

GTR EVS

'Electrolyte leakage and venting'

JRC Work Update

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JRC.C.1

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Electrolyte leakage/venting verification - Current state of the art

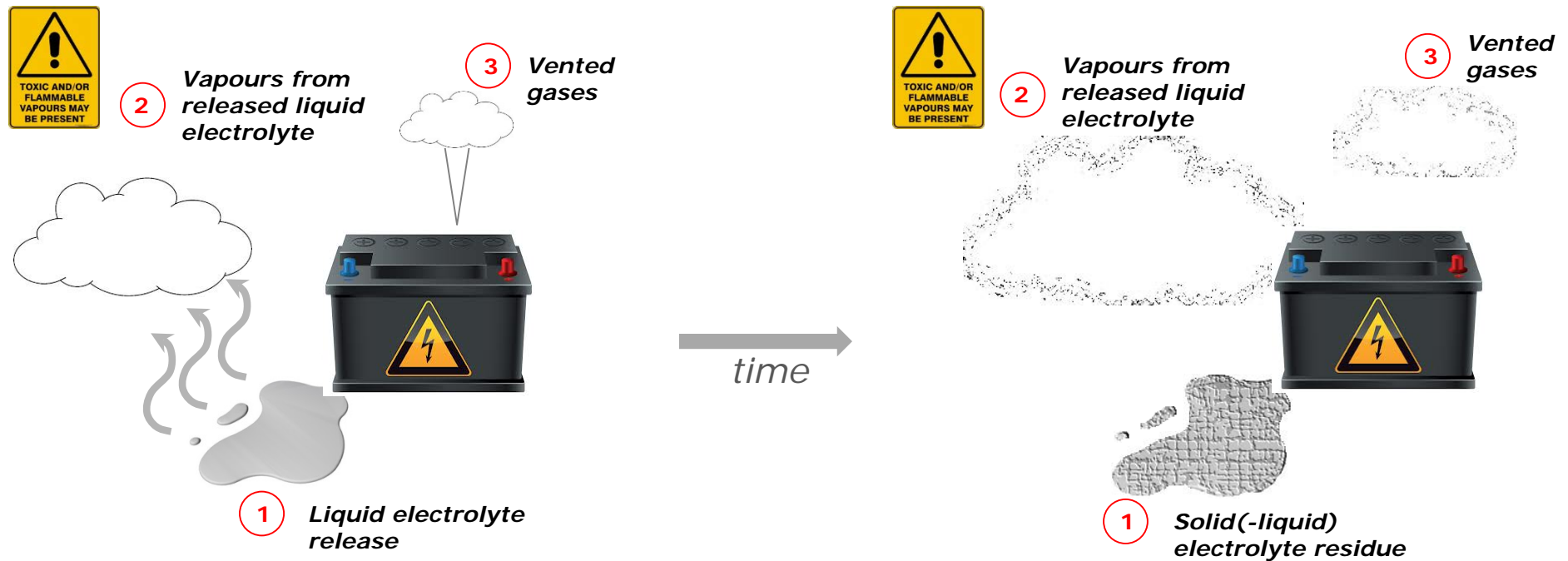
"...visual inspection without disassembling any part of the Tested-Device" is adopted in Phase 1 as a method for verification of the occurrence of electrolyte leakage and venting.

JRC concerns:

- Due to high volatility of some electrolyte components and limited release volume, electrolyte leakage and venting may not always be easily detectable, while potentially creating hazardous environment.
- Special measures may be required to ensure safety of inspecting personnel.
- Release of other substances, e.g. coolant, is currently treated equally to release of electrolyte.

JRC work will focus on the development of more robust method(s) to first verify the occurrence of the electrolyte release and/or venting and, if possible, to quantify such release.

Work in progress



Possible approaches for detection of electrolyte release

① Detection of Li-ion presence

② + ③ Gas detection

Gas detection

Equipment for Long Distance Identification, Visualization and Quantification of Gases has been procured



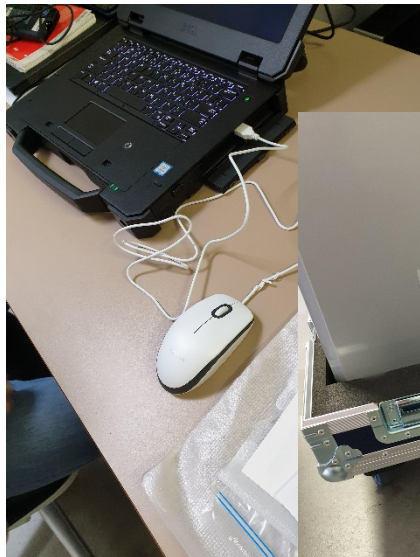
- Gas analysis in both passive and active modes
- Spectral range of 700-1500 cm^{-1} and 700-5000 cm^{-1} , respectively
- Spectral resolution of up to 0.5 cm^{-1}
- Spectral acquisition rate of 16 spectra per second
- Field of surveillance is 360° x 30°
- Spectral library of more than 450 compounds

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Gas detection

... and commissioned





Thanks

Any questions?

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