

**Regulation No 73 of the Economic Commission for Europe of the United Nations (UN/ECE) — Uniform provisions concerning the approval of goods vehicles, trailers and semi-trailers with regard to their lateral protection (\*)**

1. SCOPE

This Regulation applies to the lateral protection of complete vehicles of categories N<sub>2</sub>, N<sub>3</sub>, O<sub>3</sub> and O<sub>4</sub> <sup>(1)</sup>. It does not apply to:

- Tractors for semi-trailers;
- Trailers specially designed and constructed for the carriage of very long loads of indivisible length, such as timber, steel bars, etc.;
- Vehicles designed and constructed for special purposes where it is not possible, for practical reasons, to fit such lateral protection.

2. PURPOSE

Vehicles covered by this Regulation shall be so constructed and/or equipped as to offer effective protection to unprotected road users against the risk of falling under the sides of the vehicle and being caught under the wheels <sup>(2)</sup>.

3. DEFINITIONS

3.1. For the purposes of this Regulation:

- 3.1.1. 'Approval of a vehicle' means the approval of a complete vehicle type with regard to its lateral protection;
- 3.1.2. 'Vehicle type' means a category of vehicles which do not differ with respect to the essential points such as the width of the rear axle, the overall width, the dimensions, the shape and the materials of the whole side of the vehicle (including the cab if fitted), and the characteristics of the suspension in so far as they have a bearing on the requirements specified in paragraph 7 of this Regulation;
- 3.1.3. 'Maximum mass' means the mass stated by the vehicle manufacturer to be technically permissible (this mass may be higher than the 'permissible maximum mass' laid down by the national administration);
- 3.1.4. 'Unladen mass' means the weight of the vehicle in running order, unoccupied and unladen, but complete with fuel, coolant, lubricant, tools and spare wheel, if supplied by the vehicle manufacturer as standard equipment;
- 3.1.5. 'Unprotected road users' means pedestrians, cyclists or motor cyclists using the road in such a way that they are liable to fall under the sides of the vehicle and be caught under the wheels.

4. APPLICATION FOR APPROVAL

- 4.1. The application for approval of a vehicle type with regard to its lateral protection shall be submitted by the vehicle manufacturer or by his duly accredited representative.

(\*) Publication in accordance with Article 4(5) of Council Decision 97/836/EC of 27 November 1997 (OJ L 346, 17.12.1997, p. 78).

<sup>(1)</sup> See annex 3: Classification of vehicles.

<sup>(2)</sup> This Regulation does not prevent any country from having additional requirements for the vehicle parts forward of the front wheels and rearward of the rear wheels.

- 4.2. It shall be accompanied by the undermentioned documents in triplicate and by the following particulars:
- 4.2.1. a detailed description of the vehicle type with respect to its structure, dimensions, lines and constituent materials in so far as required for the purpose of this Regulation;
- 4.2.2. drawings of the vehicle showing the vehicle type in side and rear elevation and design details of the lateral parts of the structure;
- 4.2.3. a detailed description of the specific device for lateral protection: its dimensions, lines, constituent materials and position on the vehicle.
- 4.3. A vehicle representative of the type to be approved shall be submitted to the technical service responsible for controlling the technical specifications.
- 4.3.1. A vehicle not comprising all the components proper to the type may be accepted for approval provided that it can be shown that the absence of the components omitted has no detrimental effect on the results of the approval so far as the requirements of this Regulation are concerned.
- 4.3.2. It shall be the responsibility of the applicant for approval to show that acceptance of the variants referred to in paragraph 4.3.1 above is compatible with compliance with the requirements of this Regulation.
- 4.3.3. The competent authority shall verify the existence of satisfactory arrangements for ensuring effective control of production before type approval is granted.
5. APPROVAL
- 5.1. If the vehicle submitted for approval pursuant to this Regulation meets the requirements of paragraphs 6 and 7 below, approval of that vehicle type shall be granted.
- 5.2. An approval number shall be assigned to each type approved. Its first two digits (at present 00 for the Regulation in its original form) shall indicate the series of amendments incorporating the most recent major technical amendments made to the Regulation at the time of issue of the approval. The same Contracting Party may not assign the same number to another vehicle type.
- 5.3. Notice of approval or refusal or extension of approval of a vehicle type pursuant to this Regulation shall be communicated to the Parties to the Agreement which apply this Regulation, by means of a form conforming to the model in annex 1 to this Regulation.
- 5.4. There shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every vehicle conforming to a vehicle type approved under this Regulation an international approval mark consisting of:
- 5.4.1. a circle surrounding the letter 'E' followed by the distinguishing number of the country which has granted approval<sup>(1)</sup>;
- 5.4.2. the number of this Regulation, followed by the letter 'R', a dash and the approval number to the right of the circle prescribed in paragraph 5.4.1.

<sup>(1)</sup> 1 for the Federal Republic of Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 5 for Sweden, 6 for Belgium, 7 for Hungary, 8 for Czechoslovakia, 9 for Spain, 10 for Yugoslavia, 11 for the United Kingdom, 12 for Austria, 13 for Luxembourg, 14 for Switzerland, 15 for the German Democratic Republic, 16 for Norway, 17 for Finland, 18 for Denmark, 19 for Romania, 20 for Poland, 21 for Portugal and 22 for the Union of Soviet Socialist Republics. Subsequent numbers shall be assigned to other countries in the chronological order in which they ratify or accede to the Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, and the numbers thus assigned shall be communicated by the Secretary-General of the United Nations to the Contracting Parties to the Agreement.

- 5.5. If the vehicle conforms to a vehicle type approved, under one or more other Regulations annexed to the Agreement, in the country which has granted approval under this Regulation, the symbol prescribed in paragraph 5.4.1 need not be repeated; in such a case the regulation and approval numbers and the additional symbols of all the Regulations under which approval has been granted in the country which has granted approval under this Regulation shall be placed in vertical columns to the right of the symbol prescribed in paragraph 5.4.1.
- 5.6. The approval mark shall be clearly legible and be indelible.
- 5.7. The approval mark shall be placed close to or on the vehicle data plate affixed by the manufacturer.
- 5.8. Annex 2 to this Regulation gives examples of arrangements of approval marks.

## 6. REQUIREMENTS

### 6.1. *General*

- 6.1.1. Vehicles in categories N<sub>2</sub>, N<sub>3</sub>, O<sub>3</sub> and O<sub>4</sub> must be constructed and equipped in such a way as to offer, throughout their length, effective protection to unprotected road users against the risk of falling under the sides of the vehicle and being caught under the wheels. This requirement will be considered satisfied either:

6.1.1.1. if the vehicle is equipped with a special lateral protective device (sideguards) in accordance with the requirements of paragraph 7; or

6.1.1.2. if the vehicle is so designed and/or equipped at the side that, by virtue of their shape and characteristics, its component parts can be incorporated and/or regarded as replacing the lateral protective device. Components whose combined function satisfies the requirements set out in paragraph 7 below are considered to form a lateral protective device.

### 6.2. *Positioning of the vehicle during checks*

When checked for compliance with the technical specifications set out in paragraph 7 below, the position of the vehicle shall be as follows:

- The vehicle shall be positioned on a horizontal and flat surface;
- The steered wheels shall be in a straight-ahead position;
- The vehicle shall be unladen;
- Semi-trailers shall be positioned on their supports in an essentially horizontal manner.

## 7. TECHNICAL SPECIFICATIONS FOR LATERAL PROTECTIVE DEVICES

7.1. The lateral protective device shall not increase the overall width of the vehicle and the main part of its outer surface shall not be more than 120 mm inboard from the outermost plane (maximum width) of the vehicle. Its forward end may be turned inwards on some vehicles in accordance with paragraphs 7.4.3 and 7.4.4. Its rearward end shall not be more than 30 mm inboard from the outermost edge of the rear tyres (excluding any bulging of the tyres close to the ground) over at least the rearmost 250 mm.

7.2. The outer surface of the device shall be smooth, and so far as possible continuous from front to rear; adjacent parts may however overlap provided that the overlapping edge faces rearwards or downwards, or a gap of not more than 25 mm measured longitudinally may be left, provided that the rearward part does not protrude outboard of the forward part; domed heads of bolts or rivets may protrude beyond the surface to a distance not exceeding 10 mm and other parts may protrude to the same extent provided that they are smooth and similarly rounded; all external edges and corners shall be rounded with a radius not less than 2,5 mm.

- 7.3. The device may consist of a continuous flat surface, or of one or more horizontal rails, or a combination of surface and rails; when rails are used they shall be not more than 300 mm apart and not less than:
- 50 mm high in the case of N<sub>2</sub> and O<sub>3</sub>;
  - 100 mm high and essentially flat in the case of N<sub>3</sub> and O<sub>4</sub>;
- combinations of surfaces and rails shall form a practically continuous sideguard subject, however, to the provisions of 7.2.
- 7.4. The forward edge of the sideguard shall be constructed as follows:
- 7.4.1. Its position shall be:
- 7.4.1.1. on a motor vehicle: not more than 300 mm to the rear of the vertical plane perpendicular to the longitudinal plane of the vehicle and tangential to the outer surface of the tyre on the wheel immediately forward of the guard;
- 7.4.1.2. on a drawbar trailer: not more than 500 mm to the rear of the plane defined in paragraph 7.4.1.1;
- 7.4.1.3. on a semi-trailer: not more than 250 mm to the rear of the transverse median plane of the support legs, if support legs are fitted, but in any case the distance from the front edge to the transverse plane passing through the centre of the kingpin in its rearmost position may not exceed 2,7 m.
- 7.4.2. Where the forward edge lies in an otherwise open space, the edge shall consist of a continuous vertical member extending the whole height of the guard; the outer and forward faces of this member shall measure at least 50 mm rearwards and be turned 100 mm inwards in the case of N<sub>2</sub> and O<sub>3</sub> and at least 100 mm rearwards and be turned 100 mm inwards in the case of N<sub>3</sub> and O<sub>4</sub>.
- 7.4.3. On a motor vehicle where the 300 mm dimension referred to in paragraph 7.4.1.1 falls within the cab, the guard shall be so constructed that the gap between its forward edge and the cab panels does not exceed 100 mm and, if necessary, shall be turned in through an angle not exceeding 45°. In this case, the provisions of paragraph 7.4.2 are not applicable.
- 7.4.4. On a motor vehicle where the 300 mm dimension referred to in paragraph 7.4.1.1 falls behind the cab and the sideguard is extended forward to within 100 mm of the cab, as an option to the manufacturer, then the provisions of paragraph 7.4.3 must be met.
- 7.5. The rearward edge of the sideguard shall not be more than 300 mm forward of the vertical plane perpendicular to the longitudinal plane of the vehicle and tangential to the outer surface of the tyre on the wheel immediately to the rear; a continuous vertical member is not required on the rear edge.
- 7.6. The lower edge of the sideguard shall at no point be more than 550 mm above the ground.
- 7.7. The upper edge of the guard shall not be more than 350 mm below that part of the structure of the vehicle, cut or contacted by a vertical plane tangential to the outer surface of the tyres, excluding any bulging close to the ground, except in the following cases:
- 7.7.1. Where the plane in paragraph 7.7 does not cut the structure of the vehicle, then the upper edge shall be level with the surface of the load-carrying platform, or 950 mm from the ground, whichever is the less;

- 7.7.2. Where the plane in paragraph 7.7 cuts the structure of the vehicle at a level more than 1,3 m above the ground, then the upper edge of the sideguard shall not be less than 950 mm above the ground;
- 7.7.3. On a vehicle specially designed and constructed, and not merely adapted, for the carriage of a container or demountable body, the upper edge of the guard may be determined in accordance with paragraphs 7.7.1 and 7.7.2 above, the container or body being considered as part of the vehicle.
- 7.8. Sideguards shall be essentially rigid, securely mounted (they shall not be liable to loosening due to vibration in normal use of the vehicle) and, except as regards the parts listed in paragraph 7.9, made of metal or any other suitable material. The sideguard shall be considered suitable if it is capable of withstanding a horizontal static force of 1 kN applied perpendicularly to any part of its external surface by the centre of a ram the face of which is circular and flat, with a diameter of 220 mm  $\pm$  10 mm, and if the deflection of the guard under load is then not more than:
- 30 mm over the rearmost 250 mm of the guard, and
  - 150 mm over the remainder of the guard.
- Compliance with this requirement can be verified by calculation.
- 7.9. Components permanently fixed to the vehicle, e.g. spare wheels, batterybox, air tanks, fuel tanks, lamps, reflectors and tool boxes may be incorporated in the sideguard, provided that they meet the dimensional requirements of this Regulation. The requirements of paragraph 7.2 shall generally apply as regards gaps between protective devices and permanently fixed components.
- 7.10. The guard may not be used for the attachment of brake, air or hydraulic pipes.

## 8. DEROGATIONS

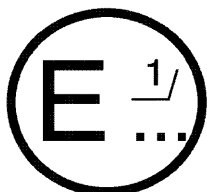
- 8.1. By derogation from the above provisions, vehicles of the following types need comply only as indicated in each case:
- 8.1.1. An extendible trailer shall comply with all the requirements of paragraph 7 when closed to its minimum length; when the trailer is extended, however, the sideguards shall comply with paragraphs 7.6, 7.7, and 7.8, and with either 7.4 or 7.5, but not necessarily both; extension of the trailer shall not produce gaps in the length of the sideguards;
- 8.1.2. A tank-vehicle, that is a vehicle designed solely for the carriage of a fluid substance in a closed tank permanently fitted to the vehicle and provided with hose or pipe connections for loading or unloading, shall be fitted with sideguards which comply so far as is practicable with all the requirements of paragraph 7; strict compliance may be waived only where operational requirements make this necessary;
- 8.1.3. On a vehicle fitted with extendible legs to provide additional stability during loading, unloading or other operations for which the vehicle is designed, the sideguard may be arranged with additional gaps, where these are necessary, to permit extension of the legs.
- 8.1.4. On a vehicle equipped with anchorage points for ro-ro transport, gaps shall be permitted within the sideguard to accept the passage and tension of fixing ropes.

- 8.2. If the sides of the vehicle are so designed and/or equipped that by their shape and characteristics the component parts together meet the requirements of paragraph 7, they may be regarded as replacing the sideguards.
9. MODIFICATIONS OF VEHICLE TYPE AND EXTENSION OF APPROVAL
- 9.1. Every modification of the vehicle type shall be notified to the administrative department which approved the vehicle type. The department may then either:
- 9.1.1. consider that the modifications made are unlikely to have an appreciable adverse effect and that in any case the vehicle still complies with the requirements; or
- 9.1.2. require a further test report from the technical service responsible for conducting the tests.
- 9.2. Confirmation or refusal of approval, specifying the modification, shall be communicated by the procedure specified in paragraph 5.3 above to the Parties to the Agreement which apply this Regulation.
- 9.3. The competent authority issuing the extension of approval shall assign a series number to each communication form drawn up for such an extension.
10. CONFORMITY OF PRODUCTION
- 10.1. Vehicles approved in accordance with this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set out in paragraph 6 above.
- 10.2. In order to verify that the requirements of paragraph 7 are met, suitable controls of the production shall be carried out. In this case, suitable controls means checking the dimensions of the product as well as the existence of procedures for the effective control of the quality of products.
- 10.3. The holder of the approval shall in particular:
- 10.3.1. Have access to control equipment necessary for checking the conformity to each approved type;
- 10.3.2. Ensure that data on test results are recorded and that annexed documents remain available for a period to be determined in accordance with the administrative service, and
- 10.3.3. Analyse the results of each type of test, in order to verify and ensure the stability of the product characteristics, making allowance for variation of an industrial production.
- 10.4. The competent authority which has granted type-approval may at any time verify the conformity control methods applicable to each production unit.
- 10.5. The normal frequency of inspections authorized by the competent authority shall be one every two years. Where negative results are recorded during one of these visits, the competent authority shall ensure that all necessary steps are taken to re-establish the conformity of production as rapidly as possible.
11. PENALTIES FOR NON-CONFORMITY OF PRODUCTION
- 11.1. The approval granted in respect of a vehicle type pursuant to this Regulation may be withdrawn if the requirements laid down in paragraphs 6 and 7 above are not complied with.

- 11.2. If a Party to the Agreement which applies this Regulation withdraws an approval it has previously granted, it shall forthwith so notify the other Contracting Parties applying this Regulation, by means of a copy of the approval form bearing at the end, in large letters, the signed and dated annotation 'APPROVAL WITHDRAWN'.
12. PRODUCTION DEFINITELY DISCONTINUED
- If the holder of the approval completely ceases to manufacture a type of vehicle approved in accordance with this Regulation, he shall so inform the authority which granted the approval. Upon receiving the relevant communication, that authority shall inform thereof the other Parties to the Agreement applying this Regulation by means of a copy of the approval form bearing at the end, in large letters, the signed and dated annotation 'PRODUCTION DISCONTINUED'.
13. NAMES AND ADDRESSES OF TECHNICAL SERVICES RESPONSIBLE FOR CONDUCTING APPROVAL TESTS, AND OF ADMINISTRATIVE DEPARTMENTS
- The Parties to the Agreement which apply this Regulation shall communicate to the United Nations Secretariat the names and addresses of the technical services responsible for conducting approval tests and of the administrative departments which grant approval and to which forms certifying approval or extension or refusal or withdrawal of approval, issued in other countries, are to be sent.
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ANNEX 1

(Maximum format: A4 (210 × 297 mm))



(1) .....  
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Communication concerning:

- approval
- refusal of approval
- extension of approval
- withdrawal of approval
- production definitely discontinued (2)

of a vehicle type with regard to its lateral protection pursuant to Regulation No 73

Approval No ..... Extension No .....

1. Trade name or mark of the vehicles: .....
2. Vehicle type: .....
3. Manufacturer's name and address: .....
4. If applicable, name and address of manufacturer's representative: .....
5. Brief description of the vehicle type as regards its structure, dimensions, lines and constituent materials:  
.....
6. Brief description of the protective devices as regards their lines, dimensions and constituent materials: .....
7. Maximum mass: .....
8. Value of deflection recorded (see paragraph 7.8) (measured or calculated): .....
9. Vehicle submitted for approval on: .....
10. Technical service responsible for conducting approval tests: .....

(1) Name of administration.

(2) Strike out what does not apply.



- 11. Date of report issued by that service: .....
- 12. Number of report issued by that service: .....
- 13. Approval granted/refused/extended/withdrawn <sup>(1)</sup>
- 14. Position of approval mark on the vehicle: .....
- 15. Place: .....
- 16. Date: .....
- 17. Signature: .....
- 18. The following documents, bearing the approval number shown above, are available upon request:  
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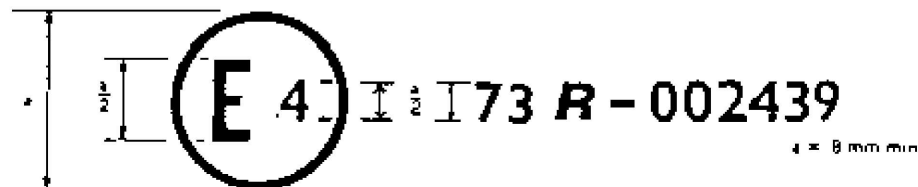
<sup>(1)</sup> Strike out what does not apply.

ANNEX 2

EXAMPLES OF APPROVAL MARKS

Model A

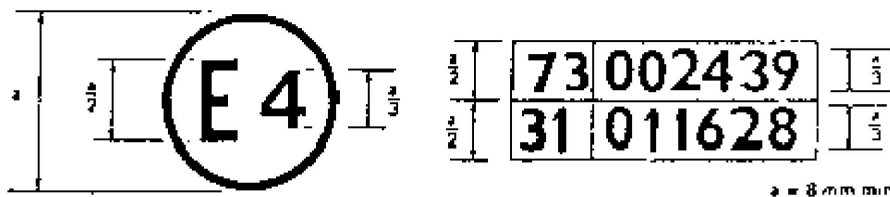
(see paragraph 5.4 of this Regulation)



The above approval mark affixed to a vehicle 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 002439. The first two digits of the approval number indicate that the approval was granted in accordance with the requirements of Regulation No 73 in its original form.

Model B

(see paragraph 5.5 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 31 <sup>(1)</sup>. The first two digits of the approval numbers indicate that, at the dates when the respective approvals were granted, Regulation No 73 had not been modified, and Regulation No 31 already included the 01 series of amendments.

<sup>(1)</sup> This latter number is given as an example only.

## ANNEX 3

CLASSIFICATION OF VEHICLES <sup>(1)</sup>

1. *Category N: Power-driven vehicles having at least four wheels or having three wheels when the maximum mass exceeds 1/metric/ton, and used for the carriage of goods*
- 1.1. *Category N<sub>2</sub>: Vehicles used for the carriage of goods and having a maximum mass exceeding 3.5 but not exceeding 12 metric tons.*
- 1.2. *Category N<sub>3</sub>: Vehicles used for the carriage of goods and having a maximum mass exceeding 12 metric tons.*
2. *Category O: Trailers (including semi-trailers)*
- 2.1. *Category O<sub>3</sub>: Trailers with a maximum mass exceeding 3.5, but not exceeding 10 metric tons.*
- 2.2. *Category O<sub>4</sub>: Trailers with a maximum mass exceeding 10 metric tons.*
3. *Remarks*
- 3.1 *With regard to category N*
- 3.1.1. *The equipment and installations carried on certain special-purpose vehicles not designed for the carriage of passengers (crane vehicles, workshop vehicles, publicity vehicles, etc.) are assimilated to goods for the purposes of paragraph 1 above.*
- 3.2. *With regard to category O*
- 3.2.1. *In the case of a semi-trailer, the maximum mass to be considered for classifying the vehicle is the mass transmitted to the ground by the axle or axles of the semi-trailer when the latter is coupled to the drawing vehicle and carrying its maximum load.*

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<sup>(1)</sup> In conformity with Regulation No 13, paragraph 5.2.