

22 June 2015

Agreement

Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions*

(Revision 2, including the amendments which entered into force on 16 October 1995)

Addendum 42 – Regulation No. 43

Revision 3 - Amendment 3

Supplement 3 to the 01 series of amendments – Date of entry into force: 15 June 2015

Uniform provisions concerning the approval of safety glazing materials and their installation on vehicles

This document is meant purely as documentation tool. The authentic and legal binding texts are:

- ECE/TRANS/WP.29/2014/66
- ECE/TRANS/WP.29/2014/67.



UNITED NATIONS

* Former title of the Agreement: Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

Paragraph 1., amend to read:

"1. Scope

This Regulation applies to:

- (a) Safety glazing materials intended for installation as windscreens or other panes, or as partitioning, on vehicles of category L with bodywork, M, N, O, and T;¹
- (b) Vehicles of categories M, N and O with regard to the installation of these materials;

In both cases, to the exclusion of:

- (i) Glazing for lighting and light-signalling devices, instrument panels, special bullet-proof glazing and double-windows;
- (ii) Small plastic glazing that is not required for either the driver's forward or rearward field of vision.

¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.3, para. 2 - www.unece.org/trans/main/wp29/wp29wgs/wp29gen/wp29resolutions.html

Insert new paragraphs 2.14. and 2.15., to read:

- "2.14. "Exterior forward-facing glazing" means any glazing other than a windscreen installed in the front of the vehicle body, representing a part of the vehicle exterior.
- 2.15. "Interior glazing" means any glazing installed in a vehicle passenger compartment (e.g. partitions, separating windows, etc.)."

Paragraphs 2.14. to 2.36. (former), renumber as paragraphs 2.16. to 2.38., and amend references to these paragraphs accordingly.

Insert a new paragraph 2.39., to read:

- 2.39. "Small glazing" is a pane having an area of less than 200 cm² and within which it is not possible to inscribe a circle having a diameter of 150 mm."

Paragraphs 5.5. to 5.5.10., amend to read:

- "5.5. The following additional symbols shall be affixed near the above approval mark:
- 5.5.1. In the case of a windscreen:
 - I for toughened glass,
 - II for ordinary laminated glass,
 - III for treated laminated glass,
 - IV for glass-plastics glazing,
 - 5.5.2. V in the case of safety glazing having a regular light transmittance less than 70 per cent,
 - 5.5.3. VI in the case of multiple-glazed unit,

- 5.5.4. VII in the case of uniformly-toughened glass glazing which can be used as windscreens for slow-moving vehicles which, by construction, cannot exceed 40 km/h.
- 5.5.5. VIII In the case of rigid plastic glazing. In addition the appropriate application will be signified by:
- /A for exterior or interior forward facing panes,
 - /B for other panes where there is a risk of head impact,
 - /C for other panes where there is no risk of head impact.
- In addition, for plastic glazing which has been submitted to the abrasion resistance tests described in Annex 3, paragraph 4., the following markings shall also be applied as appropriate:
- /L for glazing according to Annexes 14 and 16, paragraph 6.1.3.1.,
 - /M for glazing according to Annexes 14 and 16, paragraph 6.1.3.2.,
- 5.5.6. IX in the case of flexible-plastic glazing,
- 5.5.7. X in the case of a rigid plastic multiple-glazed unit. In addition, the appropriate application will be signified by:
- /A for exterior or interior forward facing panes,
 - /B for other panes where there is a risk of head impact,
 - /C for other panes where there is no risk of head impact.
- For plastic glazing which has been submitted to the abrasion resistance test described in Annex 3, paragraph 4., the following markings shall also be applied as appropriate:
- /L for glazing according to Annex 16, paragraph 6.1.3.1.,
 - /M for glazing according to Annex 16, paragraph 6.1.3.2.,
- 5.5.8. XI in the case of a laminated-glass panes,
- 5.5.9. XII in the case of glass-plastic panes,
- 5.5.10. /P in the case of a safety glazing made of glass, with a layer of plastics material on its inner face."

Annex 3,

Paragraph 5.1., amend to read:

"5.1. Procedure

Heat to 100 °C + 0 °C / -2 °C three samples or three square test pieces ... specified period of time, care being taken to avoid undue thermal shock. The test shall be carried out in an oven if the boiling water temperature is outside the specified tolerance. If samples are cut from windscreens, one edge of each such sample shall be part of an edge of the windscreen."

Annex 14,

Paragraph 4.3.4., amend to read:

"4.3.4. For glazing which do not have contact possibilities, as well as for small glazing and for all windows in trailers (classification VIII/C), there will be no headform testing."

Annex 16,

Paragraph 4.3.4., amend to read:

"4.3.4. For glazing which do not have contact possibilities, as well as for small glazing and for all windows in trailer caravans there will be no headform testing."

Annex 21, amend to read:

"Provisions regarding the installation of safety glazing on vehicles

1. Scope

This annex sets out provisions regarding the installation of safety glazing in vehicles of categories M, N and O¹ in order to ensure a high level of safety for the occupants and, in particular, to provide the driver with a high degree of visibility in all traffic conditions, not only forwards but also rearwards and laterally.

It does not apply to armoured vehicles as defined hereunder in paragraph 2.3.

2. Definitions

For the purpose of this annex:

- 2.1. "*Vehicle*" means any motor vehicle and its trailer, intended for use on the road, having at least four wheels and a maximum design speed exceeding 25 km/h, with the exception of vehicles which run on rails and all mobile machinery;
- 2.2. "*Category of vehicles*" means a set of vehicles entering into the relevant category of the classification adopted in Annex 7 to the Consolidated Resolution on the Construction of Vehicles (R.E.3);¹
- 2.3. "*Special purpose vehicle*", "*motor caravan*", "*armoured vehicle*", "*ambulance*", "*hearse*", "*convertible*", are respectively defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3).¹
- 2.4. "*Double-deck vehicle*" is defined in paragraph 2.1.2. of Regulation No. 107.
- 2.5. "*Normal condition of use of a vehicle*" means:
 - 2.5.1. For a motor vehicle, when the vehicle is ready to move with its propulsion system in the running position and its movable components in the normal position(s) as defined in paragraph 2.8.;
 - 2.5.2. For a trailer, when the trailer is coupled to a towing vehicle in the conditions prescribed in paragraph 2.5.1. and its movable components in the normal position(s) as defined in paragraph 2.8.

¹ As defined in the Consolidated Resolution on the Construction of Vehicles (R.E.3.), document ECE/TRANS/WP.29/78/Rev.3, para. 2 - www.unece.org/trans/main/wp29/wgs/wp29gen/wp29resolutions.html

- 2.6. "Park condition of a vehicle" means:
- 2.6.1. For a motor vehicle, when the vehicle is at standstill and its propulsion system not in the running position and its movable components in the normal position(s) as defined in paragraph 2.8.;
- 2.6.2. For a trailer, when the trailer is coupled to a towing vehicle in the condition described in paragraph 2.6.1. and its movable components in the normal position(s) as defined in paragraph 2.8.
- 2.7. "Movable components" of a vehicle means those body panels or other vehicle parts the position(s) of which can be changed by tilting, rotating or sliding without the use of tools. They do not include tiltable driver cabs of trucks.
- 2.8. "Normal position of use of a movable component" means the position(s) of a movable component specified by the vehicle manufacturer for the normal condition of use and the park condition of the vehicle.
3. General provisions applicable to vehicles of categories M, N and O
- 3.1. Safety glazing shall be fitted in such a way that, despite the stresses to which the vehicle is submitted under normal conditions of use as defined in paragraphs 2.5., 2.5.1. and 2.5.2., it remains in position and continues to afford visibility and safety to the occupants of the vehicle seated and/or in standing positions as defined by the vehicle manufacturer;
- 3.2. Safety glazing shall bear the appropriate component type-approval mark specified in paragraph 5.4. of this Regulation, followed when required, by one of the additional symbols provided for in paragraph 5.5.
- 3.3. Exemptions
- In the case of plastic safety panes, the provisions related to abrasion resistance as referred to in paragraph 4.2.3.2. of this annex do not apply for the locations of vehicles and panes as listed below:
- (a) Motorhomes, ambulances and hearses for panes not requisite for the driver's forward and rearward field of vision;
 - (b) Trailers, including caravans;
 - (c) Sunroofs and glazing located in the roof of a vehicle;
 - (d) All glazing of the upper deck of a double-deck vehicle;
 - (e) Partitions and separating windows not requisite for the driver's forward and rearward field of vision.
- For these cases, no abrasion test and symbol /L or /M is required.
4. Specific provisions applicable to vehicles of categories M and N¹
- 4.1. Windscreens
- 4.1.1. The regular light transmittance shall not be less than 70 per cent.
- 4.1.2. The windscreen shall be type approved for the vehicle type for which it is intended to be fitted.
- 4.1.3. The windscreen shall be correctly fitted with reference to the vehicle driver's "R" point.
- 4.1.4. Vehicles having a maximum design speed greater than 40 km/h may not be fitted with a toughened windscreen.

- 4.1.5. Plastic safety windscreens shall bear an additional symbol /A/L as defined in paragraphs 5.5.5. and 5.5.7. of this Regulation.
- 4.2. Safety glazing other than windscreens.
 - 4.2.1. Safety glazing requisite for the driver's forwards field of vision
 - 4.2.1.1. The safety glazing through which the driver's forwards field of vision as defined in paragraph 2.25.1. of this Regulation is obtained, shall have a regular light transmittance of at least 70 per cent.
 - 4.2.1.2. Plastic safety glazing shall bear an additional symbol /B/L or /C/L, as defined in paragraphs 5.5.5. and 5.5.7. of this Regulation.
 - 4.2.2. Safety glazing requisite for the driver's rearward vision
 - 4.2.2.1. The safety glazing defined in paragraph 2.25.2 of this Regulation shall have a light transmittance of at least 70 per cent, but where two exterior rear view mirrors are fitted, the glazing is allowed to have a light transmittance below 70 per cent, provided that it shall bear the additional symbol V specified in paragraph 5.5.2. of this Regulation.
 - 4.2.2.2. Plastic safety glazing shall bear an additional symbol /A/L, /A/M, /B/L, /B/M, /C/L or /C/M, as defined in paragraphs 5.5.5. and 5.5.7. of this Regulation. However, a Class M plastic safety glazing is allowed only in the case where the vehicle is fitted with two exterior rear-view mirrors.

The rear glazing in the folding roof of a convertible vehicle may be made of a flexible plastic pane.
 - 4.2.3. Other safety glazing, exterior forward-facing glazing and interior glazing.
 - 4.2.3.1. The safety glazing not covered by the definitions of paragraphs 2.25.1. and 2.25.2. of this Regulation, the exterior-forward facing glazing and interior glazing shall bear the additional symbol V specified in paragraph 5.5.2. of this Regulation, if the light transmittance is below 70 per cent.
 - 4.2.3.2. Plastic safety panes shall bear one of the additional symbols /A/L, /A/M, /B/L, /B/M, /C/L or /C/M defined in paragraphs 5.5.5. and 5.5.7. of this Regulation. However, when the vehicle is intended for conveying passengers, panes with the additional symbols /C/L or /C/M are not allowed at locations where there is a risk of head impact.
- 4.3. Particular requirements for upper deck of a double-deck vehicle
 - 4.3.1. The front exterior forward-facing glazing of the upper deck of a double-deck vehicle shall be constituted either by laminated glass or a plastic pane bearing the additional symbol /A, as defined in paragraphs 5.5.5. and 5.5.7. of this Regulation.
 - 4.3.2. Paragraph 4.3.1. is not applicable to vehicles having a maximum design speed lower than 40 km/h. However, the requirement on plastic panes classified /A is mandatory."