



Commission Delegated Regulation on the Technical requirements and test procedures for the type-approval of eCall in-vehicle systems

- Overview -

29 September 2016, IMCO

Main dates

- 19/05/2015 – publication of the eCall type-approval Regulation (2015/758)
- 08/06/2015 – entry into force
- 15/07/2016 – adoption of Commission Implementing Regulation on the administrative procedures
- 12/09/2016 – adoption of Commission Delegated Regulation on technical requirements and tests
- 31/03/2018 – mandatory fitting requirement starts to apply

Consultations

- MS Expert Group (21 January)
- MVWG (16 February)
- Several meetings organised by IMCO secretariat
- EDPS (regular consultations during preparation and on the final draft in parallel to the ISC)
- Art. 29 WG (on the final draft in parallel to the ISC)

The draft was translated in all EU official languages in August.

Empowerments for Delegated act

Art. 2(2) Exemptions

Art. 5(8) Technical requirements and tests for type-approval

Art. 5(9) Update of the versions of standards

Art. 6(12a) Technical requirements and tests for the application of the rules on personal data processing referred to in paragraphs 2 and 3

Art. 6(12b) Technical requirements and tests for ensuring there is no exchange of personal data referred to in paragraph 11



Overview of the delegated act as adopted on 12 September 2016



Technical Annexes to (EU) 2015/758

I Resistance to severe crashes (sled-test)

II Full scale crash-test assessment

III Crash resistance of audio equipment

IV Co-existence of third-party services

V Automatic triggering mechanism

VI Compatibility with Galileo and EGNOS

VII In-vehicle system self-test

VIII Privacy and data protection

IX Classes of vehicles referred to in Article 2. (Exemptions)

Annex I: Resistance to severe crashes (sled-test)

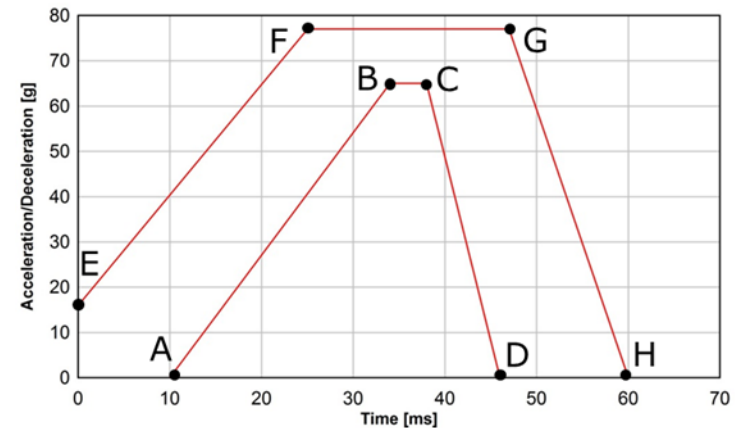
Purpose

- Ensure the core functionality of eCall after a high-severity deceleration event.

Key features

- Covers real-world collision configurations that are more challenging than the full scale crash tests.
- Component-based test procedure, i.e. no vehicle or body-in-white required.

Point	Time (ms)	Deceleration (g)
A	10	0
B	34	65
C	38	65
D	46	0
E	0	16
F	25	77
G	47	77
H	60	0



Annex II: Full scale crash-test assessment

Purpose

- Ensure automatic triggering in a frontal and side impact.
- Ensure the full functionality of the In Vehicle Systems after these collisions.

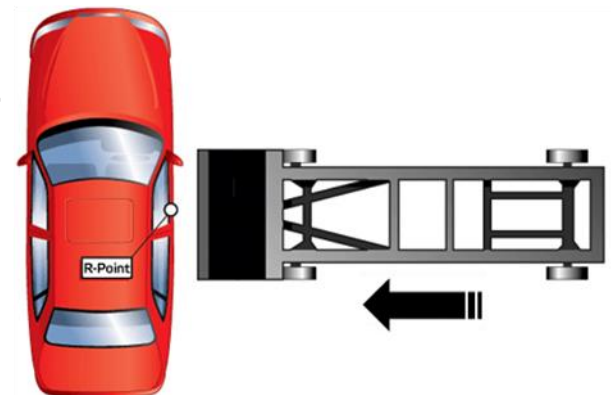
Key features

- If automatic call not possible in the test procedure due to external factors, alternative proof of successful triggering is permissible
- Front and side impact according UNECE Regulation No.94 and No.95.

UN R94 (Frontal)
56 km/h
Deformable barrier
40% overlap



UN R95 (Side)
50 km/h
Mobile deformable barrier
Barrier Mass: 950 kg



Annex III: Crash resistance of audio equipment

Purpose

- Ensure that the audio equipment remains functional after the vehicle has been involved in a frontal or side collision.

Key features

- If automatic call not possible in the test procedure due to external factors, alternative proof of successful triggering is permissible
- Front and side impact according UNECE Regulation 94 and 95, no extra potentially expensive hardware necessary

Annex IV: Co-existence of third-party services

Purpose

- Verify that the 112-based system is triggered automatically in the event that the TPS system does not function.
- Verify that there is only one system active at a time.

Key features

- Design review Failure Mode and Effect Analysis (FMEA) and Fault Tree Analysis (FTA) are used to review.
- During the verification of system behavior, multiple failure modes are applied.
- Solution applied is also used in other UN regulations, such as UN R13-H and UN R79

Annex V: Automatic triggering mechanism.

Purpose

- Automatic triggering in certain crash configurations is tested in UN R94 and UN R95 full-scale impact tests.
- This annex defines documentation to complement these tests: **Ensuring** that automatic eCalls are **also** triggered in accidents dissimilar from and/or of lower severity than collisions in UN R94 and UN R95.

Compromise:

- New point added extending the documentation requirements to avoid unjustified eCalls.

Background: This is seen as safety relevant, because unjustified eCalls could overburden emergency services and affect their capacity to respond to real accidents. Commission considers this a balanced approach that answers to justified concerns and minimizes any additional burden on manufacturers.

Annex VI: Compatibility requirements with positioning services

Purpose

- verify Galileo system compatibility
- Verify EGNOS system compatibility
- Verify positioning capabilities

Key features

- Testing procedures can be performed either on the eCall unit or directly on the GNSS chipset receiver

Annex VII: In-vehicle system self-test

Purpose

- Verify that a warning will be given to the occupants of the vehicle in the event of a critical system failure which would result in an inability to execute a 112-based eCall.

Key features

- Procedure based on documentation and a physical verification test on pre-set list of items.
- Visual tell-tale (or warning) shall be active while failure is present; may be cancelled temporarily by the driver, but shall be repeated on ignition-on.

Compromise:

- Proceed without a specific PTI provision and enable future PTI through the system self-test function.

Background: System self-test can serve a dual purpose: Warn vehicle occupants of a critical failure as required by Art. 5(1) of the eCall Regulation AND serve as a basis for PTI testing.

Annex VIII: Privacy and data protection

Purpose

- Verify that the privacy and data protection rules in Regulation 2015/758 are complied with.

Key features

- There are four procedures for verification of:
 - the lack of traceability of eCall in-vehicle system
 - the length of time an eCall log file is stored.
 - the automatic and continuous removal of data
 - the non-exchange of personal data between the eCall system and the Third party system

Annex IX: Exemptions

Purpose

- Identify classes of vehicles of category M1 and N1 which cannot be equipped with an appropriate eCall triggering mechanism for technical reasons.

Regulation 2015/758 already excludes:

- Vehicles produced in small series (Art. 22 & 23 of Dir. 2007/46/EC)*
- Individual approvals (Art. 24 of Dir. 2007/46/EC)*
- The Annex to the Regulation further specifies that for special purpose vehicles, armoured vehicles, wheelchair accessible vehicles and other multipurpose vehicles the requirement of the **base vehicle** applies in case of **multi-stage approval**. In case TA is granted at a previous stage in respect of the installation of 112-based eCall IVS, it shall remain valid if the IVS and relevant sensors are not modified (Art. 3 Commission Delegated Regulation).*

Commission Delegated Regulation further excludes:

- Armoured vehicles of categories M1 and N1 with armoured security glazing and body parts complying to standards EN 1063:2000 and EN 1522:1999.

Next step

- If no objections, publication in OJ (possibly in November 2016).