
Changes to legislation: There are outstanding changes not yet made to Commission Regulation (EU) No 1230/2012. Any changes that have already been made to the legislation appear in the content and are referenced with annotations. (See end of Document for details) View outstanding changes

ANNEX II

GRADEABILITY OF OFF-ROAD VEHICLES

1. General

- 1.1. This Annex lays down the technical requirements for the purposes of verifying the gradeability of a vehicle in order to be categorised as off-road vehicle in accordance with Section 4 of Part A of Annex II to Directive 2007/46/EC.
- 1.2. The technical service shall verify if the complete or completed vehicle, or tractor unit for semi-trailer is to be considered as an off-road vehicle in accordance with the requirements laid down in Annex II to 2007/46/EC.
- 1.3. For incomplete vehicles, this verification shall be carried out only at the request of the manufacturer.

2. Test conditions

2.1. Vehicle conditions

- 2.1.1. The vehicle shall be set in the conditions recommended by the manufacturer and fitted with the equipment referred to in Annex I to Directive 2007/46/EC.
- 2.1.2. The adjustment of the brakes, clutch (or equivalent), engine and gear box shall be set in accordance with the manufacturer's recommendations for the purposes of use off the normal roads.
- 2.1.3. The tyres shall be those recommended for off-roads use. They shall have a tread depth of not less than 90 % of the tread depth of a new tyre. The tyre pressure shall be adjusted to the value recommended by the tyre manufacturer.
- 2.1.4. The vehicle shall be loaded at its technically permissible maximum laden mass with a load distribution proportional to the distribution of the maximum mass on the axles as stated by the manufacturer.

For example a vehicle of 7,5 tonnes with a maximum mass on the front axle of 4 tonnes and a maximum mass on the rear axle of 6 tonnes shall be tested with a mass of 3 tonnes (40 %) on the front axle and 4,5 tonnes (60 %) on the rear axle.

2.2. Test track conditions

- 2.2.1. The surface of the test track shall be dry, made of asphalt or concrete
- 2.2.2. The gradient shall show a continuous percentage of 25 % with a tolerance of + 3 % ($\theta = 14$ degrees).
- 2.2.3. In agreement with the manufacturer, the test may be performed on a gradient that shows a percentage greater than 25 %. The test shall be conducted with maximum masses reduced in relation to the test conditions.

These conditions shall be reported.

- 2.2.4. The surface of the track shall show a good coefficient of adhesion.

The Skid Resistance Index ('SRI') of the surface shall be measured in accordance with Standard CEN/TS 13036-2: 2010 Road and airfield surface characteristics – Test methods – Part 2: Assessment of the skid resistance of a road pavement surface by use of dynamic measuring systems.

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The mean value of the SRI shall be reported.

3. **Test procedure**

- 3.1. The vehicle shall be first placed on a horizontal surface.
- 3.2. The mode of traction shall be set as for off-roads use. The gear(s) engaged shall allow a steady speed.
- 3.3. Sections 4 and 5 of Appendix 1 to Annex II to Directive 2007/46/EC shall apply.

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Changes and effects yet to be applied to :

- Annex 2 point 1.1 words substituted by [S.I. 2022/1273 reg. 72\(3\)\(a\)](#)
- Annex 2 point 1.2 words substituted by [S.I. 2022/1273 reg. 72\(3\)\(b\)](#)
- Annex 2 point 2.1.1 words substituted by [S.I. 2022/1273 reg. 72\(3\)\(c\)](#)
- Annex 2 point 3.3 words substituted by [S.I. 2022/1273 reg. 72\(3\)\(d\)](#)

Changes and effects yet to be applied to the whole legislation item and associated provisions

- Signature words omitted by [S.I. 2022/1273 reg. 71\(10\)](#)
- Annex 5 Pt. B s. 1 words substituted by [S.I. 2022/1273 reg. 72\(4\)\(c\)\(iii\)](#)
- Annex 5 Pt. B s. 2 words substituted by [S.I. 2022/1273 reg. 72\(4\)\(c\)\(iv\)](#)
- Annex 5 Pt. D s. 1 words substituted by [S.I. 2022/1273 reg. 72\(4\)\(e\)\(iii\)](#)
- Annex 1 Appendix 2 point 2.1 words substituted by [S.I. 2022/1273 reg. 72\(2\)\(e\)\(i\)](#)
- Annex 1 Appendix 2 point 2.2 words substituted by [S.I. 2022/1273 reg. 72\(2\)\(e\)\(ii\)\(aa\)](#)
- Annex 1 Appendix 2 point 2.2(c) words substituted by [S.I. 2022/1273 reg. 72\(2\)\(e\)\(ii\)\(bb\)](#)
- Annex 1 Appendix 4 point 1.3 words substituted by [S.I. 2022/1273 reg. 72\(2\)\(f\)](#)
- Art. 2(1) words substituted by [S.I. 2022/1273 reg. 71\(3\)\(b\)](#)
- Art. 2(2) words substituted by [S.I. 2022/1273 reg. 71\(3\)\(c\)](#)
- Art. 2(11) words substituted by [S.I. 2022/1273 reg. 71\(3\)\(d\)](#)
- Art. 2(40) words substituted by [S.I. 2022/1273 reg. 71\(3\)\(e\)](#)
- Art. 6(1)(1a) substituted for Art. 6(1) by [S.I. 2022/1273 reg. 71\(8\)\(a\)](#)