

Submitted by TF EMC

Informal document **GRE-75-18**
(75th GRE, 5-8 April 2016,
agenda item 7(c))

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

**Status report of TF to GRE-75
Friday, 8 April 2016**

TF EMC Status Report - Background

- According to report of GRE-74 (see item 24.), TF EMC was created to handle EMC related proposals on Regulation No. 10
 - ✓ [GRE/2015/35](#) (GRSG)
 - ✓ [GRE/2014/41](#) (Belgium) and [GRE-74-12](#) (Russian Federation)
 - ✓ [GRE/2015/36](#) (China)

- TF EMC had its first meeting in Paris, on January 27th, with the participation of France, Japan, RF, OICA and IMMA

- Above topics were discussed, along with AECS (e-call), based on a paper communicated by Netherlands (GRSG)

- TF EMC had its 2nd meeting on April 5th, including participants from Japan, UK, RF and OICA. The conclusions of these two meetings are now being reported to GRE-75 (agenda item 7c.)

TF EMC Status Report - Summary of the report

1. Devices for indirect vision

➤ **Done**

2. AECS (e-call)

➤ **Done**

3. Trolley buses

➤ proposal from TF

4. Proposal from China

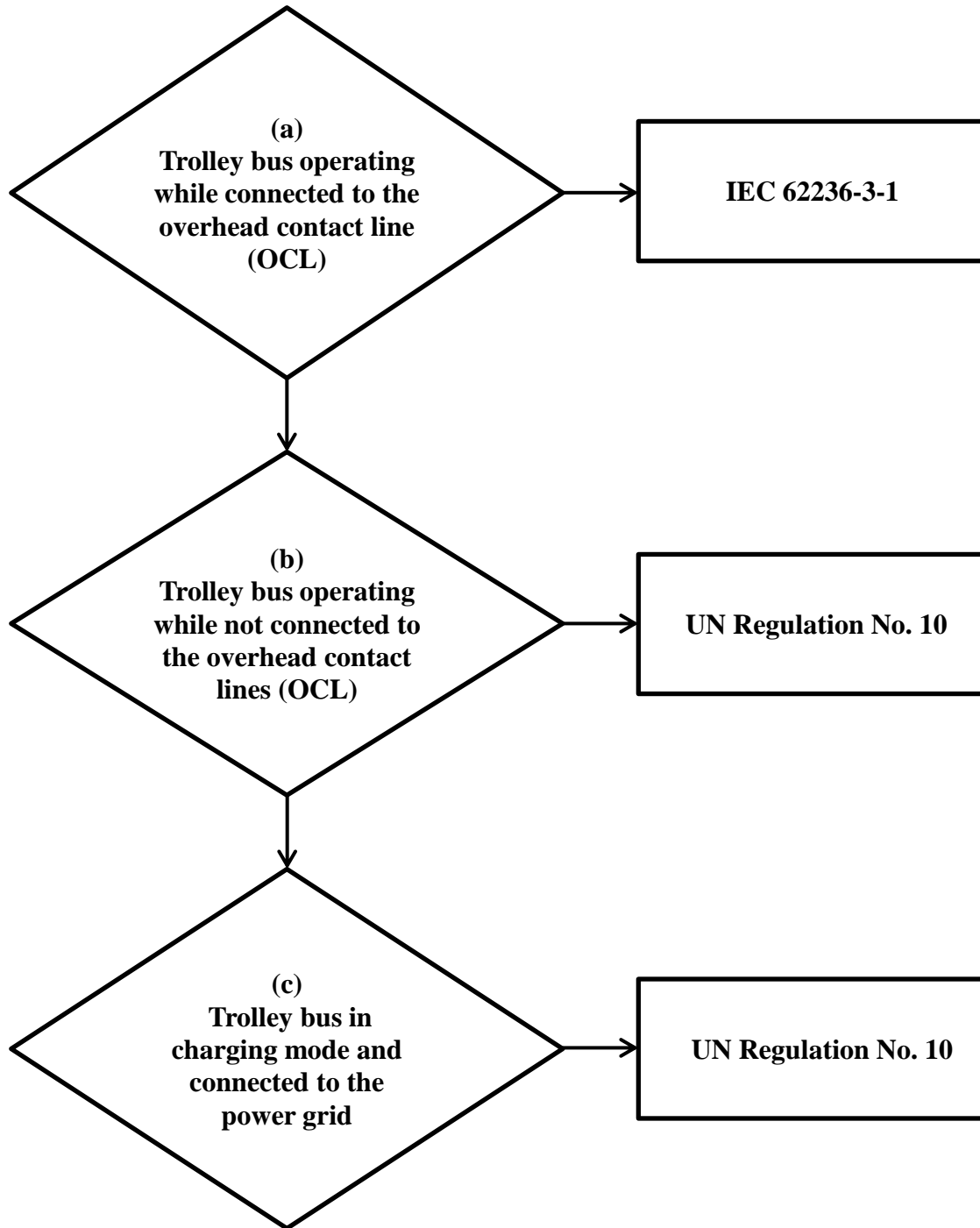
➤ current situation in TF

TF EMC Status Report - Trolley buses

- As stated in Regulation No. 107, trolley buses are dual modes vehicles:
 - a. **Trolley mode:** connected to the Overhead Contact Lines (OCL)
 - b. **Bus mode:** not connected to the OCL (propelled by Battery or Diesel engine) or connected to the Power Grid when charging the battery (charging mode)

- In mode a. IEC 62236-3-1 (Railway Standard) should apply, whereas in mode b. UN Regulation No.10 should apply

- In order to illustrate these two operating conditions, TF EMC suggested a template flow diagram that **could be inserted in Regulation No 10.**



TF EMC Status Report - Trolley buses

- The background for this clarification, the template flow diagram and has been included in informal document [GRE-75-13e](#). From informal document, the following items need attention:

- TF has identified that **in some cases** (when a trolley bus equipped with a Diesel engine) then **other Regulations then R10 will be impacted**. For example:
 - ✓ Regulations No. 100 (electrical safety) - GRSG
 - ✓ Regulations No. 51 (noise) - GRB
 - ✓ Regulations No. 89 (speed limitation of devices) - GRRF
 - ✓ Regulation No. 49 (emissions) - GRPE
 - ✓ Regulation No. 13 (brakes) - GRRF

- Therefore, TF recommends **to seek advice from June WP.29**, in order to get guidance on how to proceed further with the treatment of trolley buses in the frame of UN Regulations

- The topic should then be addressed, via an informal document, to June 2016 WP.29 session

TF EMC Status Report - Proposal from China

- [GRE/2015/36](#) (China) contains several proposals for modification of provisions of Regulation No.10
- During its 1st meeting, TF has aligned positions of France, Japan, OICA and IMMA on the Chinese proposal. A table containing all the provisions and the diverse position is available in the minutes on TF workspace, as TF-EMC-01-02e Meeting Minutes
- IMMA needed further checks on some TF comments and came back before 2nd meeting with document [TF-EMC-02-02e-IMMA Comments on GRE-2015-36](#), which shows that all positions are now aligned, except for one technical item whose conformity with CISPR12 needs to be checked (figure 1 of annex 4, appendix 1)
- At this point, the work on the Chinese proposal is on hold until we get the complete set of answers from the expert from China

TF EMC Status Report - Further Actions

- Get guidance from June WP.29 on trolley buses. Seemingly, a *horizontal* approach would have to be adopted, since **multiple GR's are impacted**
- Get comment from the Chinese representative on TF position, on [GRE/2015/36](#)
- Next meeting of TF will be just before GRE-76. Possibly, one intermediate meeting can be arranged before that, depending on feedbacks on comments and/or further potential proposals

TF EMC Status Report - Further Actions

BACK-UP

TF EMC Status Report - Devices for indirect vision

- Document [GRE/2015/35](#) to replace *rear view mirrors* by *devices for indirect vision*, was adopted during GRE-74
- Before vote in AC.1 during March WP.29, EMC experts have checked and analyzed further the potential impact of this change. No critical item has been identified
- Documents [WP.29/2016/16](#) and [WP.29/2016/17](#) were then presented and adopted at WP.29 in March
- This will then be removed from TF agenda

TF EMC Status Report - AECS

- During its 1st meeting, TF EMC has addressed some concerns from NL, coming from GRSG. Considerations are summarized in a discussion paper, available on TF workspace: [Discussion paper \(NL\) - AECD vs R10](#). This documents contains three questions that the expert from OICA answered:
 1. ***Does R10.04 (and any later version) fully cover the EMC aspects for AECD components to be fitted to vehicles and for vehicles with these systems installed/integrated?*** OICA considers that when going through R10.05, paragraph 3.2.1 "Applicability of this Regulation to ESA", it is clear that AECD falls into the scope of R10.05.
 2. ***In case not, what amendments can be proposed to Regulation No. 10?***
Does not apply
 3. ***Are specific EMC provisions necessary within the Regulation on AECS?***
General requirements of Regulation No. 10 are adequate and sufficient.
- Those answers have been communicated back to NL
- Additionally, potential inclusions of future immunity related functions in Regulation No.10 (for instance, with Autonomous Driving) should be discussed deeper by TF

TF EMC Status Report - Trolley buses

- In addition to these clarifications regarding UN R10, TF has made some comments, during its 1st meeting, on the document Mutual Resolution No. 2 (M.R.2) of the 1958 and the 1998 Agreements – see [WP.29/1121](#), containing Vehicle Propulsion System Definitions (VPSD) - see item 44 of the document
- M.R.2. reads: “Electric trolley vehicles are not covered in vehicle regulations at this stage.”
- It should then be amended in the direction of the above proposed developments/clarifications