

OICA and CLEPA joint position on

“Proposal for a new 07 series of amendments to UN Regulation No. 10 (Electromagnetic compatibility)”

GRE 90th session, Geneva, April 29th – May 3rd 2024

1. Specific requirements in flowcharts introduced for clarifying test selection

There are specific requirements relating to the qualifications of the labs which can perform tests on mode 2 chargers (ICCPDs which allow EVs to be charged from residential power outlets) in flowcharts in Annexes 4, 11, 12, 13, 15 and 16.

¹ IEC 61851-21-2 tests shall be performed by an ISO17025 accredited laboratory recognised by any Technical Service designated by the type approval Authority. The test report shall be provided by the vehicle manufacturer as evidence for the vehicle type approval.

OICA and CLEPA oppose the dual qualification requirements for test laboratories, which include both ISO/IEC 17025 accreditation and recognition by a technical service and propose a review of this requirement, due to the following reasons:

- a. Even if eligible labs for ICCPD testing are only required to be recognized by a Technical Service instead of actually being a Technical Service, this is not a sufficient moderation of the double qualification requirement.
- b. Economic disadvantage to some countries: There are countries that have signed the 1958 agreement that neither have a technical service nor a lab recognized by a technical service, e.g. Bosnia and Herzegovina, Azerbaijan, Australia, New Zealand, the Republic of Korea, Thailand, Albania and Montenegro.
- c. Restriction of competition: for example, there are 336 test laboratories in Germany which are accredited to ISO/IEC 17025 but only 72 laboratories are recognised by a Technical Service. This will restrict the number of available laboratories and reduce competition.
- d. The effort for testing Mode 2 cables is not justified: There is neither a technical benefit nor a benefit related to better compliant results. Instead, it restricts free competition among labs and puts countries without any qualifying labs at an economic disadvantage.

Summary: We recommend the removal of “recognised by any Technical Service designated by the Type Approval Authority”. Use of laboratories accredited to ISO/IEC 17025 is sufficient and addition of the requirement of recognition by a technical service will not improve compliance results but instead will restrict competition and disadvantage some signatories to the 1958 agreement.

2. Modulations used during radiated immunity tests

OICA and CLEPA recommend that modulations used during radiated immunity tests are aligned with the latest versions of ISO 11451-1 and ISO11452-1 (next stage is Final Draft International Standard, i.e. the final stage before publication). These standards are scheduled for publication in March 2025 (before the applicability date of ECE R10.07.)

- a. While updating UN-R 10, it was agreed in the IWG to align with the latest ISO standards.
- b. ECE-TRANS-WP.29-GRE-2023-27e-Rev.1 is aligned with previous draft (Draft International Standards) which included desired modulations, but the applicable frequency range has been updated based on technical research. We would like to extend the applicability of certain modulation scheme for robustness.
- c. State-of-the art requirements will be provided by the ISO standards 11451-1 and 11452-1. These requirements are up-to-date and suitable to emulate threats of current digital

technologies such as cellular communications and WiFi. Adhering to different frequency ranges in ISO standards versus UN-R 10 will lead to increased testing efforts without focusing on actual threats of digital communication technologies.

- d. There is no need to reference unpublished standards as the details would be included within the regulation.

Summary: We recommend the adoption of a technical change to the applicable frequency range of specific modulations in line with IWG-EMC-43-04e. (details shown below).

Annex 6, Paragraphs 4.1., amend to read,

"4.1. Frequency range, dwell times, polarization.

The vehicle shall be exposed to electromagnetic radiation in the 20 to ~~26~~,000 MHz frequency ranges in vertical polarization.

The test signal modulation shall be:

- (a) AM (amplitude modulation), with 1 kHz modulation and 80 per cent modulation depth in the 20 to ~~800~~ 400 MHz frequency range; ~~and~~
- ~~(b) PM (pulse modulation), Ton 577 μ s, period 4,600 μ s in the 800 to 2,000 MHz frequency range.~~
- (b) PM2 (pulse modulation type 2), Ton 3 μ s, period 3,333 μ s in the 2,700 to 3,100 MHz frequency range; and**
- (c) PM3 (pulse modulation type 3), Ton 500 μ s, period 1,000 μ s in the ~~800~~ 380 to 2,700 MHz and the 3,100 to 6,000 MHz frequency ranges.**

If not otherwise agreed between Technical Service and vehicle manufacturer.

Frequency step size and dwell time shall be chosen according to ISO 11451-1."

Annex 9, Paragraphs 3.1., amend to read:

"3.1. Frequency range, dwell times

Measurements shall be made in the 20 to ~~26~~,000 MHz frequency range with frequency steps according to ISO 11452-1.

The test signal modulation shall be:

- (a) AM (amplitude modulation), with 1 kHz modulation and 80 per cent modulation depth in the 20 to ~~800~~ 400 MHz frequency range; ~~and~~
- ~~(b) PM (pulse modulation), Ton 577 μ s, period 4,600 μ s in the 800 to 2,000 MHz frequency range.~~
- (b) PM2 (pulse modulation type 2), Ton 3 μ s, period 3,333 μ s in the 2,700 to 3,100 MHz frequency range; and**
- (c) PM3 (pulse modulation type 3), Ton 500 μ s, period 1,000 μ s in the ~~800~~ 380 to 2,700 MHz and the 3,100 to 6,000 MHz frequency ranges.**

If not otherwise agreed between Technical Service and ESA manufacturer.

Submitted by the experts from OICA and CLEPA

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Frequency step size and dwell time shall be chosen according to
ISO 11452-1.”