

## **Proposal for amendments to proposal of Russian Federation on a Supplement 05 to Regulation 28 (GRB/2015/07)**

(Uniform provisions concerning the approval of audible warning devices and of motor vehicles  
with regard to their audible warning signals)

The text reproduced below was prepared by the expert from the International Organization of Motor Vehicle Manufacturers (OICA), in order to propose amendments to GRB/2015/07 submitted by the Russian Federation. Modifications to the text are marked in bold characters for new or as strikethrough for deleted text

### **I. Proposal**

Amend to read:

...

- 2.1. "audible warning device" means a device consisting of one or several sound emission outlets that are excited **simultaneously by a single power source**, emitting an acoustic signal which is intended to give warning of the presence of a vehicle in a dangerous road traffic situation;
- 2.2. "audible warning system" means several audible warning devices operating simultaneously by the actuation of a single control, ~~where each device emits sound signal in the same or different tones~~;
- 2.3. "multiple audible warning system" means several audible warning devices/systems capable of functioning independently;  
...
- 2.4.2. princip**a**le designation:  
...
- 3.2 It shall be accompanied by ~~the following~~ documents, **either in paper format in triplicate or alternatively upon agreement with the Type Approval**

**Authority in electronic format [~~in triplicate~~]**, giving the following particulars:

...

- 6.3.11 In the case of ~~multiple-tone devices audible warning system or multiple-tone audible warning system~~ **audible warning systems** in which each sound-emitting unit ~~is capable of functioning can be operated~~ **independently or in case of multiple audible warning systems**, the minimum values of sound level specified above shall be obtained when each of the constituent units is operated separately. The maximum value of the overall sound level shall not be exceeded when all the constituent units are operated simultaneously.

...

- 11.2.1 the number and type(s) of **audible** warning devices ~~and/or audible warning systems (systems)~~ fitted on the vehicle;

...

- 14.1.1 The ~~vehicle and its~~ audible warning device(s) (system) **and its mounting elements to the vehicle** shall be so designed, constructed and assembled as to enable the vehicle, in normal use, despite the vibration to which it may be subjected, to comply with the provisions of this Regulation.

...

- 14.3.3. The A-weighted sound pressure level emitted by the device(s) fitted on the vehicle shall be measured at a distance of  $7.00 \pm 0.10$  m in front of the vehicle (Annex ~~4~~ 5), the latter being placed on an open site<sup>5</sup>, on ground as smooth as possible.

...

- 14.3.6. ~~The A-weighted sound pressure level measurement is carried out at three points at the height of (0.5 ± 0.10) m, (1.0 ± 0.10) m, (1.5 ± 0.10) m. In each point three measurements shall be performed. The arithmetic average of all measurements at each point shall be rounded to the~~

~~nearest whole number. The final result shall be the minimum value amongst the three arithmetic averages.~~

*Option 1 (preferred):*

**The maximum sound-pressure level shall be sought within the range of 0.5 and 1.5 m above the ground;**

*Option 2 (will require more assessments):*

**The sound pressure level shall be measured at a fixed height specified by the vehicle manufacturer within the range of 0.5 m and 1.5 m above the ground for a duration of at least 1 second. The final result shall be the maximum A-weighted sound pressure level of the reading period, rounded to the nearest integer.**

...

Annex 3

**I. Arrangement of the approval mark of the audible warning device(s)**

(see paragraph 5.5. of this Regulation)

**Approval marks of already existing types of audible warning devices (systems) or vehicle types may be continued to be used.**

...

## II. Justification

2.1, 2.2 and 2.3 in junction with 6.3.11

If part of the audible warning system can operate individually, it must be ensured, that each independent device fulfils the minimum sound requirements, while the maximum sound level shall not be exceeded, when all devices operate together.

2.4.3 Type error

14.1.1 Vehicle corrosion is not part of this Regulation. However a sufficient durability of the device and its mounting elements to the vehicle is important for consideration.

14.3.3. Annex 4 is for Component test; should be Annex 5

14.3.6. The suggested change of the Russian Federation means a very change of the testing and measurement reading concept. This would require an impact assessment on the test results of audible warning devices. OICA prefers to keep the original current R28 wording (Option 1). As an approach for a compromise to achieve a more accurate and repeatable test condition OICA presents an alternative approach for discussion (Option 2). The modified way of testing would still need some validation work.

Annex 3 The change of the approval mark – although to today's practise need some transitional provisions. To avoid the introduction of an own chapter from transitional provisions, it is suggested to introduce the proposed sentence in the Annex 3 for the marking.