

Proposal for amendments to document ECE/TRANS/WP.29/GRSG/2015/2 on UN Regulation No. 46 (Devices for indirect vision)

The text reproduced below has been prepared by the expert from The Netherlands amending the proposal ECE/TRANS/WP.29/GRSG/2015/2 to incorporate information on camera-monitor systems of classes I to IV in the existing information documents required for type-approval. The modifications to the current text of ECE/TRANS/WP.29/GRSG/2015/2 are marked in bold for new or strikethrough for deleted characters.

Annex 1, amend to read:

"Annex 1 - Information document for type approval of a device for indirect vision

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

Any drawings shall be supplied in appropriate scale and in sufficient detail on size A4 paper or on a folder of A4 format. Photographs, if any, shall show sufficient details.

1. Make (trade name of manufacturer):
2. Type and general commercial description(s):
3. Means of identification of the type, if indicated on the device:
4. Category of vehicle for which the device is intended:
5. Name and address of manufacturer:
6. Location and method of affixing of the approval mark:
7. Address(es) of assembly plant(s):
8. Mirrors (state for each mirror):
 - 8.1. Variant
 - 8.2. Drawing(s) for the identification of the mirror:
 - 8.3. Details of the method of attachment:
9. Devices for indirect vision other than mirrors:
 - 9.1. Type and characteristics (such as a complete description of the device):
 - 9.1.1. In the case of camera-monitor ~~device~~ systems of classes **V and VI**, the class, the detection distance (mm), contrast, luminance range, glare correction, display performance (black and white/colour) image repetition frequency, luminance reach of the monitor
 - 9.1.2. In the case of camera-monitor systems of classes I to IV, the class, field of view, magnification and resolution**
 - 9.2. Sufficiently detailed drawings to identify the complete device including installation instructions; the position for the type-approval mark has to be indicated on the drawings:"

Annex 2, amend to read:

"Annex 2 - Information document for type-approval of a vehicle with respect to the installation of devices for indirect vision

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

Any drawings shall be supplied in appropriate scale and in sufficient detail on size A4 paper or on a folder of A4 format. Photographs, if any, shall show sufficient details.

General

1. Make (trade name of manufacturer):
2. Type and general commercial description(s):
3. Means of identification of type, if marked on the vehicle:
4. Location of that marking:
5. Category of vehicle:
6. Name and address of manufacturer:
7. Address(es) of assembly plant(s):
- General construction characteristics of the vehicle
8. Photograph(s) and/or drawing(s) of a representative vehicle:
9. Driving cab (forward control or bonneted) 1/:
10. Driving position: left/right 1/
 - 10.1. The vehicle is equipped to be driven in right-hand/left hand traffic 1/
11. Range of vehicle dimensions (overall):

- 11.1. For chassis without bodywork
- 11.1.1. Width 2/:
- 11.1.1.1. Maximum permissible width:
- 11.1.1.2. Minimum permissible width:
- 11.2. For chassis with bodywork:
- 11.2.1. Width 1/
- 12. Bodywork
- 12.1. Devices for indirect vision
- 12.1.1. Mirrors
- 12.1.1.1. Drawing(s) showing the position of the mirror relative to the vehicle structure:
- 12.1.1.2. Details of the method of attachment including that part of the vehicle structure to which it is attached:
- 12.1.1.3. Optional equipment which may affect the rearward field of vision:
- 12.1.1.4. A brief description of the electronic components (if any) of the adjustment device:
- 12.1.2. Devices for indirect vision other than mirrors:
- 12.1.2.1. Sufficiently detailed drawings with the installation instructions (**where appropriate**):
- 12.1.2.2. In the case of camera-monitor system of classes I to IV:**
- 12.1.2.2.1. Drawing(s)/photograph(s) showing the position of the camera(s) relative to the vehicle structure:**
- 12.1.2.2.2. Drawing(s)/photograph(s) showing the arrangement of the monitor(s) including surrounding interior parts:**
- 12.1.2.2.3. Drawing(s)/photograph(s) showing the drivers view onto the monitor(s):**
- 12.1.2.2.4. Drawing(s)/photograph(s) showing the setup and monitor image of the required field of view:**
- 12.1.2.2.5. Details of the method of attachment of the camera-monitor device(s) including that part of the vehicle structure to which it is attached:**
- 12.1.2.2.6. Optional equipment which may affect the rearward field of vision:**
- 12.1.2.2.7. A brief description of the electronic components (if any) of the adjustment device:**
- 12.1.2.2.8. A technical specification and operator’s manual of the camera-monitor system according to ISO 16505:2015:"**

II. Justifications

1. Information documents are necessary for type-approval to provide relevant and detailed specifications to identify the type and to distinguish between its variants. ECE/TRANS/WP.29/GRSG/2015/2 introduces camera-monitor systems for Classes I to IV, including specific requirements. Therefore, new specifications of the CMS become relevant in relation to the performance and compliance with these new requirements. These specifications need to be included in the type-approval documentation accordingly.
2. Annex 1 concerning ‘information documents for type-approval of a device for indirect vision’ already includes CMS of types V and VI. A general wording is added to request additional information for CMS of classes I to IV, where relevant for their performance and within the type definition (informal document GRSG-108-21).
3. Annex 2 concerning ‘information documents for type-approval of a vehicle with respect to the installation of devices for indirect vision’ includes at present only *installation instructions* for devices for indirect vision other than mirrors. Added hereto is the wording “(where appropriate)” since this may not apply to devices of classes I to IV incorporated in the design of the vehicle.
4. Also added is the requirement on detailing specifications of CMS for classes I to IV for the performance in relation to the viewing angle, obstruction, obstruction of direct view, impact testing, etc. This requirement for CMS is in line with the existing requirement for mirrors (items 12.1.1.1. to 4.). Item 12.1.2.2.8. is in line with the information to be submitted to the Technical Service and Approval Authority according to paragraph 3.4. “application for approval”.
5. Since ECE/TRANS/WP.29/GRSG/2015/2 concerns the addition of CMS for classes I to IV only, no requirements have been added by this proposal for the classes V and VI.