

VOLVO CARS FIELD EXPERIENCE ON CELL FAILURE AND ITS CONSEQUENCES 2012-2018



VOLVO CARS EV MODELS ON THE MARKET 2012-2018



PHEVs from 2012 to 2018

- Vehicle models: V60
- ~ 30 000 vehicles ~5.6 million cells

Cell type: Pouch

Chemistry: 50-50 LMO/NMC – carbon

PHEVs models from 2015 to 2018

- Vehicle models:
 - XC90 2015--
 - S90, V90, XC60, V60 2017--
- ~ 50 000 vehicles ~5 million cells

Cell type: Pouch

Cell chemistry:

- 30-70 LMO/NMC- Carbon
- NMC - Carbon



FIELD FAILURE DATA SUMMARY

- **NO** known thermal events induced by internal short circuit to date
- **Early detection** of cell/module performance deviations by BMS indicating potential defect/malfunction (no thermal incidents)
 - ✓ Conservative safety strategy
 - ✓ Precautionary replacement/repair performed under controlled conditions
 - ✓ Vehicle occupants not exposed to risk of harm
 - ✓ No unforeseen stranding