the table the calibration was done in a proper way.

Remark:

Material for white color reference:

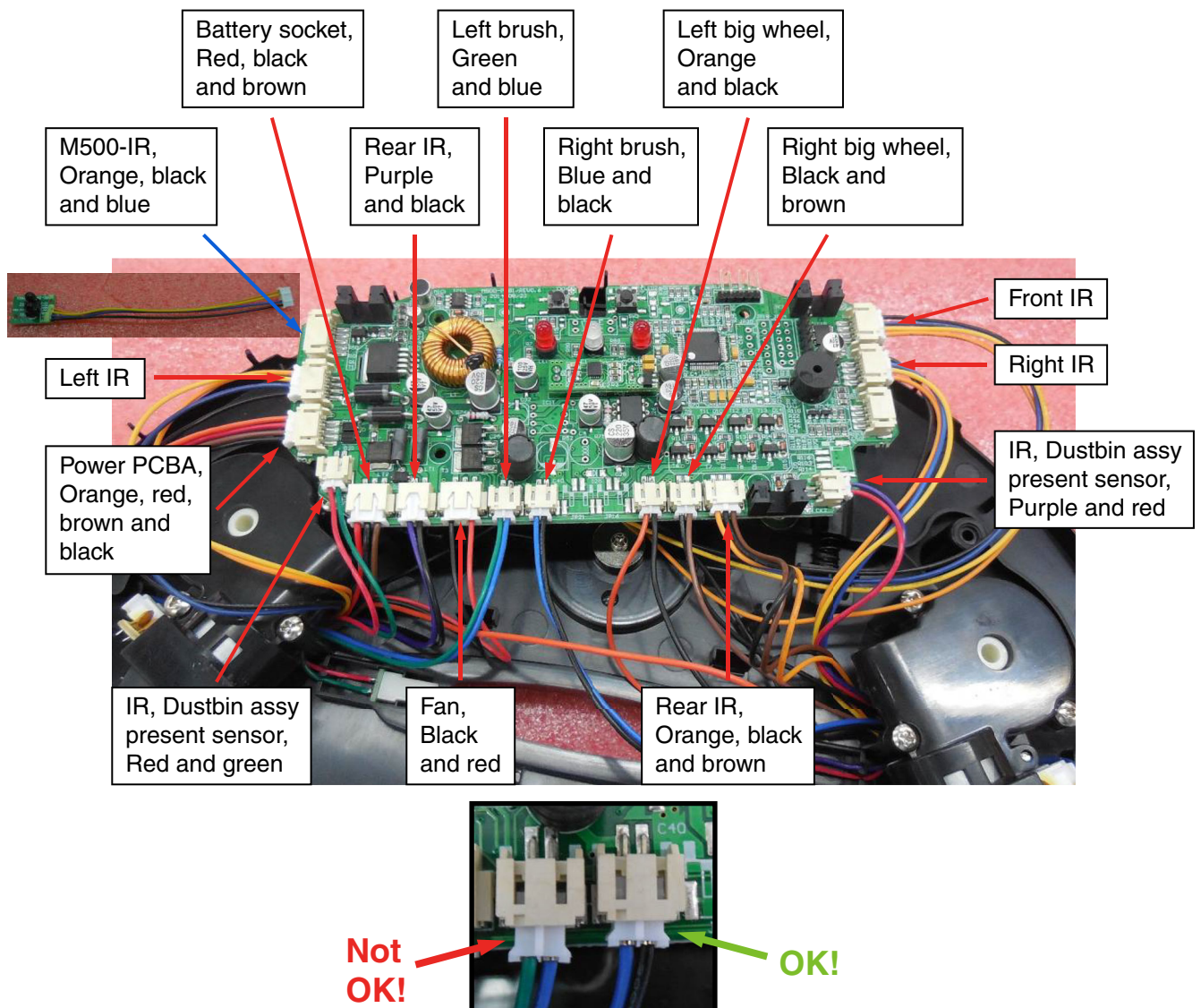
Using AA white paper or glossy paper as calibration surface.



REPAIR INSTRUCTION

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Wiring diagram

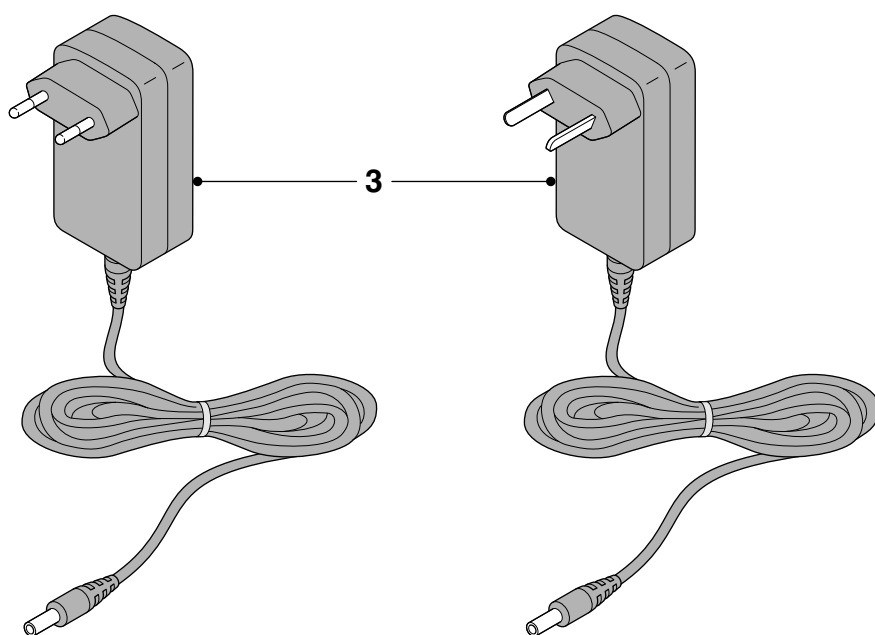
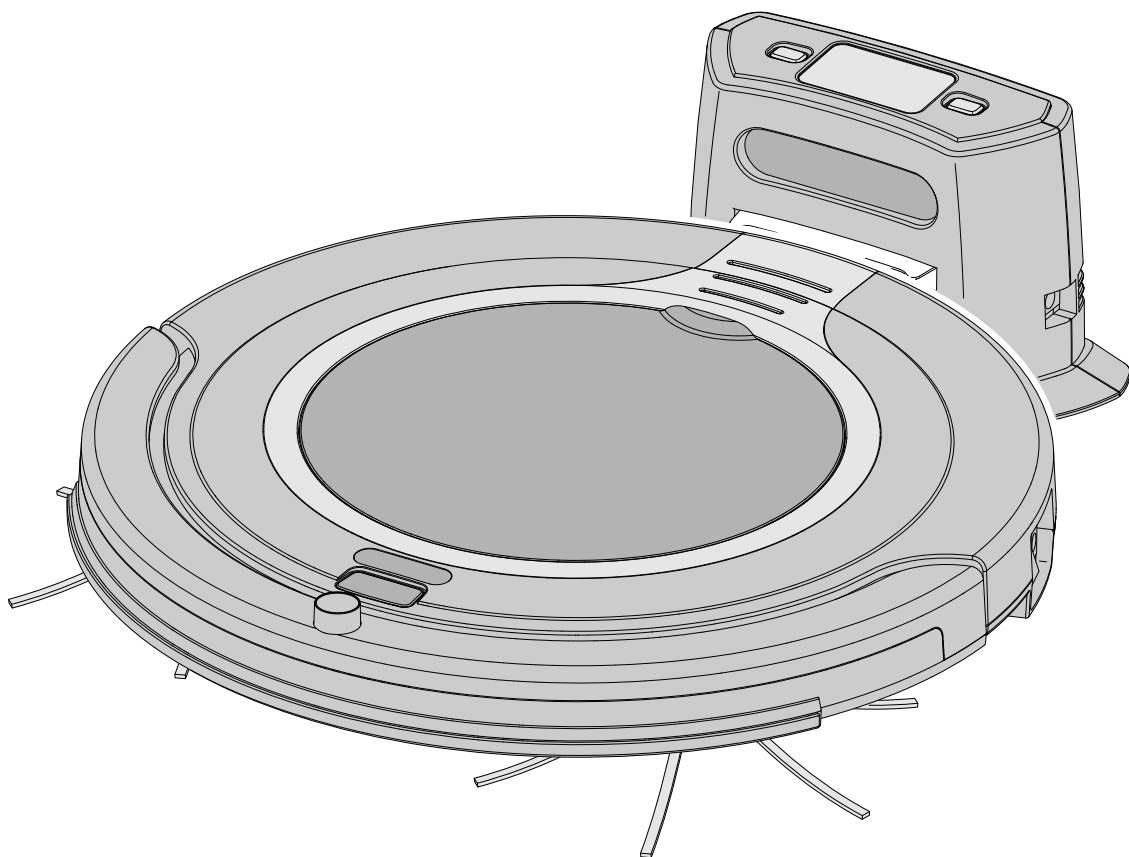


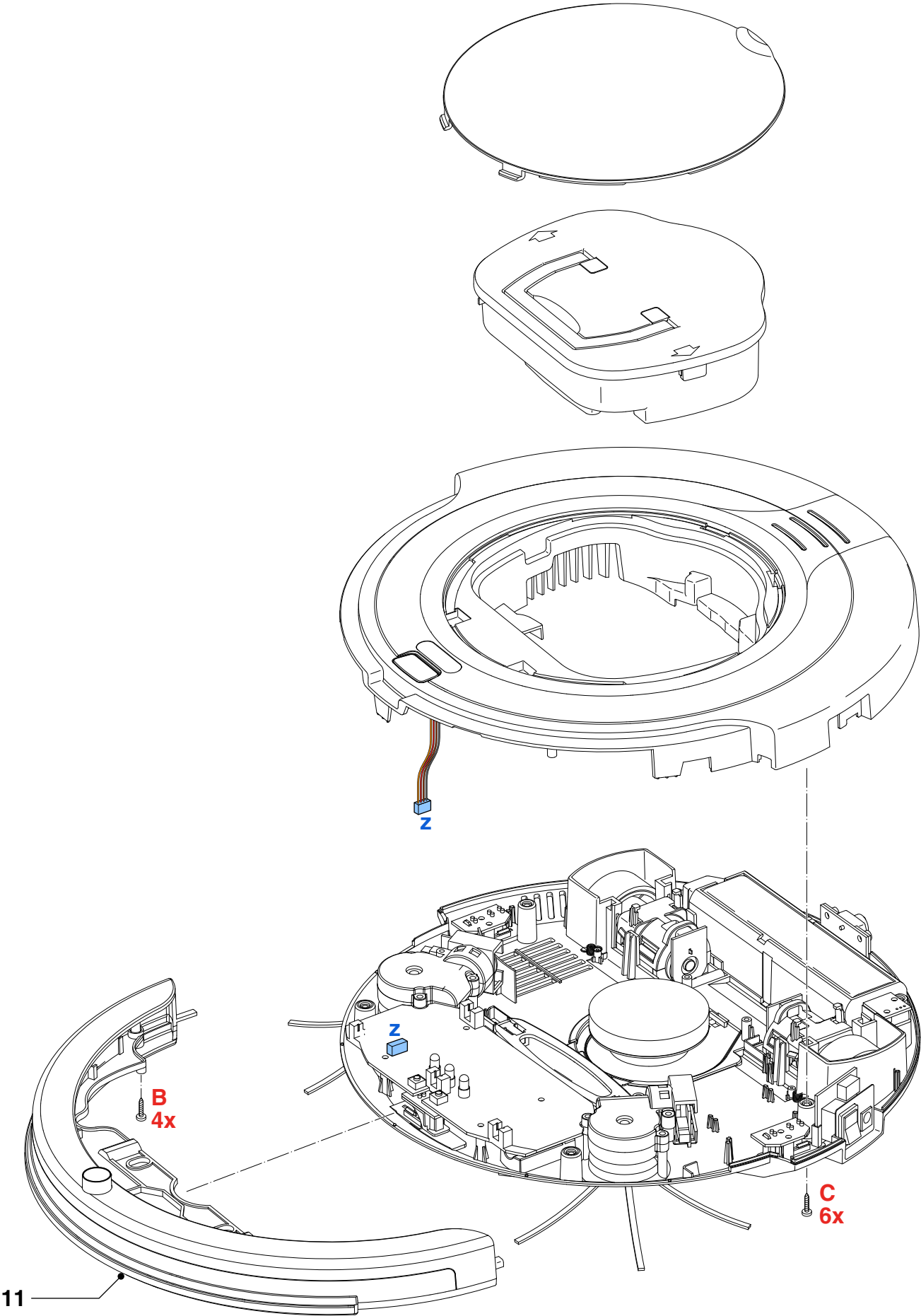
Troubleshooting:

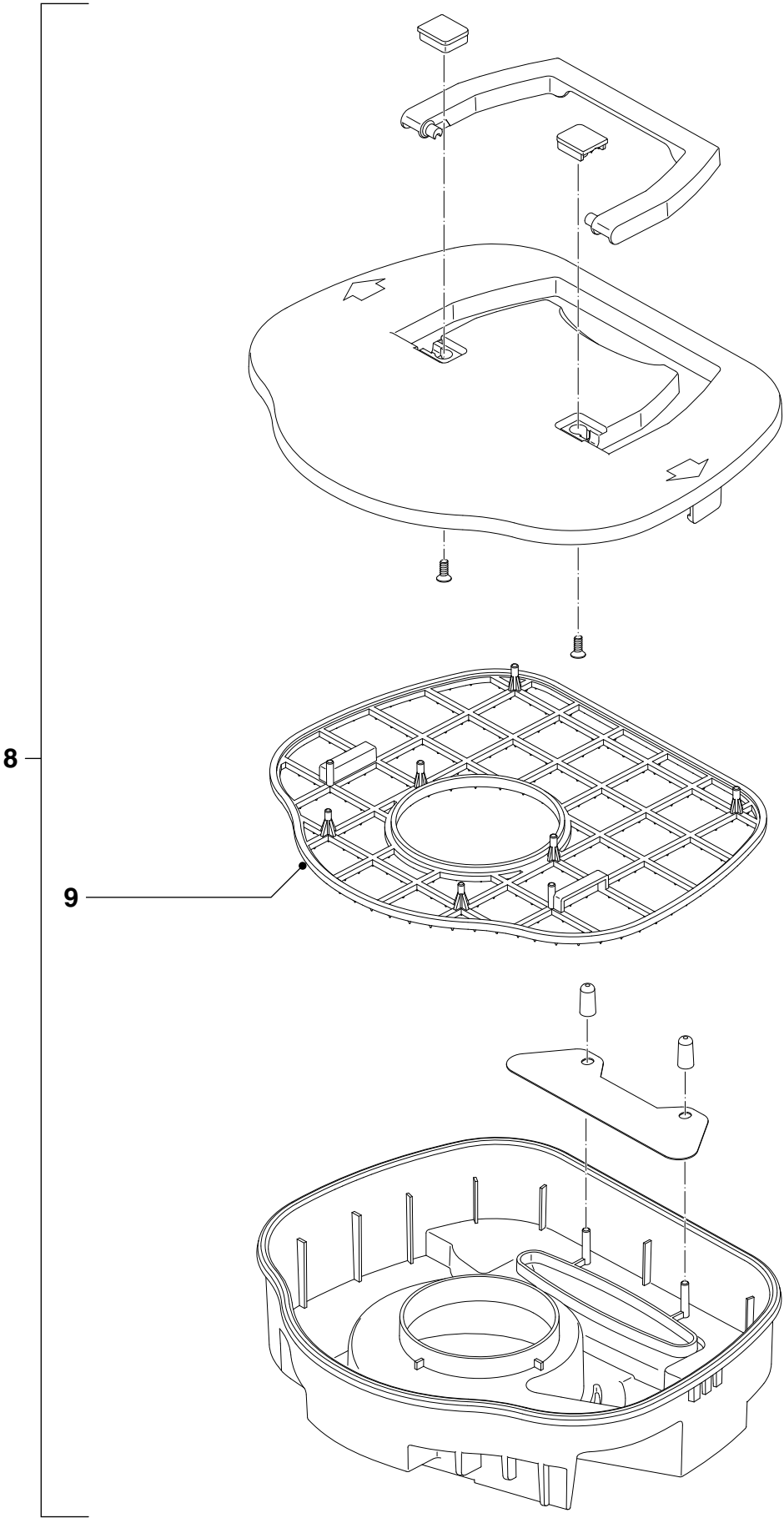
Problem	Cause	Solution
1. The robot does not charge.	a. Power Switch is off.	<ul style="list-style-type: none"> When charging the robot the Power switch should be "on", otherwise the robot will not be charged.
2. The robot does not charge, warning indicator is blinking and an alarm signal is given.	a. Power Switch is off.	<ul style="list-style-type: none"> When charging the robot the Power switch should be "on", otherwise the robot will not be charged.
3. The robot does not start cleaning when I press the on/off button.	a. The rechargeable battery is empty. b. The battery is dead. c. The small plug is still inserted in the socket on the robot and the adapter is still inserted in the wall socket.	<ul style="list-style-type: none"> Charge the rechargeable battery (See User Manual: chapter "Preparing for Use", section "Charging"). When battery is measured $< 8\text{ V}$, the battery should be replaced by a new one. The robot does not work on mains power. It only works on its rechargeable battery and always has to be disconnected from the mains before use.
4. The robot does not work and warning indicator flashes quickly.	a. The dustcontainer lid is not present or is not closed properly. b. Frontwheel is jammed with hair or other dirt.	<ul style="list-style-type: none"> When the dustcontainer lid is not present or is not closed properly, the robot does not work as a safety precaution. Make sure you place the dust container lid on the robot properly. Clean the Frontwheel (see User Manual, chapter "Cleaning and Maintenance").
5. On/off indicator lights up continuously red when the robot is switched on.	a. The battery is low. b. One or both wheels are stuck. c. One or both side brushes are stuck. d. The bumper is stuck. e. You lifted the robot while it was switched on.	<ul style="list-style-type: none"> Charge the rechargeable battery (See User Manual, chapter "Preparing for use", section "Charging"). Press the Power switch to switch off the robot. Remove the fluff, hair thread or wire that is caught around the wheel suspension. Clean the side brushes (see User Manual, chapter "Cleaning and maintenance", section "Cleaning the side brushes"). Press the Power switch to switch off the robot and check if the bumper can freely move without friction. Press the Power switch to make it resume cleaning in the wanted spot.
6. The robot does not clean properly.	a. The bristles of one or both side brushes are crooked or bent. b. The filter in the dustcontainer is dirty. c. The suction opening in the bottom is clogged.	<ul style="list-style-type: none"> Replace the side brushes (See User Manual, chapter "Replacement: section "Replacing the side brushes"). Clean the filter in the dust container with a brush with soft bristles (See User Manual, chapter: Cleaning and maintenance", section Emptying and cleaning the dust container). If brushing does not help to clean the filter, replace the filter with a new one. Clean the suction opening (See User Manual, chapter "Cleaning and maintenance", section "Cleaning the suction opening").
7. The battery can no longer be charged or runs empty very fast.	a. The rechargeable battery has reached the end of its life.	<ul style="list-style-type: none"> Replace the rechargeable battery (See User Manual, chapter "Replacement", section "Replacing the rechargeable battery").

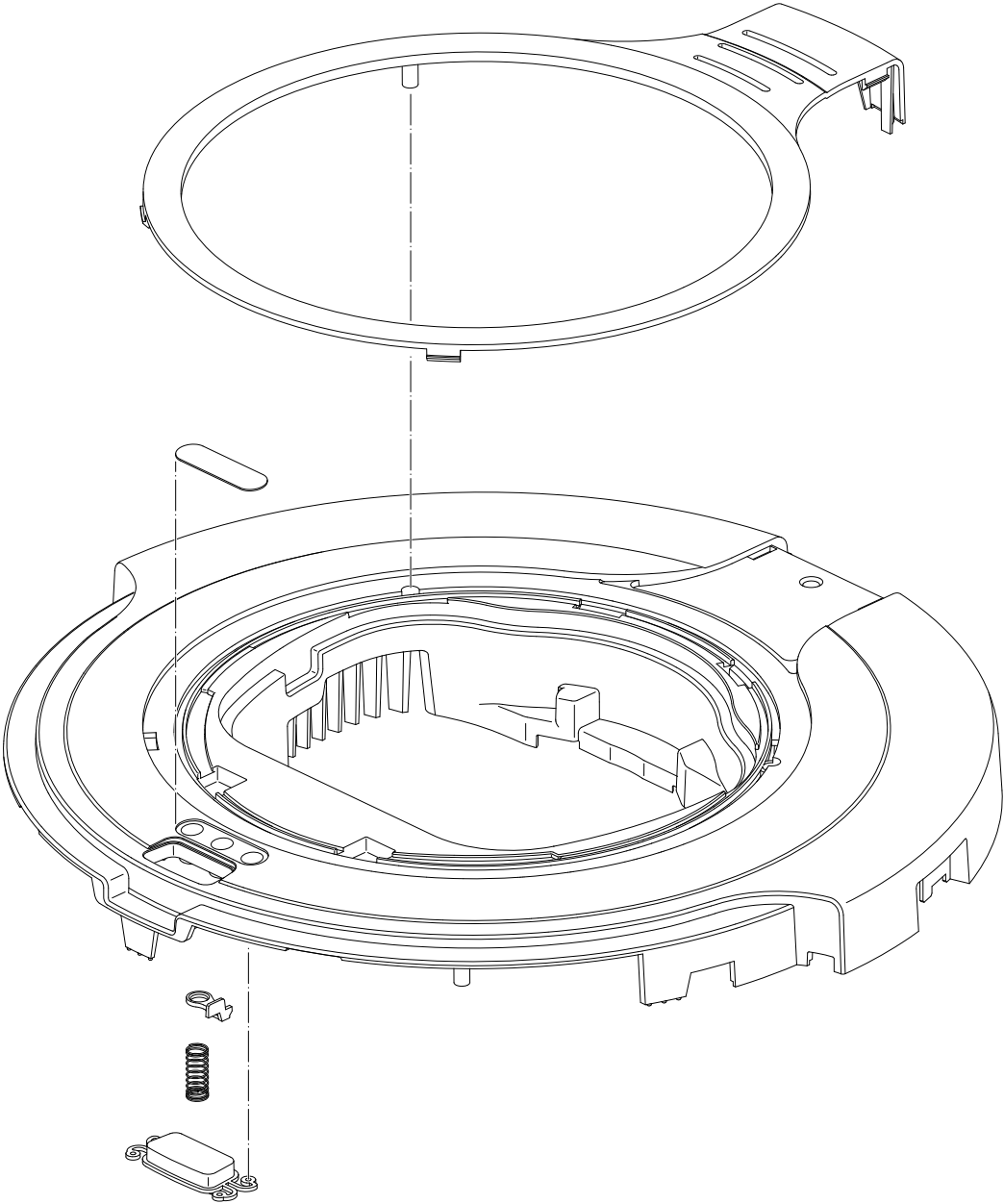
Problem	Cause	Solution
8. The robot does not clean and warning indicator lights up continuously.	a. The dust container is not present.	<ul style="list-style-type: none"> Place the dust container in the dust container compartment properly. Make sure you close the dust container cover properly.
9. The dustcontainer indicator is blinking.	a. Dustcontainer is full or clogged.	<ul style="list-style-type: none"> Clean the suction opening and clean the dustcontainer.
10. The robot runs backwards when switched on and warning indicator is blinking.	a. Cliff sensor or Front bumper-sensor triggered.	<ul style="list-style-type: none"> Start callibration procedure (see separate chapter). If problem still occurs after callibration procedure, the pcb bumper need to be replaced.
Remark In case of straight line driving issues.	a. Wheels are slipping.	<ul style="list-style-type: none"> Check and clean the wheels and both side brushes. After cleaned them, the robot will drive better in a straight line.

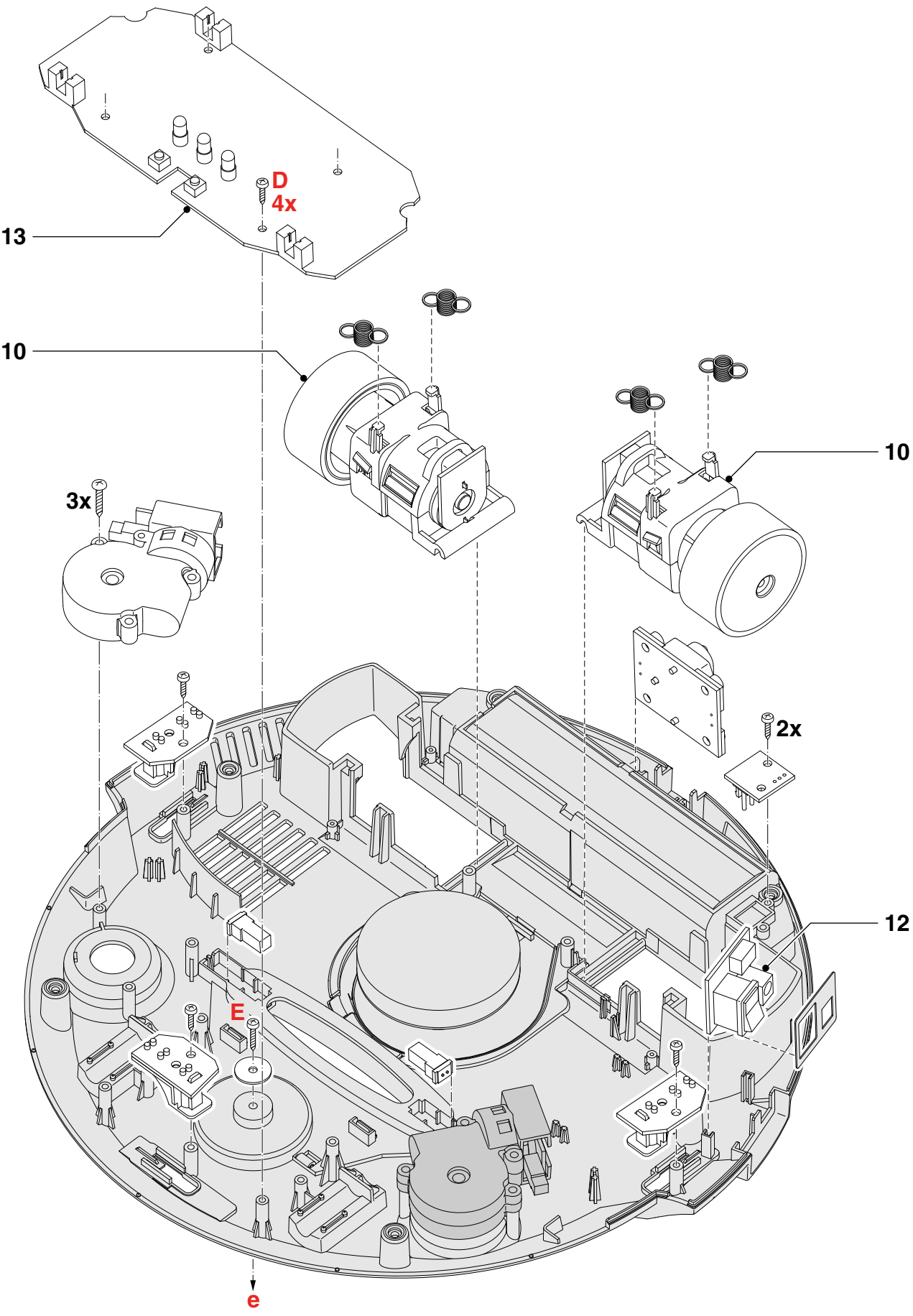
Pos	Service code	Description	Remark
1	4322 006 67901	Suction motor assy A	
2	4322 006 22901	Recharable battery 1300 mAh - 12.8 V	Super Li-Ion
3	4322 006 09961	Switching adaptor 24 V - 1000 mA	Euro plug
	4322 006 08901	Switching adaptor 24 V - 1000 mA	AU/NZ plug
	4322 006 20951	Switching adaptor 24 V - 1000 mA	Korea plug
4	4322 006 23111	Docking station A	
5	4322 004 25961	Side brush	
6	4322 006 67941	Side brush motor assy Left	
7	4322 006 67951	Side brush motor assy Right	
8	4322 005 36651	Dustbin assy A	
9	4322 004 94152	Filter Hawk A	
10	4322 005 36681	Big wheel assy M500 A	
11	4322 005 36711	Frint bumper assy A	
12	4322 006 25401	Power PCBA	
13	4322 006 25811	Main PCB	FC8700

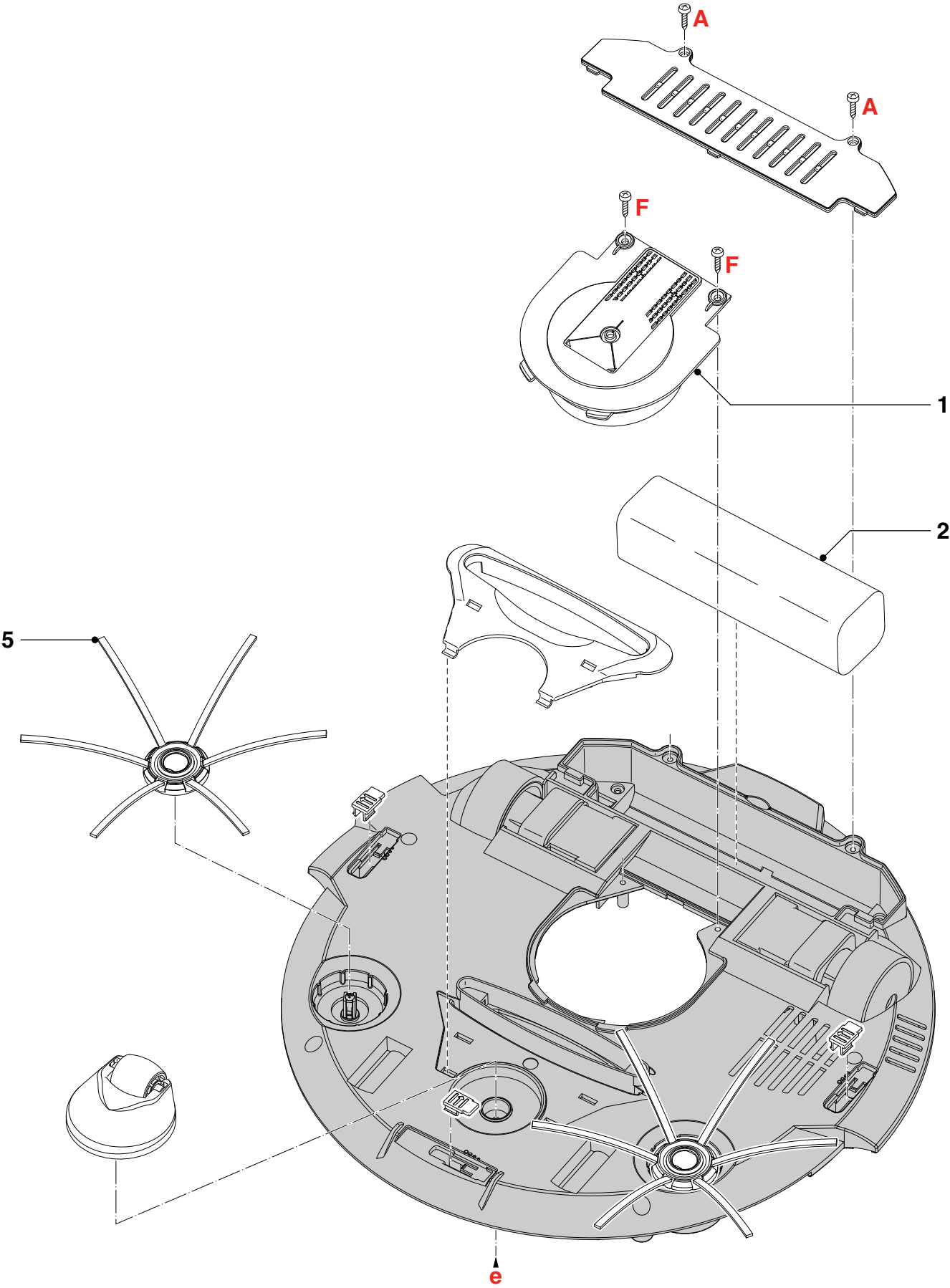


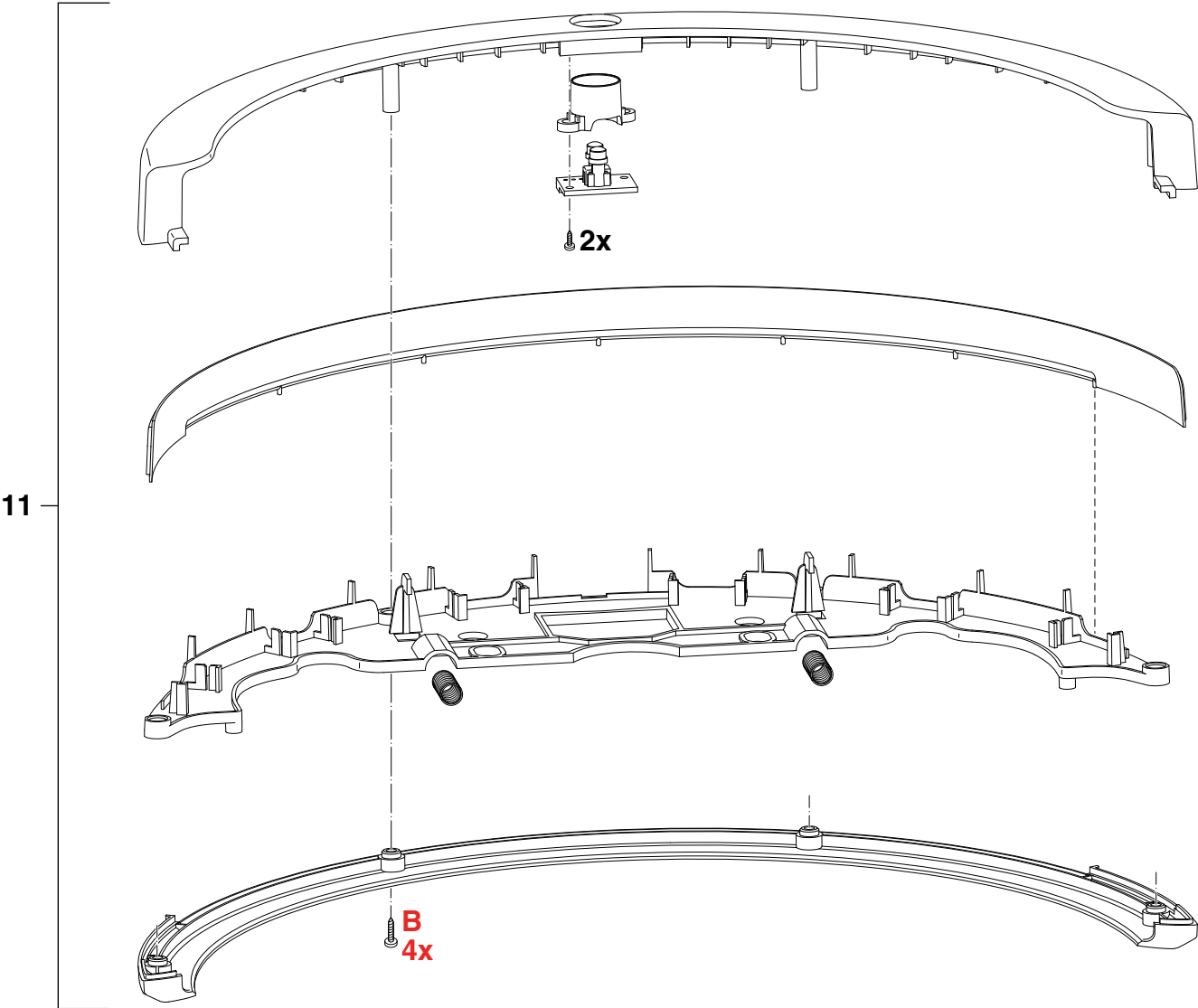


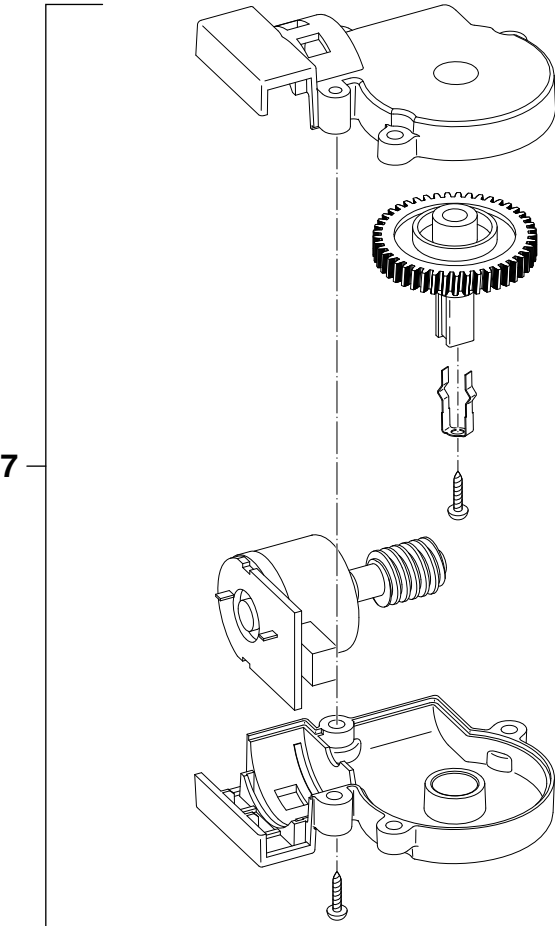
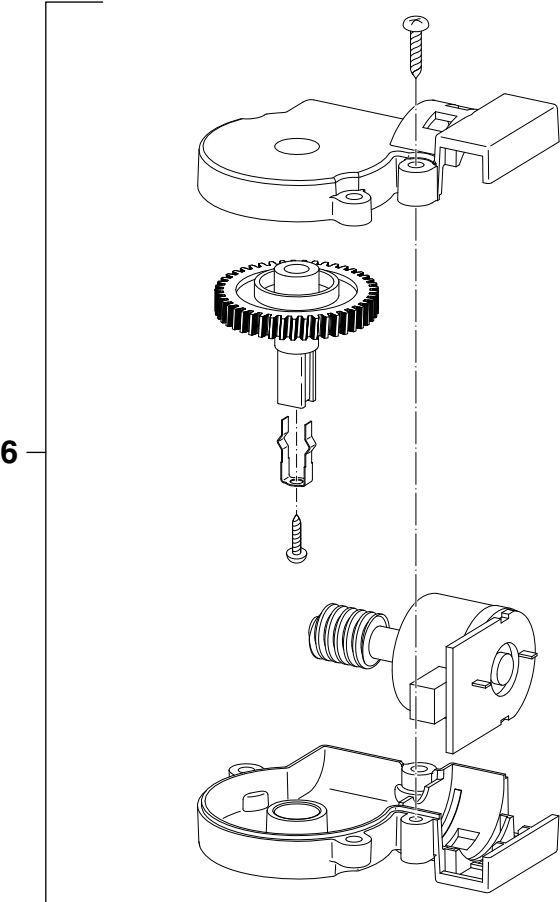


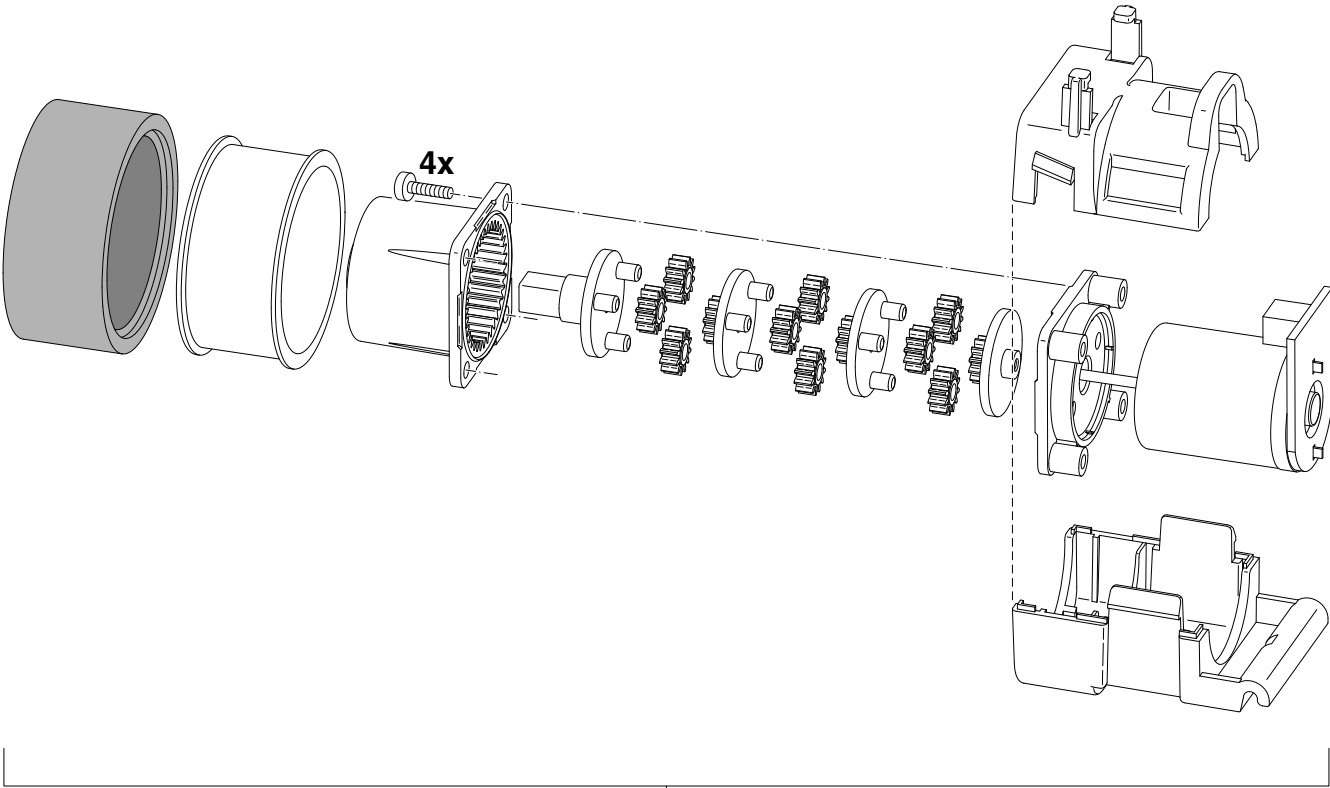


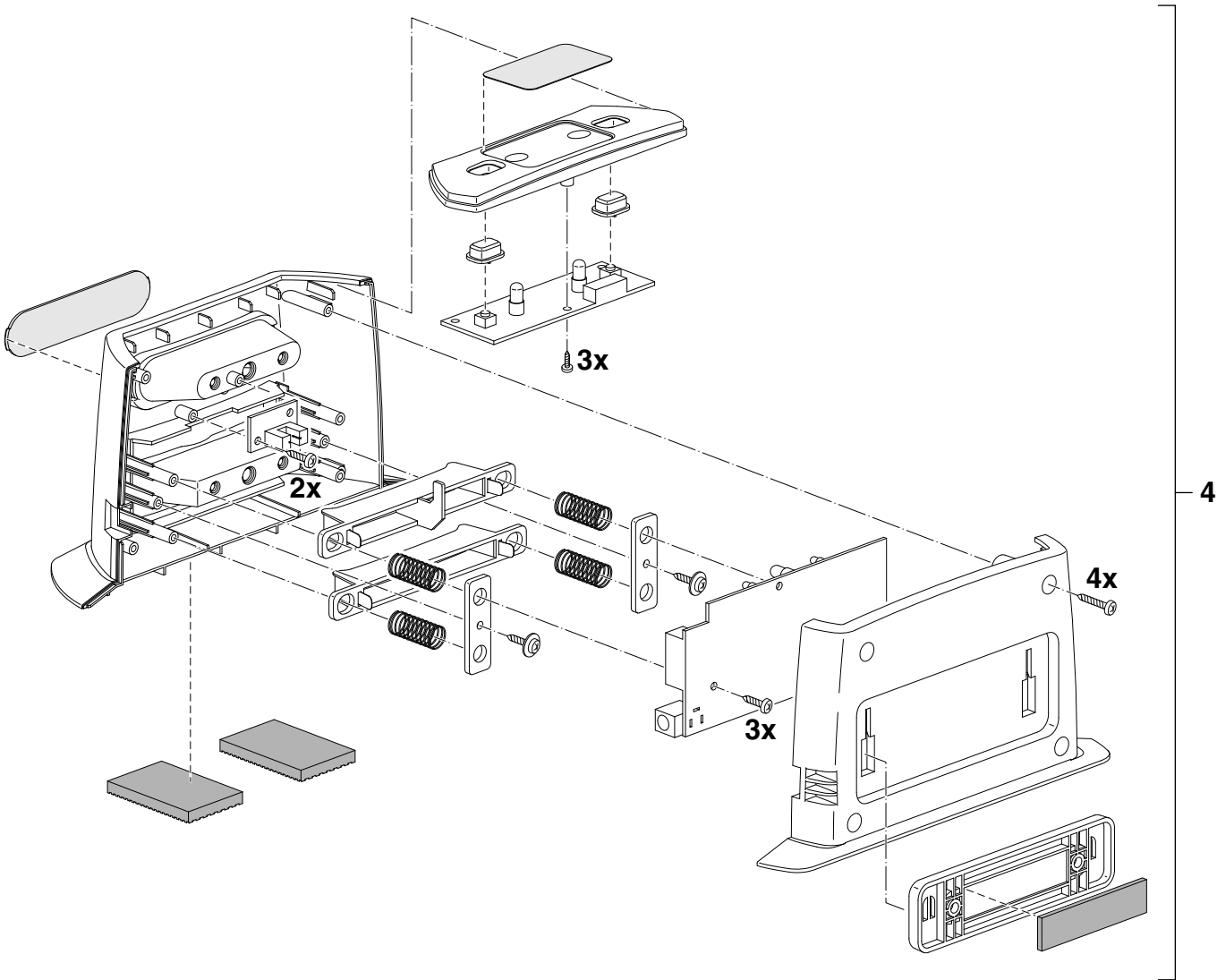












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Version history

Version 1.1 : FC8700/01 initial release.

Version 1.2 : Added new version: FC8700/71.

In Parts List and Exploded view: Added Pos. 3:

4322 006 08901 Switching adaptor 24 V – 1000 mA AU/NZ plug.

Version 1.3 : In Parts List at Pos. 9, changed 4322 004 94151 into 4322 004 94152.

Version 1.4 : In Parts List at Pos. 13, changed 9965 100 72827 into 4322 006 25811.

Added on page 3: IR Sensors calibration for replacing PCBA.

Added on page 4: Wiring diagram.

Version 1.5 : In Parts List: Added Pos. 3: 4322 006 20951 Switching adaptor 24 V – 1000 mA Korea plug.

Version 1.6 : Under Repair Instruction on page 5 and 6: Added Troubleshooting.