

SERVICE MANUAL

UltraPower Facelift



Floor Care

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EN

Edition: 2015-04

**Ultrapower FL
battery stick cleaner**

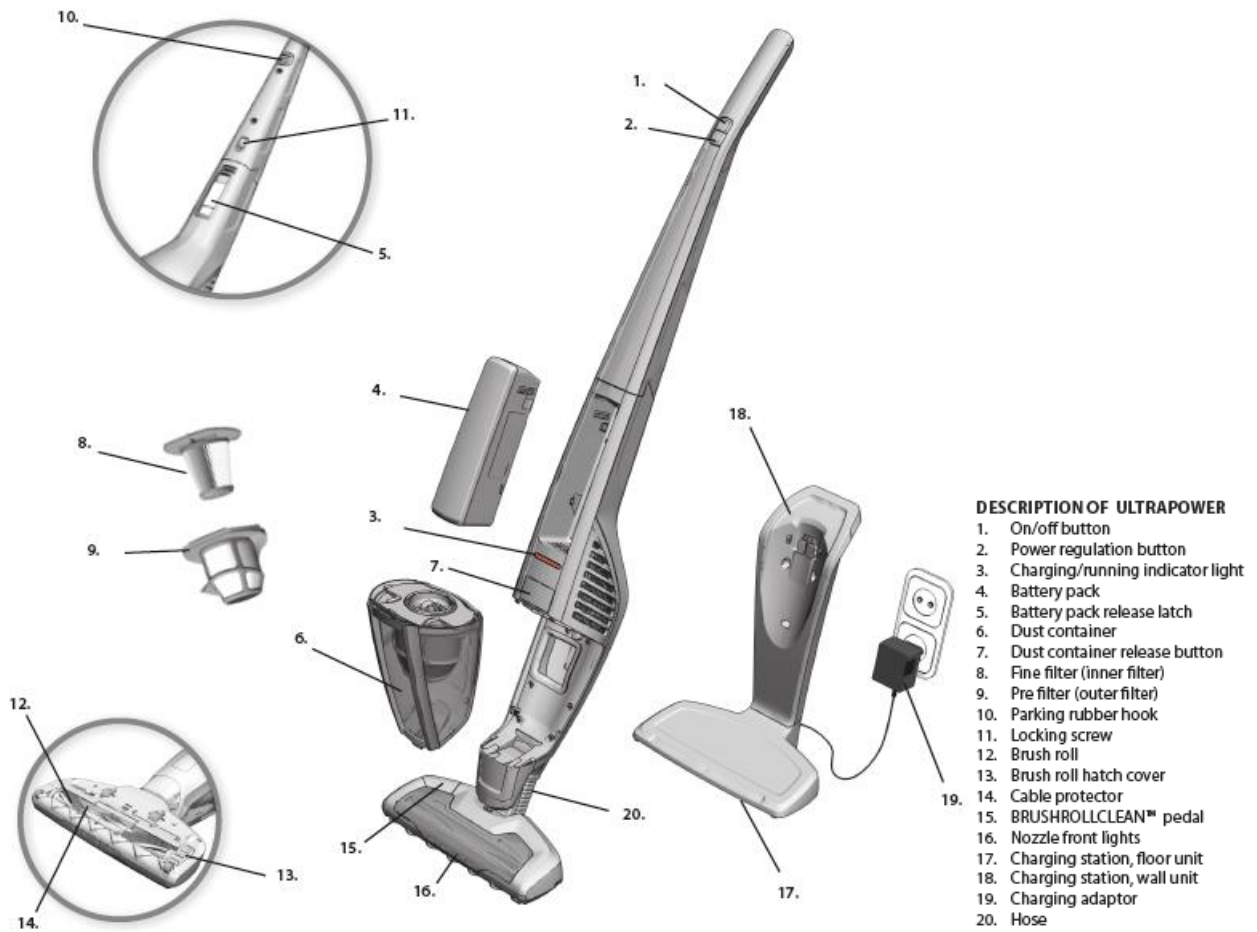
**Factory:
XX - XXXXXX (YY)**

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TABLE OF CONTENTS

1	General description	3
1.1	Exploded view.....	Hiba! A könyvjelző nem létezik.
2	ACCESSABILITY	5
3	Levels of electronic control.....	15
3.1.1.	Basic Software functionality.....	15
3.1.2.	Motor power regulation and LED functionality.....	15
3.1.3.	Charging and LED functionality	16
3.1.4.	Electronic system structure.....	17
4	Troubleshooting.....	18

1 General description

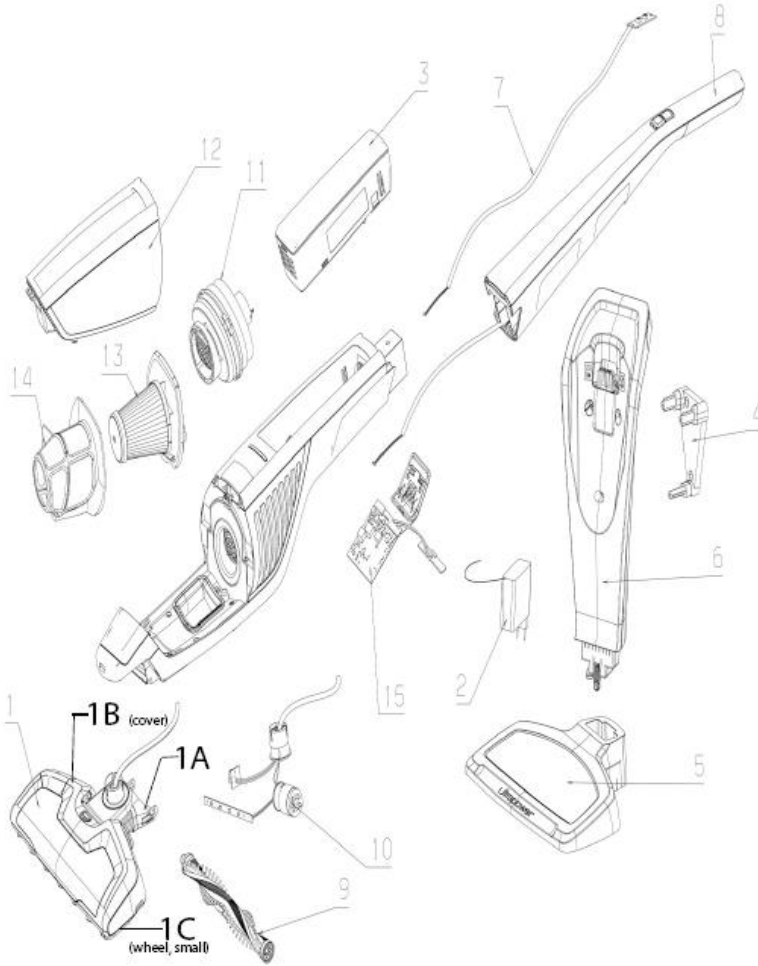


DESCRIPTION OF ULTRAPOWER

1. On/off button
2. Power regulation button
3. Charging/running indicator light
4. Battery pack
5. Battery pack release latch
6. Dust container
7. Dust container release button
8. Fine filter (inner filter)
9. Pre filter (outer filter)
10. Parking rubber hook
11. Locking screw
12. Brush roll
13. Brush roll hatch cover
14. Cable protector
15. BRUSHROLLCLEAN™ pedal
16. Nozzle front lights
17. Charging station, floor unit
18. Charging station, wall unit
19. Charging adaptor
20. Hose

1.1 Exploded view

Available spare parts:



Pos	Description
1	Floor nozzle, complete, Electrolux, soldered
001A	Channel, connector, complete
001B	Cover, floor nozzle
001C	Wheel, small, Kit
2	Charger, complete
	Accumulator
3	Comment: please check DCPM-Battery pack compatibility matrix at exchange
4	Retainer, complete
5	Plinth
6	Retainer, for, foot
6	Back panel, charging station
7	Switch, complete
8	Handle, complete, blue, soldered
10	LED PCB, complete, 24V/25,2V
11	Motor, complete, high-version
11	Motor, soldered, 24V/25.2V
12	Suction cap, complete
13	Filter, inner
14	Filter, outer
15	PCB, complete
15	Electronic, Kit, soldered
999A	Wheel, large, Kit
999B	Bracket, protection

2 ACCESSABILITY

First step is to remove the screw from the handle bottom



After this move it's easily to dispart the handle from the body:



Push the button „Open” to unlock the dust compartment:

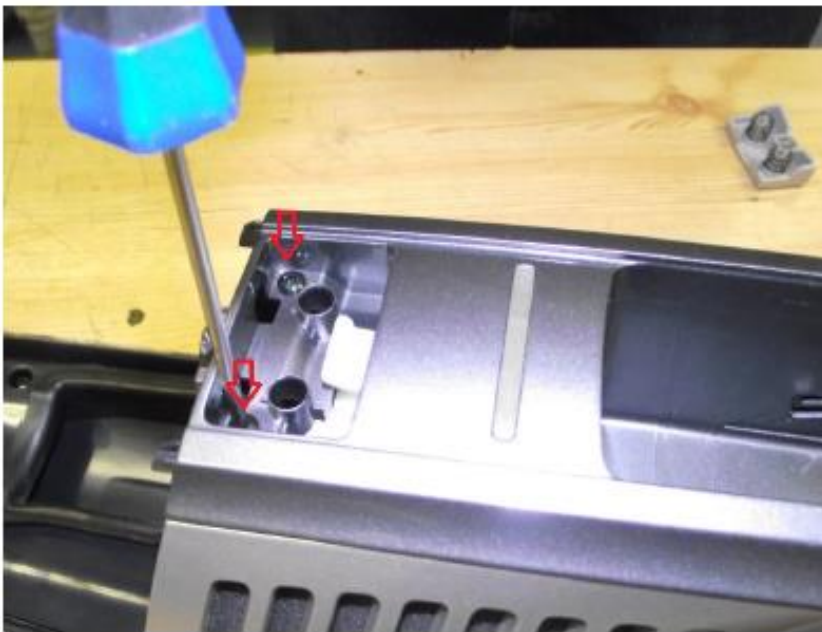


To remove the button follow the pictures:





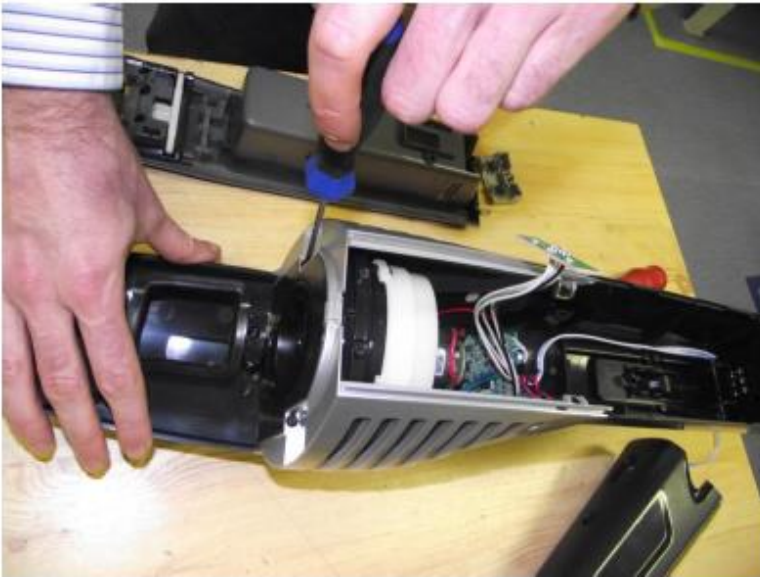
For pulling out the battery holder remove the screws and puff of the plastic:







Remove the screws from the side frame.



Remove the side frame.



Remove 6 screws.



Turn the unit upside down and release the hose by pressing the two buttons on the sides and pulling it out of the main body.



Take out the screw underneath.



Bend the nozzle to reach the two screws underneath. Remove them.



Then remove the lid.



Lift the boss with one hand and release the snappers on both sides to remove it.





Now you can reach the DCPM.



To reach the handle PCB do as follows:

Remove the rubber pads first, by using a screwdriver.



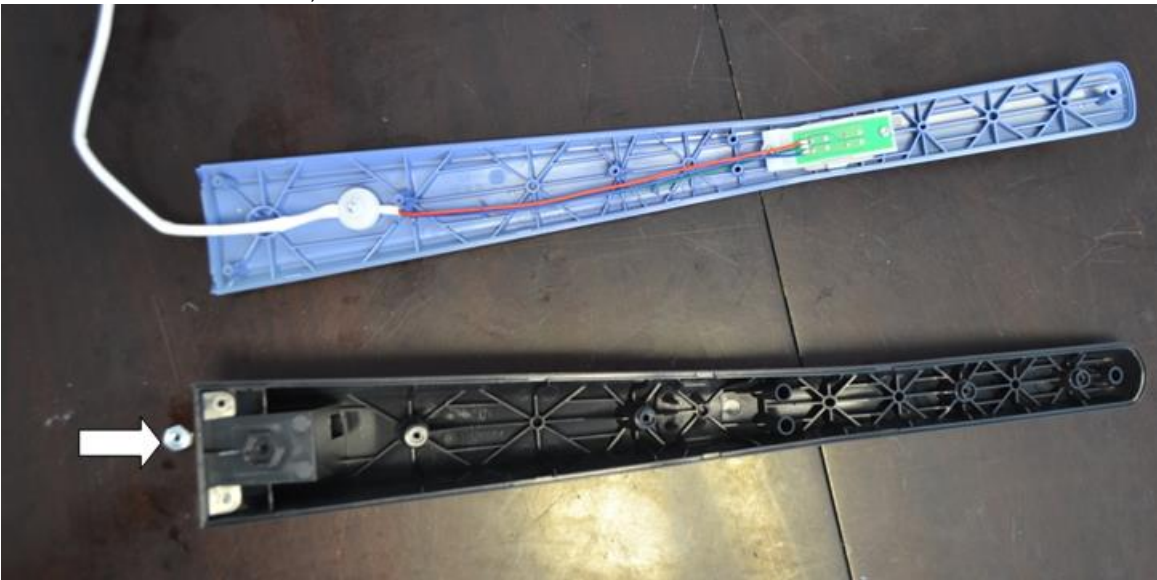
Remove 6 screws.



Remove the screws from handle PCB holder.



Be aware of the screw nut, not be loosen.



3 Levels of electronic control

3.1.1 Basic Software functionality

- ON/OFF button.
- When started by pressing On/off button, the cleaner runs in Normal mode.
- Using Power Regulation Button, the Power can be increased to Booster mode or decrease to Silent Mode.
- Booster mode has highest power level and Silent mode has lowest power level.
- Brush roll Clean Pedal is used for cleaning of brush roll.
- During running mode, the 4-Nozzle Front LEDs always turn ON.
- The Running indicator shows the battery capacity during discharge:
 - Three Orange LEDs.
- The Running indicator shows the charging state during charging:
 - Three Orange LEDs.
- Failure/Faults indication is shown by RED (Alarm) LED.

3.1.2 Motor power regulation and LED-functionality

1. Press the On/Off button to start the Cleaner:

- Both Motor should Turn ON in normal Mode.
- Nozzle Front LED Turn ON.
- Running LED light should turn ON depending upon battery capacity.
 - All three Orange LED are solid Turn On i.e. battery has full capacity.
 - Two Orange LED are solid Turn On i.e. battery has still good capacity.
 - One Orange LED are Solid Turn ON, i.e. battery is about to empty.
 - Motor stops and the middle Orange LEDs start blinking i.e. battery is empty.

2. Power Regulation Button:

- Press On/off switch to start cleaner.
- Press the Power regulation button, cleaner running mode change from Normal to Booster mode.
- Again Press the Power regulation button, cleaner running mode change from Booster to Silent mode.
- Again Press the Power regulation button, cleaner running mode change from Silent to normal mode.
- Press the On/Off button to Turn Off the cleaner.

Note: If the Power Regulation Button is pressed for longer duration, the RED Turn ON, which indicates Key stuck event. This event can be cleared by turn off the cleaner using On/off Switch.

3. Brush Roll Clean Pedal:

- Press On/off switch to start cleaner.
- Upon pressing the Brush Roll Clean Pedal, the Brush motor runs at max. Power to clean the hair and fiber from brush roll.
- If the Brush Roll Clean Pedal is pressed, the Power regulation Button will not change the running mode of cleaner.
- if the Brush Roll clean Pedal is released, the cleaner will run in its previous mode, which was before pressing the Brush Roll Clean Pedal.

Note: 1. If the Brush Roll Clean Pedal is pressed for more than 30secs duration in single or multiple stretch, the orange and red LED will start blinking alternately and the nozzle motor stopped until Brush Roll Clean Pedal is released.

2. after releasing the Brush Roll Clean Pedal, the cleaner will starts in previous mode before pressing it.

3. This event can be cleared by charging unit for 10mins.

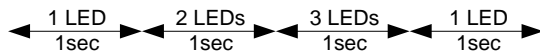
EN	Publication number	9031523	Rev. 01	04/2015	PR - 15/19
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3.1.3 Charging and LED-functionality

4. Unit is kept at charging stand and connect with correct adapter as recommended.

- Battery starts charging and LED starts indication as below:

- During CC mode, the 3 charging LEDs shall be in running state as shown in the diagram below:

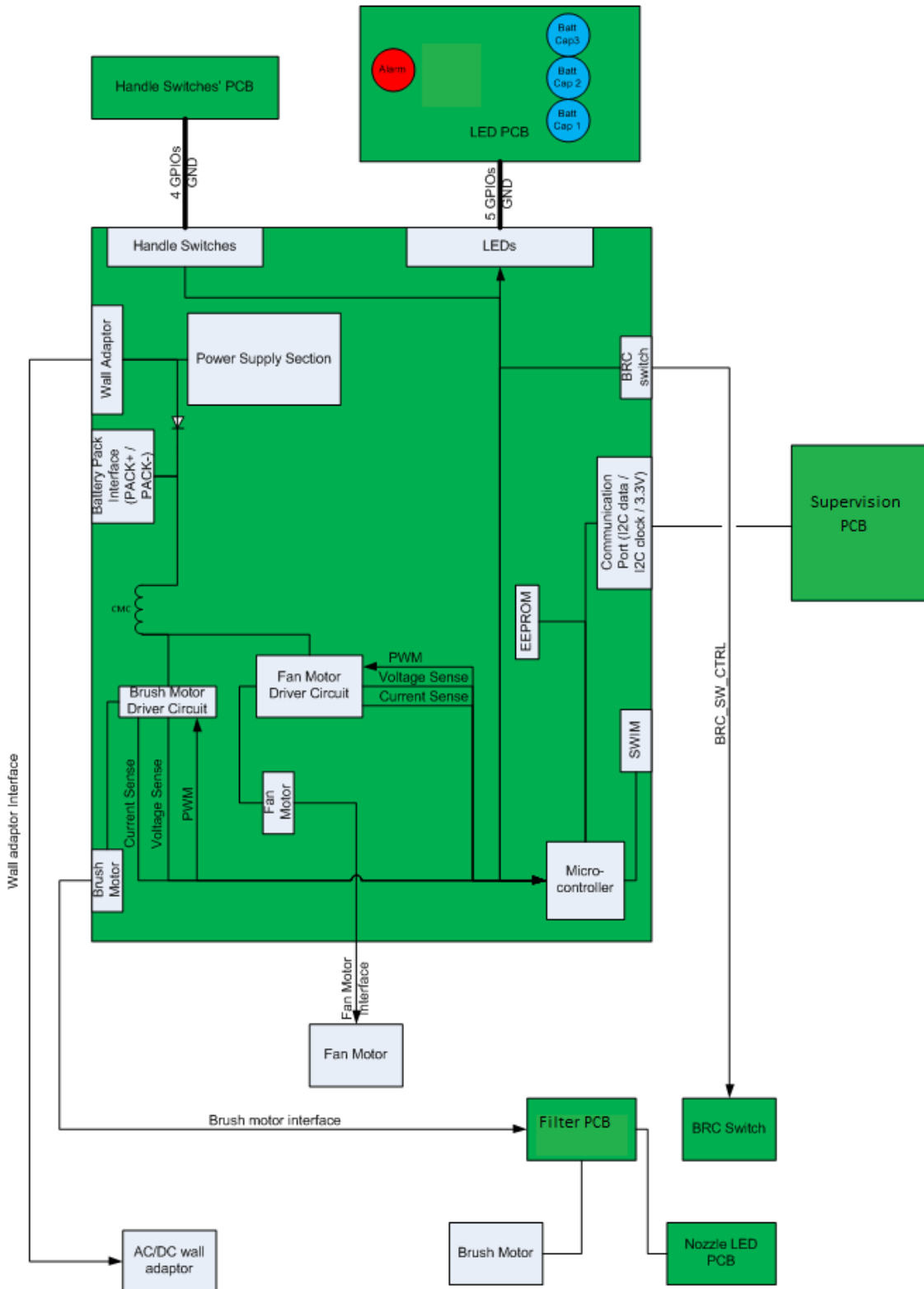


As indicated in diagram above, following steps will be repeated every 3 seconds:

- For 1st second, LED1 shall be ON and LED2 and LED3 shall be OFF.
- For 2nd second, LED1 and LED2 shall be ON and LED3 shall be OFF.
- For 3rd second, all 3 LEDs shall be ON.

- All three Orange LED start slowly blinks at every 5sec, i.e. battery is fully charged and cleaner is in standby mode, which consumes very low power from adapter.

3.1.4 Electronic system structure



4 Troubleshooting

Problem	Checks
Discharging LED Status	
<p>During start-up, Red Light turns ON in Steady State</p>	<ul style="list-style-type: none"> - Following reasons could trigger a RED alarm on power up - Battery pack temperature is more than 60 ° Celsius <ul style="list-style-type: none"> - Allow the unit to cool down for some time and then restarts - Battery pack temperature is below 0 degree Celsius <ul style="list-style-type: none"> - The cleaner is not supposed to run below 0 ° Celsius - Communication error <ul style="list-style-type: none"> - Check that battery pack is properly inserted and there is proper contact between mechanical of unit and mechanical of battery pack - If it doesn't work try replacing the battery pack, - if it works after replacing the battery pack there is something wrong with the battery pack and consider replacement of battery pack. - If not, open the unit and check all cables are properly connected.
<p>During start-up, motor starts and stops in few secs and Red Light starts flashing</p>	<ul style="list-style-type: none"> - This flashing RED LED indicates that there is something wrong with the Fan Motor or Brush motor. - Check if there is any Obstacle in Brush roll or filter container, remove it and try again. - If not, open the unit and check all cables are properly connected. - Check that Fan motor rotor is rotating. Check fan motor is connected properly. - Check the brush roll is rotating. Check that brush motor is connected properly.
<p>During start-up, motor starts and stops in few secs / doesn't start at all and Yellow LED's starts flashing</p>	<ul style="list-style-type: none"> - This indicates an under voltage condition of battery pack where the battery pack is not charged enough to run the motors. - Put the unit on the charging stand and let it charge for few hours then retry - If even after charging for few hours the unit exhibits same behaviour, it indicates that battery pack has gone bad and needs a replacement
<p>While pressing the BRC switch motor keeps on running and RED LED starts flashing alternately</p>	<ul style="list-style-type: none"> - This indicates that the BRC time limit of 30 Second has expired and user will not be able to run the BRC mode unless it is charged for at least 5 minutes - Put the unit on the charging stand and allow it to charge for at least 5 minutes before running the BRC mode once again
<p>RED LED turns on during normal discharge operation</p>	<ul style="list-style-type: none"> - Communication error <ul style="list-style-type: none"> - Check if the battery pack has lost or losing mechanical contact momentarily - Fan Motor Stuck <ul style="list-style-type: none"> - Clean the dust container and filter and try again - If still it doesn't work open the assembly and check if something is blocking the Fan motor rotor - Nozzle motor stuck <ul style="list-style-type: none"> - Check is there any obstacle in the nozzle. remove it and try again.
Charging LED Status	
<p>While the unit is put on charging stand RED LED glows for 1 minute and then turns off</p>	<ul style="list-style-type: none"> - Check if the battery pack is present in the unit, If not insert the battery pack. The charging should resume. - If the battery pack is present check for proper contacts of mechanical. Try removing the battery pack and reinserting the battery pack. - Check the type of the adapter, if it's suitable for the appliance. - Check the voltage output of the adapter, if it's defect need to exchange.

<p>While the unit is put on charging stand and none of the LED's neither RED nor Yellow LED's turn on</p>	<ul style="list-style-type: none"> - Check if the adaptor is present, powered on and is physically connected to the charging stand - If adaptor is present check the contacts between cleaner mechanical and charging stand mechanical - If none of the above works there is some problem with the charging adaptor and it is out of range of normal operating voltage. Connect another charging adaptor and try again. If it works with the new charging adaptor replace the old adaptor with new one
<p>While charging if the RED LED turns ON in steady state</p>	<ul style="list-style-type: none"> - This could be because of communication failure between DCPM and supervision PCB. <ul style="list-style-type: none"> - Check the mechanical contacts of battery pack with the unit - Check that battery pack is inserted properly and was not disturbed during charging - This could be because of over temperature condition during charging which persisted for more than 6 Hrs. <ul style="list-style-type: none"> - Check if the ambient temperature of surroundings are close to 60 ° Celsius
<p>While charging if the RED LED turns ON in steady state</p>	<ul style="list-style-type: none"> - Communication Error between ISL and supervision PCB <ul style="list-style-type: none"> - Try replacing another battery pack and if it works fine further investigation will be required for the battery pack - Cells too low to charge (not able to revive in pre charging states, may be some of the cells have gone bad) <ul style="list-style-type: none"> - Try replacing another battery pack and if it works fine further investigation will be required for the battery pack - Short circuit between Cells <ul style="list-style-type: none"> - Try replacing another battery pack and if it works fine further investigation will be required for the battery pack - Other reasons like too long CC time <ul style="list-style-type: none"> - Try replacing another battery pack and if it works fine further investigation will be required for the battery pack

<p align="center">Other failure phenomenon</p>	
<p>Cleaner doesn't start; no light indication</p>	<ul style="list-style-type: none"> - Investigate if the plastic knob reaches the ON/OFF switch - Check contact between DCPM and handle wire. - Check fuse on PCB.
<p>Not possible to change power level</p>	<ul style="list-style-type: none"> - Investigate if the plastic knob reaches the power regulation switch - Check the soldering of the wires at handle PCB. - Check contact between DCPM and handle wire.
<p>Short running time</p>	<p>Check battery pack voltage. If it's under 20V need to change battery pack. If the pack voltage over 20V need to charge up fully with the appliance, then check running time.</p> <ul style="list-style-type: none"> - Change battery pack. - Check DCPM, wire routing and soldering. - Change DCPM.
<p>Low suction</p>	<ul style="list-style-type: none"> - Check the dustbin or filter if replacement is needed. - Check nozzle below if it's blocked need to clean out.
<p>Nozzle motor doesn't start</p>	<ul style="list-style-type: none"> - Check wiring from nozzle to DCPM. - Check brush roll, is there any obstacle on it.