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Report of the Working Party on General Safety Provisions on its 129th session

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I. Attendance

1. The Working Party on General Safety Provisions (GRSG) held its 129th session from 7 to 11 April 2025 in Geneva. The meeting was chaired by Mr. A. Erario (Italy) and Mr. K. Hendershot (Canada). Experts from the following countries participated in the work, following Rule 1 of the Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29) (ECE/TRANS/WP.29/690/Rev.1): Australia, Canada, China, Finland, France, Germany, India, Italy, Japan, Netherlands (Kingdom of the), Norway, Republic of Korea, Russian Federation, Spain, Sweden, Switzerland, United Kingdom of Great Britain and Northern Ireland, United States of America and Zimbabwe. Experts from the European Commission (EC) participated. Experts from non-governmental organizations participated: American Automotive Policy Council (AAPC), European Association of Automotive Suppliers (CLEPA), European Caravan Federation (ECF), International Association of the Body and Trailer Building Industry (CLCCR), International Motor Vehicle Inspection Committee (CITA), International Motorcycle Manufacturers Association (IMMA), International Organization of Motor Vehicle Manufacturers (OICA), International Road Federation (IRF) and Union Internationale des Transports Publics (UITP).

II. Adoption of the Agenda (agenda item 1)

Documentation: ECE/TRANS/WP.29/GRSG/2025/1
Informal documents: GRSG-129-03 and GRSG-129-38-Rev.1

2. GRSG considered and adopted the agenda (ECE/TRANS/WP.29/GRSG/2025/1) proposed for the 129th session, the running order (GRSG-129-03) and the annotations (GRSG-129-38-Rev.1). Annex I lists the informal documents that were distributed during the session. Annex IX lists the GRSG Informal Working Groups (IWG).

III. Amendments to Regulations on Buses and Coaches (agenda item 2)

UN Regulation No. 107 (M₂ and M₃ vehicles)

Documentation: ECE/TRANS/WP.29/GRSG/2025/4
ECE/TRANS/WP.29/GRSG/2025/9
Informal documents: GRSG-129-19 and GRSG-129-32

3. GRSG noted a proposal of amendments (ECE/TRANS/WP.29/GRSG/2025/9) introduced by the expert from Germany, on behalf of the Task Force (TF) on Accessibility (UN Regulation No. 107). As announced at the previous session of GRSG (ECE/TRANS/WP.29/GRSG/107 paragraph 3) he explained that TF had finalized the proposal aimed at modifying the requirements of UN Regulation No. 107 to improve accessibility of vehicles of categories M₂ and M₃, class I. GRSG adopted ECE/TRANS/WP.29/GRSG/2025/9, as amended by annex II to the report and requested the secretariat to submit the proposal as the draft 11 series of amendments to UN Regulation No. 107 for consideration and vote at the November 2025 sessions of WP.29 and Administrative Committee of the 1958 Agreement (AC.1).

4. The expert from the United Kingdom of Great Britain and Northern Ireland introduced ECE/TRANS/WP.29/GRSG/2025/4 that clarifies the obligations of the manufacturer in relation to the provision of information on the location and safe use of emergency exits and fire extinguishers. The expert from OICA, introduced GRSG-129-32 amending ECE/TRANS/WP.29/GRSG/2025/4, providing means to transmit information on the location and safe use of emergency exits and fire extinguishers for passengers in the vehicle. The expert from France proposed to liaise with the expert from United Kingdom to further develop the proposal. GRSG agreed to resume consideration on this subject at its October 2025 session, based on a revised proposal.

5. The expert from Germany introduced GRSG-129-19 on behalf of the Chair of the IWG on Safer Transport of Children in Buses and Coaches (STCBC). He informed GRSG about the progress in IWG Phase 2, Child Restraint Systems in combination with 2-point belts in buses and coaches. GRSG, agreed to resume discussion on this subject on the basis of an IWG proposal.

IV. Amendments to Safety Glazing Regulations (agenda item 3)

UN Regulation No. 43 (Safety Glazing)

Documentation: Informal document: GRSG-129-34

6. GRSG noted that a new proposal had not been presented by the expert from OICA to replace GRSG-127-23, that had been revised at the October 2023 session of GRSG. The expert of OICA reiterated that UN Regulation No. 21 provides a set of dummies and tests which aim for the non-occurrence of head contact. The expert from Sweden understood the need to remove unnecessary duplicate tests. The expert from the United Kingdom offered to discuss online, possible improvements with the expert from OICA. Finally, GRSG agreed to resume discussion on a revised proposal and requested concerned parties to liaise with the expert from OICA. The expert from the United Kingdom expressed concern for those countries that do not have requirements for the use of safety-belts, especially for drivers. He added that he was looking for stronger rationales and accident data to justify the proposal. The expert from France also expressed concerns for elements that are not covered by the proposed test configuration. Finally, the expert from OICA announced a revised proposal for the October 2025 session of GRSG. At the same time, he announced a workshop on this topic for interested parties.

V. Awareness of the Proximity of Vulnerable Road Users (agenda item 4)

Documentation: Informal documents: GRSG-129-02, GRSG-129-42, GRSG-129-43 and GRSG-129-45

7. The expert from EC, Chair of the IWG on Vulnerable Road Users (VRU), introduced the IWG status report (GRSG-129-42). He also informed GRSG that the work of the IWG on approval of separate technical units for the relevant UN Regulations would not be finalized by autumn of 2025. Therefore, he introduced a proposal of amendments to the Terms of References (ToR) of the IWG (GRSG-129-02), to cover all the relevant UN Regulations that would be considered and endorsed by GRSG. The experts from OICA introduced GRSG-129-45, expressing the position of their organization on the work of IWG VRU-Proxi.

8. Finally GRSG adopted the ToR amendment (GRSG-129-02 amending ECE/TRANS/WP.29/GRSG/108, annex II), as reproduced in annex III to this report, with an extension of the IWG mandate until October 2025, and sought endorsement from WP.29 at its June 2025 session.

9. GRSG noted a presentation (GRSG-129-43) from the expert of Germany on accident research on VRU and buses. GRSG noted a first observation that most of the accidents involve cyclists and pedestrians coming from the right side.

A. UN Regulation No. 46 (Devices for Indirect Vision)

Documentation: ECE/TRANS/WP.29/GRSG/2025/8
Informal documents: GRSG-129-06 and GRSG-129-44-Rev.1

10. The expert from Germany, Chair of TF on UN Regulation No. 46 introduced ECE/TRANS/WP.29/GRSG/2025/8 and amendment GRSG-129-44-Rev.1. GRSG adopted GRSG-129-44-Rev.1 superseding ECE/TRANS/WP.29/GRSG/2025/8, as reproduced by annex IV to the report. The secretariat was requested to submit the proposal as the draft 07

series of amendments to UN Regulation No. 46, for consideration and vote at the November 2025 sessions of WP.29 and AC.1.

11. The expert from the Republic of Korea presented GRSG-129-06, to introduce an exemption to the provisions of paragraph 12.1. if it can be demonstrated that the system provides sufficient visibility performance (e.g. focal distance, luminance, legibility) for drivers, including those with presbyopia. The expert from Germany informed GRSG that TF would take this into consideration and other remaining issues at its next meetings.

B. UN Regulation No. 158 (Reversing Motion)

12. GRSG noted that proposals had not been submitted.

C. UN Regulation No. 159 (Moving Off Information System)

13. GRSG noted that proposals had not been submitted.

VI. UN Regulation No. 66 (Strength of Superstructure (Buses)) (agenda item 5)

Documentation: ECE/TRANS/WP.29/GRSG/2024/39
Informal documents: GRSG-129-07 and GRSG-129-39

14. The expert from the Russian Federation introduced GRSG-129-39 superseding ECE/TRANS/WP.29/GRSG/2024/39. The expert from OICA stated that additional post-collision tests should be considered as separate from the current tests of the UN Regulation. The experts from France expressed their reservation on the proposal arguing that: (a) the assessment of seat attachments was covered by UN Regulation No. 80 and needs to work on this issue not completely covered by UN Regulation No. 66, (b) the causes of traumas and injuries are assessed at the national level, and (c) the difficulty for type approval authorities to deal with the different annexes. The expert from the Kingdom of the Netherlands clarified that UN Regulation No. 66 did not cover seat attachments, but covered superstructures. He also added that interior fittings were not provided by bus manufacturers and not under their responsibility. The expert from Sweden endorsed the statements of France and the Kingdom of the Netherlands. The Chair of GRSG stated that the group was not in the position to adopt the proposal and suggested continuing discussion in meetings of interested parties. GRSG agreed to resume consideration on this subject at its October 2025 session based on a revised proposal provided by the expert from the Russian Federation. The GRSG Chair requested to provide comments to the expert from the Republic of Korea at its October 2025 session.

VII. UN Regulation No. 73 (Lateral Protection Devices) (agenda item 6)

Documentation: ECE/TRANS/WP.29/GRSG/2024/38
ECE/TRANS/WP.29/GRSG/2025/3
Informal documents: GRSG-129-20, GRSG-129-21-Rev.5, GRSG-129-22, GRSG-129-41, GRSG-129-46 and GRSG-129-47-Rev.2

15. The expert from Japan presented GRSG-129-20 to reintroduce ECE/TRANS/WP.29/GRSG/2024/38, amended by GRSG-129-21, that improves the effectiveness of Lateral Protection Device (LPD) in preventing left- and right-turn collisions. He underlined the benefits of low ground clearance making LPD more effective by summarizing accidentology data. The expert from the United Kingdom recommended a careful assessment of accidentology, since many of the vehicles still in circulation required exemptions on side guards. He then introduced ECE/TRANS/WP.29/GRSG/2025/3 and

GRSG-129-41 amending it, which propose different transitional provisions. The expert from Italy introduced GRSG-129-47-Rev.2, to ensure the correct interpretation of the exemptions on the height of LPD by the Type Approval Authorities. The expert from CLCCR introduced GRSG-129-46 urging that the proposal be paused pending further review, since an impact assessment is needed to confirm costs versus expected benefits. He added that the correct method involves calculating the angle between two ramps using the tangent function based on ground clearance and wheelbase. Finally, GRSG adopted GRSG-129-21-Rev.5, superseding GRSG-129-22, which incorporates the proposals from the experts of the United Kingdom and GRSG-129-47-Rev.2; see annex V of this report. The secretariat was requested to submit the amendments as the proposal of the 02 series of amendments to UN Regulation No. 73, for consideration and vote at the November 2025 sessions of WP.29 and AC.1.

VIII. Amendments to Regulations on Gas-Fuelled Vehicles (agenda item 7)

A. UN Regulation No. 67 (Liquified Petroleum Gas Vehicles)

16. GRSG noted that proposals had not been submitted.

B. UN Regulation No. 110 (Compressed Natural Gas and Liquified Natural Gas Vehicles)

17. GRSG noted that proposals had not been submitted.

IX. Amendments to the Regulations on Devices against Unauthorized Use Immobilizers and Vehicle Alarm Systems (agenda item 8)

A. UN Regulation No. 116 (Anti-theft and Alarm Systems)

Documentation: Informal document: GRSG-128-33

18. The experts from France informed GRSG that several comments had been received (GRSG-128-33) in response to their request for guidance. The comments confirmed that their understanding of the application and harmonization of practices which was in solution "C": the components of the immobilizer are tested as a unit, with functional validation of the entire assembled device. Therefore, they announced a proposal on solution C to clarify the text of UN Regulation No. 116.

B. UN Regulation No. 161 (Devices against Unauthorized Use)

19. GRSG noted that proposals had not been submitted.

C. UN Regulation No. 162 (Immobilizers)

20. GRSG noted that proposals had not been submitted.

D. UN Regulation No. 163 (Vehicle Alarm Systems)

21. GRSG noted that proposals had not been submitted.

X. UN Regulation No. 121 (Identification of Controls, Tell-tales and Indicators) (agenda item 9)

Documentation: ECE/TRANS/WP.29/GRSG/2024/4
Informal documents GRSG-128-07 and GRSG-129-15

22. The expert from the Republic of Korea withdrew ECE/TRANS/WP.29/GRSG/2024/4 and GRSG-128-07. The expert from the Kingdom of the Netherlands introduced GRSG-129-15, that updates the ISO standard by taking into account new features and associated symbols. GRSG adopted GRSG-129-15, as reproduced in annex VI to the report and requested the secretariat to submit it as the proposal of supplement 7 to the 01 series of amendments to UN Regulation No. 121 for consideration and vote at the November 2025 sessions of WP.29 and AC.1.

XI. UN Regulation No. 122 (Heating systems) (agenda item 10)

Documentation: Informal documents: GRSG-129-16 and GRSG-129-33

23. The expert from the Kingdom of the Netherlands, on behalf of TF on Autonomous Vehicles Regulatory Screening introduced GRSG-129-16, to enable the application of this Regulation to vehicles of categories X and Y, and to align the provisions for the surface temperature for all occupants. The experts from OICA argued that the proposal does not reflect all the positions of the TF experts and suggested separating the proposal to level the temperatures from that introducing the Automated Driving Systems, so that GRSG could reach a sound decision when resource data and experience were obtained. GRSG agreed to resume consideration of this subject at its October 2025 session and requested the secretariat to distribute GRSG-129-16 with an official symbol.

XII. UN Regulation No. 144 (Accident Emergency Call Systems) (agenda item 11)

24. GRSG noted that proposals had not been submitted.

XIII. Event Data Recorder (agenda item 12)

A. Guidance on Event Data Recorder Performance Elements Appropriate for Adoption in the Resolutions or Regulations of the 1958 and 1998 Agreements

Documentation: Informal document GRSG-129-37

25. The expert from the Kingdom of the Netherlands on behalf of IWG on Event Data Recorder/Data Storage System for Automated Driving (EDR/DSSAD) introduced the IWG status report (GRSG-129-37). He said that the group considers presentations and proposals on the subjects as part of the workstream “Step 2”, of its first phase: (a) VRU triggering, (b) increased recording frequency and (c) additional data elements, corrections and improvements. He therefore announced an official document for the April 2026 session of GRSG.

B. UN Regulation No. 160 (Event Data Recorder)

Documentation: Informal document GRSG-129-31

26. The expert from France withdrew GRSG-129-31.

C. UN Regulation No. 169 (Event Data Recorder for Heavy Duty Vehicles)

27. GRSG noted that proposals had not been submitted.

XIV. UN Regulation No. 0 (International Whole Vehicle Type Approval) (agenda item 13)

28. GRSG noted that information had not been submitted.

XV. Consolidated Resolution on the Construction of Vehicles (agenda item 14)

Documentation: ECE/TRANS/WP.29/GRSG/2025/5
ECE/TRANS/WP.29/GRSG/2025/10
Informal documents: GRSG-129-18 and GRSG-129-25

29. The experts from the United Kingdom deferred discussion to agenda item 16 (b).

XVI. Special Resolution No. 1 concerning the Common Definitions of Vehicle Categories, Masses and Dimensions (agenda item 15)

Documentation: ECE/TRANS/WP.29/GRSG/2025/6
Informal document GRSG-129-25 and GRSG-129-29-Rev.1

30. The expert from Germany introduced, on behalf of the Task Force on Automated Vehicle Categorisation (TF-AVC), ECE/TRANS/WP.29/GRSG/2025/6 amending Special Resolution No.1 (S.R.1) to accommodate additional definitions for Automated Driving System (ADS) and Dynamic Driving Task (DDT). GRSG also noted a clarification document (GRSG-129-29-Rev.1) on the proposed amendment, also from TF-AVC. GRSG, recommended ECE/TRANS/WP.29/GRSG/2025/6, as amended below, to the Executive Committee of the 1998 Agreement for consideration and vote at its November 2025 session as Amendment 3 to S.R.1.

Paragraph 1.3.1., amend to read:

"1.3.1. If a vehicle meets all of the following conditions:

For vehicles other than category X:

$P - (M + N \times 68) > N \times 68$,

$N \leq 6$ and

Pay mass as defined in paragraph 7. of Annex 3 exceeds 150 kg for the vehicle, as configured with the maximum mass of factory fitted optional equipment, the vehicle shall be deemed to be a category 2 vehicle.

For category X vehicles:

$P - (M + N \times 68) > N \times 68, N \leq 7$ and

..."

XVII. Exchange of Views on Vehicle Automation (agenda item 16)**A. Autonomous Shuttles**

31. GRSG noted that information had not been submitted.

B. Categorization of Automated Vehicles and Autonomous Vehicle Regulation Screening

Documentation: Informal documents: GRSG-129-09, GRSG-129-10, GRSG-129-11, GRSG-129-12, GRSG-129-13, GRSG-129-14, GRSG-129-16, GRSG-129-17, GRSG-129-27, GRSG-129-28, GRSG-129-30-Rev.1 and GRSG-129-48.

32. The expert from the United Kingdom and Northern Ireland, on behalf of the Task Force on Automated Vehicle Categorisation introduced GRSG-129-30, to accommodate additional definitions for ADS and DDT into the Consolidated Resolution on the Construction of Vehicles (R.E.3). The experts from Germany and the United Kingdom introduced the status report of TF-AVC (GRSG-129-27). The expert from the United Kingdom, on behalf of TF also introduced the TF status report (GRSG-129-25). The expert from the Kingdom of the Netherlands introduced GRSG-129-09, requesting the opinion of GRSG experts on the formula defining the multipurpose vehicles (MPV-AF) (derived from passenger vehicles). Finally, GRSG agreed on option 1 proposed by GRSG-129-25: $P - (M + N \times 68) > N \times 68$. Therefore, GRSG discussed GRSG-129-30, superseding ECE/TRANS/WP.29/GRSG/2025/10, to include a definition of a bidirectional vehicle and to remove any references to the 3-D "H"-point machine from R.E.3. GRSG finally considered GRSG-129-30-Rev.2 (incorporating GRSG-129-18) and adopted it as reproduced in annex VII to the report. The secretariat was requested to submit the proposal as Revision 8 to the R.E.3 for consideration and vote at the November 2025 session of WP.29.

33. Referring to the question and answer document (GRSG-129-28), provided by TF-AVC, the expert from EC questioned the insertion of the definition of a bidirectional vehicle since it was considered premature by TF-AVC (see question No. 20 of GRSG-129-28).

34. The expert from the Kingdom of the Netherlands introduced the status report of TF on Autonomous Vehicles Regulatory Screening (TF-AVRS) (GRSG-129-48), as well as GRSG-129-10, GRSG-129-11, GRSG-129-12, GRSG-129-13, GRSG-129-14, GRSG-129-16 and GRSG-129-17. This would introduce amendments to the UN Regulations Nos. 35, 43, 46, 107, 121, 122 and 125 enabling the application of these UN Regulations to vehicles equipped with an autonomous driving system. GRSG took note of the proposed amendments and agreed to resume discussion on the basis of official proposals submitted by TF-AVRS to the October 2025 session of GRSG.

XVIII. Other Business (agenda item 17)

A. Exchange of Views on the Future Work of the Working Party on General Safety Provisions

Documentation: Informal documents GRSG-129-08 and GRSG-129-49-Rev.1

35. GRSG started discussion on its priority of work (see also ECE/TRANS/WP.29/2025/1) and adopted GRSG-129-49-Rev.1, with agreement to submit it to WP.29 at its June 2025 session on a preliminary basis.

36. GRSG noted GRSG-129-08 from the expert of the Republic of Korea, explaining modular vehicles, designed to operate with various body structures mounted on a single driving platform, allowing them to switch configurations based on the user's current needs. The expert from the Kingdom of the Netherlands commented that from an electric vehicle construction perspective, a multi-usage approach would be used. He further suggested a dynamic registration of these types of vehicles. The expert from Germany added that these types of vehicles implied different driving licenses according to national legislations and insurances. The expert from the Republic of Korea announced further information for the October 2025 session of GRSG.

B. Periodical Technical Inspections

37. GRSG noted that proposals had not been submitted.

C. Highlights of the November 2024 and March 2025 Sessions of the World Forum for Harmonization of Vehicle Regulations

Documentation: Informal document GRSG-129-26

38. The Secretary reported on the highlights.

D. UN Regulation No. 62 (Protection against Unauthorized Use for Vehicles of Categories L₁ – L₇ Fitted with Handlebars)

Documentation: ECE/TRANS/WP.29/GRSG/2025/2

39. The expert from IMMA introduced ECE/TRANS/WP.29/GRSG/2025/2 aimed at applying the virtual key to category L vehicles. GRSG adopted the proposal, not amended, and requested the secretariat to submit it at the November 2025 sessions of WP.29 and AC.1 as proposal of Supplement 1 to the 01 series of amendments to UN Regulation No. 62.

E. UN Regulation No. 105 (Vehicles for the Carriage of Dangerous Goods)

Documentation: Informal documents: GRSG-129-04 and GRSG-129-40

40. The expert from Spain introduced the status report of TF on Engine Fire Suppression Systems for vehicles covered under the International Carriage of Dangerous Goods by Road (ADR) (GRSG-129-04). She explained that changes needed to adapt the bus requirements to trucks and that TF intended to organize a technical workshop that would help delegates better understand engine fire suppression systems, tests and procedures, and further discuss the industry proposal. The expert from OICA introduced GRSG-129-40-Rev.1 aiming to correct an inconsistency in the 07 series of amendments to UN Regulation No. 105. GRSG adopted GRSG-129-40 as reproduced in annex VIII to the report. The secretariat was requested to submit it as a proposal of Corrigendum 1 to the 07 series of amendments of UN Regulation No. 105 for consideration and vote to the November 2025 sessions of WP.29 and AC.1

F. UN Regulation No. 176 (Field of Vision Assistant Systems)

Documentation: ECE/TRANS/WP.29/GRSG/2025/7

Informal documents: GRSG-129-35-Rev.1 and GRSG-129-36

41. The experts from OICA introduced: (a) ECE/TRANS/WP.29/GRSG/2025/7 to solve issues related to an “after a battery-off” (circuit disconnection) event, and (b) GRSG-129-35-Rev.1, for UN Regulation No. 39 (Speedometer), which clarifies that the Field of Vision Assistant (FVA) approved to UN Regulations No. 125 or 176 is not to be considered within the requirements of paragraphs 5.1. and 5.2. of UN Regulation No. 39. GRSG agreed to defer discussion on this subject (GRSG-129-35-Rev.1) to the October 2025 session of GRSG under an agenda item on UN Regulation No. 39 and requested the secretariat to transform it into an official document for the October 2025 session. GRSG continued discussion on ECE/TRANS/WP.29/GRSG/2025/7 and on GRSG-129-36 amending it. The expert from the Kingdom of the Netherlands requested a time reservation on GRSG-129-36 to consider potential issues. The expert from France agreed with the expert from the Kingdom of the Netherlands, requesting further discussion. Finally, GRSG adopted ECE/TRANS/WP.29/GRSG/2025/7 not amended, and requested the secretariat to submit it as a proposal of Supplement 1 to the original version of UN Regulation No. 176 for consideration and vote at the November 2025 session of WP.29 and AC.1

G. Cooperation with the Global Forum for Road Traffic Safety

42. GRSG noted that information had not been submitted.

H. Driver Distraction and Drowsiness Warning Systems

Documentation: Informal document: GRSG-129-05

43. The experts from Australia introduced the status report (GRSG-129-05) of the IWG on Driver Distraction and Drowsiness Warning Systems (DDADWS). They explained that clear regulatory requirements should be applicable internationally and align with the technical requirements of EU Regulations 2021/1341 and 2023/2590. GRSP agreed to resume discussion on this subject at its October 2025 session.

I. Any Other Business

Documentation: Informal documents GRSG-129-23 and GRSG-129-24

44. The expert from India introduced GRSG-129-23, requesting guidance on the formulation of a proposal on a new UN GTR under the 1998 Agreement for fire protection systems in the occupant compartment of internal combustion engine buses, based on the methodology of the Indian standard. At the same time, he proposed that the standard from his country on this subject – Fire Detection and Alarm System (FDAS) and Fire Detection and Suppression Systems (FDSS) for Buses – be added to the compendium of Candidate of the 1998 Agreement (GRSG-129-24). He explained that this initiative was a follow-up of accidents originated by occupant compartments and from outside. The expert from OICA argued that there are different compartment materials. The expert from Canada stated that he was unaware of any victims of bus fires in his country and therefore had no issue with moving forward on a fire suppression system. Finally, the GRSG Chair stated that time for reflection was needed and that this proposal would be in the highlights of the Chair at the June 2025 session of WP.29. At the same time, the secretariat was requested to keep GRSG-129-23 and GRSG-129-24 in the agenda, as references.

J. UN Regulation No. 35 (Foot controls)

Documentation: ECE/TRANS/WP.29/GRSG/2024/18

45. GRSG confirmed the adoption of ECE/TRANS/WP.29/GRSG/2024/18 not amended. The secretariat was requested to submit it as proposal for Supplement 1 to the 01 series of amendments to UN Regulation No. 35 for consideration and vote to the June 2025 sessions of WP.29 and AC.1.

K. UN Regulation No. 61 (External projections of commercial vehicles)

Documentation: ECE/TRANS/WP.29/GRSG/2024/22

46. GRSG confirmed the adoption of ECE/TRANS/WP.29/GRSG/2024/22 not amended. The secretariat was requested to submit it as proposal for Supplement 4 to the Original Version of UN Regulation No. 61 (External projections of commercial vehicles) for consideration and vote to the June 2025 sessions of WP.29 and AC.1.

L. Collective Amendments to UN Regulations Nos. 151, 159, 160 and 167

Documentation: Informal document GRSG-129-01

47. GRSG noted GRSG-129-01 proposed by the expert from the Kingdom of the Netherlands on behalf of IWG IWVTA to delete the Unique Identifier (UI) marking provisions. GRSG agreed to keep it as a reference awaiting future amendments to the corresponding UN Regulations to incorporate the proposed deletion of UI. GRSG agreed to

resume discussion on this subject on the basis of new documents for the next sessions of GRSG.

M. Tribute

48. Learning that Mr. R. Gerlach (Germany) would no longer attend the GRSP sessions, the Working Party acknowledged his fruitful contributions to the work of work and wished him all the best for his future activities.

N. Provisional Agenda for the Next Session

49. GRSG noted that its 130th session was scheduled to be held in Geneva from 6 October (9.30 a.m. CET) to 9 October (5.30 p.m.) 2025. GRSG noted that the deadline for the submission of official documents to the secretariat is 14 July 2025, twelve weeks prior to the session. GRSG agreed to follow a proposal (GRSG-129-50) for the provisional agenda as reproduced below:

1. Adoption of the agenda.
2. Amendments to Regulations on Buses and Coaches:
UN Regulation No. 107 (M₂ and M₃ Vehicles).
3. Amendments to Safety Glazing Regulations:
UN Regulation No. 43 (Safety Glazing).
4. Awareness of the Proximity of Vulnerable Road Users:
 - (a) UN Regulation No. 46 (Devices for Indirect Vision);
 - (b) UN Regulation No. 151
 - (c) UN Regulation No. 158 (Reversing Motion)
 - (d) UN Regulation No. 159 (Moving Off Information System);
 - (e) UN Regulation No. 166
5. UN Regulation No. 66 (Strength of Superstructure (Buses)).
6. Amendments to Regulations on Gas-Fuelled Vehicles:
 - (a) UN Regulation No. 67 (Liquefied Petroleum Gas Vehicles);
 - (b) UN Regulation No. 110 (Compressed Natural Gas and Liquefied Natural Gas Vehicles).
7. Amendments to the Regulations on Devices against Unauthorized Use, Immobilizers and Vehicle Alarm Systems:
 - (a) UN Regulation No. 116 (Anti-theft and Alarm Systems);
 - (b) UN Regulation No. 161 (Devices against Unauthorized Use);
 - (c) UN Regulation No. 162 (Immobilizers);
 - (d) UN Regulation No. 163 (Vehicle Alarm Systems).
8. UN Regulation No. 121 (Identification of Controls, Tell-tales and Indicators).
9. UN Regulation No. 122 (Heating Systems).
10. Event Data Recorder:
 - (a) Guidance on Event Data Recorder Performance Elements Appropriate for Adoption in the Resolutions or Regulations of the 1958 and 1998 Agreements;
 - (b) UN Regulation No. 160 (Event Data Recorder);
 - (c) UN Regulation No. 169 (Event Data Recorder for Heavy-Duty Vehicles).
11. UN Regulation No. 0 (International Whole Vehicle Type Approval).

12. Consolidated Resolution on the Construction of Vehicles.
13. Special Resolution No. 1 concerning the Common Definitions of Vehicle Categories, Masses and Dimensions.
14. Exchange of Views on Vehicle Automation:
 - (a) Autonomous Shuttles;
 - (b) Categorization of Automated Vehicles and Autonomous Vehicle Regulation Screening.
15. Election of Officers
16. Other Business:
 - (a) Exchange of Views on the Future Work of the Working Party on General Safety Provisions;
 - (b) Periodical Technical Inspections;
 - (c) Highlights of the June 2025 Session of the World Forum for Harmonization of Vehicle Regulations;
 - (d) UN Regulation No. 105 (Vehicles for the Carriage of Dangerous Goods);
 - (e) UN Regulation No. 176 (Field of Vision Assistant Systems);
 - (f) Cooperation with the Global Forum for Road Traffic Safety;
 - (g) Driver Distraction and Drowsiness Warning Systems;
 - (h) Any Other Business;
 - (i) UN Regulation No. 39;
 - (j) List of relevant GRSG UN Regulations for software update.

Annex I

List of Informal Documents Considered During the Session

[English only]

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>	<i>Agenda Item</i>
1	(Japan) (NL) Collective amendments to UN Regulations Nos. 151, 159, 160 and 167	(e)	17(l)
2	(IWG VRU Proxi) Proposal for amendments to the revised Terms of Reference and Rules of Procedure of the GRSG informal working group VRU-Proxi (GRSG-128-36-Rev.3)	(d)	4
3	(Secretariat) Running order of the 129th session of GRSG	(a)	1
4	(TF Engine Fire Suppression for ADR) STATUS REPORT Task Force on Engine Fire Suppression Systems for ADR vehicles	(a)	17(e)
5	(Australia) Status Report IWG on Driver Drowsiness and Distraction Warning Systems (DDADWS)t	(a)	17(h)
6	(Rep. of Korea) Amendment Proposal to Document ECE/TRANS/WP.29/GRSG/2025/8 (129th GRSG)	(e)	4(a)
7	(Rep. of Korea) UN Regulation No. 66 rollover test	(a)	5
8	(Rep. of Korea) Modular Vehicle Concept And Certification Challenges	(a)	17(a)
9	(Rep. of Korea) Background M1-AF (MPV) formula	(a)	16(b)
10	(NL) Proposal for supplement 2 to the 01 series of amendments to UN Regulation No. 35 (Foot Controls)	(b)	16(b)
11	(NL) Proposal for supplement 13 to the 01 series of amendments to UN Regulation No. 43 (Safety Glazing)	(e)	16(b)
12	(NL) Proposal for supplement 2 to the 06 series of amendments to UN Regulation No. 46 (Devices for indirect vision)	(e)	14
13	(NL) Proposal for supplement 1 to the 10 series of amendments to UN Regulation No. 107 (category M2 and M3 vehicles with regard to their general construction)	(e)	16(b)
14	(NL) Proposal for supplement 7 to the 01 series of amendments to UN Regulation No. 121 (Identification of controls, tell-tales and indicators)	(e)	16(b)
15	(NL) Proposal for supplement 7 to the 01 series of amendments to UN Regulation No. 121 (Identification of controls, tell-tales and indicators)	(d)	9
16	(NL) Proposal for the 01 series of amendments to UN Regulation No. 122 (Heating systems)	(b)	10
17	(NL) Proposal for supplement 1 to the 03 series of amendments to UN Regulation No. 125 (Forward field of Vision of Drivers)	(e)	16(b)
18	(NL) Draft Proposal for Revision 8 to the Consolidated Resolution on the Construction of Vehicles	(d)	14
19	(Germany-Spain) Status Report of the Informal Working Group on Safer Transport of Children in Buses and Coaches (IWG-STCBC)	(a)	2

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>	<i>Agenda Item</i>
20	(Japan) Progress of UN Regulation No. 73 after 128 th GRSG with regard to Japanese proposal	(a)	6
21/Rev.5	(France & Japan) Proposal for amendment to ECE/TRANS/WP.29/GRSG/2024/38	(b)	6
22	(Japan) Proposal for a Supplement 3 to the 01 series of amendments to UN Regulation No. 73 (Lateral Protection Devices)	(a)	6
23	(India) Request for GRSG guidance for development of new UN GTR on Fire Protection System (FPS) for occupants of buses	(e)	17(a)
24	(India) AMENDMENT NO. 2 (09/2023) TO AIS-135 Fire Detection and Alarm System (FDAS) & Fire Detection and Suppression Systems (FDSS) for Buses	(e)	17(a)
25	(UK) Amending R.E.3 and S.R.1	(a)	18(d)
26	(Secretariat) Highlights of the November 2024 and March 2025 Sessions of the World Forum for Harmonization of Vehicle Regulations	(a)	17(c)
27	(TF-AVC) TASK FORCE ON AUTOMATED VEHICLE CATEGORISATION - GRSG STATUS REPORT 3 & PROPOSAL PRESENTATION	(a)	16(b)
28	(TF-AVC) QUESTIONS AND ANSWERS Regarding the proposal for Revision 8 to the Consolidated Resolution on the Construction of Vehicles (R.E.3)	(a)	16(b)
29/Rev.1	(TF-AVC) QUESTIONS AND ANSWERS Regarding the proposal for Amendment 3 to Special Resolution No. 1 Concerning the Common Definitions of Vehicle Categories, Masses and Dimensions (S.R. 1)	(a)	16(b)
30/Rev.2	TF-AVC) Draft Proposal for Amendments to the Consolidated Resolution on the Construction of Vehicles	(a)	16(b)
31	(France) Proposal for Supplement 1 to the 02 Series of Amendments to UN Regulation No. 160 (Event Data Recorder)	(a)	12(b)
32	(OICA) OICA) proposal to amend GRSG/2025/04, a UK proposal for Supplement 1 to the 10 Series of Amendments to UN Regulation No. 107	(e)	2
33	(OICA) OICA comments to document GRSG-129-XXX (UN Regulation No.122 – heating systems)	(a)	10
34	(OICA) Proposal on UN Regulation No. 43	(a)	3
35/Rev.1	(OICA) Proposal for a new Supplement to UN Regulation No. 39 (Uniform provisions concerning the approval of vehicles with regard to the speedometer and odometer equipment including its installation)	(e)	17(f)
36	(OICA) Proposal for a new Supplement to UN Regulation No. [176] on FVA, Approval of a Vehicle Type with regard to its Field of Vision Assistant, amending ECE/TRANS/WP.29/GRSG/2025/7	(e)	17(f)
37	(IWG EDR/DSSAD) IWG on EDR/DSSAD Status Report	(a)	12
38/Rev.1	(Secretariat) Provisional Agenda for the 129th session	(d)	18(f)
39	(Russian Federation) Proposal for the 03 Series of Amendments draft to UN Regulation No. 66 (Strength of Superstructure (Buses))	(e)	5
40	(OICA) Proposal for Corrigendum 1 to the 07 Series of Amendments of UN Regulation No. 105 (Carriage of dangerous goods)	(d)	17(e)

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>	<i>Agenda Item</i>
41	(UK) Amendment to ECE/TRANS/WP.29/GRSG/2025/3 Proposal for the 02 Series of Amendments to UN Regulation No. 73 (Lateral Protection Devices)	(d)	6
42	(IWG VRU Proxi) Activities of the IWG VRU-Proxi October 2024-March 2025	(d)	4
43	(Germany) GIDAS Analysis: Accidents between VRU and bus	(a)	4
44	(TF-46) Proposal for the 07 Series of Amendments to Regulation No. 46 (Devices for Indirect Vision)	(d)	4(a)
45	(OICA) OICA comments to the work of IWG VRU-Proxi	(a)	4
46	(CLCCR) Additional examples for retaining the 550mm LPD Ground Clearance	(a)	6
47/Rev.2	(Italy) Proposal for amendment to UN Regulation No. 73	(d)	6
48	(TF-AVRS) Status report TF-AVRS	(a)	16(b)
49	(Secretariat) GRSG programme of work	(d)	17(a)
50	(Secretariat) Agenda of the 130th session of GRSG	(d)	17(m)

Notes:

- (a) Consideration completed or superseded.
- (b) Continue consideration at the next session with an official symbol.
- (c) Continue consideration at the next session as an informal document.
- (d) Adopted/Endorsed to be submitted to WP.29.
- (e) Continue consideration on the basis of a revised document.

Annex II

Draft Amendments to UN Regulation No. 107 (M₂ and M₃ vehicles)

Amendments adopted to ECE/TRANS/WP.29/GRSG/2025/9 (see paragraph 3 of this report)

...

Paragraph 10.23., amend to read:

"10.23. **reserved**"

Insert new paragraphs 10.35. to.10.41., to read:

- "10.35. As from the official date of entry into force of the 11 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 11 series of amendments.**
- 10.36. As from 1 September 2027, Contracting Parties applying this Regulation shall not be obliged to accept type approvals to any of the preceding series of amendments, first issued after 1 September 2027.**
- 10.37. Until 1 September 2030, Contracting Parties applying this Regulation shall accept type approvals to 10 series of amendments, first issued before 1 September 2027.**
- 10.38. As from 1 September 2030, Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to any of the preceding series of amendments to this Regulation.**
- 10.39. Notwithstanding paragraph 10.38., Contracting Parties applying this Regulation shall continue to accept type approvals issued according to the 06, 07, 08, 09 or 10 series of amendments to this Regulation, for the vehicles which are not affected by the changes introduced by the 11 series of amendments.**
- 10.40. Contracting Parties applying this Regulation may grant type approvals according to any of the preceding series of amendments to this Regulation.**
- 10.41. Contracting Parties applying this Regulation shall continue to grant extensions of existing approvals to any of the preceding series of amendments to this Regulation. "**

Annex III

Revised Terms of Reference and Rules of Procedure of the Informal Working Group on Awareness of Vulnerable Road Users Proximity in Low-Speed Manoeuvres (VRU-Proxi) (See paragraph 8 of the report)

Adopted text based on GRSG-129-02

...

Section 4 (d) bullet point iii, amend to read:

"4 (d) iii.

- iii. Considering the need for further improvements of the established regulations of this group, in the context of:
 - Assessment of the collective effect of UN Regulations in reducing collisions with VRUs;
 - While respecting competition law, the availability of new or enhanced technologies in relation to UN Regulations No. 151 and No. **159**;
 - Assessment of the benefits of combination of a camera and a detection system in relation to UN Regulation No. 158;
 - Further enhancement of pedestrian safety around buses.

A status report will be provided to the October 2025 session of GRSG.

Taking note of paragraph 2 of these Terms of Reference, the reports generated by the group regarding points 4(d)ii and 4(d)iii shall include consideration of:

- (a) any cost-benefit analyses of the safety benefits of the proposals in addition to
- (b) the safety effects already established by the latest versions of the applicable UN Regulations and their combination. "

Annex IV

Draft Amendments to UN Regulation No. 46 (Devices for Indirect Vision)

[English only]

Adopted text based on GRSG-129-44-Rev.1 (see paragraph 10 of this report)

Paragraph 1.1., amend to read:

"1.1. This Regulation applies:

- (a) To compulsory and optional devices for indirect vision, set out in the table under paragraph 15.2.1.1.1. of this Regulation for vehicles of category M and N¹ and to compulsory and optional devices for indirect vision mentioned in paragraphs 15.2.1.1.3. and 15.2.1.1.4. of this Regulation for vehicles of category L¹ with bodywork at least partly enclosing the driver;
- (b) To the installation of devices for indirect visions on vehicles of categories M and N and on vehicles of category L¹ with bodywork at least partly enclosing the driver;
- (c) **To the installation of surveillance mirrors and surveillance camera-monitor-recording devices with regard to the requirements of paragraphs 15.2.1.2. and 16.3. respectively of this Regulation as applicable. These devices do not need to fulfil any other technical requirements of this Regulation."**

Paragraph 1.2., amend to read:

"1.2. This Regulation does not apply to devices other than those prescribed under paragraph **1.1.**~~for~~ observing the vision area(s) immediately adjacent to the front and/or the passenger's side of vehicles of category M₁, M₂, M₃, N₁ and N₂ ≤ 7.5 t. "

Paragraph 2.2., amend to read:

"2.2. "Type of device for indirect vision" means devices that do not differ on the following essential characteristics:

- (a) Design of the device inclusive, if pertinent, the attachment to the bodywork;
- (b) In the case of mirrors, the class, the shape, the dimensions and radius of curvature of the mirror's reflecting surface;
- (c) In the case of camera-monitor systems, the class, the field of view, the magnification and resolution.
- (d) **If the device for indirect vision fulfils the requirements for different classes at the same time, it may be approved as one type of device for indirect vision with just one approval number in combination**

¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.7. - <https://unece.org/transport/standards/transport/vehicle-regulations-wp29/resolutions>

with additional symbols for the specific classes of the devices for indirect vision (e.g. V+VI) covered by the approval."

Paragraph 2.3., amend to read:

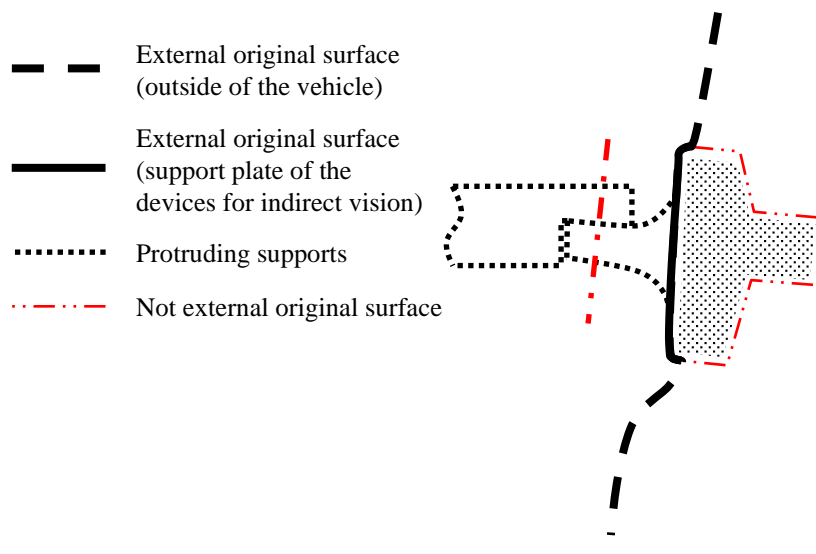
"2.3. *"Surveillance camera-monitor-recording device"* means a camera and either a monitor or recording equipment, other than the camera-monitor system defined in paragraph 2.1.2. above, which can be fitted to the inside or outside of the vehicle in order to provide fields of vision other than those specified in paragraph 15.2.4. of this Regulation or to provide a security system within or around the vehicle.

Devices mandated by other UN Regulations are not seen as a surveillance camera-monitor-recording device, if not explicitly mentioned in the respective other Regulation."

Paragraph 2.7., amend to read:

"2.7. *"External original surface"* means the outside of the vehicle including the bonnet, the lid of the luggage compartment, the doors, the wings (**fender**), the roof, the lighting and light-signalling devices, the visible strengthening components, **the support plate of devices for indirect vision** and additional external original design surfaces defined by the manufacturer excluding protruding supports for devices of indirect vision.

Figure 1a



Figures 1 (former), renumber as figures 1b to 1c

Paragraph 5.4.3., amend to read:

"5.4.3. Additional symbol(s) **I, II, III, IV, V, VI or VII specifying** the class to which the type of device for indirect vision belongs. The additional symbols shall be placed in any convenient position in the vicinity of the circle containing the letter "E"."

Insert new paragraph 6.1.1.3.1., to read:

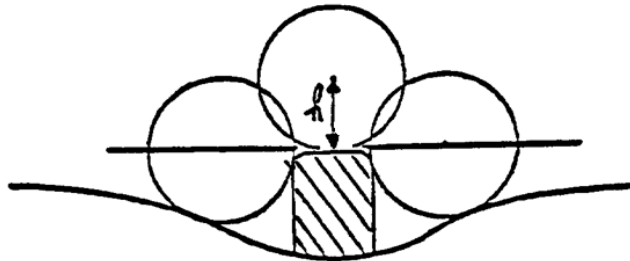
"6.1.1.3.1. In the case of a Class I mirror, the requirement of paragraph 6.1.1.3. does not apply to the backside of the mirror. "

Paragraph 6.1.1.4.2., amend to read:

- "6.1.1.4.2. If the dimension of the projection of a component which is mounted on a surface other than convex cannot be determined by simple measurement, it shall be determined by the maximum variation of the distance of the centre of a 100 mm diameter sphere from the nominal line of the panel when the sphere is moved over and is in constant contact with that component. Figure 1b shows an example of the use of this procedure.

Figure 1b

Example for the Measurement by Maximum Variation



"

Paragraph 6.1.1.6., amend to read:

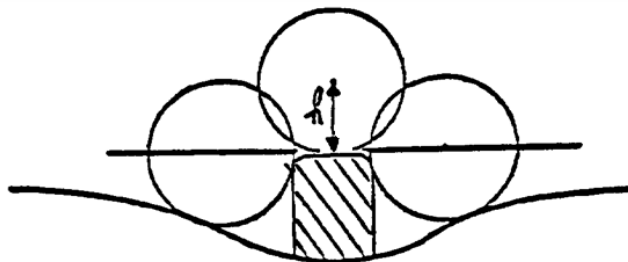
- "6.1.1.6. The device for the attachment of mirrors to the vehicle shall be so designed that a cylinder with a 70 mm radius (50 mm in the case of an L-category vehicle), having as its axis the axis, or one of the axes, of pivot or rotation which ensures deflection of the mirror in the direction of impact concerned, passes through at least part of the external original surface **as defined in paragraph 2.7.** "

Paragraph 6.2.2.1.2.2., amend to read:

- "6.2.2.1.2.2. If the dimension of the projection of a component which is mounted on a surface other than convex cannot be determined by simple measurement, it shall be determined by the maximum variation of the distance of the centre of a 100 mm diameter sphere from the nominal line of the panel when the sphere is moved over and is in constant contact with that component. Figure 1b shows an example of the use of this procedure.

Figure 1b

Example for the Measurement by Maximum Variation



"

Paragraph 6.3.2., amend to read:

- "6.3.2. Impact test

The test according to this paragraph is not to be carried out for

- (a) exterior devices not projecting beyond the overall width and length of the vehicle and providing a frontal deflecting area of an angle not more

than 45° measured in relation to the longitudinal median plane of the vehicle, or

- (b) devices not protruding more than 100 mm measured at the attachment point beyond the circumscribing external original surface of the vehicle”

Paragraph 6.3.2.1.1., amend to read:

"6.3.2.1.1. The test rig consists of a pendulum capable of swinging about two horizontal axes at right angles to each other, one of which is perpendicular to the plane containing the "release" trajectory of the pendulum.

The end of the pendulum comprises a hammer formed by a rigid sphere with a diameter of 165 ± 1 mm, and **at least on the impact side** a 5 ± 1 mm thick rubber covering of Shore A hardness 50.

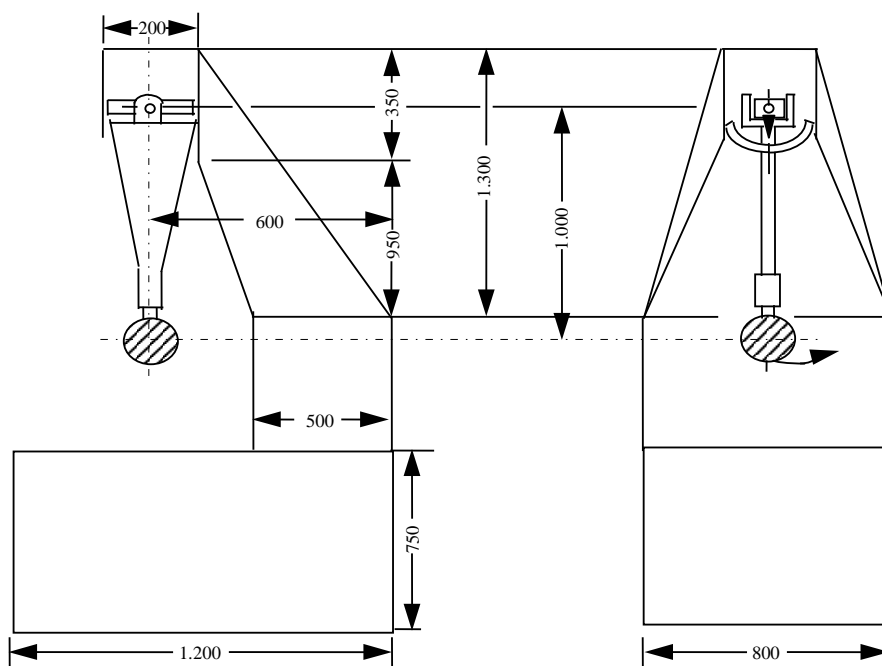
The end of the hammer may be formed by any other rigid shape having at least on the impact side a spherical shape and a 5 ± 1 mm thick rubber covering of Shore A hardness 50, if the equivalence of this shape is demonstrated through a mathematical model, to the satisfaction of the Type Approval Authority.

A device is provided which permits determination of the maximum angle assumed by the arm in the plane of release.

A support firmly fixed to the structure of the pendulum serves to hold the specimens in compliance with the impact requirements specified in paragraph 6.3.2.2.7. below.

Figure 1c below gives the dimensions (in mm) of the test rig and the special design specifications:

Figure 1c



Paragraph 6.3.2.2.5., amend to read:

"6.3.2.2.5. When, under the conditions governing adjustment laid down in paragraphs 6.3.2.2.1. and 6.3.2.2.2. above parts of the device for indirect vision limit the

return of the hammer **before and after the impact**, the point of impact shall be displaced **through the centre of the reflecting surface**, in a direction perpendicular to the axis of rotation or pivoting in question.

The displacement shall be no greater than is strictly necessary for the execution of the test. **The necessary displacement shall be agreed upon by the Type Approval Authority or Technical Service**; it shall be limited in such a way that:

- (a) Either the sphere delimiting the hammer remains at least tangential to the cylinder as defined in paragraph 6.1.1.6.;
- (b) Or, in the case of mirrors, the point of contact with the hammer is located on the reflecting surface at least 10 mm from the periphery of the reflecting surface"

Paragraph 15.2.1.1.3., amend to read:

"15.2.1.1.3. Rear-view mirrors required for L-category vehicles with body work

<i>Category of vehicle</i>	<i>Rear-view Class I</i>	<i>Main rear-view Classes III and VII</i>
L category motor vehicles fitted with bodywork which partly or wholly encloses the driver	1 ¹	1, if there is a Class I rear-view mirror; 2, if there is not a Class I rear-view mirror

¹ No rear-view mirror Class I is required if the visibility conditions referred to in paragraph 15.2.5.4.1. below cannot be met. In this case two Class III or VII rear-view mirrors are required, one giving the view on the left and one giving the view on the right hand side of the vehicle.

Where a single Class III or VII rear-view mirror is fitted this shall be located on the left hand side of the vehicle in those countries where the traffic drives on the right and on the right hand side of the vehicle in those countries where the traffic drives on the left."

Paragraph 15.2.1.2., amend to read:

"15.2.1.2. Exterior surveillance mirrors shall be mounted at least 2 m above the ground when the vehicle is under a load corresponding to its maximum technical permissible mass or shall be fully integrated in a housing including Class II or III mirror(s) which is (are) type approved to this Regulation."

Paragraph 15.2.4.2., amend to read:

"15.2.4.2. Class II main rear-view device

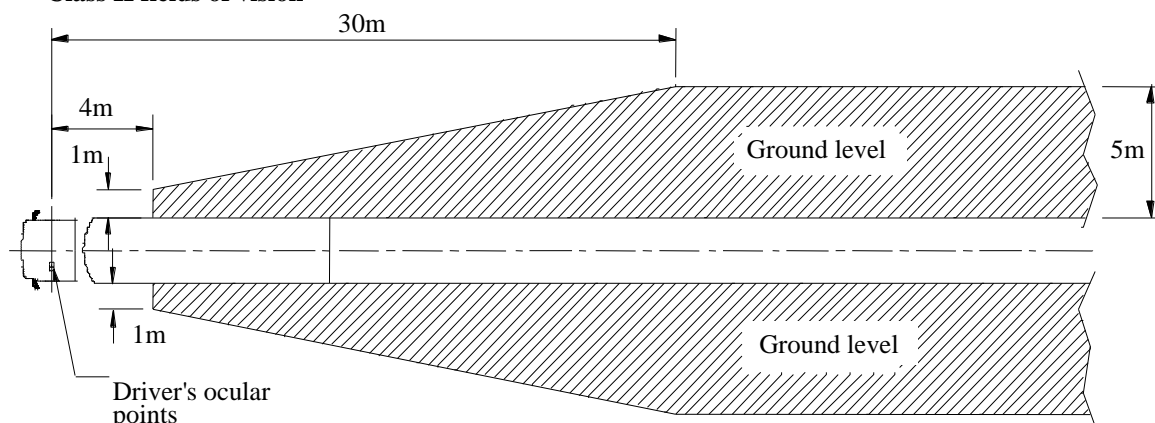
15.2.4.2.1. Main rear-view device on the driver's side

The field of vision shall be such that the driver can see at least a 5 m wide, flat, horizontal portion of the road, which is bounded by a plane which is parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle on the driver's side of the vehicle and extends from 30 m behind the driver's ocular points to the horizon.

In addition, the road shall be visible to the driver over a width of 1 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 4 m behind the vertical plane passing through the driver's ocular points, **while**

linearly increasing up to a width of 5 m wide at the point 30 m behind the vertical plane passing through the driver's ocular points (see Figure 5).

Figure 5
Class II fields of vision



15.2.4.2.2. Main rear-view device on the passenger's side

The field of vision shall be such that the driver can see at least a 5 m wide, flat, horizontal portion of the road, which is bounded on the passenger's side by a plane parallel to the median longitudinal vertical plane of the vehicle and passing through the outermost point of the vehicle on the passenger's side and which extends from 30 m behind the driver's ocular points to the horizon.

In addition, the road shall be visible to the driver over a width of 1 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 4 m behind the vertical plane passing through the driver's ocular points, **while linearly increasing up to a width of 5 m wide at the point 30 m behind the vertical plane passing through the driver's ocular points** (see Figure 5)."

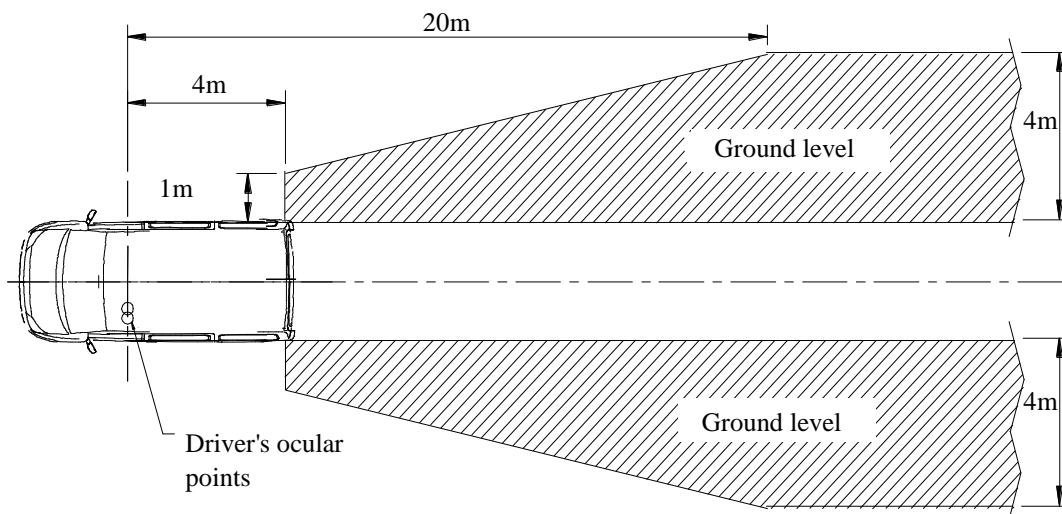
Paragraph 15.2.4.3., amend to read:

"15.2.4.3. Class III main rear-view device

15.2.4.3.1. Main rear-view device on the driver's side

The field of vision shall be such that the driver can see at least a 4 m wide, flat, horizontal portion of the road, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle on the driver's side of the vehicle and extends from 20 m behind the driver's ocular points to the horizon (see Figure 6).

Figure 6
Class III fields of vision



In addition, the road shall be visible to the driver over a width of 1 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 4 m behind the vertical plane passing through the driver's ocular points, **while linearly increasing up to a width of 4 m wide at the point 20 m behind the vertical plane passing through the driver's ocular points.**

15.2.4.3.2. Main rear-view device on the passenger's side

The field of vision shall be such that the driver can see at least a 4 m wide flat, horizontal portion of the road which is bounded by a plane parallel to the median longitudinal vertical plane passing through the outermost point of the vehicle on the passenger's side and which extends from 20 m behind the driver's ocular points to the horizon (see Figure 6).

In addition, the road shall be visible to the driver over a width of 1 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 4 m behind the vertical plane passing through the driver's ocular points, **while linearly increasing up to a width of 4 m wide at the point 20 m behind the vertical plane passing through the driver's ocular points."**

Paragraph 15.2.4.4., amend to read:

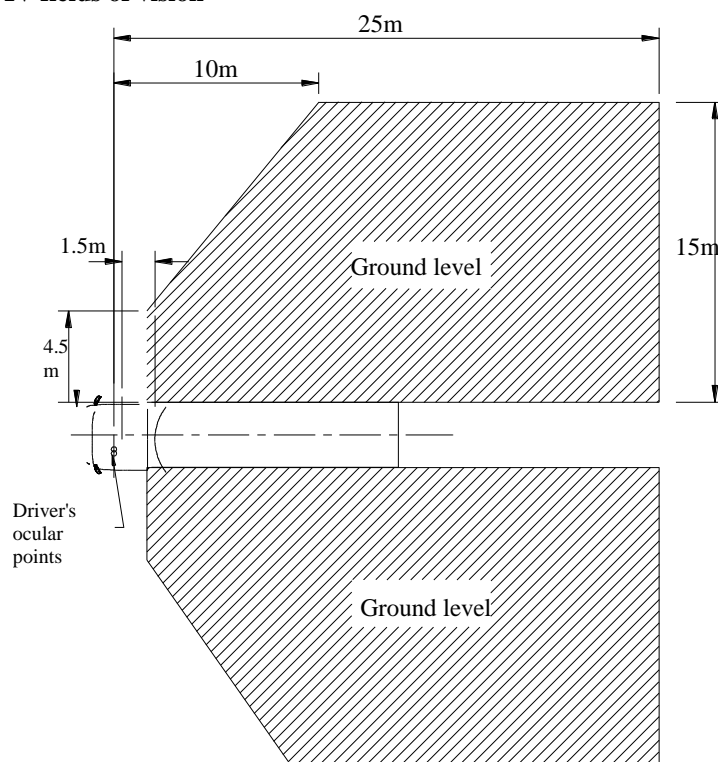
"15.2.4.4. Class IV wide-angle view device

15.2.4.4.1. Wide-angle view device on the driver's side

The field of vision shall be such that the driver can see at least a 15 m wide, flat, horizontal portion of the road, which is bounded by a plane parallel to the median longitudinal vertical plane of the vehicle and passing through the outermost point of the vehicle on the driver's side and which extends from at least 10 m to 25 m behind the driver's ocular points.

In addition, the road shall be visible to the driver over a width of 4.5 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 1.5 m behind the vertical plane passing through the driver's ocular points, **while linearly increasing up to a width of 15 m wide at the point 10 m behind the vertical plane passing through the driver's ocular points** (see Figure 7).

Figure 7
Class IV fields of vision



15.2.4.4.2. Wide-angle view device on the passenger's side

The field of vision shall be such that the driver can see at least a 15 m wide, flat, horizontal portion of the road, which is bounded by a plane parallel to the median longitudinal vertical plane of the vehicle and passing through the outermost point of the vehicle on the passenger's side and which extends from at least 10 m to 25 m behind the driver's ocular points.

In addition, the road shall be visible to the driver over a width of 4.5 m, which is bounded by a plane parallel to the median longitudinal vertical plane and passing through the outermost point of the vehicle starting from a point 1.5 m behind the vertical plane passing through the driver's ocular points, **while linearly increasing up to a width of 15 m wide at the point 10 m behind the vertical plane passing through the driver's ocular points** (see Figure 7)."

Insert new paragraph 15.2.4.9.3., to read:

"15.2.4.9.3. The reflective surfaces must be sufficiently large to accommodate the full fields of vision specified above, i.e. obstructions up to the percentages mentioned above may not be caused by insufficient reflective surface sizes."

Insert new paragraph 16.1.1.3.1., to read:

"16.1.1.3.1. Safety-Related Rearward Vision Information

Safety-related rearward vision information refers to information that directly enhances the driver's ability to identify, assess, and respond to potential hazards or obstacles in the rearward field of vision. This includes, but is not limited to:

- (a) Hazard alerts highlighting vehicles, cyclists, or pedestrians;
- (b) Distance lines or markers to highlight the distance to other vehicles;:-

(c) **Parking guidance lines.**

Any additional information proposed by the vehicle manufacturer as safety-related rearward vision information shall be evaluated and approved by the Technical Service and Type Approval Authority.

Indicators like blind spot monitoring indicators as described in UN Regulation No. 151, side indicators, temperature warnings are not considered as safety-related rearward vision information."

Paragraph 16.1.2., amend to read:

"16.1.2. Operating readiness (System availability)

Non-operation of the system (e.g. CMS failure **as defined by the manufacturer in the explanation of the warning strategy and safety concept according to paragraph 2.3.1. (e) of Annex 12** or CMS in a folded position **on driver's request**) shall be recognizable to the driver and indicated by e.g. warning indication, display information, absence of status indicator. The information for the driver shall be explained in the operator's manual."

Paragraph 16.1.3.1., amend to read:

"16.1.3.1. Magnification factor

The minimum and the average magnification factors of the CMS, in both horizontal and vertical directions shall not be lower than the magnification factors indicated below:

Magnification limit with two digits after the decimal point: round the measured value to the nearest hundredth;

Magnification limit with three digits after the decimal point: round the measured value to the nearest thousandth.

Examples:

0,255 -> 0,26

0,0154 -> 0,015"

Delete paragraph 16.2.5.

Insert new paragraphs 16.3. to 16.3.5., to read:

"16.3. **Surveillance Camera-Monitor-Recording Devices**

16.3.1. Exterior surveillance cameras shall be mounted at least 2 m above the ground when the vehicle is under a load corresponding to its maximum technical permissible mass.

16.3.2. Notwithstanding the provisions of paragraph 16.3.1., exterior surveillance cameras mounted below 2 m from the ground when the vehicle is under a load corresponding to its maximum technical permissible mass shall not project more than 50 mm beyond the overall width of the vehicle measured without this device and shall have radii of curvature according to paragraphs 6.2.2.1.1. to 6.2.2.1.5. or shall be integrated in a housing of a Class II or III device for indirect vision approved under this Regulation.

16.3.2.1. In the case of vehicles of category N, the provisions of paragraph 16.3.2. only apply to a surveillance camera-monitor recording device mounted on the external surface according to paragraph 2.1. as defined in UN Regulation No. 61.

16.3.3. Notwithstanding the provisions in paragraph 16.3.1. in case of vehicles of category M2 and M3 the provisions of paragraph 16.3.2. do not apply to surveillance camera-monitor recording devices mounted on the rear wall of the vehicle.

- 16.3.4. Monitors of a surveillance camera-monitor-recording device shall fulfil the provisions of paragraphs 6.2.2. to 6.2.2.1.1. and 6.2.2.1.4."**

Insert new paragraph 22.33. and consequent subparagraphs, to read:

- "22.33. Transitional Provisions of the 07 Series of Amendments**
- "22.33.1. As from the official date of entry into force of the 07 series of amendments, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals under this Regulation as amended by the 07 series of amendments.**
- 22.33.2. As from 1 September 2027, Contracting Parties applying this Regulation shall not be obliged to accept type approvals to any of the preceding series of amendments, first issued after 1 September 2027.**
- 22.33.3. Until 1 September 2029, Contracting Parties applying this Regulation shall accept type approvals to the 06 series of amendments, first issued before 1 September 2027.**
- 22.33.4. As from 1 September 2029, Contracting Parties applying this Regulation shall not be obliged to accept type approvals issued to any of the preceding series of amendments to this Regulation.**
- 22.33.5. Notwithstanding paragraphs 22.33.3. and 22.33.4., Contracting Parties applying this Regulation shall continue to accept type approvals issued according to the 04, 05 and 06 series of amendments to this Regulation, for the vehicles and devices for indirect vision which are not affected by the changes introduced by the 07 series of amendments.**
- 22.33.6. Contracting Parties applying this Regulation may grant type approvals according to any of the preceding series of amendments to this Regulation.**
- 22.33.7. Contracting Parties applying this Regulation shall continue to grant extensions of existing approvals to any of the preceding series of amendments to this Regulation."**

Annex 1, paragraph 9.1.1., amend to read:

- "9.1.1. In the case of camera-monitor systems of Classes V and VI, the class(es), the detection distance(s) [mm], contrast(s), luminance range(s), glare correction(s), display performance(s) (black and white/colour) image repetition frequency(s), luminance reach of the monitor(s):"**

Annex 1, item 9.1.2., amend to read:

- "9.1.2. In the case of camera-monitor systems of Classes I to IV, the class(es), field(s) of view, magnification(s) and resolution(s):"**

Insert new paragraphs 12.1.3. to 12.1.4. in Annex 2, to read:

- "12.1.3. Surveillance Mirrors**
- 12.1.3.1. Drawing(s) showing the position of the surveillance mirror relative to the vehicle structure:**
- 12.1.3.2. Details of the method of attachment including that part of the vehicle structure to which it is attached:**
- 12.1.3.3. Optional equipment which may affect the rearward field of vision:**
- 12.1.3.4. A brief description of the electronic components (if any) of the adjustment device:**
- 12.1.4. surveillance camera-monitor-recording devices:**
- 12.1.4.1. Sufficiently detailed drawings with the installation instructions:**

- 12.1.4.2. Drawing(s)/photograph(s) showing the position of the camera(s) relative to the vehicle structure:
- 12.1.4.3. Drawing(s)/photograph(s) showing the arrangement of the monitor(s) including surrounding interior parts:
- 12.1.4.4. Details of the method of attachment of the camera-monitor device(s) including that part of the vehicle structure to which it is attached:
- 12.1.4.5. Optional equipment which may affect the rearward field of vision:
- 12.1.4.6. A brief description of the electronic components (if any) of the adjustment device:"

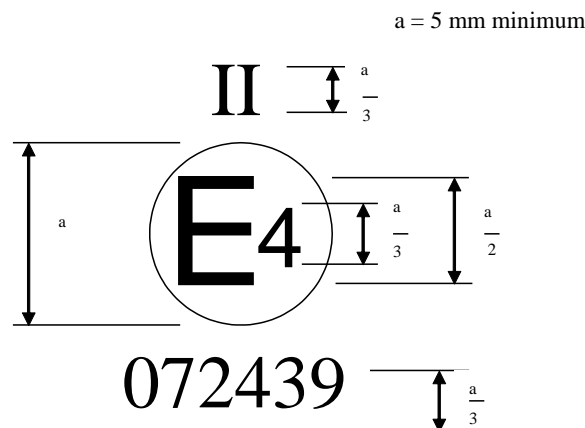
Annex 5, amend to read:

"Annex 5

Arrangement of Approval Mark of a Device for Indirect Vision

(See paragraph 5.4. of the Regulation)

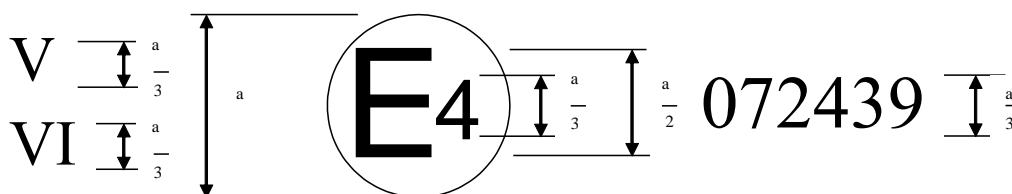
Example 1



The above approval mark affixed to a device for indirect vision indicates that the device is a main rear-view device, of Class II, which has been approved in the **Kingdom of the Netherlands** (E 4) pursuant to Regulation No. 46 and under approval number **072439**. The first two digits of the approval number indicate that Regulation No. 46 already included the **05 07** series of amendments when the approval was granted.

Note: The approval number and the additional symbol shall be placed close to the circle and either above or below the "E" or to the left or right of that letter. The digits of the approval number and the additional symbols may be on the same side of the "E" or one on one side and the other on the other side and point in the same direction. The additional symbol shall be directly next or opposite to the approval number. The use of Roman numerals as approval numbers shall be avoided so as to prevent any confusion with other symbols.

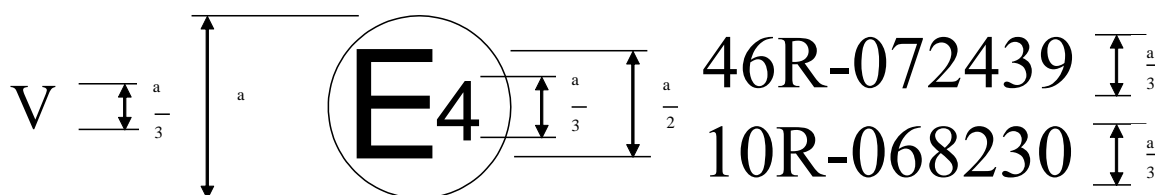
Example 2
One Approval Number for Two Classes



The above approval mark affixed to a device for indirect vision indicates that the device is a close-proximity view device, of Class V, and a front-view device, of Class VI, which has been approved in the Kingdom of the Netherlands (E 4) pursuant to Regulation No. 46 and under approval number 072439. The first two digits of the approval number indicate that Regulation No. 46 already included the 07 series of amendments when the approval was granted.

Note: The approval number and the additional symbol(s) shall be placed close to the circle and on the same side or one to the left and one to the right of that letter. The digits of the approval number and the additional symbols shall point in the same direction. The use of Roman numerals as approval numbers shall be avoided so as to prevent any confusion with other symbols.

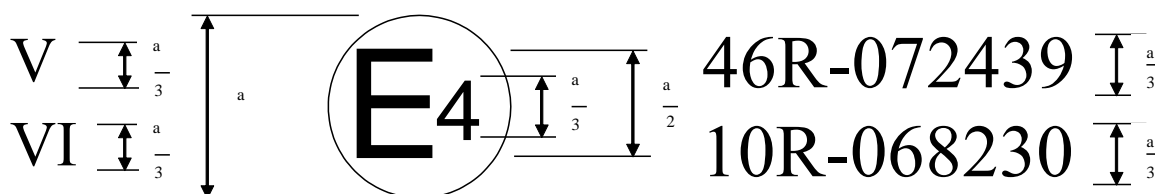
Example 3
Combined Approval Mark for UN Regulation No. 46 and UN Regulation No. 10



The above approval mark affixed to a device for indirect vision indicates that the device is a close-proximity view device, of Class V, which has been approved in the Kingdom of the Netherlands (E 4) pursuant to Regulation No. 46 and under approval number 072439 and pursuant to Regulation No. 10 and under approval number 068230. The first two digits of the approval number indicate that Regulation No. 46 already included the 07 series of amendments and Regulation No. 10 already included the 06 series of amendments when the approval was granted.

Note: The approval numbers and the additional symbol shall be placed close to the circle and either above or below the "E" or to the left or right of that letter. The digits of the approval number and the additional symbols may be on the same side of the "E" and point in the same direction. The use of Roman numerals as approval numbers shall be avoided so as to prevent any confusion with other symbols.

Example 4
Combined Approval Mark for UN Regulation No. 46 (One Number for Two Classes)
and UN Regulation No. 10



The above approval mark affixed to a device for indirect vision indicates that the device is a close-proximity view device of Class V, and a front-view device of Class VI, which has been approved in the Kingdom of the Netherlands (E 4) pursuant to Regulation No. 46 and under approval number 07243946 and pursuant to Regulation No. 10 and under approval number 068230. The first two digits of the approval number indicate that Regulation No. 46 already included the 07 series of amendments and Regulation No. 10 already included the 06 series of amendments when the approval was granted.

Note: The approval numbers and the additional symbols shall be placed close to the circle and on one side or one to the left and one to the right of the "E" or on the same side of the letter. The digits of the approval number and the additional symbols shall point in the same direction. The additional symbols shall be directly or opposite to the approval numbers. The use of Roman numerals as approval numbers shall be avoided so as to prevent any confusion with other symbols."

Insert new paragraph 3. in Annex 7, to read:

"3. Equivalent Procedures

- 3.1. Alternative tests may be permitted at the discretion of the Type Approval Authority provided equivalence can be demonstrated. A report shall be attached to the approval documentation describing the method used and the results obtained or the reason for not carrying out the test.**
- 3.2. Responsibility for demonstrating the equivalence of the alternative method shall rest with the manufacturer or his agent wishing to use such a method."**

Annex V

Draft Amendments to UN Regulation No. 73 (Lateral Protection Devices)

**Adopted text based on GRSG-129-21-Rev.5 and GRSG-129-47-Rev.2
(see paragraph 15 of this report)**

Paragraphs 1.1.1. to 1.1.3., footnote 1, amend to read:

"¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.7. - <https://unece.org/transport/vehicle-regulations/wp29/resolutions>"

Paragraph 5.1.2., amend to read:

"5.1.2. **An approval number shall be assigned to each type approved in accordance with Schedule 4 of the Agreement (E/ECE/TRANS/505/Rev.3). "**

Paragraph 5.1.4.1., footnote 2, amend to read:

"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.7. - <https://unece.org/transport/vehicle-regulations/wp29/resolutions>"

Paragraph 5.2.2., amend to read:

"5.2.2. **An approval number shall be assigned to each type approved in accordance with Schedule 4 of the Agreement (E/ECE/TRANS/505/Rev.3). "**

Paragraph 5.3.2., amend to read:

"5.3.2. **An approval number shall be assigned to each type approved in accordance with Schedule 4 of the Agreement (E/ECE/TRANS/505/Rev.3). "**

Insert new paragraphs 11.5. to 11.10., to read:

"11.5. **As from the official date of entry into force of the 02 series of amendments, no Contracting Party applying this UN Regulation shall refuse to grant or refuse to accept type approvals under this UN Regulation as amended by the 02 series of amendments.**

11.6. **As from 1 September 2027, Contracting Parties applying this UN Regulation shall not be obliged to accept type approvals to any of the preceding series of amendments, first issued after 1 September 2027.**

11.7. **Until 1 September 2028, Contracting Parties applying this UN Regulation shall accept type approvals to the 01 series of amendments, first issued before 1 September 2027.**

11.8. **As from 1 September 2028, Contracting Parties applying this UN Regulation shall not be obliged to accept type approvals issued to any of the preceding series of amendments to this UN Regulation.**

11.9. **Contracting Parties applying this UN Regulation may grant type approvals according to any preceding series of amendments to this UN Regulation.**

11.10. **Contracting Parties applying the UN Regulation shall continue to accept type approvals of, and to grant extensions of approvals to, the vehicles or the vehicle systems/equipment/parts to the preceding series of**

amendments to the UN Regulation which are not affected by the changes introduced by the 02 series of amendments

- 11.11. The requirement for the height of the lower edge of LPD as specified in paragraphs 12.8. and 15.6. as amended by the 02 series of amendments are not compulsory for the purpose of granting type-approval to the 02 series of amendment, until 1 September 2034. These exemptions shall remain applicable in the case of extensions of approvals first granted before 1 September 2034.
- 11.12. Notwithstanding the transitional provisions above, Contracting Parties whose application of this Regulation comes into force after the date of entry into force of the most recent series of amendments are not obliged to accept approvals which were granted in accordance with any of the preceding series of amendments to this Regulation."

Paragraph 12.8., amend to read:

- "12.8. The lower edge of LPD shall at no point be more than **450 mm** above the ground. **In the case of vehicles where the distance between the centers of adjacent axles exceeds 6.5m, the height of the lower edge of the LPD may be no more than 550 mm above the ground.**"

Paragraph 13.1.1., delete paragraph:

- "13.1.1. **Reserved**"

Paragraph 13.3., amend to read:

- "13.3. Vehicles where any LPD (e.g. fixed, removable, foldable, adjustable, etc.) is incompatible with their on-road use may be partly or fully exempted from this Regulation, subject to the decision of the Type Approval Authority."
- 13.3.1. For vehicles of category N2G, N3G and their vehicle bodywork (1), where any LPD is incompatible with their off-road use, the Type Approval Authority may decide that the lower edge of LPD shall at no point be more than 550mm above the ground.
- **Bodywork, chassis parts or other components, such that, by virtue of their shape and characteristics, these elements can be regarded as totally or partially fulfilling the function of the LPD.**

Paragraph 16.1.1., delete paragraph:

- "16.1.1. **Reserved**"

Paragraph 16.2., amend to read:

- "16.2. Vehicles where any LPD (e.g. fixed, removable, foldable, adjustable, etc.) is incompatible with their on-road use may be partly or fully exempted from this Regulation, subject to the decision of the Type Approval Authority."
- 16.2.1. For vehicles of category N2G, N3G and their vehicle bodywork (1), where any LPD is incompatible with their off-road use, the Type Approval Authority may decide that the lower edge of LPD shall at no point be more than 550mm above the ground.
- **Bodywork, chassis parts or other components, such that, by virtue of their shape and characteristics, these elements can be regarded as totally or partially fulfilling the function of the LPD.**

Paragraph 15.6., amend to read:

- "15.6. The lower edge of LPD shall at no point be more than **450 mm** above the ground. **In the case of vehicles where the distance between the centers of adjacent axles exceeds 6.5m, the lower of the bottom edge of the LPD may be no more than 550 mm above the ground.**"

Paragraph 15.7., amend to read:

- "15.7. On a vehicle fitted with a crane for loading, unloading or other operations, having a permanently fitted **operator's** workstation or operating platform from which the crane may be controlled, the upper edge of the LPD may be determined in accordance with paragraphs **15.7.1.** and **15.7.2.**, the workstation or operating platform being considered as if it was the load carrying platform."

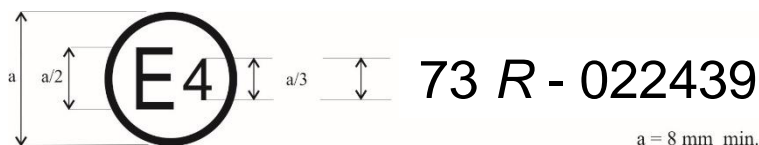
Annex 2, amend to read (01 → 02):

"Annex 2

Arrangements of Approval Marks

Model A

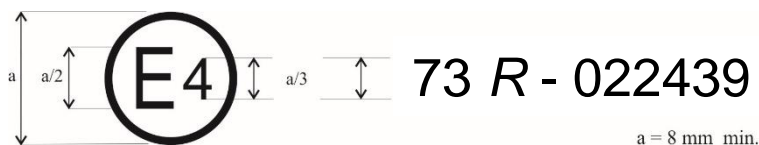
(see paragraphs 5.1.4. and 5.3.4. of this Regulation)



The above approval mark affixed to a vehicle or to an LPD shows that the vehicle type concerned has, with regard to its lateral protection, been approved in the Netherlands (E 4) pursuant to Regulation No. 73 under approval number **022439** as a complete vehicle. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. 73 as amended by the **02** series of amendments.

Model B

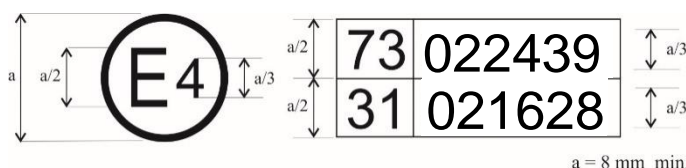
(see paragraph 5.2.4. of this Regulation)



The above approval mark affixed to an LPD shows that the LPD type concerned has, with regard to its lateral protection, been approved in the Netherlands (E 4) pursuant to Regulation No. 73 under approval number **022439**. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No. 73 as amended by the **02** series of amendments.

Model C

(see paragraphs 5.1.5. and 5.3.5. of this Regulation)



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. 73 and 31². The first two digits of the approval numbers indicate that, at the dates when the respective approvals were granted, Regulation No. 73 included the **02** series of amendments and the approval was granted for a completed vehicle, and Regulation No. 31 included the **02** series of amendments.

² This latter number is given as an example only.

Annex VI

Draft Amendments to UN Regulation No. 121 (Identification of Controls, Tell-tales and Indicators)

Adopted text based on GRSG-129-15 (see paragraph 22 of this report)

Paragraphs 5.2.1. to 5.2.7., paragraphs 5.4.1.1. to 5.4.2. and table 1 - footnotes 2 and 18, replace:

"ISO 2575:2004"

by:

"ISO 2575:2021"

Annex VII

Draft amendments to Consolidated Resolution on the Construction of Vehicles

Adopted text based on ECE/TRANS/WP.29/GRSG/2025/5 (see paragraph 31 of this report)

Introduction, amend to read:

"0. Introduction

...

Revision 8 in addition updates R.E.3 by supplementing Section 1 and by amending Annex 1 to introduce a definition of a bidirectional vehicle which can be used and/or can be referred to in the UN Regulations. Annex 1 was updated after the 3-D "H"-point procedure had been revised and has become part of Mutual Resolution No. 1. The UN Regulations which refer to the 3-D "H"-point machine and measurement procedure have been updated previously and already refer to Mutual Resolution No. 1 - Addendum 6.

In order to keep the current Annex numbering in R.E.3, it was decided to keep Annex 1 in and to just replace the full text with a reference to Mutual Resolution No. 1."

Insert new paragraphs 1.18. to 1.19., to read:

"1.18. *"Bidirectional vehicle"* means a vehicle that can operate in two opposite forward directions.

1.19. *"Forward direction"* (of a vehicle) means the direction that is intended to be used as the main travelling direction of the vehicle."

Paragraph 2.2.5.4., amend to read:

"2.2.5.4. *"Mass of a vehicle in running order"* means the mass of an unladen vehicle with bodywork, and with coupling device in the case of a towing vehicle, or the mass of the chassis with cab if the manufacturer does not fit the bodywork and/or coupling device, including coolant, oils, 90 per cent of fuel, 100 per cent of other liquids except used waters, tools, spare wheel, driver (75 kg) **except in the case of vehicles of category X or category Y**, and, for buses and coaches, the mass of the crew member (75 kg) if there is a crew seat in the vehicle. **For vehicles of category X and category Y the driver's mass is not included.**"

Paragraph 2.8.2.1., amend to read:

"2.8.2.1. Vehicles in category N₁ with a maximum mass not exceeding 2,000 kg and vehicles in category M₁ shall be in running order, namely with coolant fluid, lubricants, fuel, tools, spare-wheel and, **except in the case of vehicles of category X or category Y**, a driver considered to weigh a standard 75 kg. **For vehicles of category X and category Y the driver's mass is not included.**"

Annex 1, amend to read:

"Annex 1

Standard Annex on the Procedure for the Determination of the "H" point and the Actual Torso Angle for Seating Positions in Motor Vehicles

The procedure was updated and moved to Mutual Resolution No. 1. See Addendum 6 of Mutual Resolution No. 1 (M.R.1) (document ECE/TRANS/WP.29/1101/Amend.5); <https://unece.org/transport/vehicle-regulations/wp29/resolutions>"

Annex VIII

Draft amendments to UN Regulation No. 105 (Vehicles for the carriage of dangerous goods)

Adopted text based on GRSG-129-40 (see paragraph 39 of this report)

Paragraph 5.1.3.7., amend to read:

"5.1.3.7. Hydrogen fuel cell vehicles."

Annex IX

GRSG Informal Working Groups

[English only]

<i>Informal working group</i>	<i>Secretary</i>
Awareness of Vulnerable Road Users Proximity (VRU-Proxi)	Mr. J. Broeders (OICA)
Driver Drowsiness and Distraction Warning Systems Regulations	Mr. S. Bambagioni (OICA)