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COUNCIL DIRECTIVE

of 20 March 1970

on the approximation of the laws of the Member States relating to liquid fuel tanks and

► C1 rear underrun protection ◀ for motor vehicles and their trailers

(70/221/EEC)

(OJ L 76, 6.4.1970, p. 23)

Amended by:

	Official Journal		
	No	page	date
► <u>M1</u> Commission Directive 79/490/EEC of 18 April 1979	L 128	22	26.5.1979
► <u>M2</u> amended by Commission Directive 81/333/EEC of 13 April 1981	L 131	4	18.5.1981
► <u>M3</u> Commission Directive 97/19/EC of 18 April 1997	L 125	1	16.5.1997

Amended by:

► <u>A1</u> Act of Accession of Denmark, Ireland and the United Kingdom of Great Britain and Northern Ireland	L 73	14	27.3.1972
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Corrected by:

► C1 Corrigendum, OJ L 65, 15.3.1979, p. 42 (70/221/EEC)

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COUNCIL DIRECTIVE
of 20 March 1970

on the approximation of the laws of the Member States relating to liquid fuel tanks and ►C1 rear underrun protection ◀ for motor vehicles and their trailers

(70/221/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community and in particular Article 100 thereof;

Having regard to the proposal from the Commission;

Having regard to the Opinion of the European Parliament ⁽¹⁾;

Having regard to the Opinion of the Economic and Social Committee ⁽²⁾;

Whereas the technical requirements which motor vehicles must satisfy pursuant to national laws relate, *inter alia* to their liquid fuel tanks and ►C1 rear underrun protection ◀;

Whereas those requirements differ from one Member State to another; whereas it is therefore necessary that all Member States adopt the same requirements either in addition to or in place of their existing rules, in order, in particular, to allow the EEC type approval procedure which was the subject of the Council Directive ⁽³⁾ of 6 February 1970 on the approximation of the laws of the Member States relating to the type approval of motor vehicles and their trailers to be applied in respect of each type of vehicle;

HAS ADOPTED THIS DIRECTIVE:

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Article 1

For the purposes of this Directive, 'vehicle' means any motor vehicle intended for use on the road, with or without bodywork, having at least four wheels and a maximum design speed exceeding 25 kilometres per hour, and its trailers, with the exception of vehicles which run on rails and of agricultural and forestry tractors and all mobile machinery.

▼M1

Article 2

1. No Member State may, on grounds relating to its liquid fuel tanks, refuse to grant EEC type-approval or national type-approval for a vehicle if such vehicle satisfies the requirements set out in the Annex concerning liquid fuel tanks.

2. No Member State may, on grounds relating to rear underrun protection, refuse to grant EEC type-approval or national type-approval for a vehicle if such vehicle satisfies the requirements set out in the Annex concerning rear underrun protection or if such vehicle is fitted with a rear underrun protective device which has been granted type-approval as a technical unit ►M3 within the meaning of Article 2 of Directive 70/156/EEC and installed in accordance with the requirements set out in item 5 of Annex II. ◀

3. No Member State may refuse to grant EEC type-approval or national type-approval for a rear underrun protective device if such device, considered as a technical unit ►M3 within the meaning of Article 2 of Directive 70/156/EEC, satisfies the relevant requirements set out in Annex II. ◀

⁽¹⁾ OJ No C 160, 18.12.1969, p. 7.

⁽²⁾ OJ No C 48, 16.4.1969, p. 16.

⁽³⁾ OJ No L 42, 23.2.1970, p. 1.

▼ **M1***Article 2a*

1. No Member State may, on grounds relating to its liquid fuel tanks, refuse or prohibit the sale, registration, entry into service or use of a vehicle if such a vehicle satisfies the requirements set out in the Annex concerning liquid fuel tanks.
2. No Member State may, on grounds relating to its rear underrun protection, refuse or prohibit the sale, registration, entry into service or use of a vehicle if such a vehicle satisfies the requirements set out in the Annex concerning rear underrun protection or if the vehicle is fitted with a rear underrun protective device which has been granted type-approval as a technical unit ► **M3** within the meaning of Article 2 of Directive 70/156/EEC and installed in accordance with the requirements set out in item 5 of Annex II. ◀
3. No Member State may prohibit the placing on the market of any rear underrun protective device considered as a technical unit within the meaning of ► **M3** Article 2 ◀ of Directive 70/156/EEC if it conforms to a type which has been granted type-approval within the meaning of Article 2 (3).

Article 2b

A Member State which carries out type-approval shall take the measures necessary to ensure that it is informed of any modification to a part or characteristic referred to in ► **M3** items 2.1 and 2.2 of Annex II ◀. The competent authorities of that Member State shall determine whether fresh tests should be carried out on the modified type and a fresh report drawn up. Where such tests reveal that the requirements of this Directive have not been complied with, the modification shall not be authorized.

▼ **B***Article 3*

The amendments necessary for adjusting the requirements of the Annex so as to take account of technical progress, with the exception of the requirements set out under ► **M3** Annex I ◀, shall be adopted in accordance with the procedure laid down in Article 13 of the Council Directive of 6 February 1970 on the type approval of motor vehicles and their trailers.

Article 4

1. Member States shall put into force the provisions containing the requirements needed in order to comply with this Directive within eighteen months of its notification and shall forthwith inform the Commission thereof.
2. Member States shall ensure that the texts of the main provisions of national law which they adopt in the field covered by this Directive are communicated to the Commission.

Article 5

This Directive is addressed to the Member States.

▼M3**LIST OF ANNEXES**

- Annex I:** Tanks for liquid fuel
- Appendix 1:* Information document
 - Appendix 2:* EC type-approval certificate
- Annex II:** Rear underrun protection
- Appendix 1:* Information document (vehicle)
 - Appendix 2:* Information document (separate technical unit)
 - Appendix 3:* EC type-approval certificate (vehicle)
 - Appendix 4:* EC type-approval certificate (separate technical unit)
 - Appendix 5:* EC type-approval mark

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ANNEX I

TANKS FOR LIQUID FUEL

1. SCOPE
 - 1.1. This Annex applies to vehicles to which Directive 70/156/EEC applies.
2. DEFINITIONS

For the purpose of this Directive:

 - 2.1. 'Vehicle type with regard to fuel tanks' means vehicles which do not differ essentially in such respects as:
 - 2.1.1. the structure, shape, dimensions and materials of the tank(s);
 - 2.1.2. the position of the tank(s) in the vehicle (right and/or left, front, rear, centre).
 - 2.2. 'Tank' means the tank(s) designed to contain the liquid fuel, as defined in 2.3, used primarily for the propulsion of the vehicle excluding its accessories (filler pipe (if it is a separate element), filler hole, cap, gauge, connections to the engine or to compensate interior excess pressure, etc.).
 - 2.3. 'Liquid fuel' means a fuel which is liquid in normal ambient conditions.
3. APPLICATION FOR EC TYPE-APPROVAL
 - 3.1. The application for type-approval of a vehicle with regard to its fuel tanks pursuant to Article 3 (4) of Directive 70/156/EEC shall be submitted by the vehicle manufacturer.
 - 3.2. A model for the information document is given in Appendix 1.
 - 3.3. The following must be submitted to the technical service responsible for conducting the type-approval tests:
 - 3.1.1. a vehicle representative of the vehicle type to be approved or the parts of the vehicle which the technical service deems necessary for approval tests.
4. GRANTING OF EC TYPE-APPROVAL
 - 4.1. If the relevant requirements are satisfied, EC type-approval pursuant to Article 4 (3) and, if applicable, Article 4 (4) of Directive 70/156/EEC shall be granted.
 - 4.2. A model for the EC type-approval certificate is given in Appendix 2.
 - 4.3. An approval number in accordance with Annex VII to Directive 70/156/EEC shall be assigned to each type of vehicle approved. The same Member State shall not assign the same number to another type of vehicle.
5. SPECIFICATIONS
 - 5.1. Fuel tanks must be made so as to be corrosion resistant. They must satisfy the leakage tests carried out by the manufacturer at a pressure equal to double the working pressure but in any event not less than 1,3 bars. Any excess pressure or any pressure exceeding the working pressure must be automatically compensated by suitable devices (vents, safety valves, etc.). The vents must be designed in such a way as to prevent any fire risks. The fuel must not escape through the fuel tank cap or through the devices provided to compensate excess pressure, even if the tank is completely overturned: a drip shall be tolerated.
 - 5.2. Fuel tanks must be installed in such a way as to be protected from the consequences of an impact to the front or to the rear of the vehicle; there shall be no protruding parts, sharp edges, etc., near the tanks.
6. MODIFICATIONS OF THE TYPE AND AMENDMENTS TO APPROVALS
 - 6.1. In the case of modifications of the type approved pursuant to this Directive, the provisions of Article 5 of Directive 70/156/EEC shall apply.

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7. CONFORMITY OF PRODUCTION

- 7.1. As a general rule, measures to ensure the conformity of production shall be taken in accordance with the provisions laid down in Article 10 of Directive 70/156/EEC.

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Appendix I

INFORMATION DOCUMENT No ...

in accordance with Annex I to Directive 70/156/EEC(*) relating to EC type-approval of a vehicle type with regard to its liquid fuel tanks

(Directive 70/221/EEC, as last amended by Directive .../.../EEC)

The following information, if applicable, must be supplied in triplicate and include a list of contents. Any drawings must be supplied in appropriate scale and in sufficient detail on size A4 or on a folder of A4 format. Photographs, if any, must show sufficient detail.

If the systems, components or separate technical units have electronic controls, information concerning their performance must be supplied.

- 0. GENERAL
 - 0.1. Make (trade name of manufacturer):
 - 0.2. Type and general commercial description(s):
 - 0.3. Means of identification of type, if marked on the vehicle^(b):
 - 0.3.1. Location of that marking:
 - 0.4. Category of vehicle^(c):
 - 0.5. Name and address of the manufacturer:
 - 0.8. Address(es) of assembly plant(s):
 - 1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE
 - 1.1. Photographs and/or drawings of a representative vehicle (different body styles only):
 - 3. POWER PLANT^(d)
 - 3.2.2. Fuel: diesel oil/petrol/LPG/any other⁽¹⁾
 - 3.2.3. Fuel tank(s)
 - 3.2.3.1. Service fuel tank(s)
 - 3.2.3.1.1. Number, capacity, material:
 - 3.2.3.1.2. Drawing and technical description of the tank(s) with all connections and all lines of the breathing and venting system, locks, valves, fastening devices:
 - 3.2.3.1.3. Drawing showing clearly the position of the tank(s) in the vehicle:
 - 3.2.3.2. Reserve fuel tank(s)
 - 3.2.3.2.1. Number, capacity, material:
 - 3.2.3.2.2. Drawing and technical description of the tank(s) with all connections and all lines of the breathing and venting system, locks, valves, fastening devices:
 - 3.2.3.2.3. Drawing showing clearly the position of the tank(s) in the vehicle:
-
(Date, file)

(*) The item numbers and footnotes used in this information document correspond to those set out in Annex I to Directive 70/156/EEC. Items not relevant for the purpose of this Directive are omitted.

⁽¹⁾ Delete where not applicable.

▼ **M3***Appendix 2*

MODEL

(maximum format: A4 (210 × 297 mm))

EC TYPE-APPROVAL CERTIFICATE

Stamp of administration

Communication concerning the:

- type-approval⁽¹⁾,
- extension of type-approval⁽¹⁾,
- refusal of type-approval⁽¹⁾,
- withdrawal of type-approval⁽¹⁾,

of a type of vehicle/component/separate technical unit⁽¹⁾ with regard to Directive . . . /EEC as last amended by Directive . . . /EC.

Type-approval number:

Reason for extension:

SECTION I

- 0.1. Make (trade name of manufacturer):
- 0.2. Type and general commercial description(s):
- 0.3. Means of identification of type, if marked on the vehicle/component/separate technical unit⁽¹⁾(²):
.....
- 0.3.1. Location of that marking:
- 0.4. Category of vehicle⁽¹⁾(³):
- 0.5. Name and address of manufacturer:
- 0.7. In the case of components and separate technical units, location and method of affixing of the EC approval mark:
- 0.8. Address(es) of assembly plant(s):

SECTION II

1. Additional information (where applicable): see Addendum
2. Technical service responsible for carrying out the tests:
3. Date of test report:
4. Number of test report:
5. Remarks (if any): see Addendum

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6. Place:
7. Date:
8. Signature:
9. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

(¹) Delete where not applicable.

(²) If the means of identification of type contains characters not relevant to describe the vehicle, component or separate technical unit types covered by this type-approval certificate, such characters shall be represented in the documentation by the symbol: '?' (e.g. ABC??123??).

(³) As defined in Annex II Section A to Directive 70/156/EEC.

Addendum to EC type-approval certificate No ...

concerning the type-approval of a vehicle with regard to Directive 70/221/EEC (fuel tanks) as last amended by Directive .../.../EC

1. Additional information
 - 1.1. Material:
 - 1.2. Capacity:
 - 1.3. Location(s):
 - 1.4. Fuel: diesel oil/petrol/any other (¹)
5. Remarks:

(¹) Delete where not applicable.

▼ **M3***ANNEX II***REAR UNDERRUN PROTECTION**

1. GENERAL

Vehicles covered by this Directive must be designed so as to provide effective protection against underrunning from the rear by vehicles of categories M₁ and N₁ ⁽¹⁾.

2. DEFINITIONS

2.1. Vehicle type for the purposes of rear underrun protection

The term 'vehicle type for the purposes of rear underrun protection' means vehicles which do not differ essentially with respect to the following main characteristics:

2.1.1. width of the rear axle, structure, dimensions, shape and materials of the rear part of the vehicle in so far as they have a bearing on the requirements of 5.1 to 5.4.5.5;

2.1.2. suspension characteristics in so far as they have a bearing on the requirements of 5.1 to 5.4.5.5;

2.1.3. type of rear underrun protection device, if fitted.

2.2. Type of rear underrun protection device

The term 'type of rear underrun protection device' means devices which do not differ essentially with respect to the following main characteristics:

2.2.1. shape;

2.2.2. dimensions;

2.2.3. attachment;

2.2.4. materials.

3. APPLICATION FOR EC TYPE-APPROVAL

3.1. Application for EC type-approval in respect of a vehicle type

3.1.1. Application for EC type-approval pursuant to Article 3 (4) of Directive 70/156/EEC of a vehicle type with regard to rear underrun protection shall be submitted by the vehicle manufacturer.

3.1.2. A model for the information document is given in Appendix 1.

3.1.3. A vehicle representative of the type to be approved shall be submitted to the technical service responsible for conducting the type-approval tests.

3.2. Application for EC type-approval in respect of a rear underrun protective device considered to be a separate technical unit

3.2.1. Application for EC type-approval pursuant to Article 3 (4) of Directive 70/156/EEC in respect of a rear underrun protective device considered to be a separate technical unit within the meaning of Article 2 of that Directive shall be submitted by the vehicle manufacturer or the manufacturer of the rear underrun protective device.

3.2.2. A model for the information document is given in Appendix 2.

3.2.3. One sample of the type of rear underrun protective device to be approved shall be submitted to the technical service conducting the tests. That service may, if it is considered necessary, request a further sample. The samples shall be clearly and indelibly marked with the applicant's trade name or mark and the type designation.

4. GRANTING OF EC TYPE-APPROVAL

4.1. If the relevant requirements are satisfied, EC type-approval pursuant to Article 4 (3) and, if applicable, Article 4 (4) of Directive 70/156/EEC shall be granted.

⁽¹⁾ As defined in Annex II Section A to Directive 70/156/EEC.

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- 4.2. A model for the EC type-approval certificate is shown in:
- 4.2.1. Appendix 3 for applications referred to in 3.1; and
- 4.2.2. Appendix 4 for applications referred to in 3.2.
- 4.3. An approval number in accordance with Annex VII to Directive 70/156/EEC shall be assigned to each type of vehicle or each type of rear protective device approved. The same Member State shall not assign the same number to another type of vehicle or to another type of rear protective device.

5. SPECIFICATIONS

- 5.1. All vehicles must be so constructed and/or equipped as to offer effective protection over their whole width against underrunning from the rear by a vehicle of categories M₁ and N₁ ⁽¹⁾.
- 5.2. Any vehicle in one of the categories M₁, M₂, M₃, N₁, O₁ or O₂ ⁽¹⁾ will be deemed to satisfy the condition set out in 5.1:
- if it satisfies the conditions set out in 5.3, or
 - if the ground clearance of the rear part of the unladen vehicle does not exceed 55 cm over a width which is not shorter than that of the rear axle by more than 10 cm on either side (excluding any tyre bulging close to the ground).

Where there is more than one rear axle, the width to be considered is that of the widest.

This requirement must be satisfied at least on a line at a distance of not more than 45 cm from the rear extremity of the vehicle.

- 5.3. Any vehicle in one of the categories N₂, N₃, O₃ or O₄ ⁽¹⁾ will be deemed to satisfy the condition set out in 5.1 provided that:
- the vehicle is equipped with a special rear underrun protective device in accordance with the requirements of 5.4, or
 - the vehicle is so designed and/or equipped at the rear that, by virtue of their shape and characteristics, its component parts can be regarded as replacing the rear underrun protective device. Components whose combined function satisfies the requirements set out in 5.4 are considered to form a rear underrun protective device.
- 5.4. A device for protection against underrunning from the rear, hereinafter referred to as 'device', generally consists of a cross-member and linking components connected to the chassis side-members or to whatever replaces them.
- It must have the following characteristics:
- 5.4.1. the device must be fitted as close to the rear of the vehicle as possible. When the vehicle is unladen ⁽²⁾ the lower edge of the device must at no point be more than 55 cm above the ground;
- 5.4.2. the width of the device must at no point exceed the width of the rear axle measured at the outermost points of the wheels, excluding the bulging of the tyres close to the ground, nor must it be more than 10 cm shorter on either side. Where there is more than one rear axle, the width to be considered is that of the widest;
- 5.4.3. the section height of the cross-member must be not less than 10 cm. The lateral extremities of the cross-member must not bend to the rear or have a sharp outer edge; this condition is fulfilled when the lateral extremities of the cross-member are rounded on the outside and have a radius of curvature of not less than 2,5 mm;
- 5.4.4. the device may be so designed that its position at the rear of the vehicle can be varied. In this event, there must be a guaranteed method of securing it in the service position so that any unintentional change of position is precluded. It must be possible for the operator to vary the position of the device by applying a force not exceeding 40 daN;
- 5.4.5. the device must offer adequate resistance to forces applied parallel to the longitudinal axis of the vehicle, and be connected, when in the

⁽¹⁾ As defined in Annex II Section A to Directive 70/156/EEC.

⁽²⁾ As defined in item 2.6 of Appendix 1.

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service position, with the chassis side-members or whatever replaces them.

This requirement will be satisfied if it is shown that both during and after the application the horizontal distance between the rear of the device and the rear extremity of the vehicle does not exceed 40 cm at any of the points P1, P2 and P3. In measuring this distance, any part of the vehicle which is more than 3 m above the ground when the vehicle is unladen must be excluded;

- 5.4.5.1. points P1 are located 30 cm from the longitudinal planes tangential to the outer edges of the wheels on the rear axle; points P2, which are located on the line joining points P1, are symmetrical to the median longitudinal plane of the vehicle at a distance from each other of 70 to 100 cm inclusive, the exact position being specified by the manufacturer. The height above the ground of points P1 and P2 must be defined by the vehicle manufacturer within the lines that bound the device horizontally. The height must not, however, exceed 60 cm when the vehicle is unladen. P3 is the centre-point of the straight line joining points P2;
- 5.4.5.2. a horizontal force corresponding to 12,5 % of the maximum technically permissible mass of the vehicle but not exceeding $2,5 \times 10^4$ N must be applied successively to both points P1 and to point P3;
- 5.4.5.3. a horizontal force corresponding to 50 % of the maximum technically permissible mass of the vehicle but not exceeding 10×10^4 N must be applied successively to both points P2;
- 5.4.5.4. the forces specified in 5.4.5.2 and 5.4.5.3 above must be applied separately. The order in which the forces are applied may be specified by the manufacturer;
- 5.4.5.5. whenever a practical test is performed to verify compliance with the abovementioned requirements, the following conditions must be fulfilled:
 - 5.4.5.5.1. the device must be connected to the chassis side-members of the vehicle or to whatever replaces them;
 - 5.4.5.5.2. the specified forces must be applied by rams which are suitably articulated (e.g. by means of universal joints) and must be parallel to the median longitudinal plane of the vehicle via a surface not more than 25 cm in height (the exact height must be indicated by the manufacturer) and 20 cm wide, with a radius of curvature of 5 ± 1 mm at the vertical edges; the centre of the surface is placed successively at points P1, P2 and P3.
- 5.5. By way of derogation from the abovementioned requirements, vehicles of the following categories need not comply with the requirements of this Annex as regards rear underrun protection:
 - tractors for semi-trailers,
 - 'slung' trailers and other similar trailers for the transport of logs or other very long items,
 - vehicles for which rear underrun protection is incompatible with their use.
6. EC TYPE-APPROVAL MARKING
 - 6.1. Every rear underrun protective device conforming to the type approved pursuant to this Directive as a separate technical unit shall bear an EC type-approval mark.
 - 6.2. This mark shall consist of a rectangle surrounding the letter 'e' followed by the distinguishing number or letters of the Member State which has granted type-approval:
 - 1 for Germany
 - 2 for France
 - 3 for Italy
 - 4 for the Netherlands
 - 5 for Sweden
 - 6 for Belgium
 - 9 for Spain
 - 11 for the United Kingdom
 - 12 for Austria

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- 13 for Luxembourg
- 17 for Finland
- 18 for Denmark
- 21 for Portugal
- 23 for Greece
- IRL for Ireland.

It must also include in the vicinity of the rectangle the 'base approval number' contained in Section 4 of the type-approval number referred to in Annex VII of Directive 70/156/EEC, preceded by the two figures indicating the sequence number assigned to the most recent major technical amendment to Directive 70/221/EEC on the date EC type-approval was granted. In this Directive the sequence number is '00'.

- 6.3. The EC type-approval mark must be affixed to the rear underrun protective device in such a way as to be indelible and clearly legible even if the device is fitted to a vehicle.
- 6.4. An example of the EC type-approval mark is shown in Appendix 5.
- 7. MODIFICATIONS OF THE TYPE AND AMENDMENTS TO APPROVALS
 - 7.1. In the case of modifications of the type approved pursuant to this Directive, the provisions of Article 5 of Directive 70/156/EEC shall apply.
- 8. CONFORMITY OF PRODUCTION
 - 8.1. As a general rule, measures to ensure the conformity of production shall be taken in accordance with the provisions laid down in Article 10 to Directive 70/156/EEC.

▼ **M3***Appendix I***INFORMATION DOCUMENT No ...**

pursuant to Annex I to Directive 70/156/EEC(*) relating to EC type-approval of a vehicle with respect to the rear underrun protection

(Directive 70/221/EEC as last amended by Directive .../.../EEC)

The following information, if applicable, must be supplied in triplicate and include a list of contents. Any drawings must be supplied in appropriate scale and in sufficient detail on size A4 or on a folder of A4 format. Photographs, if any, must show sufficient detail.

If the systems, components or separate technical units have electronic controls, information concerning their performance must be supplied.

0. GENERAL
 - 0.1. Make (trade name of manufacturer):
 - 0.2. Type and general commercial description(s):
 - 0.3. Means of identification of type, if marked on the vehicle^(b):
 - 0.3.1. Location of that marking:
 - 0.4. Category of vehicle^(c):
 - 0.5. Name and address of manufacturer:
 - 0.8. Address(es) of assembly plant(s):
1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE
 - 1.1. Photographs and/or drawings of a representative vehicle:
 - 1.5. Material used for the side-members^(d):
2. MASSES AND DIMENSIONS^(e)
(in kg and mm) (refer to drawing where applicable)
 - 2.3.3. Width of the widest rear axle:
 - 2.4. Range of vehicle dimensions (overall)
 - 2.4.1. For chassis without bodywork
 - 2.4.1.2. Width^(k):
 - 2.4.2. For chassis with bodywork
 - 2.4.2.2. Width^(k):
 - 2.6. Mass of the vehicle with bodywork, and with coupling device in the case of a towing vehicle of a category other than M₁, in running order, or the mass of the chassis with cab if the manufacturer does not fit the bodywork and/or coupling device (including coolant, oils, fuel, 100 % other liquids except used waters, tools, spare wheel and driver, and, for buses and coaches, the mass of the crew member (75 kg) if there is a crew seat in the vehicle^(o) ^(f)):
 - 2.8. Technically permissible maximum laden mass stated by the manufacturer^(v) (maximum and minimum):

(*) The item numbers and footnotes used in this information document correspond to those set out in Annex I to Directive 70/156/EEC. Items not relevant for the purpose of this Directive are omitted.

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9. BODYWORK

9.1. Type of bodywork(*):

9.2. Material used and method of construction(*):

9.15. Rear underrun protection

9.15.1. Drawings of the vehicle parts relevant to the rear underrun protection, i.e. drawing of the vehicle and/or chassis with position and mounting of the widest rear axle, drawing of the mounting and/or fitting of the rear underrun protection. If the underrun protection is no special device, the drawing must clearly show that the required dimensions are met:

9.15.2. In the case of special device, full description and/or drawing of the rear underrun protection (including mountings and fittings), or, if approved as a separate technical unit, type approval number:

.....
(Date, file)

(*) If applicable, when part of the bodywork forms a part of the rear underrun protection.

▼ **M3***Appendix 2***INFORMATION DOCUMENT No ...****relating to EC type-approval as a separate technical unit with respect of a rear underrun protective device***(Directive 70/221/EEC as last amended by Directive .../.../EC)*

The following information, if applicable, must be supplied in triplicate and include a list of contents. Any drawings must be supplied in appropriate scale and in sufficient detail on size A4 or on a folder of A4 format. Photographs, if any, must show sufficient detail.

If the systems, components or separate technical units have electronic controls, information concerning their performance must be supplied.

0. GENERAL

- 0.1. Make (trade name of manufacturer):
- 0.2. Type and general commercial description(s):
- 0.5. Name and address of manufacturer:
- 0.7. In the case of components and separate technical units, location and method of affixing of the EC approval mark:
- 0.8. Address(es) of assembly plant(s):

1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE(S) on which the device is intended to be fitted in so far as they relate to the rear underrun protection (attach photographs and/or drawings):

- 1.1. Minimum sum of the moments of inertia about the horizontal axis of the chassis side-members in cross-section:
- 1.2. Distance between the chassis side-members at the mounting points of the device:

2. MASS AND DIMENSIONS

- 2.1. Technically permissible maximum laden mass:

3. BODYWORK

- 3.1. Full description and/or drawing of the rear underrun protection device (including mounting and fittings):

.....
(Date, file)

▼ **M3***Appendix 3*

MODEL

(maximum format: A4 (210 × 297 mm))

EC TYPE-APPROVAL CERTIFICATE

Stamp of administration

Communication concerning the:

- type-approval⁽¹⁾,
- extension of type-approval⁽¹⁾,
- refusal of type-approval⁽¹⁾,
- withdrawal of type-approval⁽¹⁾,

of a type of vehicle/component/separate technical unit⁽¹⁾ with regard to Directive .../.../EEC as last amended by Directive .../.../EC.

Type-approval number:

Reason for extension:

SECTION I

- 0.1. Make (trade name of manufacturer):
- 0.2. Type and general commercial description(s):
- 0.3. Means of identification of type, if marked on the vehicle/component/separate technical unit⁽¹⁾⁽²⁾:
.....
- 0.3.1. Location of that marking:
- 0.4. Category of vehicle⁽¹⁾⁽³⁾:
- 0.5. Name and address of manufacturer:
- 0.7. In the case of components and separate technical units, location and method of affixing of the EC approval mark:
- 0.8. Address(es) of assembly plant(s):

SECTION II

1. Additional information (where applicable): see Addendum
2. Technical service responsible for carrying out the tests:
3. Date of test report:
4. Number of test report:
5. Remarks (if any): see Addendum

▼ **M3**

6. Place:
7. Date:
8. Signature:
9. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

⁽¹⁾ Delete where not applicable.

⁽²⁾ If the means of identification of type contains characters not relevant to describe the vehicle, component or separate technical unit types covered by this type-approval certificate such characters shall be represented in the documentation by the symbol: '?' (e.g. ABC??123??).

⁽³⁾ As defined in Annex II Section A to Directive 70/156/EEC.

*Addendum to EC type-approval certificate No ...
concerning the type-approval of a vehicle with respect of a rear underrun protective device
(Directive 70/221/EEC as last amended by Directive .../.../EC)*

1. Additional information
 - 1.1. Vehicle category:
 - 1.2. The vehicle is not fitted with a rear underrun protection device⁽¹⁾
 - 1.3. The vehicle is fitted with a rear underrun protection device⁽¹⁾
 - 1.3.1. The device has been approved as a separate technical unit⁽¹⁾
 - distance from the ground and from the rear of the vehicle:
 - approval mark:
 - 1.3.2. The device has not been approved as a separate technical unit⁽¹⁾
 - width, section depth, distance from the ground and from the rear of the vehicle:
 - method of affixing:
5. Remarks:

⁽¹⁾ Delete where not applicable.

▼ **M3***Appendix 4*

MODEL

(maximum format: A4 (210 × 297 mm))

EC TYPE-APPROVAL CERTIFICATE

Stamp of administration

Communication concerning the

- type-approval⁽¹⁾,
- extension of type-approval⁽¹⁾,
- refusal of type-approval⁽¹⁾,
- withdrawal of type-approval⁽¹⁾,

of a type of vehicle/component/separate technical unit⁽¹⁾ with regard to Directive .../.../EEC as last amended by Directive .../.../EC.

Type-approval number:

Reason for extension:

SECTION I

- 0.1. Make (trade name of manufacturer):
- 0.2. Type and general commercial description(s):
- 0.3. Means of identification of type, if marked on the vehicle/component/separate technical unit⁽¹⁾⁽²⁾:
.....
- 0.3.1. Location of that marking:
- 0.4. Category of vehicle⁽¹⁾⁽³⁾:
- 0.5. Name and address of manufacturer:
- 0.7. In the case of components and separate technical units, location and method of affixing of the EC approval mark:
- 0.8. Address(es) of assembly plant(s):

SECTION II

1. Additional information (where applicable): see Addendum
2. Technical service responsible for carrying out the tests:
3. Date of test report:
4. Number of test report:
5. Remarks (if any): see Addendum

▼M3

6. Place:
7. Date:
8. Signature:
9. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

⁽¹⁾ Delete where not applicable.

⁽²⁾ If the means of identification of type contains characters not relevant to describe the vehicle, component or separate technical unit types covered by this type-approval certificate such characters shall be represented in the documentation by the symbol '?' (e.g. ABC??123??).

⁽³⁾ As defined in Annex II Section A to Directive 70/156/EEC.

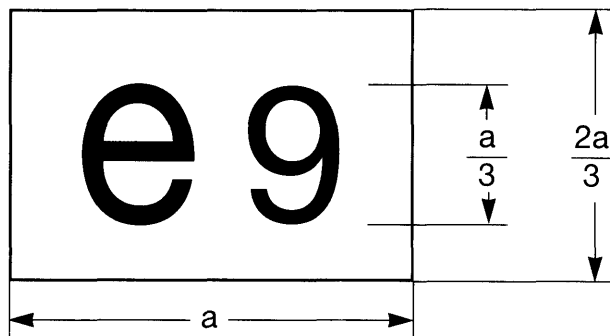
*Addendum to EC type-approval certificate No ...
concerning the type-approval of a separate technical unit with regard to a rear underrun protective
device*

(Directive 70/221/EEC as last amended by Directive .../.../EC)

1. Additional information
 - 1.1. Construction
 - 1.1.1. Material:
 - 1.1.2. Method of affixing:
 - 1.1.3. Dimension of the device:
 - 1.2. Maximum technically permissible mass of the vehicle on which the device is to be mounted:
 - 1.3. Restrictions of the use of the device (if any):
5. Remarks:

▼ M3*Appendix 5***Model for the EC type-approval mark**

$a \geq 12 \text{ mm}$



000148
 $\frac{a}{3}$

The rear underrun protective device bearing the above EC type-approval mark is a device which has been approved in Spain (e 9) under the base approval 0148 on the basis of this Directive (00).

The figures used are only indicative.