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Minimum collection, storage, and retrievability of motor vehicle crash event data:

New UN Regulation on Event Data Recorder

Proposal for a new UN Regulation on Event Data Recorder

Submitted by the Informal Working Group on Event Data Recorder and Data Storage System for Automated Driving*

The text reproduced below was prepared by the Informal Working Group (IWG) on Event Data Recorder and Data Storage System for Automated Driving (EDR/DSSAD) to establish a new UN Regulation on Event Data Recorder (EDR) intended to be fitted to passenger cars and light duty vehicles concerning the minimum collection, storage, and retrievability of crash event data.

* In accordance with the programme of work of the Inland Transport Committee for 2020 as outlined in proposed programme budget for 2020 (A/74/6 (part V sect. 20) para 20.37), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

UN Regulation No. XXX

Uniform provisions concerning the approval of motor vehicles with regard to the Event Data Recorder

0. Introduction

0.1.

1. Scope

1.1.

2. Definitions

For the purposes of this Regulation:

2.1.

3. Application for approval

3.1. The application for approval of a vehicle type with regard to the EDR shall be submitted by the vehicle manufacturer or by his authorized representative.

3.2. It shall be accompanied by the documents mentioned below in triplicate:

3.2.1. A description of the vehicle type with regard to the items specified in paragraph 5 below, in particular related to the location of the EDR in the vehicle, the triggering parameter, storing capacity and the resistance to high deceleration and mechanical stress of a severe impact.

3.2.2. The data and data format stored in the EDR.

3.2.3. Instructions for retrieving data from the EDR.

3.3. A vehicle representative of the vehicle type to be approved shall be submitted to the Technical Service conducting the approval tests.

3.4. The Type Approval Authority shall verify the existence of satisfactory arrangements for ensuring effective checks on conformity of production before type-approval is granted.

4. Approval

- 4.1. If the vehicle type submitted for approval pursuant to this Regulation meets the requirements of paragraph 5. below, approval of that vehicle type shall be granted.
- 4.2. An approval number shall be assigned to each type approved. Its first two digits (at present 00 for the Regulation in its original form) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party shall not assign the same number to the same vehicle type equipped with another type of EDR, or to another vehicle type.
- 4.3. Notice of approval or of extension or of refusal or of withdrawal of approval of a vehicle type pursuant to this Regulation shall be communicated to the Contracting Parties to the Agreement applying this Regulation by means of a form conforming to the model in Annex 1 to this Regulation and documentation supplied by the applicant being in a format not exceeding A4 (210 × 297mm) and on an appropriate scale or electronic format.
- 4.4. There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every vehicle conforming to a vehicle type approved under this Regulation, an international approval mark conforming to the model described in Annex 3, consisting of either:
- 4.5.1. A circle surrounding the letter "E" followed by:
- (a) the distinguishing number of the country which has granted approval;¹ and
 - (b) the number of this Regulation, followed by the letter "R", a dash and the approval number to the right of the circle prescribed in this paragraph;
- or
- 4.5.2. An oval surrounding the letters "UI" followed by the Unique Identifier.
- 4.6. If the vehicle conforms to a vehicle type approved under one or more other UN Regulations annexed to the Agreement, in the country which has granted approval under this Regulation, the symbol prescribed in paragraph 4.5. above need not be repeated. In such a case, the UN Regulation and approval numbers and the additional symbols shall be placed in vertical columns to the right of the symbol prescribed in paragraph 4.5. above.
- 4.7. The approval mark shall be clearly legible and be indelible.
- 4.8. The approval mark shall be placed close to or on the vehicle data plate.

5. Specifications

- 5.1.

¹ The distinguishing numbers of the Contracting Parties to the 1958 Agreement are reproduced in Annex 3 to the Consolidated Resolution on the Construction of Vehicles (R.E.3), document ECE/TRANS/WP.29/78/Rev.6 - www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html

6. Test procedure

6.1.

7. Modification of vehicle type and extension of approval

7.1. Every modification of the vehicle type as defined in paragraph 2.2. of this Regulation shall be notified to the Type Approval Authority which approved the vehicle type. The Type Approval Authority may then either:

7.1.1. Consider that the modifications made do not have an adverse effect on the conditions of the granting of the approval and grant an extension of approval;

7.1.2. Consider that the modifications made affect the conditions of the granting of the approval and require further tests or additional checks before granting an extension of approval.

7.2. Confirmation or refusal of approval, specifying the alterations, shall be communicated by the procedure specified in paragraph 4.3. above to the Contracting Parties to the Agreement applying this Regulation.

7.3. The Type Approval Authority shall inform the other Contracting Parties of the extension by means of the communication form which appears in Annex 1 to this Regulation. It shall assign a serial number to each extension, to be known as the extension number.

8. Conformity of production

8.1. Procedures for the conformity of production shall conform to the general provisions defined in Article 2 and Schedule 1 to the Agreement (E/ECE/TRANS/505/Rev.3) and meet the following requirements:

8.2. A vehicle approved pursuant to this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements of paragraph 5. above;

8.3. The Type Approval Authority which has granted the approval may at any time verify the conformity of control methods applicable to each production unit. The normal frequency of such inspections shall be once every two years.

9. Penalties for non-conformity of production

9.1. The approval granted in respect of a vehicle type pursuant to this Regulation may be withdrawn if the requirements laid down in paragraph 8. above are not complied with.

9.2. If a Contracting Party withdraws an approval it had previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation by sending them a communication form conforming to the model in Annex 1 to this Regulation.

10. Production definitively discontinued

If the holder of the approval completely ceases to manufacture a type of vehicle approved in accordance with this Regulation, he shall so inform the Type Approval Authority which granted the approval, which in turn shall forthwith inform the other Contracting Parties to the Agreement applying this Regulation by means of a communication form conforming to the model in Annex 1 to this Regulation.

11. Names and addresses of the Technical Services responsible for conducting approval tests and of Type Approval Authorities

The Contracting Parties to the Agreement applying this Regulation shall communicate to the United Nations Secretariat the names and addresses of the Technical Services responsible for conducting approval tests and of the Type Approval Authorities which grant approval and to which forms certifying approval or extension or refusal or withdrawal of approval are to be sent.

Annex 1

Communication

(Maximum format: A4 (210 x 297 mm))



issued by :

(Name of administration)

.....
.....
.....

- ¹Concerning: ²
- Approval granted
 - Approval extended
 - Approval refused
 - Approval withdrawn
 - Production definitively discontinued

of a type of vehicle with regard to the Event Data Recorder (EDR) pursuant to UN Regulation No. XXX

Approval No.:

1. Trademark:
2. Type and trade name(s):
3. Name and address of manufacturer:
4. If applicable, name and address of manufacturer's representative:
5. Brief description of vehicle:
6. Date of submission of vehicle for approval:
7. Technical Service performing the approval tests:
8. Date of report issued by that Service:
9. Number of report issued by that Service:
10. Reason(s) for extension (if applicable) :
11. Approval granted/refused/extended/withdrawn:²
12. Place:
13. Date:
14. Signature:
15. The list of documents deposited with the Type Approval Authority which has granted approval is annexed to this communication.

¹ Distinguishing number of the country which has granted/extended/refused/withdrawn an approval (see approval provisions in this Regulation).

² Strike out what does not apply.

Annex 2

Information document on the type approval of a type of vehicle with regard to the Event Data Recorder (EDR)

The following information, if applicable, shall be supplied in triplicate and shall include a list of contents.

Any drawings shall be supplied in appropriate scale and in sufficient detail on size A4 paper or on a folder of A4 format.

Photographs, if any, shall show sufficient detail.

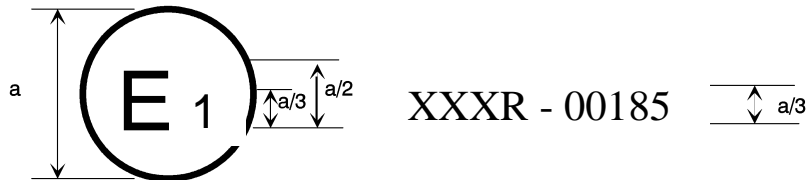
General

1. Make (trade name of manufacturer):.....
2. Type and general commercial description(s):
3. Means of identification of type, if marked on the vehicle:
4. Location of the marking:.....
5. Location of and method of affixing the approval mark:
6. Category of vehicle:
7. Name and address of manufacturer:.....
8. Address(es) of assembly plant(s):
9. Photograph(s) and/or drawing(s) of a representative vehicle:
10. EDR
- 10.1. Make (trade name of manufacturer):.....
- 10.2. Type and general commercial description(s):
- 10.3. Drawing(s) or photographs showing the location and method of attachment of the EDR in the vehicle:
- 10.4. Description of the triggering parameter:
- 10.5. Description of any other relevant parameter (storing capacity, resistance to high deceleration and mechanical stress of a severe impact, etc.):
- 10.6. The data and data format stored in the EDR:
- 10.7. Instructions for retrieving data from the EDR.:

Annex 3

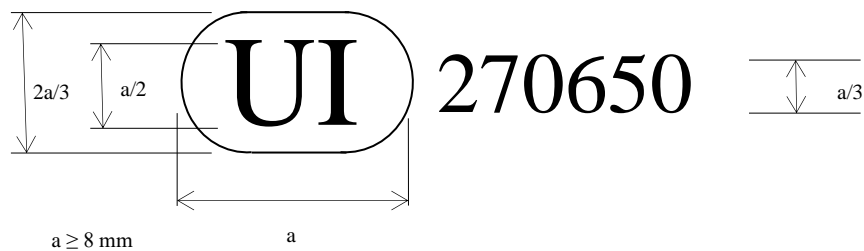
Arrangements of approval marks

(see paragraphs 4.5. to 4.5.2. of this Regulation)



$a = 8 \text{ mm min}$

The above approval mark affixed to a vehicle shows that the vehicle type concerned has been approved in Germany (E1) with regard to the EDR pursuant to UN Regulation No. XXX. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of UN Regulation No. XXX in its original form.



The above Unique Identifier shows that the type concerned has been approved and that the relevant information on that type-approval can be accessed on the UN secure internet database by using 270650 as Unique Identifier. Any leading zeroes in the Unique Identifier may be omitted in the approval marking.

Annex 4

Data elements

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