

Proposal for amendments to ECE/TRANS/WP.29/GRSG/2016/19

The text reproduced below was prepared by the Secretary of the GRSG informal working group on AECS in order to convey the latest improvements to the text of the draft regulation on AECS. The modifications to document ECE/TRANS/WP.29/GRSG/2016/19 are marked in bold for new characters and strikethrough for deleted characters.

I. Proposal

Paragraph 2.10, amend to read:

“2.23 *AECD (Accident Emergency Call Device)*” means a unit or a set of units performing at least the following functions;

- a) receiving and/or generating the automatic and manual triggering signals, and
- b) sending the data.

It may in addition perform one of the following functions:

- c) receiving or determining the vehicle location,
- d) providing a warning **and information** signals, and
- e) allowing bidirectional audio signals for voice communication;

unless specified otherwise in this regulation.”

Paragraph 7.4.1, amend to read:

“7.5.1 The following information shall be provided regarding the status of the emergency call transaction when the AECD is automatically or manually activated:

- a) system is processing (~~eeall~~ **emergency call** is triggered, connection is being set up or data transmission is in progress or completed)
- b) transmission failed (connection failed or data transmission failed)”

Paragraphs 7.5.2.1, 16.5.3.1 and 25.7.3.1 (the tables), amend to read:

ITEM		Comments
Component	Failure type	
Crash Control Unit	Internal failure	If not in good condition, then the automatic eeall emergency call is not possible. If CCU internal failure verification is not part of AECD approval (Part I), then it shall be subject to AECS approval (Part II).
Back-up power supply (if fitted)	Electrical connection	Dedicated battery is connected.
SIM	not present	This item only applies if a removable SIM card is used.
Back-up power supply (if fitted)	The state of charge, threshold for warning at the discretion of the manufacturer	Failure if the state of charge is at a critical level according to the manufacturer.

Table 1: Template of information for self-test function

Paragraph 7.6, amend to read:

“7.6. Power supply

~~7.6.1. Perform the sled test described in Annex 7.~~

~~7.6.2. Immediately after the sled test, simulate the trigger so as to emit the MSD.~~

~~7.6.3. The AECD shall send the MSD and shall produce status indication (if relevant) upon triggering. This shall be verified by one of the methods described in paragraph 2. of Annex 9.~~

7.6.2.1. In the case of an AECD equipped with a back-up power supply, at the request of the applicant, it shall be verified that the AECD is able to operate autonomously for a period of, first, not less than 5 minutes in voice communication mode followed by 60 minutes in call-back mode (idle mode, registered in a network), and finally, not less than 5 minutes in voice communication mode. It shall be indicated in the communication document of Annex I, item 10.

~~7.6.3.2.~~ The absence/presence of a back-up power supply shall be clearly indicated in the information document of Annex 4, item 10.”

Paragraphs 7.7 and 25.10, amend to read:

“7.7. Resistance to impact

The AECD shall remain operational after impact. This shall be demonstrated according to Annex 7 and a verification of the MSD and HMI functionality according to ~~paragraph 2~~ **paragraphs 2.1 and 2.3** of Annex 9. **In case of use of wired test method n°3 of Annex 9, mobile network antenna and mobile network antenna wire verification shall be performed according to paragraph 2.4 of Annex 9.**”

Paragraph 16.1.2, amend to read:

“16.1.2. The AECD shall be connected to the vehicle’s on-board electrical network, so that the AECD functions in all the required modes, and the ~~backup battery~~ **power supply (if fitted) is charged operational.**”

Paragraph 16.5.2, amend to read:

“16.5.2. ...

(a) system is processing (**emergency call eCall** is triggered, connection is being set up, data transmission is in progress or completed, or voice call is in progress);

....”

Paragraph 16.7.2.3, amend to read:

“16.7.2.3. After the impact test under Regulation No. 94 and/or Regulation No. 95 whichever relevant, the AECS ~~back-up~~ power supply shall be able to supply power to the AECS. This may be verified by one of the methods described in Annex 9.

...”

Add a new paragraph 16.7.2.4, to read:

“**16.7.2.4. In the case the main power supply and its connectors are not tested according to Part I of this regulation, they shall be tested according**

to Annex 7 for this Part, in compliance with the provisions of paragraph 15.1. It shall be demonstrated that they remain operational after impact by:

- a battery test with a battery analyser after the sled test, and
- verification that no cable connectors are unplugged during the event.”

Paragraph 25.1.2, amend to read:

“25.1.2. The AECD shall be connected to the vehicle's on-board electrical network, so that the AECD functions in all the required modes, and the backup power source (if fitted) is ~~charged~~ **operational**.”

Annex 8, paragraph 2.2.3, amend to read:

“2.2.3. Set up the simulator in accordance with its operational manual. Start simulation of for combined GNSS GLONASS, Galileo, GPS and SBAS signals script with set parameters, given in Table ~~5~~ **6**.”

Annex 8, paragraph 2.2.4, amend to read:

“2.2.4. Set up the **test system to start** recording of NMEA-0183 messages after receiving the navigation solution. Up to the moment the simulation script is complete, the NMEA-0183 messages are output by the GNSS receiver to a file.”

Annex 8, paragraph 2.2.5, amend to read:

“2.2.5. ~~Upon receiving the navigation solution, set up recording of NMEA-0183 messages output by GNSS receiver to a file, up to the moment the simulation script is complete.~~

The test system shall store the recorded NMEA-0183 messages into a separate file when the simulation script is completed.”

Annex 8, paragraphs 2.2.3, 2.2.11, 2.2.12, 2.2.13, 2.5.3, 2.6.2, 2.7.6., change the references to Table 5 into references to Table 6.

Annex 8, paragraph 2.3.1, amend to read:

“2.3.1. Repeat test procedures described in paragraph 2.2., ~~but~~ **except** paragraphs 2.2.11. to 2.2.13. with simulation script for maneuvering movement given in Table 7.”

Annex 10, table 10, amend to read:

<i>Short Name of MSD Element</i>	<i>Description</i>
...	...
Vehicle type	Provides a the vehicle type category.
...	...

II. Justifications

Paragraph 2.23: information signals should be associated to the warning signals, as in the text of the regulation (paragraphs 7.4, 16.4 and 26.9).

Paragraph 7.5.1 and several other occurrences in the text: the emergency call is triggered, rather than the ecall per the meaning of this Regulation.

Paragraphs 7.5.2.1, 16.5.3.1 and 25.7.3.1 (the tables):

- The emergency call is triggered, rather than the ecall per the meaning of this regulation
- The electrical connection of only the back-up power supply is relevant since it must supply energy to the AECD only in case the main power supply is disconnected.
- The two lines dedicated to the back-up power supply are of interest only in the case a power supply is fitted.

Paragraph 7.6: This section concerns only the ability of the power supply to supply the AECD; the resistance to impact is treated in paragraph 7.7. The main power supply probably does not exist at the time of the approval of the AECD as a separate component (Part I). It is hence not necessary to perform the sled test at this stage on the main power supply.

In addition, it is up to the OEM to test or not the main power supply as mentioned in paragraph 7.7.2. If the main power supply is not tested in Part I, it shall be tested in part II (see paragraph 15.1).

Paragraphs 7.7 and 25.10: only paragraphs 2.1 and 2.3 of Annex 9 apply to the verification of the MSD and HMI. Paragraph 2.2 corresponds to the Hands-free audio equipment which is not in the scope of the Part I.

Paragraph 16.1.2: “Power supply” is the term defined per paragraph 2.6. the wording “charged” is not precise enough and then may be subject to interpretation according to the state of charge (SOC). The wording “operational” is then more appropriate since it well indicates that the power supply must be able to operate the AECS as prescribed elsewhere in the text.

Paragraph 16.7.2.3: this paragraph is in the section dedicated to the case when the AECS is not equipped with a back-up power supply.

After the impact, only the connection and the “good” functioning of the battery should be performed. The test can be conducted with the use of a Battery Analyser. It is not necessary to perform here an autonomy test, as this should have been conducted per paragraph 16.7.2.2.

Paragraph 25.1.2: The wording “operational” is then more appropriate since it well indicates that the power supply must be able to operate the AECS as prescribed elsewhere in the text.

Annex 8, paragraph 2.2.4: Clarifies the meaning of the paragraph.

Annex 8, paragraph 2.2.5: Together with the improvement of the wording of paragraph 2.2.4, this amendment improves the clarity of paragraph 2.2.5.

Annex 10, table 10: Change the term “type” into “category”. “Vehicle type” could be a source of confusion in a UN regulation. The EU directive 2007/46 uses the term “class” for defining the different categories of vehicle (M1, M2 ...).