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## I

(Acts whose publication is obligatory)

## COMMISSION DIRECTIVE 97/19/EC

of 18 April 1997

adapting to technical progress Council Directive 70/221/EEC on the approximation of the laws of the Member States relating to liquid fuel tanks and rear underrun protection of motor vehicles and their trailers

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Directive 70/221/EEC of 20 March 1970 on the approximation of the laws of the Member States relating to liquid fuel tanks and rear underrun protection of motor vehicles and their trailers<sup>(1)</sup>, as last amended by Commission Directive 81/333/EEC<sup>(2)</sup>, and in particular Article 3 thereof,

Whereas Directive 70/221/EEC is one of the separate directives in the EC type-approval procedure established by Council Directive 70/156/EEC 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<sup>(3)</sup>, as last amended by Directive 96/79/EC of the European Parliament and of the Council<sup>(4)</sup>; whereas, consequently, the provisions laid down in Directive 70/156/EEC relating to vehicle systems, components and separate technical units apply to Directive 70/221/EEC;

Whereas, in particular, pursuant to Articles 3 (4) and 4 (3) of Directive 70/156/EEC it is necessary that each separate directive has attached to it an information document incorporating the relevant items of Annex I to Directive 70/156/EEC and also a type-approval certificate based on Annex VI to Directive 70/156/EEC in order that type-approval may be computerized;

Whereas these amendments relate only to the administrative provisions contained in Directive 70/221/EEC; whereas it is not necessary therefore to

invalidate existing approvals pursuant to Directive 70/221/EEC nor to prevent the registration, sale and entry into service of new vehicles covered by such approvals;

Whereas the measures provided for in this Directive are in accordance with the opinion of the Committee for Adaptation to Technical Progress established by Directive 70/156/EEC,

HAS ADOPTED THIS DIRECTIVE:

*Article 1*

Directive 70/221/EEC is hereby amended as follows:

1. Article 1 is replaced by the following:

*'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.'

2. Article 2 is amended as follows:

- (a) in paragraph 2:

'within the meaning of Article 9a of Directive 70/156/EEC and installed in accordance with the requirements of item II.5 of the Annex.'

is replaced by:

'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.'

<sup>(1)</sup> OJ No L 76, 6. 4. 1970, p. 23.

<sup>(2)</sup> OJ No L 131, 18. 5. 1981, p. 4.

<sup>(3)</sup> OJ No L 42, 23. 2. 1970, p. 1.

<sup>(4)</sup> OJ No L 18, 21. 1. 1997, p. 7.

(b) in paragraph 3:

‘within the meaning of Article 9a of Directive 70/156/EEC, satisfies the relevant requirements set out in the Annex.’

is replaced by:

‘within the meaning of Article 2 of Directive 70/156/EEC, satisfies the relevant requirements set out in Annex II’;

3. Article 2a is amended as follows:

(a) in paragraph 2:

‘within the meaning of Article 9a of Directive 70/156/EEC and installed in accordance with the requirements set out in item II.5 of the Annex.’

is replaced by:

‘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’;

(b) in paragraph 3, ‘Article 9a’ is replaced by ‘Article 2’;

4. in Article 2b, ‘items II.2.1 and II.2.2 of the Annex’ is replaced by ‘items 2.1 and 2.2 of Annex II’;

5. in Article 3, ‘item I’ is replaced by ‘Annex I’;

6. the Annex is replaced by the Annex to this Directive.

#### Article 2

With effect from 1 October 1997, Member States

— shall no longer grant EC type-approval pursuant to Article 4 (1) and, if applicable, Article 4 (4) of Directive 70/156/EEC, and

— may refuse national type-approval,

for a new type of vehicle on grounds relating to liquid fuel tanks and rear underrun protection or, for a new type of a rear underrun protective device as a separate technical unit, if it fails to comply with the provisions of Directive 70/221/EEC, as amended by this Directive.

This Directive shall not invalidate any approval previously granted pursuant to Directive 70/221/EEC nor prevent extensions of such approvals under the terms of the Directive under which they were originally granted.

#### Article 3

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 30 September 1997. They shall forthwith inform the Commission thereof.

When Member States adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States.

2. Member States shall communicate to the Commission the texts of the main provisions of national law which they adopt in the field covered by this Directive.

#### Article 4

This Directive shall enter into force on the 20th day following its publication in the *Official Journal of the European Communities*.

#### Article 5

This Directive is addressed to the Member State.

Done at Brussels, 18 April 1997.

*For the Commission*

Martin BANGEMANN

*Member of the Commission*

## 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

## 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:
- 3.3.1. 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.

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.
-

## Appendix 1

## 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<sup>(b)</sup>: .....
- 0.3.1. Location of that marking: .....
- 0.4. Category of vehicle<sup>(c)</sup>: .....
- 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<sup>(d)</sup>
- 3.2.2. Fuel: diesel oil/petrol/LPG/any other<sup>(1)</sup>
- 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.

<sup>(1)</sup> Delete where not applicable.

## Appendix 2

## MODEL

(maximum format: A4 (210 × 297 mm))

## EC TYPE-APPROVAL CERTIFICATE

Stamp of administration
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Communication concerning the:

- type-approval<sup>(1)</sup>,
- extension of type-approval<sup>(1)</sup>,
- refusal of type-approval<sup>(1)</sup>,
- withdrawal of type-approval<sup>(1)</sup>,

of a type of vehicle/component/separate technical unit<sup>(1)</sup> 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<sup>(1)</sup>/<sup>(2)</sup>:  
.....
- 0.3.1. Location of that marking: .....
- 0.4. Category of vehicle<sup>(1)</sup>/<sup>(3)</sup>: .....
- 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



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.

(<sup>1</sup>) Delete where not applicable.

(<sup>2</sup>) 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??).

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

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*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(<sup>1</sup>)
5. Remarks: .....

(<sup>1</sup>) Delete where not applicable.

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## 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 M<sub>1</sub> and N<sub>1</sub><sup>(1)</sup>.

## 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.

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

#### 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 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 M<sub>1</sub> and N<sub>1</sub><sup>(1)</sup>.
- 5.2. Any vehicle in one of the categories M<sub>1</sub>, M<sub>2</sub>, M<sub>3</sub>, N<sub>1</sub>, O<sub>1</sub> or O<sub>2</sub><sup>(1)</sup> 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 N<sub>2</sub>, N<sub>3</sub>, O<sub>3</sub> or O<sub>4</sub><sup>(1)</sup> 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<sup>(2)</sup> 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

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

<sup>(2)</sup> As defined in item 2.6 of Appendix 1.

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 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  $10 \times 10^4$  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  $5 \pm 1$  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	12 for Austria
2 for France	13 for Luxembourg
3 for Italy	17 for Finland
4 for the Netherlands	18 for Denmark
5 for Sweden	21 for Portugal
6 for Belgium	23 for Greece
9 for Spain	IRL for Ireland.
11 for the United Kingdom	

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.
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## Appendix 1

## 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 .../.../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): .....
- 0.3. Means of identification of type, if marked on the vehicle<sup>(b)</sup>: .....
- 0.3.1. Location of that marking: .....
- 0.4. Category of vehicle<sup>(c)</sup>: .....
- 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<sup>(d)</sup>: .....

2. MASSES AND DIMENSIONS<sup>(e)</sup>

(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<sup>(k)</sup>: .....
  - 2.4.2. For chassis with bodywork
    - 2.4.2.2. Width<sup>(k)</sup>: .....
- 2.6. Mass of the vehicle with bodywork, and with coupling device in the case of a towing vehicle of a category other than M<sub>1</sub>, 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<sup>(n)</sup> <sup>(l)</sup>: .....
- 2.8. Technically permissible maximum laden mass stated by the manufacturer<sup>(v)</sup> (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.

- 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.

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)

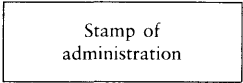


Appendix 3

MODEL

(maximum format: A4 (210 x 297 mm))

EC TYPE-APPROVAL CERTIFICATE



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

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.

(<sup>1</sup>) Delete where not applicable.

(<sup>2</sup>) 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??).

(<sup>3</sup>) 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 .../.../EEC)*

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

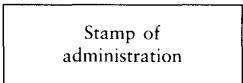
(<sup>1</sup>) Delete where not applicable.

Appendix 4

MODEL

(maximum format: A4 (210 × 297 mm))

EC TYPE-APPROVAL CERTIFICATE



Communication concerning the

- type-approval<sup>(1)</sup>,
- extension of type-approval<sup>(1)</sup>,
- refusal of type-approval<sup>(1)</sup>,
- withdrawal of type-approval<sup>(1)</sup>,

of a type of vehicle/component/separate technical unit<sup>(1)</sup> 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<sup>(1)</sup>(<sup>2</sup>):  
.....
- 0.3.1. Location of that marking: .....
- 0.4. Category of vehicle<sup>(1)</sup>(<sup>3</sup>): .....
- 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

- 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.

(<sup>1</sup>) Delete where not applicable.

(<sup>2</sup>) 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??).

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

*Addendum to EC type-approval certificate No ...*

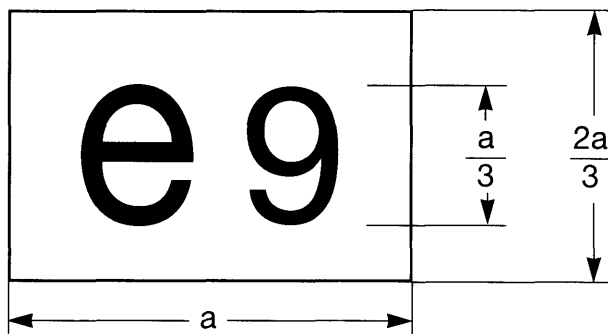
*concerning the type-approval of a separate technical unit with regard to a rear underrun protective device*

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

- 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: .....

## 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.

## COMMISSION DIRECTIVE 97/20/EC

of 18 April 1997

adapting to technical progress Council Directive 72/306/EEC on the approximation of the laws of the Member States relating to the measures to be taken against the emission of pollutants from diesel engines for use in vehicles

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

HAS ADOPTED THIS DIRECTIVE:

Having regard to the Treaty establishing the European Community,

*Article 1*

Having regard to Council Directive 72/306/EEC of 2 August 1972 on the approximation of the laws of the Member States relating to the measures to be taken against the emission of pollutants from diesel engines for use in vehicles<sup>(1)</sup>, as last amended by Commission Directive 89/491/EEC<sup>(2)</sup>, and in particular Article 4 thereof,

Directive 72/306/EEC is hereby amended as follows:

1. Article 1 is replaced by the following:

*'Article 1*

For the purposes of this Directive "vehicle" means any vehicle with a diesel engine, intended for use on the road, with or without bodywork, having at least four wheels and a maximum design speed exceeding 25 km/h, with the exception of vehicles which run on rails and of agricultural and forestry tractors and of all mobile machinery.;

Whereas Directive 72/306/EEC is one of the separate directives in the EC type-approval procedure established by Council Directive 70/156/EEC of 6 February 1970 on the approximation of the laws of Member States relating to the type-approval of motor vehicles and their trailers<sup>(3)</sup>, as last amended by Directive 96/79/EC of the European Parliament and of the Council<sup>(4)</sup>; whereas, consequently, the provisions laid down in Directive 70/156/EEC relating to vehicle systems, components and separate technical units apply to Directive 72/306/EEC;

2. in Article 2, 'Annexes I, II, III, IV and VI' are replaced by 'the requirements of the relevant Annexes to this Directive';
3. in Article 3, 'item 2.2' is replaced by 'item 1.1';
4. the Annexes are amended in accordance with the Annex to this Directive.

Whereas, in particular, pursuant to Articles 3(4) and 4(3) of Directive 70/156/EEC, it is necessary that each separate directive has attached to it an information document incorporating the relevant items of Annex I to Directive 70/156/EEC and also a type-approval certificate based on Annex VI to Directive 70/156/EEC in order that type-approval may be computerized;

*Article 2*

With effect from 1 October 1997, Member States:

Whereas these amendments relate only to the administrative provisions contained in Directive 72/306/EEC, whereas it is not necessary therefore to invalidate existing approvals pursuant to Directive 72/306/EEC nor to prevent the registration, sale and entry into service of new vehicles covered by such approvals;

— shall no longer grant EC type-approval pursuant to Article 4(1) of Directive 70/156/EEC, and

— may refuse national type-approval,

Whereas the measures provided for in this Directive are in accordance with the opinion of the Committee for Adaptation to Technical Progress established by Directive 70/156/EEC,

for a new type of vehicle on grounds relating to the emission of pollutants from diesel engines if it fails to comply with the provisions of Directive 72/306/EEC, as amended by this Directive.

This Directive shall not invalidate any approval previously granted pursuant to Directive 72/306/EEC nor prevent extensions of such approvals under the terms of the Directive under which they were originally granted.

<sup>(1)</sup> OJ No L 190, 20. 8. 1972, p. 1.

<sup>(2)</sup> OJ No L 238, 15. 8. 1989, p. 43.

<sup>(3)</sup> OJ No L 42, 23. 2. 1970, p. 1.

<sup>(4)</sup> OJ No L 18, 21. 1. 1997, p. 7.

*Article 3*

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 30 September 1997. They shall forthwith inform the Commission thereof.

When Member States adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States.

2. Member States shall communicate to the Commission the texts of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 4*

This Directive shall enter into force on the 20th day following its publication in the *Official Journal of the European Communities*.

*Article 5*

This Directive is addressed to the Member States.

Done at Brussels, 18 April 1997.

*For the Commission*

Martin BANGEMANN

*Member of the Commission*

## ANNEX

## AMENDMENTS TO THE ANNEXES TO DIRECTIVE 72/306/EEC

1. A list of Annexes is inserted between the Articles and Annex I to read as follows:

## 'LIST OF ANNEXES

- Annex I:** Definitions, application for EC type-approval, granting of EC type-approval, symbol of the corrected absorption coefficient, specifications and tests, modifications of the type, conformity of production
- Appendix 1:* Information document
- Appendix 2:* Type-approval certificate
- Annex II:** Example of the symbol of the corrected absorption coefficient
- Annex III:** Test at steady speeds over the full-load curve
- Annex IV:** Test under free acceleration
- Annex V:** Technical characteristics of reference fuel
- Annex VI:** Limit values applicable in the test at steady speeds
- Annex VII:** Characteristics of opacimeters
- Annex VIII:** Installation and use of the opacimeter.'

## ANNEX 1

2. The index letter 'a' in the headline and the pertaining footnote are deleted.
3. The title reads as follows:

'DEFINITIONS, APPLICATION FOR EC TYPE-APPROVAL, GRANTING OF EC TYPE-APPROVAL, SYMBOL OF THE CORRECTED ABSORPTION COEFFICIENT, SPECIFICATIONS AND TESTS, MODIFICATIONS OF THE TYPE, CONFORMITY OF PRODUCTION'.

4. Item 2 becomes item 1.
5. Items 2.2 to 2.5 become items 1.1 to 1.4.
6. In item 1.1 (former item 2.2):  
'Annex II' is replaced by 'Appendix 1'.
7. Item 3 becomes item 2.
8. Item 3.1 becomes item 2.1 and reads as follows:  
'2.1. The application for EC type-approval pursuant to Article 3 (4) of Directive 70/156/EEC of a vehicle type with regard to its emission of pollutants from diesel engines shall be submitted by the manufacturer.'
9. Item 3.2 becomes item 2.2 and reads as follows:  
'2.2. A model for the information document is given in Appendix 1.'
10. Items 3.2.1 and 3.2.2 are deleted.
11. In item 3.3:  
— item 3.3 becomes item 2.3.  
— 'Annex II to the Regulation' is replaced by 'Appendix 1'.



12. Item 3a becomes item 3 and reads as follows:
  3. GRANTING OF EC TYPE-APPROVAL
    - 3.1. 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.
    - 3.2. A model for the EC type-approval certificate is given in Appendix 2.
    - 3.3. 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.
13. Items 4.4 to 4.6 becomes items 4.1 to 4.3.
14. In item 4.1 (former item 4.4):

'Annex to the type-approval certificate shown in Annex X' is replaced by 'Addendum to the type-approval certificate shown in Appendix 2'.
15. In item 4.3 (former item 4.6):

'Annex IX' is replaced by 'Annex II'.
16. Item 6 reads as follows:
  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.
17. Item 7.1 reads as follows:
  - 7.1. 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.
18. Item 7.3 becomes item 7.2 and reads as follows:
  - 7.2. In particular, conformity of the vehicle with the approved type as regards the emission of pollutants from diesel engines shall be verified on the basis of the results listed in the Addendum to the type-approval certificate shown in Appendix 2. In addition:
19. Items 7.3.1, 7.3.1.1 and 7.3.1.2 become items 7.2.1, 7.2.1.1 and 7.2.1.2.
20. Item 7.2.1.2 (former item 7.3.1.2):
  - in the English version: '7.3.1' is replaced by '7.2.1.1'
  - in the other versions: '7.3.1.1' is replaced by '7.2.1.1'
21. Items 8 and 9 are deleted.
22. The following Appendices 1 and 2 are added to read:

*'Appendix 1*

INFORMATION DOCUMENT NO ...

pursuant to Annex I to Council Directive 70/156/EEC(\*) relating to EC type-approval of a vehicle with respect to the measures to be taken against the emission of pollutants from diesel engines

*(Directive 72/306/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.

(\*) 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.

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<sup>(b)</sup>: .....
- 0.3.1. Location of that marking: .....
- 0.4. Category of vehicle<sup>(c)</sup>: .....
- 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: .....
3. POWER PLANT<sup>(a)</sup>
- 3.1. Manufacturer: .....
- 3.1.1. Manufacturer's engine code (as marked on the engine, or other means of identification): .....
- 3.2.1.1. Working principle: positive ignition/compression ignition, four stroke/two stroke<sup>(1)</sup>
- 3.2.1.2. Number and arrangement of cylinders: .....
- 3.2.1.2.1. Bore<sup>(1)</sup>: ..... mm
- 3.2.1.2.2. Stroke<sup>(1)</sup>: ..... mm
- 3.2.1.2.3. Firing order: .....
- 3.2.1.3. Engine capacity<sup>(c)</sup>: ..... cm<sup>3</sup>
- 3.2.1.4. Volumetric compression ratio<sup>(2)</sup> .....
- 3.2.1.5. Drawings of combustion chamber, piston crown and, in the case of positive ignition engines, piston rings: .....
- 3.2.1.6. Idling speed<sup>(2)</sup>: ..... min<sup>-1</sup>
- 3.2.1.8. Maximum net power<sup>(1)</sup>: ..... kW at ..... min<sup>-1</sup> (manufacturer's declared value)
- 3.2.1.9. Maximum permitted engine speed as prescribed by the manufacturer: ..... min<sup>-1</sup>
- 3.2.4. Fuel feed
- 3.2.4.2. By fuel injection (compression ignition only): yes/no<sup>(1)</sup>
- 3.2.4.2.1. System description: .....
- 3.2.4.2.2. Working principle: direct injection/pre-chamber/swirl chamber<sup>(1)</sup>
- 3.2.4.2.3. Injection pump
- 3.2.4.2.3.1. Make(s): .....
- 3.2.4.2.3.2. Type(s): .....
- 3.2.4.2.3.3. Maximum fuel delivery<sup>(1)(2)</sup>: ..... mm<sup>3</sup>/stroke or cycle at a pump speed of: ..... min<sup>-1</sup> or, alternatively, a characteristic diagram: .....
- 3.2.4.2.3.4. Injection timing<sup>(2)</sup>: .....
- 3.2.4.2.3.5. Injection advance curve<sup>(2)</sup>: .....
- 3.2.4.2.3.6. Calibration procedure: test bench/engine<sup>(1)</sup>
- 3.2.4.2.4. Governor
- 3.2.4.2.4.1. Type: .....
- 3.2.4.2.4.2. Cut-off point
- 3.2.4.2.4.2.1. Cut-off point under load: ..... min<sup>-1</sup>
- 3.2.4.2.4.2.2. Cut-off point without load: ..... min<sup>-1</sup>
- 3.2.4.2.5. Injection piping

- 3.2.4.2.5.1. Length: ..... mm
- 3.2.4.2.5.2. Internal diameter: ..... mm
- 3.2.4.2.6. Injector(s)
- 3.2.4.2.6.1. Make(s): .....
- 3.2.4.2.6.2. Type(s): .....
- 3.2.4.2.6.3. Opening pressure<sup>(2)</sup>: ..... kPa or characteristic diagram<sup>(2)</sup>: .....
- 3.2.4.2.7. Cold start system
- 3.2.4.2.7.1. Make(s): .....
- 3.2.4.2.7.2. Type(s): .....
- 3.2.4.2.7.3. Description: .....
- 3.2.4.2.9. Electronic control unit
- 3.2.4.2.9.1. Make(s): .....
- 3.2.4.2.9.2. Description of the system: .....
- 3.2.4.4. Feed pump
- 3.2.4.4.1. Pressure<sup>(2)</sup>: ..... kPa or characteristic diagram<sup>(2)</sup>: .....
- 3.2.7. Cooling system (liquid/air)<sup>(1)</sup>
- 3.2.8. Intake system
- 3.2.8.1. Pressure charger: yes/no<sup>(1)</sup>
- 3.2.8.1.1. Make(s): .....
- 3.2.8.1.2. Type(s): .....
- 3.2.8.1.3. Description of the system (e.g. maximum charge pressure: ..... Pa, wastegate if applicable): .....
- 3.2.8.2. Intercooler: yes/no<sup>(1)</sup>
- 3.2.8.3. Intake depression at rated engine speed and at 100 % load  
 minimum allowable: ..... kPa  
 maximum allowable: ..... kPa
- 3.2.8.4. Description and drawings of inlet pipes and their accessories (plenum chamber, heating device, additional air intakes, etc.): .....
- 3.2.8.4.1. Intake manifold description (include drawings and/or photos): .....
- 3.2.8.4.2. Air filter, drawings: ....., or
- 3.2.8.4.2.1. Make(s): .....
- 3.2.8.4.2.2. Type(s): .....
- 3.2.8.4.3. Intake silencer, drawings: ....., or
- 3.2.8.4.3.1. Make(s): .....
- 3.2.8.4.3.2. Type(s): .....
- 3.2.9. Exhaust system
- 3.2.9.1. Description and/or drawing of the exhaust manifold: .....
- 3.2.9.2. Description and/or drawing of the exhaust system: .....
- 3.2.9.3. Maximum allowable exhaust back pressure at rated engine speed and at 100 % load: ..... kPa
- 3.2.10. Minimum cross-sectional areas of inlet and outlet ports: .....
- 3.2.11. Valve timing or equivalent data
- 3.2.11.1. Maximum lift of valves, angles of opening and closing, or timing details of alternative distribution systems, in relation to dead-centres: .....
- 3.2.11.2. Reference and/or setting ranges<sup>(1)</sup>: .....
- 3.2.12. Measures taken against air pollution
- 3.2.12.2. Additional anti-pollution devices (if any, and if not covered by another heading)
- 3.2.12.2.1. Catalytic converter: yes/no<sup>(1)</sup>
- 3.2.12.2.1.1. Number of catalytic converters and elements: .....

- 3.2.12.2.1.2. Dimensions, shape and volume of the catalytic converter(s): .....
- 3.2.12.2.1.3. Type of catalytic action: .....
- 3.2.12.2.1.4. Total charge of precious metals: .....
- 3.2.12.2.1.5. Relative concentration: .....
- 3.2.12.2.1.6. Substrate (structure and material): .....
- 3.2.12.2.1.7. Cell density: .....
- 3.2.12.2.1.8. Type of casing for the catalytic converter(s): .....
- 3.2.12.2.1.9. Location of the catalytic converter(s) (place and reference distance in the exhaust line):  
.....
- 3.2.12.2.4. Exhaust gas recirculation: yes/no<sup>(1)</sup>
- 3.2.12.2.4.1. Characteristics (flow rate, etc.): .....
- 3.2.12.2.6. Particulate trap: yes/no<sup>(1)</sup>
- 3.2.12.2.6.1. Dimensions, shape and capacity of the particulate trap: .....
- 3.2.12.2.6.2. Type and design of the particulate trap: .....
- 3.2.12.2.6.3. Location (reference distance in the exhaust line): .....
- 3.2.12.2.6.4. Method or system of regeneration, description and/or drawing: .....
- .....
- 3.2.12.2.7. Other systems (description and operation): .....
- 3.2.13. Location of the absorption coefficient symbol (compression ignition engines only): .....
- .....
4. TRANSMISSION<sup>(v)</sup>
- 4.3. Moment of inertia of engine flywheel: .....
- 4.3.1. Additional moment of inertia with no gear engaged: .....
- .....
- (Date, file)

<sup>(1)</sup> Delete where not applicable.

<sup>(2)</sup> 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??).

#### *Addendum to Appendix 1*

#### INFORMATION ON TEST CONDITIONS

##### 1. LUBRICANT USED

1.1. Make: .....

1.2. Type: .....  
(state percentage of oil in mixture if lubricant and fuel mixed)

2. ENGINE PERFORMANCES

2.1. Power at the six points of measurement referred to in 2.1 of Annex III: .....

2.1.1. Power of the engine measured on the test bench: .....

2.1.2. Power measured on the wheels of the vehicle: .....

Engine speed (min <sup>-1</sup> )	Measured power (kW)
1. ....	.....
2. ....	.....
3. ....	.....
4. ....	.....
5. ....	.....
6. ....	.....

Appendix 2

MODEL

(maximum format: A4 (210 × 297 mm))

EC TYPE-APPROVAL CERTIFICATE

Stamp of administration
----------------------------

Communication concerning the:

- type-approval<sup>(1)</sup>,
- extension of type-approval<sup>(1)</sup>,
- refusal of type-approval<sup>(1)</sup>,
- withdrawal of type-approval<sup>(1)</sup>

of a type of a vehicle/component/separate technical unit<sup>(1)</sup> 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<sup>(1)</sup>(<sup>2</sup>):.....
- 0.3.1. Location of that marking:.....
- 0.4. Category of vehicle<sup>(1)</sup>(<sup>3</sup>):.....
- 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
- 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.

<sup>(1)</sup> Delete where not applicable.

<sup>(2)</sup> 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??).

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

*Addendum to EC type-approval certificate No ...*

*concerning the type-approval of a vehicle with regard to Directive 72/306/EEC, as last amended by Directive .../.../EC*

- 1. Additional information
  - 1.1. Power plant
    - 1.1.1. Manufacturer's engine code (as marked on the engine, or other means of identification):....

1.2. Test results

1.2.1. At steady speeds:

Engine speed (min <sup>-1</sup> )	Nominal flow G (litres/second)	Limit absorption values (m <sup>-1</sup> )	Measured absorption values (m <sup>-1</sup> )
1. ....	.....	.....	.....
2. ....	.....	.....	.....
3. ....	.....	.....	.....
4. ....	.....	.....	.....
5. ....	.....	.....	.....
6. ....	.....	.....	.....

1.2.2. Under free acceleration

1.2.2.1. Measured value of the absorption coefficient: ..... m<sup>-1</sup>

1.2.2.2. Corrected value of the absorption coefficient: ..... m<sup>-1</sup>

1.2.2.3. Location of the absorption coefficient symbol on the vehicle: .....  
.....

5. Remarks: .....

ANNEX II

23. Annex II is deleted.

ANNEX III

24. Item 3.1.2:

'Annex II' is replaced by 'Appendix 1 to Annex I'.

25. Item 3.1.3:

'Annex II' is replaced by 'Appendix 1 to Annex I'.

ANNEX V

26. In the table, the limit value for the sulphur content shall read as follows:

'max. 0,05 % mass'.

ANNEX IX

27. Annex IX becomes Annex II.

ANNEX X

28. Annex X is deleted.

## COMMISSION DIRECTIVE 97/21/EC

of 18 April 1997

adapting to technical progress Council Directive 80/1269/EEC on the approximation of the laws of the Member States relating to the engine power of motor vehicles

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

HAS ADOPTED THIS DIRECTIVE:

Having regard to the Treaty establishing the European Community,

*Article 1*

Having regard to Council Directive 80/1269/EEC of 16 December 1980 on the approximation of the laws of the Member States relating to the engine power of motor vehicles<sup>(1)</sup>, as last amended by Commission Directive 89/491/EEC<sup>(2)</sup>, and in particular Article 3 thereof,

Directive 80/1269/EEC is hereby amended as follows:

1. Article 1 is replaced by the following:

*'Article 1*

Whereas Directive 80/1269/EEC is one of the separate directives in the EC type-approval procedure established by Council Directive 70/156/EEC 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<sup>(3)</sup>, as last amended by Directive 96/79/EC of the European Parliament and of the Council<sup>(4)</sup>; whereas, consequently, the provisions laid down in Directive 70/156/EEC relating to vehicle systems, components and separate technical units apply to Directive 80/1269/EEC;

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 km/h, with the exception of vehicles which run on rails and of agricultural and forestry tractors and all mobile machinery.;

2. in Article 2, 'Annexes I and II' is replaced by 'the relevant Annexes';
3. the Annexes are amended in accordance with the Annex to this Directive.

Whereas, in particular, pursuant to Article 3 (4) and Article 4 (3) of Directive 70/156/EEC it is necessary that each separate Directive has attached to it an information document incorporating the relevant items of Annex I to Directive 70/156/EEC and also a type-approval certificate based on Annex VI to Directive 70/156/EEC in order that type-approval may be computerized;

*Article 2*

Whereas these amendments relate only to the administrative provisions contained in Directive 80/1269/EEC; whereas it is not necessary therefore to invalidate existing approvals pursuant to Directive 80/1269/EEC nor to prevent the registration, sale and entry into service of new vehicles covered by such approvals;

With effect from 1 October 1997, Member States:

- shall no longer grant EC type-approval pursuant to Article 4 (1) of Directive 70/156/EEC, and
- may refuse national type-approval,

for a new type of vehicle on grounds relating to the engine power if the engine power has not been determined in accordance with Directive 80/1269/EEC, as amended by this Directive.

Whereas the measures provided for in this Directive are in accordance with the opinion of the Committee for Adaptation to Technical Progress established by Directive 70/156/EEC,

This Directive shall not invalidate any approval previously granted pursuant to Directive 80/1269/EEC nor prevent extensions of such approvals under the terms of the directive under which they were originally granted.

<sup>(1)</sup> OJ No L 375, 31. 12. 1980, p. 46.

<sup>(2)</sup> OJ No L 238, 15. 8. 1989, p. 43.

<sup>(3)</sup> OJ No L 42, 23. 2. 1970, p. 1.

<sup>(4)</sup> OJ No L 18, 21. 1. 1997, p. 7.



*Article 3*

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 30 September 1997. They shall forthwith inform the Commission thereof.

When Member States adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States.

2. Member States shall communicate to the Commission the texts of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 4*

This Directive shall enter into force on the 20th day following its publication in the *Official Journal of the European Communities*.

*Article 5*

This Directive is addressed to the Member States.

Done at Brussels, 18 April 1997.

*For the Commission*  
Martin BANGEMANN  
*Member of the Commission*

## ANNEX

## AMENDMENTS TO THE ANNEXES TO DIRECTIVE 80/1269/EEC

1. A list of Annexes is inserted between the Articles and Annex I to read as follows:

## 'LIST OF ANNEXES

**Annex I:** Determination of engine power

*Appendix 1:* Information document

*Appendix 2:* Type-approval certificate

**Annex II:** Test report'

## ANNEX I

2. Item 1 reads as follows:

## '1. ADMINISTRATIVE PROVISIONS FOR TYPE-APPROVAL

## 1.1. Application for EC type-approval of a vehicle type

1.1.1. The application for EC type-approval pursuant to Article 3 (4) of Directive 70/156/EEC of a vehicle type with regard to its engine power shall be submitted by the manufacturer.

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

1.1.3. If the technical service responsible for the type-approval tests carries out the test itself, the following must be submitted:

1.1.3.1. an engine representative of the type to be approved together with the auxiliary equipment specified in Table 1.

## 1.2. Granting of EC type-approval of a vehicle type

1.2.1. 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.

1.2.2. A model for the EC type-approval certificate is given in Appendix 2.

1.2.3. 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.

## 1.3. Modifications of the type and amendments to approvals

1.3.1. 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.

## 1.4. Conformity of production

1.4.1. 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.'

3. In item 2.1:

'Annex I' is replaced by 'Annex II Section A'.

4. In item 5.6:

'Appendix I' is replaced by 'Annex II'.

5. In item 6.4.2 the formula reads as follows:

$$\alpha_d = (f_a)^{fm}$$

6. Item 7 reads as follows:

‘7. TEST REPORT

The test report shall contain the results and all the calculations required to determine the net power, as listed in Annex II. In order to draw up this document, the competent authority may use the report prepared by an approved or recognized laboratory pursuant to the provisions of this Directive.’

7. Items 8 to 8.2.2 are deleted.

8. Items 9 to 9.2 become items 8 to 8.2.

9. Appendices 1 and 2 are replaced by the following Appendices 1 and 2:

‘Appendix 1

INFORMATION DOCUMENT No. ...

pursuant to Annex I to Council Directive 70/156/EEC(\*) relating to EC type-approval of a vehicle with respect to the engine power

(Directive 80/1269/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): .....
  - 0.3. Means of identification of type, if marked on the vehicle<sup>(b)</sup>: .....
  - 0.3.1. Location of that marking: .....
  - 0.4. Category of vehicle<sup>(c)</sup>: .....
  - 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: .....
  - 1.8. Hand of drive: left/right<sup>(1)</sup>: .....

(\*) 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.

- 3. POWER PLANT<sup>(9)</sup>
  - 3.1. Manufacturer: .....
  - 3.1.1. Manufacturer's engine code (as marked on the engine, or other means of identification): .....
  - 3.2.1.1. Working principle: positive ignition/compression ignition, four stroke/two stroke<sup>(1)</sup>
  - 3.2.1.2. Number and arrangement of cylinders: .....
  - 3.2.1.2.1. Bore<sup>(1)</sup>: ..... mm
  - 3.2.1.2.2. Stroke<sup>(1)</sup>: ..... mm
  - 3.2.1.2.3. Firing order: .....
  - 3.2.1.3. Engine capacity<sup>(3)</sup>: ..... cm<sup>3</sup>
  - 3.2.1.4. Volumetric compression ratio<sup>(2)</sup>: .....
  - 3.2.1.5. Drawings of combustion chamber, piston crown and, in the case of positive ignition engines, piston rings: .....
  - 3.2.1.8. Maximum net power<sup>(1)</sup>: ..... kW at ..... min<sup>-1</sup>  
(manufacturer's declared value)
  - 3.2.1.9. Maximum permitted engine speed as prescribed by the manufacturer: ..... min<sup>-1</sup>
  - 3.2.1.10. Maximum net torque<sup>(1)</sup>: ..... Nm at ..... min<sup>-1</sup>  
(manufacturer's declared value)
  - 3.2.2. Fuel: diesel oil/petrol/LPG/any other<sup>(1)</sup>
    - 3.2.2.1. RON, leaded: .....
    - 3.2.2.2. RON, unleaded: .....
    - 3.2.4. Fuel feed
      - 3.2.4.1. By carburettor(s): yes/no<sup>(1)</sup>
        - 3.2.4.1.1. Make(s): .....
        - 3.2.4.1.2. Type(s): .....
        - 3.2.4.1.3. Number fitted: .....
        - 3.2.4.1.4. Adjustments<sup>(2)</sup>
          - 3.2.4.1.4.1. Jets: .....
          - 3.2.4.1.4.2. Venturis: .....
          - 3.2.4.1.4.3. Float-chamber level: .....
          - 3.2.4.1.4.4. Mass of float: .....
          - 3.2.4.1.4.5. Float needle: .....
  - 3.2.4.1.5. Cold start system: manual/automatic<sup>(1)</sup>
    - 3.2.4.1.5.1. Operating principle(s): .....
    - 3.2.4.1.5.2. Operating limits/settings<sup>(1)</sup><sup>(2)</sup>: .....
  - 3.2.4.2. By fuel injection (compression ignition only): yes/no<sup>(1)</sup>
    - 3.2.4.2.1. System description: .....
    - 3.2.4.2.2. Working principle: direct injection/pre-chamber/swirl chamber<sup>(1)</sup>
      - 3.2.4.2.3. Injection pump
        - 3.2.4.2.3.1. Make(s): .....
        - 3.2.4.2.3.2. Type(s): .....
        - 3.2.4.2.3.3. Maximum fuel delivery<sup>(1)</sup><sup>(2)</sup>: ..... mm<sup>3</sup>/stroke or cycle at a pump speed of: ..... min<sup>-1</sup> or, alternatively, a characteristic diagram: .....
        - 3.2.4.2.3.4. Injection timing<sup>(2)</sup>: .....
        - 3.2.4.2.3.5. Injection advance curve<sup>(2)</sup>: .....
      - 3.2.4.2.3.6. Calibration procedure: test bench/engine<sup>(1)</sup>
    - 3.2.4.2.4. Governor
      - 3.2.4.2.4.1. Type: .....
      - 3.2.4.2.4.2. Cut-off point
        - 3.2.4.2.4.2.1. Cut-off point under load: ..... min<sup>-1</sup>
        - 3.2.4.2.4.2.2. Cut-off point without load: ..... min<sup>-1</sup>

Or the curve of fuel delivery plotted against the air flow and settings required to keep to the curve

3.2.4.2.5.	Injection piping	
3.2.4.2.5.1.	Length: .....	mm
3.2.4.2.5.2.	Internal diameter: .....	mm
3.2.4.2.6.	Injector(s)	
3.2.4.2.6.1.	Make(s): .....	
3.2.4.2.6.2.	Type(s): .....	
3.2.4.2.6.3.	Opening pressure <sup>(2)</sup> : .....	kPa or characteristic diagram <sup>(2)</sup> : .....
3.2.4.2.7.	Cold start system	
3.2.4.2.7.1.	Make(s): .....	
3.2.4.2.7.2.	Type(s): .....	
3.2.4.2.7.3.	Description: .....	
3.2.4.2.9.	Electronic control unit	
3.2.4.2.9.1.	Make(s): .....	
3.2.4.2.9.2.	Description of the system: .....	
3.2.4.3.	By fuel injection (positive ignition only): yes/no <sup>(1)</sup>	
3.2.4.3.1.	Working principle: intake manifold (single-/multi-point <sup>(1)</sup> ) direct injection/other (specify) <sup>(1)</sup> : .....	
3.2.4.3.2.	Make(s): .....	
3.2.4.3.3.	Type(s): .....	
3.2.4.3.4.	System description	
3.2.4.3.4.1.	Type or number of the control unit: ...	} In the case of systems other than continuous injection give equivalent details.
3.2.4.3.4.2.	Type of fuel regulator: .....	
3.2.4.3.4.3.	Type of air-flow sensor: .....	
3.2.4.3.4.4.	Type of fuel distributor: .....	
3.2.4.3.4.5.	Type of pressure regulator: .....	
3.2.4.3.4.8.	Type of throttle housing: .....	
3.2.4.3.5.	Injectors: opening pressure <sup>(2)</sup> : .....	kPa or characteristic diagram <sup>(2)</sup> : .....
3.2.4.3.6.	Injection timing: .....	
3.2.4.3.7.	Cold start system	
3.2.4.3.7.1.	Operating principle(s): .....	
3.2.4.3.7.2.	Operating limits/settings <sup>(1)</sup> <sup>(2)</sup> : .....	
3.2.4.4.	Feed pump	
3.2.4.4.1.	Pressure <sup>(2)</sup> : .....	kPa or characteristic diagram <sup>(2)</sup> : .....
3.2.5.	Electrical system	
3.2.5.1.	Rated voltage: .....	V, positive/negative ground <sup>(1)</sup>
3.2.5.2.	Generator	
3.2.5.2.1.	Type: .....	
3.2.5.2.2.	Nominal output: .....	VA
3.2.6.	Ignition	
3.2.6.1.	Make(s): .....	
3.2.6.2.	Type(s): .....	
3.2.6.3.	Working principle: .....	
3.2.6.4.	Ignition advance curve <sup>(2)</sup> : .....	
3.2.6.5.	Static ignition timing <sup>(2)</sup> : .....	degrees before TDC
3.2.6.6.	Contact-point gap <sup>(2)</sup> : .....	mm
3.2.6.7.	Dwell-angle <sup>(2)</sup> : .....	degrees
3.2.7.	Cooling system (liquid/air) <sup>(1)</sup>	
3.2.7.1.	Nominal setting of the engine temperature control mechanism: .....	
3.2.7.2.	Liquid	
3.2.7.2.1.	Nature of liquid: .....	
3.2.7.2.2.	Circulating pump(s): yes/no <sup>(1)</sup>	
3.2.7.2.3.	Characteristics .....	, or
3.2.7.2.3.1.	Make(s): .....	
3.2.7.2.3.2.	Type(s): .....	

3.2.7.2.4.	Drive ratio(s): .....
3.2.7.2.5.	Description of the fan and its drive mechanism: .....
3.2.7.3.	Air
3.2.7.3.1.	Blower: yes/no <sup>(1)</sup>
3.2.7.3.2.	Characteristics: ....., or
3.2.7.3.2.1.	Make(s): .....
3.2.7.3.2.2.	Type(s): .....
3.2.7.3.3.	Drive ratio(s): .....
3.2.8.	Intake system
3.2.8.1.	Pressure charger: yes/no <sup>(1)</sup>
3.2.8.1.1.	Make(s): .....
3.2.8.1.2.	Type(s): .....
3.2.8.1.3.	Description of the system (e.g. maximum charge pressure: ..... kPa, wastegate if applicable): .....
3.2.8.2.	Intercooler: yes/no <sup>(1)</sup>
3.2.8.4.	Description and drawings of inlet pipes and their accessories (plenum chamber, heating device, additional air intakes, etc.): .....
3.2.8.4.1.	Intake manifold description (include drawings and/or photos): .....
3.2.8.4.2.	Air filter, drawings: ....., or
3.2.8.4.2.1.	Make(s): .....
3.2.8.4.2.2.	Type(s): .....
3.2.8.4.3.	Intake silencer, drawings: ....., or
3.2.8.4.3.1.	Make(s): .....
3.2.8.4.3.2.	Type(s): .....
3.2.9.	Exhaust system
3.2.9.1.	Description and/or drawing of the exhaust manifold: .....
3.2.9.2.	Description and/or drawing of the exhaust system: .....
3.2.9.3.	Maximum allowable exhaust back pressure at rated engine speed and at 100 % load: ..... kPa
3.2.10.	Minimum cross-sectional areas of inlet and outlet ports: .....
3.2.11.	Valve timing or equivalent data
3.2.11.1.	Maximum lift of valves, angles of opening and closing, or timing details of alternative distribution systems, in relation to dead-centres: .....
3.2.11.2.	Reference and/or setting ranges <sup>(1)</sup> : .....
3.2.12.	Measures taken against air pollution
3.2.12.2.	Additional anti-pollution devices (if any, and if not covered by another heading)
3.2.12.2.1.	Catalytic converter: yes/no <sup>(1)</sup>
3.2.12.2.1.1.	Number of catalytic converters and elements: .....
3.2.12.2.1.2.	Dimensions, shape and volume of the catalytic converter(s): .....
3.2.12.2.2.	Oxygen sensor: yes/no <sup>(1)</sup>
3.2.12.2.3.	Air injection: yes/no <sup>(1)</sup>
3.2.12.2.4.	Exhaust gas recirculation: yes/no <sup>(1)</sup>
3.2.12.2.6.	Particulate trap: yes/no <sup>(1)</sup>
3.2.12.2.6.1.	Dimensions, shape and capacity of the particulate trap: .....
3.2.12.2.7.	Other systems (description and operation): .....
3.6.	Temperatures permitted by the manufacturer
3.6.1.	Cooling system
3.6.1.1.	Liquid cooling
	Maximum temperature at outlet: ..... °C
3.6.1.2.	Air cooling
3.6.1.2.1.	Reference point: .....
3.6.1.2.2.	Maximum temperature at reference point: ..... °C
3.6.2.	Maximum outlet temperature of the inlet intercooler: ..... °C

- 3.6.3. Maximum exhaust temperature at the point in the exhaust pipe(s) adjacent to the outer flange(s) of the exhaust manifold: ..... °C
- 3.6.4. Fuel temperature
  - minimum: ..... °C
  - maximum: ..... °C
- 3.6.5. Lubricant temperature
  - minimum: ..... °C
  - maximum: ..... °C
- 3.8. Lubrication system
  - 3.8.1. Description of the system
    - 3.8.1.1. Position of the lubricant reservoir: .....
    - 3.8.1.2. Feed system (by pump/injection into intake/mixing with fuel, etc.)<sup>(1)</sup>: .....
  - 3.8.2. Lubricating pump
    - 3.8.2.1. Make(s): .....
    - 3.8.2.2. Type(s): .....
  - 3.8.3. Mixture with fuel
    - 3.8.3.1. Percentage: .....
  - 3.8.4. Oil cooler: yes/no<sup>(1)</sup>
    - 3.8.4.1. Drawing(s): ....., or
      - 3.8.4.1.1. Make(s): .....
      - 3.8.4.1.2. Type(s): .....

.....  
(Date, file)

<sup>(1)</sup> Delete where not applicable.

<sup>(2)</sup> 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??).

*Addendum to Appendix 1*

- 1. Other auxiliary equipment driven by the engine (as per item 5.1.2 of Annex I) (list and brief description if necessary): .....
- 2. Additional information on test conditions (for positive ignition engines only)
  - 2.1. Spark plugs
    - 2.1.1. Make: .....
    - 2.1.2. Type: .....
    - 2.1.3. Spark-gap setting: .....
  - 2.2. Ignition coil
    - 2.2.1. Make: .....
    - 2.2.2. Type: .....
  - 2.3. Ignition condenser
    - 2.3.1. Make: .....
    - 2.3.2. Type: .....
  - 2.4. Radio interference suppression equipment
    - 2.4.1. Make: .....
    - 2.4.2. Type: .....

## Appendix 2

## MODEL

(maximum format: A4 (210 x 297 mm))

## EC TYPE-APPROVAL CERTIFICATE

Stamp of administration
----------------------------

Communication concerning the

- type-approval<sup>(1)</sup>,
- extension of type-approval<sup>(1)</sup>,
- refusal of type-approval<sup>(1)</sup>,
- withdrawal of type-approval<sup>(1)</sup>,

of a type of a vehicle/component/separate technical unit<sup>(1)</sup> 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<sup>(1)</sup><sup>(2)</sup>: .....
- 0.3.1. Location of that marking: .....
- 0.4. Category of vehicle<sup>(1)</sup><sup>(3)</sup>: .....
- 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
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.

(<sup>1</sup>) Delete where not applicable.

(<sup>2</sup>) 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??).

(<sup>3</sup>) 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 80/1269/EEC, as last amended by Directive .../.../EEC*

1. Additional information
  - 1.1. Engine .....
    - 1.1.1. Manufacturer's engine code: .....  
(as marked on the engine, or other means of identification)
    - 1.1.2. Engine capacity: .....
    - 1.1.3. Fuel: diesel oil/petrol/LPG/any other(<sup>1</sup>)
    - 1.1.4. Maximum net power: ..... kW at ..... min<sup>-1</sup>
5. Remarks: .....

(<sup>1</sup>) Delete where not applicable.

*ANNEX II*

10. The entire text above item 1 is replaced by the new title 'TEST REPORT'.
11. Items 1 to 4 are deleted.
12. Items 5 and 6 become items 1 and 2 respectively.
13. Item 2.1 (former item 6.1):

In the table 'Power to be added ... (see Table 1, note 5)' is replaced by 'Power to be added for auxiliary equipment fitted on the engine in excess of Table 1 in Annex I (see item 1 in the Addendum to Appendix 1 of Annex I). Power to be subtracted when fan not fitted (see Table 1 in Annex I, note 5).'

14. Items 7 to 14 are deleted.