

**Task Force
on Electro-Magnetic Compatibility
(TF-EMC)**

**Status report to GRE-84
April 2021**

TF-EMC Status Report - General

- Reminder : UNECE R10.06 has been published 2019, November 20th with date of entry into force 2019, October 15th.
- TF-EMC had its 20th meeting on 2021, March 16th (previous meeting was in September 2019) with CPs representatives from Italy, Spain, Japan, Sweden, Netherland and China.
- Since last GRE TF-EMC meeting, OICA EMC TF has continued to work for future revision of UNECE R10 to propose modifications of UNECE R10.06 (either through an amendment or an UNECE R10.07 new revision).
- Additionally to the on-going work to draft some proposals for revision of UNECE R10.06, OICA EMC TF has launched an internal sub TF on virtual testing to evaluate if use of virtual testing could be used as an alternative to some physical tests. First meeting of Virtual testing STF took place in February 2021.
- TF-EMC 20th meeting focused on OICA EMC TF first proposals and/or CPs representatives proposals.

TF-EMC Status Report - Revision of R10

- **Proposals already agreed by OICA EMC TF and presented to TF-EMC**
 - Consideration of [autonomous vehicles \(ADAS functions\)](#) for vehicle immunity tests
 - Consideration of [e-call](#) for vehicle immunity tests
 - [Suppression of 800 mm Stripline method](#) for ESA immunity testing
 - [Addition of reverberation chamber method](#) for ESA testing
 - Change of minimum current value for emission test in charging mode (vehicle and ESA)
 - Align Conformity Of Production requirements between tests included in revision 3 (without EV Charge mode) and editions 4, 5 and 6 (with EV Charge modes)
 - Consideration of area others than residential environment for radiofrequency conducted disturbances on AC or DC power lines
 - Modification of failure criteria for immunity test on ESA in configuration "REESS charging mode coupled to the power grid"
 - Use of FFT for emission measurements
 - [Clarification on testing for immunity to and emission of transients](#) of electrical/electronic sub-assemblies
 - [Clarification on testing for emission of harmonics](#) generated on AC power lines from vehicle
 - Note on EMC and functional safety
 - Precision concerning RF transmitters

TF-EMC Status Report - Revision of R10

- **Proposals still under consideration within OICA EMC TF for revision of UNECE R10**
 - Modification of set-up for vehicle in charging mode for vehicle radiated emission (NB and BB)
 - **Addition of precisions of charging modes to be tested in AC** (mode 1, mode 2, mode 3) for all vehicle annexes in configuration "REESS charging mode coupled to the power grid"
 - **Addition of precisions of charging cables to be tested** in AC for all vehicle annexes in configuration "REESS charging mode coupled to the power grid"
 - **Improvement of test set-up figures and descriptions for ESA** in configuration "REESS charging mode coupled to the power grid"
 - Update of standards normative references to more recent editions

TF-EMC Status Report - Revision of R10

- **General topics raised by CPs for revision of UNECE R10**
 - **Change of frequency range** (lower and/or upper frequencies)
 - **Testing** : test levels, E-marking vs CE-marking, orientation and polarization for immunity to external field
 - Consideration of **ADAS function** for immunity tests
 - « **Cybersecurity** » : software updates vs new functionalities

TF-EMC Status Report - Revision of R10

- **Potential roadmap for R10 revision**

- Confirmation by D.Rovers that **R10 is one of the top priorities issues within the subjects under consideration by GRE (with a 2022 timeline)** and also in the latest version of EU Commission program of work.
- Proposed targets for TF-EMC

