GM3.0 Aging Compensation_V1.1

01/24/2017

Revision History

Revision	Data (mm/dd/yyyy)	Author	Note
V1.0	10/9/2016	Mitch Lu	1st version for customer
V1.1	01/24/2017	Zhangshuai	Modify page 4/Delete page 8

Outline

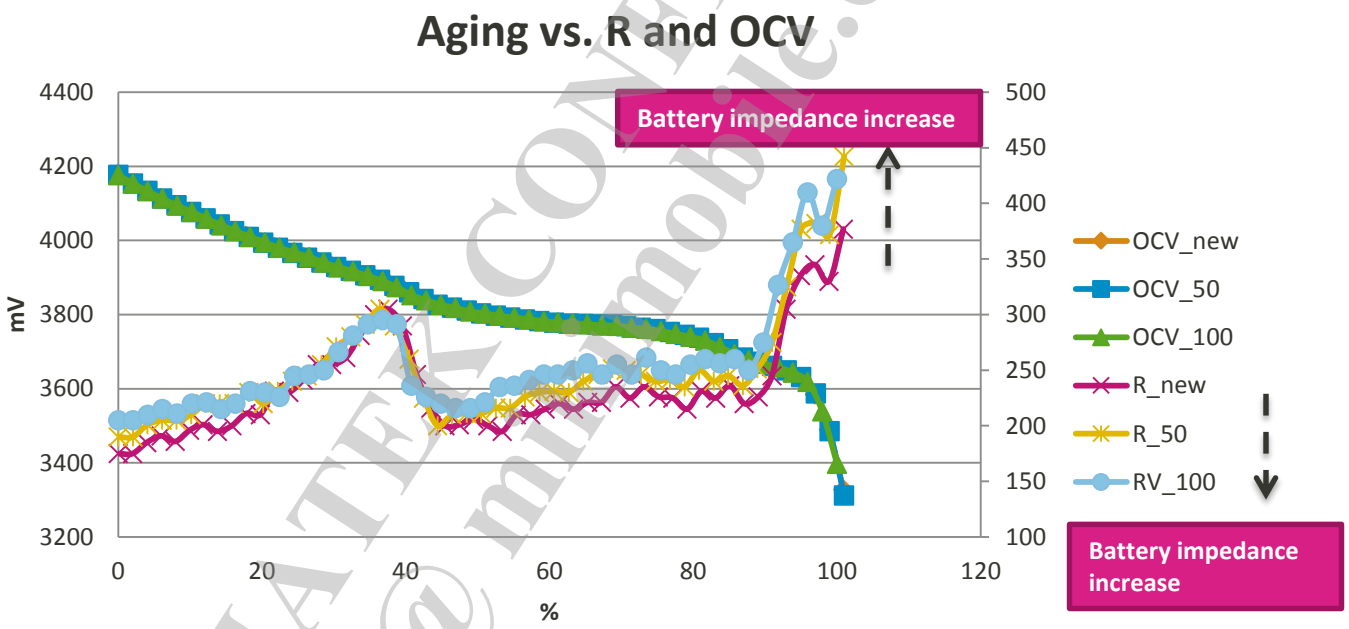
- What is aging?
- What is aging factor?
- Aging factor detection in GM3.0

What is Aging?

- Aging
  - Aging is a phenomenon of a new battery starting working
  - Lithium battery is a re-chargeable battery by Li-ion working between anode and cathode. During the working procedure, some Li-ion would be dead and stops working. The battery usable capacity decreases by discharging and charging cycles.

What is Aging?

- Battery property impact by aging



Aging Factor Definition in GM3.0

- Aging factor definition in GM3.0

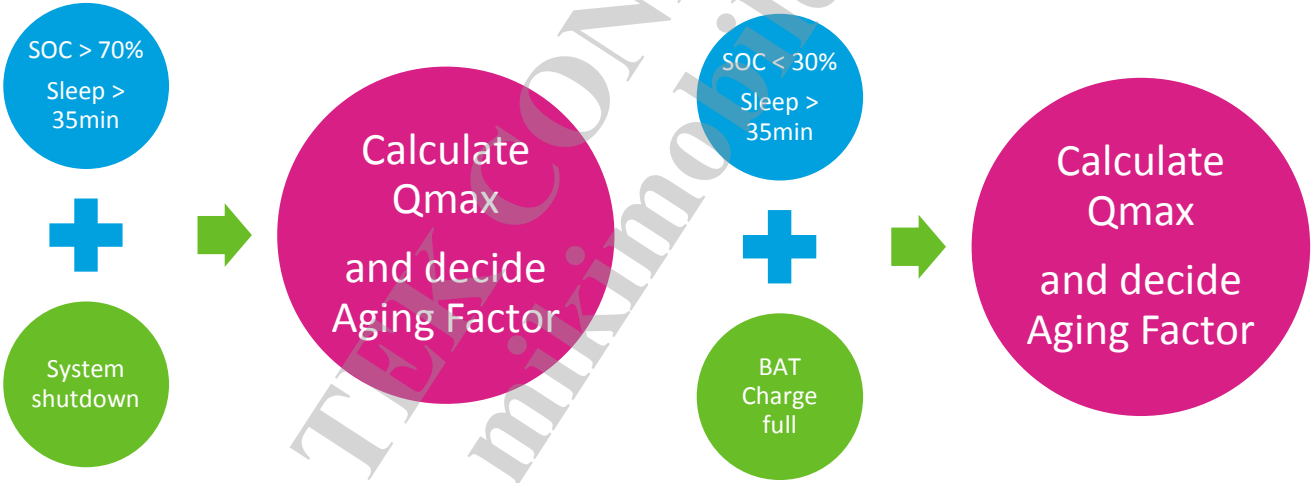
Aging factor = Qmax_new/Qmax_table

- Qmax_new: GM3.0 algorithm (Qmax Learning) to update
- Qmax_table: Customer file .dtsi (battery parameter) to get

Aging Factor Function in GM3.0

- GM3.0 **aging factor** is stored in ***NVRAM***.
- GM3.0 **aging factor** is reset by battery plug-out unless powering on HW OCV and SW OCV is near the last shutdown battery OCV.
- GM3.0 **aging factor** can be customized by setting up AGING_SEL.
  - AGING_SEL=0, use GM3.0 algorithm
  - AGING_SEL=1, use customer set

GM3.0 Aging _ Qmax Learning Compensation



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