

QRTV for UN Regulation

GRB 61

Meetings

Pre-meetings (under QRTV for GTR TF umbrella):

- 2014 September 4th and 5th (Geneva)
- 2014 October 28th (Brussels)

Meetings for UN Regulation under 58 Agreement :

- 2014 December 10-11th (Tokyo)
 - Draft UN Regulation on QRTV for informal document to GRB 61st session
- 2015 January 26th and 27th (Geneva)
- 2015 February 26th and 27th (Brussels)
- 2015 May 11th to 13th (location to be defined)
 - Working document UN Regulation on QRTV to GRB 62nd session

A new UN Regulation

- **Title** : Uniform provisions concerning the approval of Quiet Road Transport Vehicles with regard to their reduced audibility
- **Scope** : This standard applies to vehicles of categories M, N, [L] with either electric- or hybrid-electric drive for which the vehicle's propulsion system can propel the vehicle in normal travel mode, in reverse or at least one forward drive gear, without an internal combustion engine operating.
- **Modular building** : At this stage, only acoustic measures shall be developed in order to overcome the concern of reduced audible signals from EV / HEV. After finalisation, the appropriate GR shall be assigned with the enhancement of the Regulation in order to develop **alternative, non-acoustic measures**, taking into account active safety systems such as, but not limited to pedestrian detection systems.

Basic principles

This standard proposes the following well-accepted specifications:

- Test of Minimum sound at 10 km/h, 20 km/h and reversing
This standard specifies minimum levels for overall sound and for at least two 1/3 octave bands
- Frequency shift from 5 to 20 km/h

This regulation provides vehicle performance specifications with or without an AVAS for EVs and HEVs (without an AVAS if natural sound of EV/HEV is loud enough)

In order to achieve a compromise for prompt publication of this Regulation, potential additional specifications were postponed to permit any additional research work

Recommendations for GRB

Because state of the art does not permit today to prove that those following points will be beneficial without undesired adverse effects, the IWG proposes to GRB for the working document :

- to postpone L categories from the scope
- to have stationary sound as an option
- to have pause function as an option

The IWG proposes to GRB to re-consider these points after adoption in September 2015 for the revision of this future Regulation

Work load for working document

- Specifications under discussion :
 - Reduce spectral requirement for vehicle without AVAS if overall sound pressure level is above limit + xx dB (because natural sound of EV/HEV is loud enough)
 - Reverse alarm
 - Fading out of the sound above a certain speed
 - Limitation of the overall sound emission of AVAS to ensure the protection of the environment
- Communication form
- Transitional provisions
- Test method improvements (e.g. measurement of frequency shift)