

Proposal for draft amendments to UN Regulation No. 79 to differentiate the scope of UN Regulation No. 79 and the draft DCAS UN Regulation

Note: The text reproduced below is based on the document ADAS-23-07 as amended at the 23rd ADAS TF session.

I. Objective

The Objective of the Scope amendments are to eliminate both ‘double-testing’ and incompatibilities in technical provisions, i.e.:

- Functions approved to R79 shouldn’t have to also be approved to (or meet the technical requirements of) DCAS
- Functions approved to DCAS shouldn’t also have to be approved to (or meet the technical requirements of) R79
- Contracting Parties which do not apply DCAS should still be able to require compliance with R79 in-full, with unchanged provisions.

In addition, similar issues related to R157 are addressed in this proposal.

II. Reference

Draft UN Regulation No. XXX (DCAS)

Uniform provisions concerning the approval of vehicles with regard to Driver Control Assistance Systems

1. Scope

- 1.1. This UN Regulation applies to the approval of vehicles of Categories M and N¹ with regard to their Driver Control Assistance Systems (DCAS).
- 1.2. This UN Regulation does not apply to the approval of vehicles with regard to their Automatically Commanded Steering Functions (ACSF) or Risk Mitigation Function (RMF) which have been approved to UN Regulation No. 79. However, if the manufacturer declares such ACSF or RMF to be part of DCAS, this UN Regulation applies irrespective of whether it has also been approved to UN Regulation No. 79.

(Comment: We should not prohibit the function being approved to both R79 and DCAS if it meets both sets of requirements. There are valid reasons why a manufacturer may wish to have e.g. fully-compliant ACSF-B1 lane-keeping approved to R79, but which also forms the basis of their DCAS).

¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.6, para. 2 - <https://unece.org/transport/standards/transport/vehicle-regulations-wp29/resolutions>

2. Definitions

- 2.1. *“Driver Control Assistance System (DCAS)”* means the hardware and software collectively capable of assisting a driver in controlling the longitudinal and lateral motion of the vehicle on a sustained basis. ~~containing at least one feature, as specified under section 6 in this Regulation, which envisages the driver engagement by means of motoric and/or visual monitoring, and whereby the driver is required to be engaged and to monitor the environment, and vehicle/system performance permanently.~~

Within this Regulation, DCAS is also referred to as *“the system”*.

(Comment: There is no need for this arbitrary requirement to have a 'paragraph 6 feature'. E.g., if the vehicle has only L2 lane keeping/ACC, but the manufacturer wants to benefit from the flexibilities of DCAS, this should be permitted).

III. Proposal

UN Regulation No. 79

Uniform provisions concerning the approval of vehicles with regard to steering equipment

1. Scope

Amend paragraph 1.2.3. to read:

- 1.1. This Regulation applies to the steering equipment of vehicles of categories M, N and O.
- 1.2. This Regulation does not apply to:
- 1.2.1. Steering equipment with a purely pneumatic transmission;
- 1.2.2. Autonomous Steering Systems as defined in paragraph 2.3.3.;
- 1.2.3. Steering systems exhibiting the functionality defined as ACSF of Category B2, D or E in paragraphs 2.3.4.1.3., 2.3.4.1.5., or 2.3.4.1.6., respectively, ~~until specific provisions are introduced in this Regulation.~~ **unless those functions comply with the technical requirements and transitional provisions of UN Regulation No. [DCAS] [and/or UN Regulation No. 157], as applicable.**^x

(Comment: Replacing 'until specific provisions...' with 'unless compliant with DCAS/ALKS' - since we now know those provisions will never be in R79, but have been created as new regulations).

Insert new footnote x

^x **Contracting Parties who do not apply UN Regulation No. [DCAS] [and/or UN Regulation No. 157] are not obliged to accept approvals to UN Regulation No. 79, where the steering system exhibits the ACSF functionality associated with those UN Regulations respectively.**

4. Approval

Insert new paragraph 4.4.3 to read:

- 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 consisting of:
- 4.4.1. a circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval;²
- 4.4.2. the number of this Regulation, followed by the letter "R", a dash and the approval number to the right of the circle prescribed in paragraph 4.4.1.
- 4.4.3. **a letter "X" preceding the approval number in the case when either:**
- (a) **ACSF of Category B1 or C, or RMF, have been exempted from the technical requirements of this UN Regulation according to paragraphs 5.6.2, 5.6.4 and/or 5.1.6.3.**
- (b) **The steering system exhibits functionality defined as ACSF of Category B2, D or E.**

5. Construction provisions

Amend paragraphs 5.1.6.3, 5.6.2, 5.6.3 and 5.6.4 to read:

- 5.1.6.3. Vehicles equipped with an RMF shall fulfil the following requirements: **unless the vehicle is equipped with a DCAS which:**
- (a) **incorporates this function, and**
- (b) **complies with the technical requirements and transitional provisions of UN Regulation No. [DCAS].^y**
- An RMF system shall be subject to the requirements of Annex 6.
- 5.6.2. Special Provisions for ACSF of Category B1
- Any ACSF of Category B1 shall fulfil the following requirements: **unless the vehicle is equipped with a DCAS which:**
- (a) **incorporates this function, and**
- (b) **complies with the technical requirements and transitional provisions of UN Regulation No. [DCAS].^y**
- 5.6.3. ~~(Reserved for ACSF of Category B2)~~
- 5.6.4. Special Provisions for ACSF of Category C
- ~~Vehicles equipped with an~~ **Any ACSF system of Category C shall fulfil the following requirements: unless the vehicle is equipped with a DCAS which:**

² 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, Annex 3 - www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html

- (c) incorporates this function, and
- (d) complies with the technical requirements and transitional provisions of UN Regulation No. [DCAS].^y

Insert new footnote y

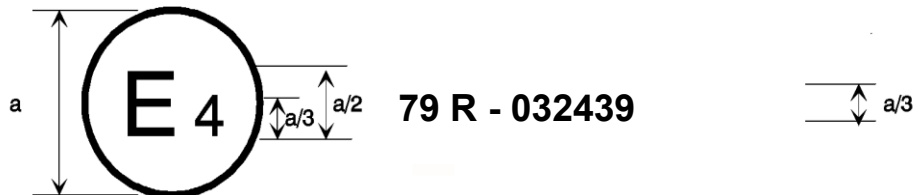
^y Contracting Parties who do not apply UN Regulation No. [DCAS] are not obliged to accept approvals to UN Regulation No. 79 which do not comply in full with the technical requirements for ACSF and RMF in this UN Regulation.

Annex 2

Arrangements of approval marks

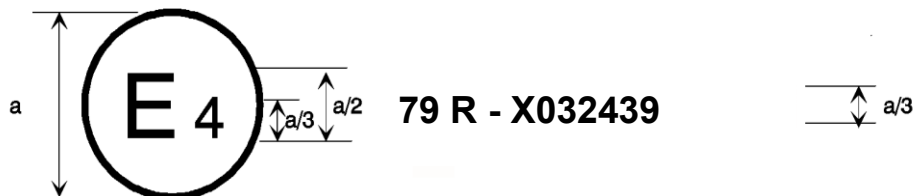
Model A

(See paragraph 4.4. of this Regulation)



a = 8 mm min

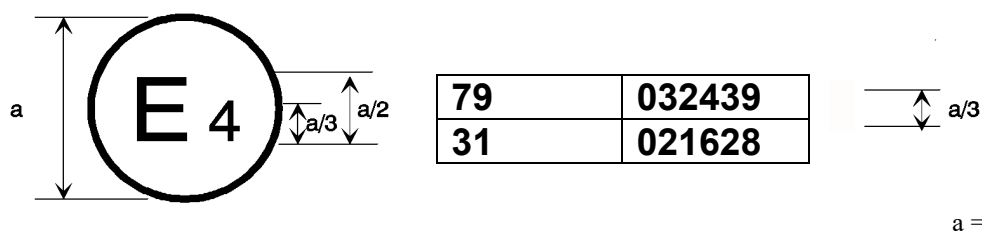
The above approval mark affixed to a vehicle shows that the vehicle type concerned has, with regard to steering equipment, been approved in the Netherlands (E 4) pursuant to UN Regulation No. 79 under approval No. 032439. The approval number indicates that the approval was granted in accordance with the requirements of UN Regulation No. 79 incorporating the 03 series of amendments.



a = 8 mm min

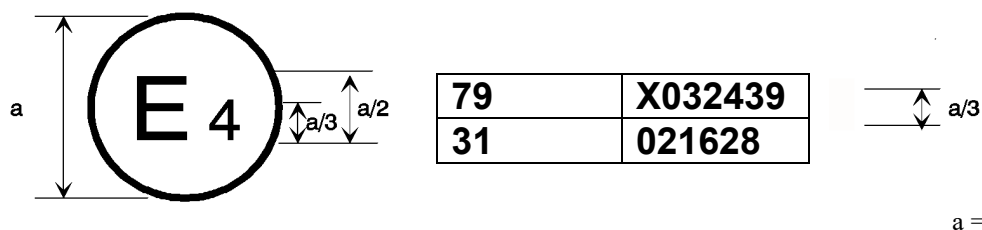
The above approval mark affixed to a vehicle shows that the vehicle type concerned has, with regard to steering equipment, been approved in the Netherlands (E 4) pursuant to UN Regulation No. 79 under approval No. 032439. The letter "X" preceding the approval number indicates that the vehicle is equipped with ACSF or RMF which has been exempted from the requirements of this UN Regulation, and/or that the vehicle is equipped with a steering system which exhibits functionality defined as an ACSF of Category B2, D or E. The approval number indicates that the approval was granted in accordance with the requirements of UN Regulation No. 79 incorporating the 03 series of amendments.

Model B
(See paragraph 4.5. of this Regulation)



a = 8 mm min

The above approval mark affixed to a vehicle shows that the vehicle type concerned has been approved in the Netherlands (E 4) pursuant to Regulations Nos. 79 and 31.³ The approval numbers indicate that, at the dates when the respective approvals were given, UN Regulation No. 79 incorporating the 03 series of amendments and UN Regulation No. 31 included the 02 series of amendments.



a = 8 mm min

The above approval mark affixed to a vehicle shows that the vehicle type concerned has been approved in the Netherlands (E 4) pursuant to Regulations Nos. 79 and 31.⁴ The letter "X" preceding the approval number pursuant to Regulation No. 79 indicates that the vehicle is equipped with ACSF or RMF which have been exempted from the requirements of this UN Regulation, or that the vehicle is equipped with a steering system which exhibits functionality defined as an ACSF of Category B2, D or E.. The approval numbers indicate that, at the dates when the respective approvals were given, UN Regulation No. 79 incorporating the 03 series of amendments and UN Regulation No. 31 included the 02 series of amendments.

Annex 8

Amend paragraph 3.4

3.4. (Reserved for ACSF of Category B2)

IV. Justification

Draft DCAS UN Regulation

- 1.2. This is needed so that vehicles with 'basic' B1+ACC are not required to approve to the DCAS regulation just because that functionality meets the definition of DCAS. However, if the vehicle is equipped with DCAS that includes such functionality, that functionality must be approved according to this regulation so that the DCAS has been assessed holistically.
- 2.1. As a result of the amendment to 1.2, the DCAS definition can now simply refer to any "Level 2" systems.

³ The second number is given merely as an example.

⁴ The second number is given merely as an example.

UN Regulation No. 79

1.2.3. Approval of steering systems exhibiting ACSF B2, D and E functionality was excluded from R79 until 'specific provisions are introduced' into the Regulation. Those 'specific provisions' for ACSF B2, D and E now exist, although they have been written into other (new) regulations. Broadly, R157 might cover B2 and E whilst DCAS might cover D and E. However, the definitions are not completely aligned and so this proposal does not associate specific ACSF with specific other regulations.

The footnote allows Contracting Parties who do not apply R157 and/or R[DCAS] to maintain the previous restrictions imposed by R79.

4.4.3. and Annex 2

A new marking provision is added so that approvals to Regulation 79 which have made use of the provisions specifically relating to DCAS and/or R157 can be identified, and therefore Contracting Parties who do not apply either of those regulations can assess whether a Regulation 79 approval is valid in their territory or not.

5.1.6.3, 5.6.2. and 5.6.4.

It is necessary to exempt the technical requirements in R79 covering ACSF-B1, ACSF-C, and RMF when these have been approved to (or met the requirements of) UN Regulation No. [DCAS], in order to avoid duplication of testing and/or incompatibility of requirements.

5.6.3 and Annex 8, 3.4

References to ACSF-B2 in these reserved paragraphs can now be removed, as ACSF-B2 will not be added to Regulation 79.
