

# Official Journal

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## Legislation

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## I

(Acts whose publication is obligatory)

**DIRECTIVE 2000/7/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**of 20 March 2000**

**on speedometers for two- or three-wheel motor vehicles and amending Council Directive 92/61/EEC on the type-approval of two- or three-wheel motor vehicles**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF  
THE EUROPEAN UNION,

Having regard to the Treaty establishing the European  
Community, and in particular Article 95 thereof,

Having regard to the proposal from the Commission<sup>(1)</sup>,

Having regard to the opinion of the Economic and Social  
Committee<sup>(2)</sup>,

Acting in accordance with the procedure laid down in Article  
251 of the Treaty<sup>(3)</sup>,

Whereas:

- (1) Road safety is a fundamental Community objective which requires speed to be monitored and checked by means of a speedometer, with a view to raising awareness, particularly among young people, of the need for proper road use.
- (2) The technical legislation on road safety should be adopted in a cohesive fashion, in the form of 'packages' of directives, so as to raise public awareness of the European Union's contribution to enhancing road safety.
- (3) In every Member State, two- or three-wheel motor vehicles must, as regards speedometers, display certain technical characteristics laid down as compulsory requirements that vary from Member State to Member State; such variation constitutes an obstacle to intra-Community trade.
- (4) Such obstacles to the functioning of the internal market can be eliminated by the adoption of the same requirements by all the Member States in lieu of their existing rules and regulations.

- (5) This Directive is to be added to the separate Directives that must be complied with under Article 4 of Council Directive 92/61/EEC of 30 June 1992 relating to the type-approval of two- or three-wheel motor vehicles<sup>(4)</sup>.
- (6) The introduction of harmonised requirements for speedometers in two- or three-wheel motor vehicles is necessary in order to permit implementation, for each type of those vehicles, of the type-approval and approval procedures laid down by Directive 92/61/EEC.
- (7) In accordance with the principles of subsidiarity and proportionality as set out in Article 5 of the Treaty, the objective of the action envisaged, namely Community type-approval by type of vehicle, cannot be sufficiently achieved by the Member States and can therefore, in view of the scale and the impact of the action proposed, be better achieved at the Community level. This Directive limits itself to the minimum required for the attainment of that objective and does not go beyond what is necessary for that purpose.
- (8) To facilitate access to the markets of non-member countries, it is clearly necessary to establish equivalence between the requirements of this Directive and those of Regulation No 39 of the Economic Commission for Europe of the United Nations (hereinafter referred to as 'UN-ECE Regulation No 39').
- (9) The Member States of the European Union must negotiate as soon as possible an amendment to UN-ECE Regulation No 39 to align it with the provisions of this Directive.
- (10) Directive 92/61/EEC should therefore be amended accordingly,

HAVE ADOPTED THIS DIRECTIVE:

*Article 1*

1. This Directive shall apply to the speedometer of each type of vehicles described in Article 1 of Directive 92/61/EEC.

<sup>(1)</sup> OJ C 212, 8.7.1998, p. 7.

<sup>(2)</sup> OJ C 40, 15.2.1999, p. 1.

<sup>(3)</sup> Opinion of the European Parliament of 12 January 1999 (OJ C 104, 14.4.1999, p. 19) confirmed on 27 October 1999, Council common position of 20 May 1999 (OJ C 232, 13.8.1999, p. 1) and Decision of the European Parliament of 27 October 1999 (not yet published in the Official Journal).

<sup>(4)</sup> OJ L 225, 10.8.1992, p. 72. Directive as amended by the 1994 Act of Accession.

2. Any vehicle falling within the scope of Directive 92/61/EEC shall be fitted with a speedometer complying with the Annex to this Directive.

#### Article 2

The procedures for the granting of component type-approval in respect of the speedometer of a type of two- or three-wheel motor vehicle and the conditions governing the free movement of such vehicles shall be as laid down in, respectively, Chapters II and III of Directive 92/61/EEC.

#### Article 3

In accordance with Article 11 of Directive 92/61/EEC, the equivalence between the requirements laid down in this Directive and those laid down in UN-ECE Regulation No 39, in the latest version adopted by the Community, is hereby acknowledged.

The authorities of the Member States which grant type-approval shall accept approvals, and type-approval marks, granted in accordance with the requirements of the said Regulation No 39 within the scope of that Regulation, in place of the corresponding approvals and type-approval marks granted in accordance with the requirements of this Directive.

#### Article 4

The amendments that are essential in order to take account of the amendments to UN-ECE Regulation No 39 and to adapt the Annex to technical progress shall be adopted in accordance with the procedure referred to in Article 13 of 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>(1)</sup>.

#### Article 5

Directive 92/61/EEC is amended as follows:

1. In Annex I, heading No 45, 'Speedometer and odometer for motorcycles, motor tricycles and quadricycles' shall be replaced by 'Speedometer' and the term 'CONF' by 'SD'.
2. Annex IIA is amended as follows:
  - (a) item 4.7. 'Speedometer and odometer: yes/no (1)' shall be replaced by 'Speedometer';
  - (b) the following items shall be inserted:
    - 4.7.3. Photos and/or drawings of the complete system
    - 4.7.4. Range of speeds displayed
    - 4.7.5. Tolerance of the speedometer's measuring mechanism

4.7.6. Technical constant of the speedometer

4.7.7. *Modus operandi* and description of the drive mechanism

4.7.8. Overall transmission ratio of the drive mechanism'.

3. In Annex IIIB, heading No 10.12, 'Speedometer and odometer for motorcycles, motor tricycles and quadricycles' shall be replaced by 'Speedometer' and the term 'CONF' by 'SD'.

#### Article 6

1. Member States shall bring into force the laws, regulations and administrative provisions needed in order to comply with this Directive before 1 January 2001. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they 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. The Member States shall communicate to the Commission the text of the provisions of national law which they adopt in the area covered by this Directive.

3. With effect from 1 January 2001, Member States may no longer prohibit, on grounds relating to the speedometers, the first bringing into service of vehicles that meet the requirements of this Directive.

4. Member States shall apply the requirements set out in the first subparagraph of paragraph 1 as from 1 July 2001, except for mopeds, to which these requirements shall be applicable from 1 July 2002.

#### Article 7

This Directive shall take effect on the day of its publication in the *Official Journal of the European Communities*.

#### Article 8

This Directive is addressed to the Member States.

Done at Brussels, 20 March 2000.

For the European Parliament

The President

N. FONTAINE

For the Council

The President

J. GAMA

<sup>(1)</sup> OJ L 42, 23.2.1970, p. 1. Directive as last amended by Directive 98/91/EC (OJ L 11, 16.1.1999, p. 25).

## ANNEX

**1. Definitions**

For the purposes of this Directive:

- 1.1. 'Type of vehicle in respect of its speedometer' shall mean vehicles which do not among themselves display any essential differences, where those differences can apply, in particular, to the following:
  - 1.1.1. the size designation of the tyres chosen from the range of tyres normally fitted;
  - 1.1.2. the overall transmission ratio, including any adaptor reduction drive, to the speedometer;
  - 1.1.3. the type of speedometer as characterised by:
    - 1.1.3.1. the tolerance of the speedometer's measuring mechanism,
    - 1.1.3.2. the technical constant of the speedometer,
    - 1.1.3.3. the range of speeds displayed.
- 1.2. 'Tyres normally fitted' shall mean the types(s) of tyres intended by the manufacturer for the type of vehicle under consideration and entered in the information document referred to in Annex II to Directive 92/61/EEC.

Winter tyres shall not be considered to be the tyres normally fitted.
- 1.3. 'Normal running pressure' shall mean the cold inflation pressure specified by the vehicle manufacturer, plus 0,2 bar.
- 1.4. 'Speedometer' shall mean that part of the equipment intended to inform the driver of the speed of his vehicle at any given time.
  - 1.4.1. 'Tolerance of the speedometer's measuring mechanism' shall mean the accuracy of the speedometer instrument itself, expressed as the upper and lower speed indication limits for a range of speed inputs.
  - 1.4.2. 'Technical constant of the speedometer' shall mean the relationship between the input revolutions or pulses per minute and a specified displayed speed.
- 1.5. 'Mass in running order' shall mean the mass as defined in note (d)(2) to Annex II to Directive 92/61/EEC.

**2. Requirements**

- 2.1. The dial of the speedometer must be located within the direct field of view of the driver and must be clearly legible both day and night. The range of speeds displayed must be sufficiently wide to include the maximum speed of this type of vehicle as stated by its manufacturer.
- 2.2. Where the speedometer includes a dial instead of a digital readout that dial must be clearly graduated.
  - 2.2.1. In the case of speedometers intended for motorcycles or motor tricycles, the subdivisions must be of 1, 2, 5 or 10 km/h. Speed must be displayed as follows:
    - 2.2.1.1. where the maximum speed on the dial does not exceed 200 km/h, the marked numerical speed value intervals must not exceed 20 km/h,
    - 2.2.1.2. where the maximum speed on the dial exceeds 200 km/h, the marked numerical speed value intervals shown on the dial must not exceed 30 km/h;
  - 2.2.2. in the case of speedometers intended for mopeds, the dial must indicate a maximum speed not exceeding 80 km/h; the subdivisions must be of 1, 2, 5 or 10 km/h and the speed value intervals shown on the dial must not exceed 10 km/h.

In addition, the dial must show the speed of 45 km/h clearly (or 25 km/h in the case of low-performance mopeds).

- 2.2.3. where a vehicle is intended for sale in a Member State where imperial distances are used, the speedometer must also be graduated in mph (miles per hour), with subdivisions of 1, 2, 5 or 10 mph. Marked numerical speed value intervals must not exceed 20 mph and must begin at either 10 mph or 20 mph;
- 2.2.4. the marked numerical speed values need not be at regular intervals.
- 2.3. The accuracy of the speedometer will be checked in accordance with the following procedure:
- 2.3.1. the tyres will be one of the types normally fitted to the vehicle as defined in 1.2. A test will have to be carried out for each type of speedometer intended to be fitted by the manufacturer;
- 2.3.2. the load on the wheel spindle driving the speedometer will have to correspond to the mass in running order;
- 2.3.3. the reference temperature at the speedometer position must be  $296\text{ K} \pm 5\text{ K}$ ;
- 2.3.4. during each test, the tyre pressure must be the normal running pressure defined in item 1.3.;
- 2.3.5. the vehicle will be tested at the following speeds:

Maximum speed ( $V_{\max}$ ) stated by the manufacturer (km/h)	Test speed (km/h)
$V_{\max} \leq 45$	80 % of $V_{\max}$
$45 < V_{\max} \leq 100$	40 and 80 % of $V_{\max}$ (if the resultant test speed $\geq 55$ )
$100 < V_{\max} \leq 150$	40, 80 and 80 % von $V_{\max}$ (if the resultant test speed $\geq 100$ )
$150 < V_{\max}$	40, 80 and 120

- 2.3.6. the checking device used to measure the actual speed of the vehicle must be accurate to at least  $\pm 0,5\%$ ;
- 2.3.6.1. if the tests are carried out on a track, the surface thereof must be flat and dry and provide sufficient grip;
- 2.3.6.2. if a rolling-road dynamometer is used for the test, the rollers must have a diameter of at least 2 m. In the case of speedometers intended for mopeds, the test may be carried out on rollers with a diameter of at least 400 mm;
- 2.3.7. the speed displayed must never be lower than the actual speed. Between speed  $V_1$ , read on the speedometer and actual speed  $V_2$ ; there must be the following relationship with the test values specified in item 2.3.5 and between those values:

$$0 \leq (V_1 - V_2) \leq 0,1 \cdot V_2 + 4 \text{ km/h.}$$

### 3. Conformity of production

- 3.1. Conformity of production will be checked on the basis of the provisions of Annex VI to Directive 92/61/EEC.
- 3.2. Production models will be considered to meet the requirements of this Directive if, under the conditions referred to in items 2.3.1 to 2.3.6, the relationship between speed  $V_1$  read on the speedometer and actual speed  $V_2$  is as follows:

$$0 \leq (V_1 - V_2) \leq 0,1 \cdot V_2 + 4 \text{ km/h for mopeds,}$$

and

$$0 \leq (V_1 - V_2) \leq 0,1 \cdot V_2 + 8 \text{ km/h for motorcycles and motor tricycles.}$$

*Appendix 1***INFORMATION DOCUMENT****in respect of the fitting of a speedometer to a type of two- or three-wheel motor vehicle**

(to be attached to the application for approval if this is lodged separately from that for approval of the vehicle)

Order No (assigned by the applicant)

The application for approval in respect of the fitting of a speedometer to two- or three-wheel motor vehicles must include the information referred to in the following items in Section A of Annex II to Directive 92/61/EEC:

0.1.

0.2.

0.5.

0.6.

2.1.

2.1.1.

4.7 to 4.7.8.

5.2.

5.2.2.

\_\_\_\_\_

Appendix 2

**TYPE-APPROVAL CERTIFICATE**

**in respect of the fitting of a speedometer to a type of two- or three-wheel motor vehicle**

MODEL

Name of competent authority

Report No: ..... by testing body: ..... of .....

Component type-approval No: ..... Extension No: .....

- 1. Make or trade name of vehicle: .....
- 2. Type of vehicle: .....
- 3. Name and address of manufacturer: .....
- 4. Where appropriate, name and address of the manufacturer's representative:  
.....
- 5. Vehicle submitted for component type-approval on: .....
- 6. Component type-approval granted/refused<sup>(1)</sup>
- 7. Place .....
- 8. Date: .....
- 9. Signature: .....

\_\_\_\_\_

<sup>(1)</sup> Delete as appropriate.

**DIRECTIVE 2000/8/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**of 20 March 2000**

**amending 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**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 95 thereof,

Having regard to the proposal from the Commission <sup>(1)</sup>,

Having regard to the opinion of the Economic and Social Committee <sup>(2)</sup>,

Acting in accordance with the procedure laid down in Article 251 of the Treaty <sup>(3)</sup>,

Whereas:

(1) 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 for motor vehicles and their trailers <sup>(4)</sup>, is one of the separate directives within the EC type-approval procedure which was established by Council Directive 70/156/EEC of 6 February 1990 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers <sup>(5)</sup>; consequently, the provisions and definitions laid down in Directive 70/156/EEC concerning vehicles, vehicle systems, components and separate technical units apply to Directive 70/221/EEC; it is necessary to adapt Article 1 of Directive 70/221/EEC to the definitions of Directive 70/156/EEC.

(2) In order to take account of technical progress, it is advisable to adapt Directive 70/221/EEC to the technical requirements adopted by the United Nations Economic Commission for Europe in its Regulation No 34 relating to the approval of vehicles with regard to the prevention of fire risk, in particular, to the provisions of fuel tanks made of plastic material.

(3) The accidental spillage of fuel (especially diesel) on to the road is a significant hazard for riders of two-wheeled motor vehicles and pedal cycles.

(4) There is increasing interest in gaseous fuels for the propulsion of motor vehicles, in particular for environmental reasons; whereas therefore, in future, Directive 70/221/EEC should also contain provisions for tanks for fuels other than liquid fuels; for this purpose the title and the scope of Directive 70/221/EEC should be amended accordingly; technical specifications for tanks for gaseous fuels will be introduced through later amendments of the said Directive.

(5) Furthermore, it is more and more common for original fuel tanks to be replaced by larger fuel tanks or for additional, unapproved fuel tanks to be installed; provision should consequently be made at the earliest opportunity for Community type-approval of liquid and gas fuel tanks as separate technical units, in order to maintain a high level of safety in motor-vehicle traffic.

(6) Amendments to the provisions relating to fuel tanks have to be adopted by the European Parliament and the Council; whereas it is expedient that, in the future, amendments necessary for adjusting the technical requirements of Directive 70/221/EEC relating to fuel tanks to technical progress should be adopted in accordance with the procedure laid down in Article 13 of Directive 70/156/EEC.

(7) The amendments made by this Directive relate in particular to fuel tanks made of a plastic material; it is unnecessary therefore to invalidate existing approvals granted under Directive 74/60/EEC <sup>(6)</sup> and to prevent the sale, registration and entry into service of new vehicles having metal liquid fuel tanks covered by such approvals.

<sup>(1)</sup> OJ C 164, 29.5.1998, p. 16.

<sup>(2)</sup> OJ C 407, 28.12.1998, p. 58.

<sup>(3)</sup> Opinion of the European Parliament of 10 February 1999 (OJ C 150, 28.5.1999, p. 168), Council common position of 12 July 1999 (OJ C 249, 1.9.1999, p. 25), decision of the European Parliament of 27 October 1999 (not yet published in the Official Journal).

<sup>(4)</sup> OJ L 76, 6.4.1970, p. 23. Directive as last amended by Commission Directive 97/19/EC (OJ L 125, 16.5.1997, p. 1).

<sup>(5)</sup> OJ L 42, 23.2.1970, p. 1. Directive as last amended by Directive 98/91/EC of the European Parliament and of the Council (OJ L 11, 16.1.1999, p. 25).

(8) Given the scale and impact of the action proposed in the sector in question, the Community measures which are the subject of this Directive are necessary, or even indispensable, to attain the objective set, namely

<sup>(6)</sup> OJ L 38, 11.2.1974, p. 2. Directive as last amended by Directive 78/632/EEC (OJ L 206, 29.7.1978, p. 26).

Community vehicle type-approval; this objective cannot be adequately achieved by the Member States individually,

## Article 2

HAVE ADOPTED THIS DIRECTIVE:

### Article 1

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

1. The title shall be replaced by the following:

‘Council Directive of 20 March 1970 on the approximation of the laws of the Member States relating to fuel tanks and rear underrun protection of motor vehicles and their trailers.’

2. Article 1 shall be replaced by the following:

#### ‘Article 1

For the purpose of this Directive, “vehicle” means any motor vehicle and its trailers as defined in Annex II Section A to Directive 70/156/EEC.’

3. Article 2(1) shall be replaced by the following:

‘1. No Member State may refuse to grant EC type-approval or national type-approval for a vehicle on grounds relating to its fuel tanks if such vehicle satisfies the requirements set out in this Directive concerning fuel tanks.’

4. Article 2a(1) shall be replaced by the following:

‘1. No Member State may refuse or prohibit the sale, registration, entry into service or use of a vehicle on grounds relating to its fuel tanks if such a vehicle satisfies the requirements set out in this Directive concerning fuel tanks.’

5. Article 3 shall be replaced by the following:

#### ‘Article 3

Any amendments necessary to adapt the requirements of the Annexes to technical progress, shall be adopted in accordance with the procedure laid down in Article 13 of Directive 70/156/EEC.’

6. The list of Annexes and Annex I to Directive 70/221/EEC are hereby amended in accordance with the Annex to this Directive.

1. With effect from 3 May 2001, Member States shall accept compliance with the requirements of Directive 70/221/EEC, as amended by this Directive, for the purposes of Articles 4(1) and 7(1) of Directive 70/156/EEC.

2. With effect from 3 May 2002, Member States:

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

— may refuse national type-approval,

for a new type of vehicle on grounds related to its fuel tanks if it fails to comply with the provisions of Directive 70/221/EEC, as amended by this Directive.

3. With effect from 3 May 2003, Member States

— shall consider certificates of conformity which accompany new vehicles in accordance with the provisions of Directive 70/156/EEC as no longer valid for the purposes of Article 7(1) of that Directive, and

— may refuse the sale, registration or entry into service of new vehicles which are not accompanied by a certificate of conformity valid in accordance with Directive 70/156/EEC, except where the provisions of Article 8(2) of that Directive are invoked,

on grounds relating to the fuel tanks, if the requirements of Directive 70/221/EEC, as amended by this Directive, are not fulfilled.

4. This Directive shall not invalidate any approval previously granted to vehicles having metal liquid fuel tanks 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 before 3 May 2001 and shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

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

*Article 5*

This Directive is addressed to the Member States.

*Article 4*

Done at Brussels, 20 March 2000.

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

*For the European Parliament*

*The President*

N. FONTAINE

*For the Council*

*The President*

J. GAMA

## ANNEX

**AMENDMENTS TO THE LIST OF ANNEXES AND TO ANNEX I TO DIRECTIVE 70/221/EEC****List of Annexes**

The indication regarding Annex I shall be replaced by the following:

- 'Annex I: Tanks for liquid fuel  
Appendix 1: Test of resistance to fire  
Appendix 2: Dimensions and technical data of firebricks  
Appendix 3: Information document  
Appendix 4: EC type-approval certificate'

**Annex I**

Annex I shall be replaced by the following:

'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 Annex:

- 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 (metal/plastic) of the tank(s);
- 2.1.2. In vehicles of category M<sub>1</sub> <sup>(1)</sup> the position of the tank(s) in the vehicle in so far as it has a negative effect on the requirements of Section 5.10 of this Annex.
- 2.2. "Occupant compartment", means the space for occupant accommodation bounded by the roof, floor, side walls, doors, outside glazing, front bulkhead and rear bulkhead.
- 2.3. "Unladen mass", means the mass of the vehicle in running order as defined in Section 2.6 of Annex I to Directive 70/156/EEC.
- 2.4. "Tank", means the tank(s) designed to contain the liquid fuel, as defined in Section 2.6, 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).
- 2.5. "Capacity of the tank", means the tank capacity as specified by the manufacturer.
- 2.6. "Liquid fuel", means a fuel which is liquid in normal ambient conditions.

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

### 3. APPLICATION FOR EC TYPE-APPROVAL

3.1. The application for type-approval of a type of 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 3.

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;

3.3.2. In the case of a vehicle equipped with a tank made of a plastic material: seven additional tanks, with their accessories;

3.3.3. In the case of a vehicle equipped with a tank made of another material: two additional tanks, with their accessories.

### 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 4.

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. Tanks must be made so as to be corrosion-resistant.

5.2. Tanks must satisfy, when equipped with all accessories which are normally attached to them, the leakage tests carried out according to Section 6.1 at a relative internal pressure equal to double the working excess pressure, but in any event not less than an excess pressure of 0,3 bar.

Tanks for vehicles made of a plastic material are considered as meeting this requirement if they have passed the test described in Section 6.3.2.

5.3. Any excess pressure or any pressure exceeding the working pressure must be compensated automatically by suitable devices (vents, safety valves, etc).

5.4. The vents must be designed in such a way as to prevent any fire risk. In particular, any fuel which may leak when the tank(s) is (are) being filled must not be able to fall on the exhaust system. It shall be channelled to the ground.

5.5. The tank(s) must not be situated in, or form, a surface (floor, wall, bulkhead) of the occupant compartment or other compartment integral with it.

5.6. A partition must be provided to separate the occupant compartment from the tank(s). The partition may contain apertures (e.g. to accommodate cables) provided they are so arranged that fuel cannot flow freely from the tank(s) into the occupant compartment or other compartment integral with it during normal conditions of use.

5.7. Every tank must be securely fixed and so placed as to ensure that any fuel leaking from the tank or its accessories will escape to the ground and not into the occupant compartment during normal conditions of use.

- 5.8. The filler hole must not be situated in the occupant compartment, in the luggage compartment or in the engine compartment.
- 5.9. The fuel must not escape through the tank cap or through the devices provided to compensate excess pressure during the foreseeable course of operation of the vehicle. In the case of overturning of the vehicle, a drip may be tolerated provided that it does not exceed 30 g/min; this requirement must be verified during the test prescribed in Section 6.2.
- 5.9.1. The tank cap must be fixed to the filler pipe: the seal must be retained securely in place, the cap must latch securely in place against the seal and filler pipe when closed.
- 5.9.1.1. The requirements of Section 5.9.1 will be deemed to be satisfied if the vehicle meets the requirements of Section 5.1.3 of Annex I to Directive 70/220/EEC<sup>(1)</sup>, subject to the proviso that the examples listed in the third indent of that section do not apply to vehicles in categories other than M<sub>1</sub> or N<sub>1</sub>.
- 5.10. Tanks must be installed in such a way as to be protected from the consequences of an impact to the front or the rear of the vehicle; there shall be no protruding parts, sharp edges, etc. near the tank.
- 5.11. The fuel tank and the filler neck shall be designed and installed in the vehicles in such a way as to avoid any accumulation of static electricity charges on their entire surface. If necessary, they shall be discharged into the metallic structure of the chassis or any major metallic mass by means of a good conductor.
- 5.12. Moreover, tanks made of plastic material must also be tested according to the specific procedure set out in Section 6.3.

## 6. TESTS

### 6.1. Hydraulic test

The tank must be subjected to a hydraulic internal pressure test which must be carried out on an isolated unit complete with all its accessories. The tank must be completely filled with a non-flammable liquid (water, for example). After all communication with the outside has been cut off, the pressure must be gradually increased, through the pipe connection through which fuel is fed to the engine, to a relative internal pressure equal to double the working pressure used and in any case to not less than an excess pressure of 0,3 bar, which must be maintained for one minute. During this time the tank shell must not crack or leak; however, it may be permanently deformed.

### 6.2. Overturn test

- 6.2.1. The tank and all its accessories must be mounted on to a test fixture in a manner corresponding to the mode of installation on the vehicle for which the tank is intended; this also applies to systems for the compensation of the interior excess pressure.
- 6.2.2. The test fixture shall rotate about an axis lying parallel to the longitudinal vehicle axis.
- 6.2.3. The test will be carried out with the tank filled to 90 % of its capacity and also 30 % of its capacity with a non-flammable liquid having a density and a viscosity close to those of the fuel normally used (water may be accepted).
- 6.2.4. The tank must be turned from its installed position 90° to the right. The tank must remain in this position for at least five minutes.

The tank must then be turned 90° further in the same direction. The tank must be held in this position, in which it is completely inverted, for at least another five minutes.

The tank must be rotated back to its normal position. Testing liquid which has not flowed back from the venting system into the tank must be drained and replenished if necessary.

The tank must be rotated 90° in the opposite direction and left for at least five minutes in this position.

<sup>(1)</sup> OJ L 76, 6.4.1970, p. 1.

The tank must be rotated 90° further in the same direction. This completely inverted position must be maintained for at least five minutes. Afterwards, the tank must be rotated back to its normal position.

### 6.3. Additional tests for tank(s) for vehicles made of a plastic material

#### 6.3.1. Impact resistance

6.3.1.1. The tank must be filled to its capacity with a water-glycol mixture or with another liquid having a low freezing point which does not change the properties of the tank material, and must then be subjected to a perforation test.

6.3.1.2. During this test the tank temperature must be  $233\text{ K} \pm 2\text{ K}$  ( $-40\text{ °C} \pm 2\text{ °C}$ ).

6.3.1.3. A pendulum impact testing fixture must be used for the test. The impact body must be of steel and have the shape of a pyramid with equilateral-triangle faces and a square base, the summit and the edges being rounded to a radius of 3 mm. The centre of percussion of the pendulum must coincide with the centre of gravity of the pyramid; its distance from the axis of rotation of the pendulum must be 1 m. The total mass of the pendulum must be 15 kg. The energy of the pendulum at the moment of impact must be not less than 30 Nm and as close to that value as possible.

6.3.1.4. The tests must be made on the points of the tank which are regarded as vulnerable to frontal or rear collisions. The points regarded as vulnerable are those which are most exposed or weakest having regard to the shape of the tank or the way in which it is installed on the vehicle. The points selected by the laboratories must be indicated in the test report.

6.3.1.5. During the test, the tank must be held in position by the fittings on the side or sides opposite the side of impact. No leak must result from the test.

6.3.1.6. At the choice of the manufacturer, all the impact tests may be carried out on one tank or each may be carried out on a different tank.

#### 6.3.2. Mechanical strength

The tank must be tested under the conditions prescribed in Section 6.1 for leaks and for rigidity of shape. The tank and all its accessories must be mounted onto a test fixture in a manner corresponding to the mode of installation on the vehicle for which the tank is intended. Water at 326 K (53 °C) must be used as the testing fluid and must fill the tank to its capacity. The tank must be subjected to a relative internal pressure equal to double the working pressure and in any case to not less than 0,3 bar at a temperature of  $326\text{ K} \pm 2\text{ K}$  ( $53\text{ °C} \pm 2\text{ °C}$ ) for a period of five hours. During the test, the tank and its accessories must not crack or leak; however, it may be permanently deformed.

#### 6.3.3. Fuel permeability

6.3.3.1. The fuel used for the permeability test must be either the reference fuel specified in Annex VIII to Directive 70/220/EEC or a commercial premium-grade fuel. If the tank is only designed for installation on vehicles with a compression-ignition engine, the tank shall be filled with diesel fuel.

6.3.3.2. Prior to the test, the tank must be filled to 50 % of its capacity with testing fuel and stored, without being sealed, at an ambient temperature of  $313\text{ K} \pm 2\text{ K}$  ( $40\text{ °C} \pm 2\text{ °C}$ ) until the weight loss per unit time becomes constant.

6.3.3.3. The tank must then be emptied and refilled to 50 % of its capacity with test fuel, after which it must be hermetically sealed and be stored at a temperature of  $313\text{ K} \pm 2\text{ K}$  ( $40\text{ °C} \pm 2\text{ °C}$ ). The pressure must be adjusted when the contents of the tank have reached the testing temperature. During the ensuing test period of eight weeks, the loss of weight due to diffusion during the test period shall be determined. The maximum permissible average loss of fuel is 20 g per 24 hours of testing time.

6.3.3.4. If the loss due to diffusion exceeds the value indicated in Section 6.3.3.3, the test described there must be carried out again, on the same tank, to determine the loss by diffusion at  $296\text{ K} \pm 2\text{ K}$  ( $23\text{ °C} \pm 2\text{ °C}$ ), but under the same conditions otherwise. The loss so measured shall not exceed 10 g per 24 hours.

6.3.4. *Resistance to fuel*

After the test referred to in Section 6.3.3, the tank must still meet the requirements set out in Sections 6.3.1 and 6.3.2.

6.3.5. *Resistance to fire*

The tank must be subjected to the following tests.

6.3.5.1. For two minutes the tank, fixed as on the vehicle, must be exposed to flame. There must be no leakage of liquid fuel from the tank.

6.3.5.2. Three tests must be made on different tanks filled with fuel as follows:

6.3.5.2.1. If the tank is designed for installation on vehicles equipped with either a positive ignition engine or a compression ignition engine, three tests must be carried out with tanks filled with premium-grade gasoline;

6.3.5.2.2. If the tank is only designed for installation on vehicles equipped with a compression-ignition engine, three tests must be carried out with tanks filled with diesel fuel;

6.3.5.2.3. For each test the tank must be installed in a testing fixture simulating actual installation conditions as far as possible. The method whereby the tank is fixed in the fixture must correspond to the relevant specifications for the vehicle. Vehicle parts which protect the tank and its accessories against exposure to flame or which affect the course of the fire in any way, as well as specified components installed on the tank and plugs, must be taken into consideration. All openings must be closed during the test, but venting systems must remain operative. Immediately prior to the test the tank must be filled with the specified fuel to 50 % of its capacity.

6.3.5.3. The flame to which the tank is exposed must be obtained by burning commercial fuel for positive-ignition engines (hereafter called "fuel") in a pan. The quantity of fuel poured into the pan shall be sufficient to permit the flame, under free-burning conditions, to burn for the whole test procedure.

6.3.5.4. The pan dimensions must be chosen so as to ensure that the sides of the fuel tank are exposed to the flame. The pan must therefore exceed the horizontal projection of the tank by at least 20 cm, but not more than 50 cm. The side walls of the pan must not project more than 8 cm above the level of the fuel at the start of the test.

6.3.5.5. The pan filled with fuel must be placed under the tank in such a way that the distance between the level of the fuel in the pan and the tank bottom corresponds to the design height of the tank above the road surface at the unladen mass (see Section 2.3). Either the pan, or the testing fixture, or both, must be freely movable.

6.3.5.6. During phase C of the test, the pan must be covered by a screen placed  $2\text{ cm} \pm 1\text{ cm}$  above the fuel level. The screen must be made of a refractory material, as prescribed in Appendix 2. There must be no gap between the bricks and they must be supported over the fuel pan in such a manner that the holes in the bricks are not obstructed. The length and width of the frame must be 2 cm to 4 cm smaller than the interior dimensions of the pan so that a gap of 1 cm to 2 cm exists between the frame and the wall of the pan to allow ventilation.

6.3.5.7. When the tests is carried out in the open air, sufficient wind protection must be provided and the wind velocity at fuel-pan level must not exceed 2,5 km/h. Before the test the screen must be heated to  $308\text{ K} \pm 5\text{ K}$  ( $35^\circ\text{C} \pm 5^\circ\text{C}$ ). The fire bricks may be wetted in order to guarantee the same test conditions for each successive test.

6.3.5.8. The test must comprise four phases (see Appendix 1).

6.3.5.8.1. Phase A: Pre-heating (figure 1)

The fuel in the pan must be ignited at a distance of at least 3 m from the tank being tested. After 60 seconds pre-heating, the pan must be placed under the tank.

6.3.5.8.2. Phase B: Direct exposure to flame (figure 2)

For 60 seconds the tank must be exposed to the flame from the freely burning fuel.

6.3.5.8.3. Phase C: Indirect exposure to flame (figure 3)

As soon as phase B has been completed, the screen must be placed between the burning pan and the tank. The tank must be exposed to this reduced flame for a further 60 seconds.

6.3.5.8.4. Phase D: End of test (figure 4)

The burning pan covered with the screen must be moved back to its original position (phase A). If, at the end of the test, the tank is burning, the fire must be extinguished forthwith.

6.3.5.9. The results of the test shall be considered satisfactory if no liquid fuel is leaking from the tank.

6.3.6. *Resistance to high temperature*

6.3.6.1. The fixture used for the test must match the manner of installation of the tank on the vehicle, including the way in which the tank vent works.

6.3.6.2. The tank filled to 50 % of its capacity with water at 293 K (20 °C) must be subjected for one hour to an ambient temperature of 368 K  $\pm$  2 K (95 °C  $\pm$  2 °C).

6.3.6.3. The results of the test shall be considered satisfactory if, after the test, the tank is not leaking or seriously deformed.

6.3.7. *Markings on the fuel tank*

6.3.7.1. The trade name or mark must be affixed to the tank; it must be indelible and clearly legible on the tank when the latter is installed on the vehicle.

7. AMENDMENTS TO APPROVAL

7.1. In the case of amendments to approvals granted pursuant to this Directive, the provisions of Article 5 of Directive 70/156/EEC shall apply.

8. CONFORMITY OF PRODUCTION

8.1. 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.

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Appendix 1

TEST OF RESISTANCE TO FIRE

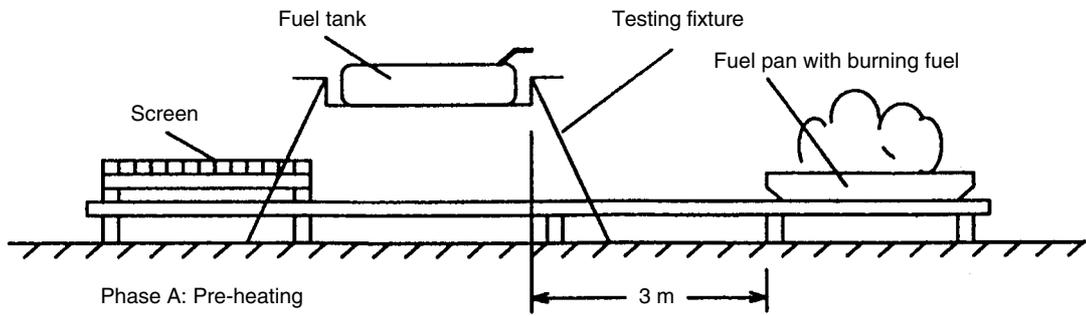


Figure 1

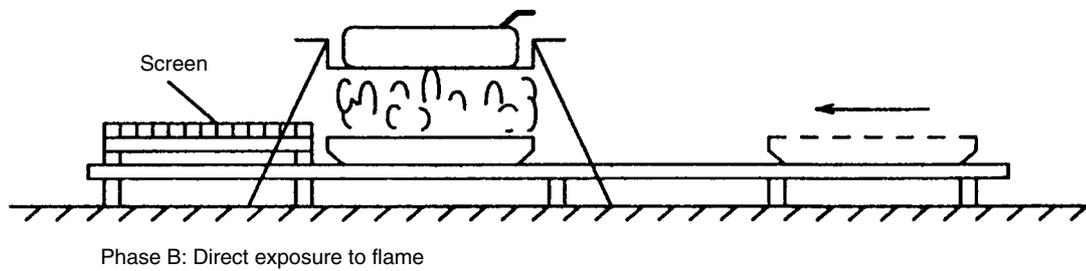


Figure 2

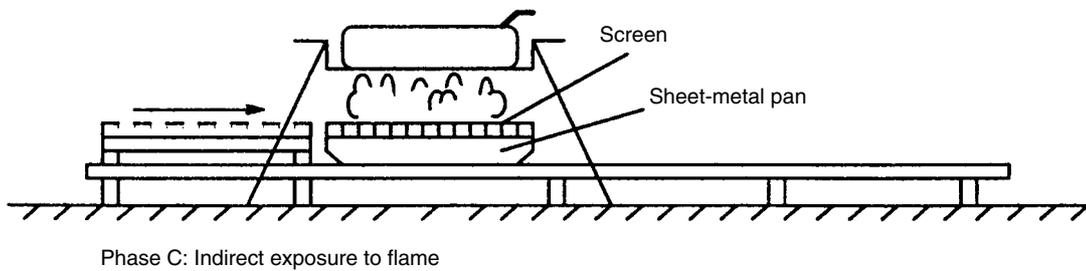


Figure 3

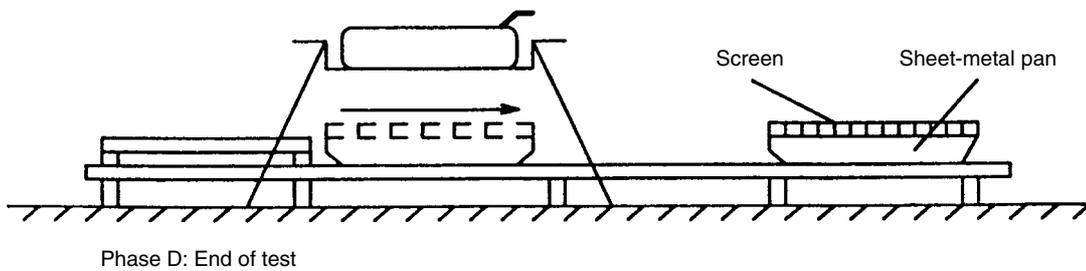
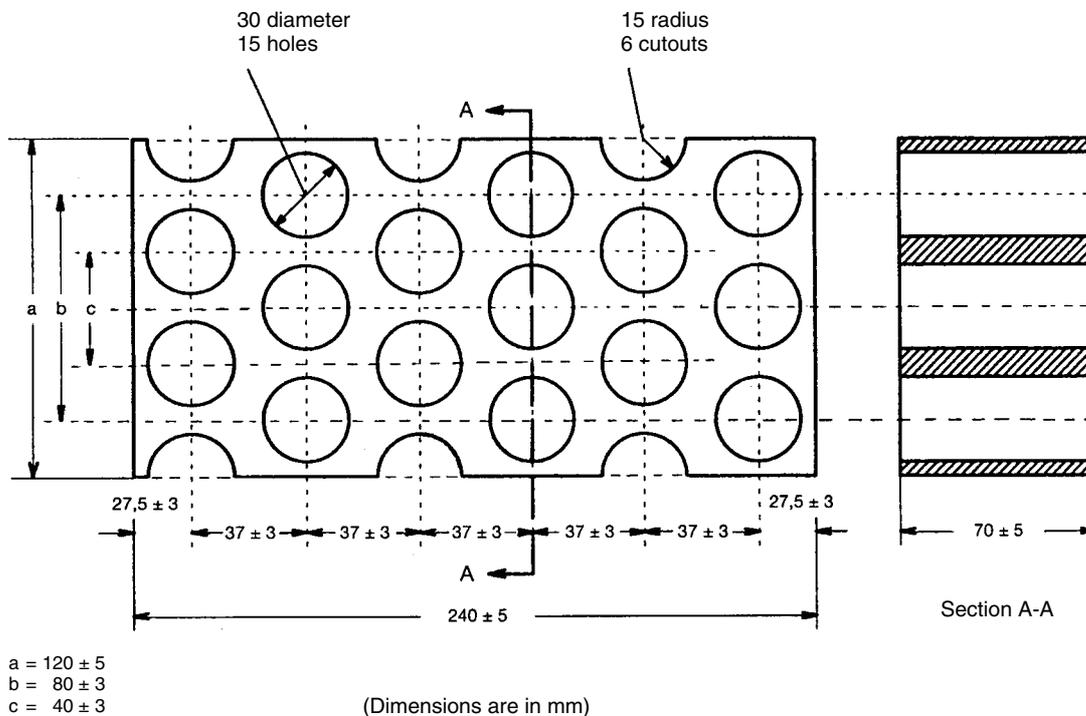


Figure 4

## Appendix 2

## DIMENSIONS AND TECHNICAL DATA OF FIREBRICKS



Fire resistance (Seger-Kegel)	SK 30
Al <sub>2</sub> O <sub>3</sub> content	30 to 33 %
Open porosity (Po)	20 to 22 % vol.
Density	1 900 to 2 000 kg/m <sup>3</sup>
Effective holed area	44,18 %

## Appendix 3

## 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 2000/8/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 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 tanks 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.

## Appendix 4

**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 vehicle/component/separate technical unit <sup>(1)</sup> with regard to Directive 70/221/EEC as last amended by Directive 2000/8/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.

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(<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 2000/8/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: .....

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

**DIRECTIVE 2000/9/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**of 20 March 2000**

**relating to cableway installations designed to carry persons**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF  
THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 47(2) and Articles 55 and 95 thereof,

Having regard to the proposal from the Commission <sup>(1)</sup>,

Having regard to the opinion of the Economic and Social Committee <sup>(2)</sup>,

Acting in accordance with the procedure laid down in Article 251 of the Treaty <sup>(3)</sup>,

Whereas:

- (1) Cableway installations designed to carry persons (hereinafter referred to as 'cableway installations') are designed, manufactured, put into service and operated with the object of carrying persons. Principally, cableway installations are mountain lift systems used in high-altitude tourist resorts and consisting of funicular railways, cable cars, gondolas, chairlifts and drag lifts, but may also consist of cableway installations used in urban transport facilities. Some types of cableway installation may use other, completely different basic principles which cannot be excluded *a priori*. Therefore, provision should be made for introducing specific requirements designed to achieve the same safety objectives as those laid down in this Directive.
- (2) Cableway installations are principally operated in connection with tourism, particularly in mountain areas, which plays an important role in the economy of the regions concerned and is becoming an increasingly important factor in the trade balances of the Member States. From a technical point of view, the cableway installations sector also ranks among the industrial activities linked to the production of capital equipment and to activities in the building and civil engineering sector.
- (3) Member States are responsible for ensuring the safety of cableway installations at the time of manufacture, putting into service and during operation. Moreover,

they are responsible together with the competent authorities for such matters as land-use, regional planning and environmental protection. National regulations differ widely as a result of techniques peculiar to the national industry as well as local customs and knowhow. They stipulate specific dimensions and devices and particular characteristics. In the light of these circumstances, manufacturers are obliged to redefine their equipment for each market. This makes it difficult to provide standard solutions and adversely affects competitiveness.

- (4) The essential health and safety requirements must be observed in order to ensure that cableway installations are safe. Those requirements are to be applied with discernment to take account of the state of the art at the time of construction and of technical and economic requirements.
- (5) Further, cableway installations may straddle frontiers and the construction thereof may run up against conflicting national rules.
- (6) Steps should be taken to define, on a Community-wide basis, essential human safety and health requirements, environmental protection and consumer protection requirements applicable to cableway installations, subsystems and their safety components. Without this, mutual recognition of national regulatory provisions would create insoluble political and technical difficulties as regards interpretation and liability. By the same token, standardisation without prior definition of harmonised regulatory requirements is not sufficient to solve the problems.
- (7) Responsibility for approving cableway installations is generally vested in a service of the competent national authorities; in certain cases, approval of the components cannot be obtained beforehand but only when the customer applies for such approval. By the same token, the requisite inspection of the cableway installation prior to its entry into service may result in the rejection of certain components or in diverse technological solutions. Such a state of affairs leads to increased costs and longer delivery periods and is particularly penalising for foreign manufacturers. Moreover, cableway installations are also carefully monitored by the public services when they are operational. The causes of serious accidents may be linked to the choice of site, to the system of transport itself, to the structures, or to the way in which the system is operated and maintained.

<sup>(1)</sup> OJ C 70, 8.3.1994, p. 8 and OJ C 22, 26.1.1996, p. 12.

<sup>(2)</sup> OJ C 388, 31.12.1994, p. 26.

<sup>(3)</sup> Opinion of the European Parliament of 6 April 1995 (OJ C 109, 1.5.1995, p. 122), confirmed on 27 October 1999 (not yet published in the Official Journal), Council common position of 28 June 1999 (OJ C 243, 27.8.1999, p. 1) and Decision of the European Parliament of 27 October 1999 (not yet published in the Official Journal). Council Decision of 16 December 1999.

- (8) In these circumstances, the safety of cableway installations depends equally on the surrounding

conditions, on the quality of the industrial goods supplied and on the way in which they are assembled, installed on site and monitored during operation. This underlines the importance of having a general overview of cableway installations in order to assess the level of safety and of adopting a common approach at Community level to quality assurance. In these circumstances, in order to enable manufacturers to overcome their present difficulties and in order to enable users to derive the full benefit from cableway installations and to enjoy an equal level of development in all Member States, a set of requirements should be defined, together with control and inspection procedures to be applied uniformly in all Member States.

- (9) Persons using cableways, from all Member States and beyond, must be ensured a satisfactory level of safety. In order to meet this requirement, it is necessary to define procedures and examination, control and inspection methods. This necessitates the use of standardised technical devices which must be incorporated in cableway installations.
- (10) Where Council Directive 85/337/EEC<sup>(1)</sup> so requires, the effects of cableway installations on the environment must be assessed; above and beyond the effects mentioned in that Directive, both environmental protection and requirements in connection with the sustainable development of tourism should be taken into account.
- (11) Cableway installation may come within the scope of Council Directive 93/38/EEC of 14 June 1993 coordinating the procurement procedures of entities operating in the water, energy, transport and telecommunications sectors<sup>(2)</sup>.
- (12) Technical specifications should be included in the general documentation or in the technical specifications peculiar to each contract. Those technical specifications must be defined by reference to European specifications where such specifications exist.
- (13) In order to make it easier to prove that the essential requirements have been complied with, it is useful to have harmonised European standards, compliance with which enables it to be presumed that the product is in conformity with the said essential requirements. Harmonised European standards are drawn up by private bodies and must retain their non-mandatory status. For this purpose, the European Committee for Standardisation (CEN) and the European Committee for Electrotechnical Standardisation (Cenelec) are recognised as the bodies competent to adopt harmonised standards that follow the general guidelines for cooperation between the Commission and those two bodies signed on 13 November 1984.
- (14) For the purposes of this Directive, a harmonised standard is a technical specification (European standard or harmonisation document) adopted by one or other of those bodies, or by both, at the request of the Commission pursuant to Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on information society services<sup>(3)</sup> and in accordance with the general guidelines referred to above. In relation to standardisation, the Commission should be assisted by the committee referred to in that Directive, which will, if necessary, consult technical experts.
- (15) Only safety components or subsystems of an installation which conform to a national standard transposing a harmonised standard the reference of which has been published in the *Official Journal of the European Communities*, are deemed to conform to the relevant essential requirements of this Directive, regardless of the need for any special justification.
- (16) In the absence of European specifications, the technical specifications should as far as possible be defined by reference to other standards in use in the Community. Main contractors may define the additional specifications needed to supplement the European specifications or other standards. These provisions must ensure that the harmonised Community-level requirements with which cableway installations must comply are satisfied.
- (17) It is, moreover, in the interest of the Member States to have an international standardisation system capable of producing standards which are actually used by international trading partners and satisfy the requirements of Community policy.
- (18) In certain Member States at the moment in the general documentation or specifications peculiar to each contract, main contractors may indicate the control and inspection procedures. Those procedures must in future, notably in the case of safety components, fall within the framework of the Council resolution of 21 December 1989 concerning a global approach to conformity assessment<sup>(4)</sup>. The concept of safety component applies not only to physical objects but also to intangible objects such as software. The procedures for assessing the conformity of safety components must be based on use of the modules provided for in Council Decision 93/465/EEC<sup>(5)</sup>. In the case of critical safety components, the principles and conditions for the application of design quality assurance should be defined; such an approach is necessary in order to

<sup>(1)</sup> Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment (OJ L 175, 5.7.1985, p. 40). Directive as last amended by Directive 97/11/EC (OJ L 73, 14.3.1997, p. 5).

<sup>(2)</sup> OJ L 199, 9.8.1993, p. 84. Directive as last amended by Directive 98/4/EC (OJ L 101, 1.4.1998, p. 1).

<sup>(3)</sup> OJ L 204, 21.7.1998, p. 37. Directive as amended by Directive 98/48/EC (OJ L 217, 5.8.1998, p. 18).

<sup>(4)</sup> OJ C 10, 16.1.1990, p. 1.

<sup>(5)</sup> Council Decision 93/465/EEC of 22 July 1993 concerning the modules for the various phases of the conformity assessment procedures and the rules for the affixing and use of the CE conformity marking, which are intended to be used in the technical harmonisation Directives (OJ L 220, 30.8.1993, p. 23).

- promote the general adoption of the quality assurance system in undertakings.
- (19) When conducting methodical safety analysis of cableway installations, it is necessary to identify the components on which the safety of the cableway installation depends.
- (20) In their contractual documents, main contractors lay down, by reference to European specifications, the characteristics which manufacturers are under a contractual obligation to observe, particularly for safety components. In these circumstances, the conformity of the components is linked principally to their field of use and not solely to free movement on the Community market.
- (21) Safety components should bear the CE marking to be affixed either by the manufacturer or by his authorised representative established within the Community. The CE marking means that the safety component complies with the provisions of this Directive and those of other applicable Community Directives on CE marking.
- (22) It is not necessary to affix the CE marking to subsystems subject to the provisions of this Directive but, on the basis of the assessment of conformity following the procedures laid down for this purpose in this Directive, the declaration of conformity will suffice. This is without prejudice to the obligation incumbent on manufacturers to affix the CE marking to certain subsystems in order to certify that they conform with other Community provisions applicable to them.
- (23) Member States' responsibility for safety, health and other aspects covered by the essential requirements on their territory must be recognised in a safeguard clause providing for the appropriate Community procedures.
- (24) A procedure is necessary for the inspection of subsystems of cableway installations before they are put into service. Such inspection must enable the authorities to satisfy themselves that at each stage of the design, manufacturing and entry into service, the result obtained conforms with the applicable provisions of this Directive. This must enable manufacturers to count on equal treatment, irrespective of the Member State in question. The principles and conditions governing EC verification of subsystems of installations should therefore be defined.
- (25) The constraints linked to the operation of cableway installations must be taken into account in the safety analysis, albeit not in such a way as to jeopardise the principle of free movement of goods or the safety of cableway installations. Consequently, although this Directive does not cover the actual operation of cableway installations, the Commission should propose to the Member States a series of recommendations designed to ensure that such installations situated on their territory are operated in such a way as to offer users, operating personnel and third parties a high degree of protection.
- (26) In the case of cableway installations, full-scale tests can be carried out on technological innovations only on the construction of a new installation. In these circumstances, a procedure should be provided for which, while ensuring that the essential requirements are complied with, also enables special conditions to be established.
- (27) Cableway installations for which authorisation has been given but in connection with which building work has not yet started or which are already under construction must comply with the provisions of this Directive, unless Member States decide otherwise, giving their reasons, and an equally high level of protection is achieved. The provisions of this Directive must be complied with where existing cableway installations are modified if national legislation requires such modifications to be authorised.
- (28) It is not necessary to require all existing cableway installations to be brought into conformity with the provisions applicable to new installations. However, this may prove necessary if the essential safety objectives are not complied with. In that event, the Commission should propose to the Member States a series of recommendations designed to ensure that existing cableway installations on their territory afford users a high degree of protection in the light of the provisions applicable in this field to new installations.
- (29) Particularly in the absence of a European specification, the notified bodies responsible for procedures for assessing the conformity both of safety components and of subsystems of cable installations must coordinate their decisions as closely as possible. The Commission must ensure that they do so.
- (30) Implementation of the essential requirements, particularly with regard to the safety of the installation, and coordination of all procedures call for the establishment of a committee.
- (31) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission<sup>(1)</sup>,

HAVE ADOPTED THIS DIRECTIVE:

#### CHAPTER I

#### GENERAL PROVISIONS

##### *Article 1*

1. This Directive shall apply to cableway installations designed to carry persons.
2. For the purposes of this Directive 'cableway installations designed to carry persons' shall mean installations made up of several components, designed, manufactured, assembled and put into service with the object of carrying persons.

<sup>(1)</sup> OJ L 184, 17.7.1999, p. 23.

These on-site installations are used for the carriage of persons in vehicles or by towing devices, whereby the suspension and/or traction is provided by cables positioned along the line of travel.

3. The installations concerned are:

- (a) funicular railways and other installations with vehicles mounted on wheels or on other suspension devices where traction is provided by one or more cables;
- (b) cable cars where the cabins are lifted and/or displaced by one or more carrier cables; this category also includes gondolas and chair lifts;
- (c) drag lifts, where users with appropriate equipment are dragged by means of a cable.

4. This Directive shall apply to:

- installations built and put into service, as from its entry into force,
- subsystems and safety components placed on the market, as from its entry into force.

It concerns such harmonisation provisions as are necessary and sufficient in order to ensure and guarantee compliance with the essential requirements referred to in Article 3(1).

In the event that important characteristics, subsystems or safety components of existing installations undergo modifications for which a new authorisation for entry into service is required by the Member State in question, such modifications and their repercussions on the installation as a whole must satisfy the essential requirements referred to in Article 3(1).

5. For the purposes of this Directive:

- 'installation' shall mean the whole on-site system, consisting of infrastructure and the subsystems listed in Annex I where infrastructure specially designed for each installation and constructed on site shall mean the layout, system data, station structures and structures along the line, which are needed for the construction and the operation of the installation, including the foundations,
- 'safety component' shall mean any basic component, set of components, subassembly or complete assembly of equipment and any device incorporated in the installation for the purpose of ensuring a safety function and identified by the safety analysis, the failure of which endangers the safety or health of persons, be they users, operating personnel or third parties,
- 'main contractor' shall mean any natural or legal person who commissions the construction of an installation,

- 'operability' shall mean all the technical provisions and measures which have an impact on design and realisation and are necessary in order for the installation to operate safely,

- 'maintainability' shall mean all the technical provisions and measures which have an impact on design and realisation and are necessary for maintenance designed to ensure that the installation operates safely.

6. This Directive shall not apply to:

- lifts within the meaning of Directive 95/16/EC<sup>(1)</sup>,
- cable-operated tramways of traditional construction,
- installations used for agricultural purposes,
- on-site or mobile equipment for use in fairgrounds and/or amusement parks which are designed for leisure purposes and not as a means for transporting persons,
- mining installations or on-site installations used for industrial purposes,
- cable-operated ferries,
- rack railways,
- chain-driven installations.

#### Article 2

1. This Directive shall apply without prejudice to other Community Directives, although compliance with the essential requirements laid down in this Directive may call for the application of special European specifications established for that purpose.

2. 'European specification' shall mean a common technical specification, a European technical approval or a national standard transposing a European standard.

3. The references of European specifications, which may be common technical specifications, European technical approvals within the meaning of Directive 93/38/EEC or national standards used to transpose harmonised European standards, shall be published in the *Official Journal of the European Communities*.

4. Member States shall publish the references of national standards used to transpose harmonised European standards.

5. In the absence of harmonised European standards, Member States shall take the necessary measures to inform parties concerned of those existing national standards and technical specifications which are regarded as important or useful for ensuring proper transposition of the essential requirements referred to in Article 3(1).

<sup>(1)</sup> Directive 95/16/EC of the European Parliament and of the Council of 29 June 1995 on the approximation of the laws of the Member States relating to lifts (OJ L 213, 7.9.1995, p. 1).

6. Those technical specifications which are also required to supplement European specifications or other standards must not jeopardise compliance with the essential requirements referred to in Article 3(1).

7. Where a Member State or the Commission considers that a European specification as referred to in paragraph 2 does not entirely satisfy the essential requirements referred to in Article 3(1), the Commission or the Member State concerned shall bring the matter before the committee referred to in Article 17 giving the reasons therefor. The committee shall deliver an opinion without delay.

In the light of the committee's opinion and following consultations with the committee set up pursuant to Directive 98/34/EC in the case of harmonised European standards, the Commission shall inform the Member States whether or not it is necessary to withdraw the European specifications in question from the published information referred to in paragraph 3.

#### Article 3

1. The installations and their infrastructure, subsystems and safety components of an installation must comply with the essential requirements which are laid down in Annex II and are applicable to them.

2. Where a national standard transposing a harmonised European standard the reference for which has been published in the *Official Journal of the European Communities* covers the essential safety requirements laid down in Annex II, the installations and their infrastructure, subsystems and safety components of any installation constructed in accordance with the standard shall be presumed to comply with the relevant essential requirements.

#### Article 4

1. At the request of the main contractor or his authorised representative, all planned installations shall be subject to a safety analysis as defined in Annex III which covers all safety aspects of the system and its surroundings in the context of the design, realisation and putting into service and makes it possible to identify from past experience risks liable to occur during operation.

2. The safety analysis shall be the subject of a safety report recommending the measures envisaged to deal with any such risks and including a list of the safety components and subsystems which must be covered by the provisions of Chapter II or III, as the case may be.

### CHAPTER II

#### SAFETY COMPONENTS

#### Article 5

1. Member States shall take all necessary measures to ensure that safety components:

— are placed on the market only if they permit the construction of installations complying with the essential requirements referred to in Article 3(1),

— are put into service only if they permit the construction of installations which are not liable to endanger the health or safety of persons or, where applicable, the safety of property when properly installed and maintained and used for their intended purpose.

2. This Directive shall not affect Member States' entitlement to lay down, in compliance with the Treaty, such requirements as they may deem necessary to ensure that persons and in particular workers are protected when using the installations in question, provided that this does not mean that the installations are modified in a way not specified in the Directive.

#### Article 6

Member States may not, on the basis of this Directive, prohibit, restrict or impede the placing on their national markets of safety components intended to be used in an installation where such components comply with the provisions of this Directive.

#### Article 7

1. Member States shall regard safety components referred to in Article 4(2) bearing the CE conformity marking shown in Annex IX and accompanied by the EC declaration of conformity provided for in Annex IV as conforming with all the relevant provisions of this Directive.

2. Before a safety component is placed on the market, the manufacturer or his authorised representative established in the Community must:

(a) submit the safety component to a conformity assessment procedure in accordance with Annex V, and

(b) affix the CE conformity marking on the safety component and, on the basis of the modules laid down in Decision 93/465/EEC, draw up an EC declaration of conformity in accordance with Annex IV.

3. The procedure for assessing safety component conformity shall be carried out at the request of the manufacturer or his authorised representative established in the Community by the notified body referred to in Article 16 and appointed by him for this purpose.

4. Where the safety components are subject to other Directives concerning other aspects and which also provide for the affixing of the CE conformity marking, the marking shall indicate that the safety component is also presumed to conform to the provisions of those other Directives.

5. Where neither the manufacturer nor his authorised representative established in the Community has complied with the obligations of paragraphs 1 to 4, those obligations shall devolve on whomsoever places the safety component on the market in the Community. The same obligations shall apply to whomsoever manufactures safety components for his own use.

## CHAPTER III

**SUBSYSTEMS***Article 8*

Member States shall take all necessary measures to ensure that subsystems within the meaning of Annex I are placed on the market only if they permit the construction of installations complying with the essential requirements referred to in Article 3(1).

*Article 9*

Member States may not, on the basis of this Directive, prohibit, restrict or impede the placing on their national markets for use in an installation, of subsystems which comply with the provisions of this Directive.

*Article 10*

1. Member States shall regard subsystems within the meaning of Annex I which are accompanied by the EC declaration of conformity based on the model provided for in Annex VI and by the technical documentation provided for in paragraph 3 of this Article, as conforming with the relevant essential requirements referred to in Article 3(1).

2. The EC procedure for examining subsystems shall be carried out at the request of the manufacturer or his authorised representative established in the Community or, in their absence, any natural or legal person who places the subsystem in question on the market, by the notified body referred to in Article 16 which the manufacturer or his authorised representative or the abovementioned person appointed for that purpose. The EC declaration of conformity shall be drawn up by the manufacturer or his authorised representative or the abovementioned person on the basis of the EC examination in accordance with Annex VII.

3. The notified body shall draw up the EC examination certificate in accordance with Annex VII and the technical documentation which accompanies it. The technical documentation must include all the necessary documents concerning the characteristics of the subsystem and, where appropriate, all the documents certifying the conformity of the safety components. It must also contain all the relevant details of the conditions of, and restrictions on, use and of the instructions for servicing.

## CHAPTER IV

**INSTALLATIONS***Article 11*

1. Each Member State shall lay down procedures for authorising the construction and the putting into service of installations which are located within its territory.

2. Member States shall take all appropriate measures and determine the procedures to ensure that safety components and subsystems referred to in Annex I incorporated in installations constructed in their territory are installed and put into service only if they permit the construction of installations

which are not liable to endanger the safety and health of persons or, where applicable, the safety of property, when properly installed and maintained and used in accordance with their intended purpose.

3. Where a Member State considers a safety component or subsystem referred to in Annex I to have been designed or constructed using an innovative approach, it shall take all appropriate measures and may make the construction and/or putting into service of an installation in which such innovative components or subsystems are to be used subject to special conditions. It shall immediately inform the Commission thereof, stating its reasons. The Commission shall immediately refer the matter to the committee provided for in Article 17.

4. Member States shall take all appropriate measures to ensure that the installations are constructed and put into service only if they have been designed and constructed in such a way as to guarantee compliance with the essential requirements referred to in Article 3(1).

5. On the basis of the provisions referred to in paragraph 1, Member States may not prohibit, restrict or hinder the free movement of safety components and subsystems referred to in Annex I which are accompanied by an EC declaration of conformity within the meaning of Article 7 or Article 10.

6. The safety analysis, the EC declarations of conformity and the accompanying technical documentation relating to the safety components and subsystems referred to in Annex I must be submitted by the main contractor or his authorised representative to the authority responsible for approving the installation, and a copy of them shall be kept at the installation.

7. Member States must ensure that the safety analysis, the safety report and the technical documentation are provided and include all the documentation concerning the characteristics of the installation and, where appropriate, all the documents certifying the conformity of the safety components and subsystems referred to in Annex I. In addition, documents must exist setting out the necessary conditions, including the restrictions on operation, and full details of servicing supervision, adjustment and maintenance.

*Article 12*

Without prejudice to other legislative provisions, Member States may not prohibit, restrict or impede the construction and putting into service within their territories of installations which comply with this Directive.

*Article 13*

Member States shall ensure that an installation remains in operation only if it conforms to the conditions set out in the safety report.

CHAPTER V  
SAFEGUARDS

Article 14

1. Where a Member State ascertains that a safety component bearing the CE conformity marking placed on the market and used in accordance with its intended purpose or a subsystem with an EC declaration of conformity as referred to in Article 10(1), used in accordance with its intended purpose, is liable to endanger the safety and health of persons, and, where applicable, the safety of property, it shall take all appropriate measures to restrict the conditions of use of the component or subsystem or prohibit its use.

The Member State concerned shall immediately inform the Commission of any such measure, indicating the reasons for its decision and whether non-conformity is due, in particular, to:

- (a) failure to satisfy the essential requirements referred to in Article 3(1),
- (b) incorrect application of the European specifications referred to in Article 2(2) in so far as application of those specifications is invoked,
- (c) shortcomings in the European specifications referred to in Article 2(2).

2. The Commission shall enter into consultation with the parties concerned at the earliest opportunity. Where, after such consultation, the Commission finds that:

- the measures are justified, it shall immediately so inform the Member State which took the initiative and the other Member States; where the decision referred to in paragraph 1 is based on shortcomings in the European specifications, the Commission shall, after consulting the parties concerned, initiate the procedure referred to in Article 2(7) if the Member State which has taken the decision intends to maintain it,
- the measures relating to a safety component are unjustified, it shall immediately so inform the manufacturer or his authorised representative established in the Community and the Member State which took the measures,
- the measures relating to a subsystem are unjustified, it shall immediately so inform the manufacturer or his authorised representative established in the Community or, in their absence, any natural or legal person having placed the subsystem in question on the market, and the Member State which took the measures.

3. Where a safety component bearing the CE conformity marking is found not to comply, the competent Member State shall take appropriate action against whomsoever affixed that marking and drew up the EC declaration of conformity and shall so inform the Commission and the other Member States.

4. Where a subsystem with an EC declaration of conformity is found not to comply, the competent Member State shall take appropriate action against whomsoever drew up the EC declaration of conformity and shall so inform the Commission and the other Member States.

5. The Commission shall ensure that the Member States are kept informed of the outcome of the procedure.

Article 15

If a Member State finds that an approved installation which is used in accordance with its intended purpose is liable to endanger the safety and the health of persons and, where appropriate, the safety of property, it shall take all appropriate measures to restrict the conditions of operation of the installation or to prohibit the operation thereof.

CHAPTER VI

NOTIFIED BODIES

Article 16

1. Member States shall notify the Commission and the other Member States of the bodies responsible for carrying out the conformity assessment procedure referred to in Articles 7 and in Article 10, specifying the field of competence of each body. The Commission shall assign identification numbers to them. The Commission shall publish in the *Official Journal of the European Communities* the list of notified bodies, together with their identification number and their fields of competence, and shall ensure that the list is kept up to date.

2. Member States must apply the criteria laid down in Annex VIII in assessing the bodies to be notified. Bodies meeting the assessment criteria laid down in the relevant harmonised European standards shall be presumed to fulfil those criteria.

3. A Member State which has notified a body must withdraw its notification if it finds that the body no longer meets the criteria laid down in Annex VIII. It shall immediately inform the Commission and the other Member States thereof.

4. Should the need arise, coordination of the notified bodies shall be implemented in accordance with Article 17.

CHAPTER VII

COMMITTEE

Article 17

- 1. The Commission shall be assisted by a committee.
- 2. Where reference is made to this paragraph, Articles 3 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.
- 3. The committee shall draw up its rules of procedure.

CHAPTER VIII

CE CONFORMITY MARKING

Article 18

1. The CE conformity marking shall consist of the letters 'CE'. Annex IX sets out the model to be used.

2. The CE conformity marking shall be affixed to each safety component distinctly and visibly or, where that is not possible, on a label inseparably attached to the component.

3. The affixing on safety components of markings which are likely to mislead third parties as to the meaning and form of the CE conformity marking shall be prohibited. Any other marking may be affixed to the safety component, provided that the visibility and legibility of the CE conformity marking are not thereby reduced.

4. Without prejudice to Article 14:

- (a) where a Member State establishes that the CE conformity marking has been wrongly affixed, the manufacturer of the safety component or the authorised representative of the latter established in the Community shall be obliged to make the product conform as regards the provisions concerning the CE conformity marking and to end the infringement under the conditions imposed by the Member State;
- (b) should non-conformity persist, the Member State must take all appropriate measures to restrict or prohibit the placing on the market of the safety component in question, or to ensure that it is withdrawn from the market in accordance with the procedures provided for in Article 14.

#### CHAPTER IX

#### FINAL PROVISIONS

##### Article 19

Any decision taken pursuant to this Directive which restricts the use of safety components or of a subsystem in an installation or the placing on the market thereof shall state the grounds on which it is based. Such a decision shall be notified at the earliest opportunity to the party concerned, who shall at the same time be informed of the legal remedies available to him under the law in force in the Member States concerned and of the time limits to which such remedies are subject.

##### Article 20

Installations for which authorisation has been given before the entry into force of this Directive and for which construction has not yet started must comply with the provisions of this Directive, unless Member States decide otherwise, stating their reasons, and an equally high level of protection is achieved.

##### Article 21

1. Member States shall adopt and publish the laws, regulations and administrative provisions necessary to comply with this Directive not later than 3 May 2002. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

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

3. Member States shall, for a period of four years following entry into force of this Directive, allow:

- the construction and putting into service of installations,
- the placing on the market of subsystems and safety components

which conform with the provisions in force in their territories on the date of entry into force of this Directive.

4. The Commission shall report to the European Parliament and the Council on the implementation of this Directive, and in particular Article 1(6) and 17 thereof, not later than 3 May 2004 and, if necessary, submit any proposal for appropriate amendments.

##### Article 22

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

##### Article 23

This Directive is addressed to the Member States.

Done at Brussels, 20 March 2000.

For the European Parliament

The President

N. FONTAINE

For the Council

The President

J. GAMA

## ANNEX I

**SUBSYSTEMS OF AN INSTALLATION**

For the purposes of this Directive, an installation is divided up into infrastructure and the subsystems listed below, with exploitability and maintainability having to be taken into account in each case:

1. Cables and cable connections
  2. Drives and brakes
  3. Mechanical equipment
    - 3.1. Cable winding gear
    - 3.2. Station machinery
    - 3.3. Line engineering
  4. Vehicles
    - 4.1. Cabins, seats or drag devices
    - 4.2. Suspension gear
    - 4.3. Driving gear
    - 4.4. Connections to the cable
  5. Electrotechnical devices
    - 5.1. Monitoring, control and safety devices
    - 5.2. Communication and information equipment
    - 5.3. Lightning protection equipment
  6. Rescue equipment
    - 6.1. Fixed rescue equipment
    - 6.2. Mobile rescue equipment
-

## ANNEX II

**ESSENTIAL REQUIREMENTS****1. Purpose**

This Annex sets out the essential requirements, including maintainability and operability, applicable to the design, construction and entry into service of installations referred to in Article 1(5) of this Directive.

**2. General requirements****2.1. Safety of persons**

The safety of users, workers and third parties is a fundamental requirement for the design, construction and operation of installations.

**2.2. Principles of safety**

All installations must be designed, operated and serviced in accordance with the following principles, which are to be applied in the order given:

- eliminate or, if that is not possible, reduce risks by means of design and construction features,
- define and implement all necessary measures to protect against risks which cannot be eliminated by the design and construction features,
- define and state the precautions which should be taken to avoid the risks which it has not been possible to eliminate completely by means of the provisions and measures referred to in the first and second indents.

**2.3. Consideration of external factors**

Installations must be so designed and constructed as to make it possible to operate them safely, taking into account the type of installation, the nature and physical features of the terrain on which it is installed, its surroundings and atmospheric and meteorological factors, as well as possible structures and obstacles located in the vicinity either on the ground or in the air.

**2.4. Dimensions**

The installation, the subsystems and all its safety components must be dimensioned, designed and constructed to withstand, with a sufficient degree of safety, all stresses encountered under all foreseeable conditions, including those which occur when not in operation, and taking account in particular of outside influences, dynamic effects and fatigue phenomena, while complying with the acknowledged rules of the art, in particular with regard to the choice of materials.

**2.5. Assembly**

- 2.5.1. The installation, the subsystems and all the safety components must be designed and constructed in such a way as to ensure that they can be safely assembled and put into place.
- 2.5.2. The safety components must be so designed as to make assembly mistakes impossible, either as a result of construction or by means of appropriate markings on the components themselves.

**2.6. Integrity of the installation**

- 2.6.1. The safety components must be designed and constructed and be usable in such a way as to ensure that, in every case, their own operational integrity and/or the safety of the installation is ensured, as defined in the safety analysis in Annex III, so that their failure is highly improbable and with an adequate safety margin.
- 2.6.2. The installation must be designed and constructed in such a way as to ensure that, during its operation, any failure of a component which might affect safety, even indirectly, is met by an appropriate measure being taken in good time.

- 2.6.3. The safeguards referred to in points 2.6.1 and 2.6.2 must apply throughout the period between two scheduled inspections of the component concerned. The time period for the scheduled inspection of the safety components must be clearly indicated in the instruction manual.
- 2.6.4. Safety components which are incorporated into installations as spare parts must satisfy the essential requirements of this Directive and the conditions relating to the smooth interaction with the other parts of the installations.
- 2.6.5. Measures must be taken to ensure that the effects of a fire in the installation do not endanger the safety of persons being transported and workers.
- 2.6.6. Special measures must be taken to protect installations and persons from the effects of lightning.

2.7. *Safety devices*

- 2.7.1. Any defect in the installation which could result in a failure endangering safety must, where practicable, be detected, reported and processed by a safety device. The same applies to any normally foreseeable external event which may endanger safety.
- 2.7.2. It must be possible at all times to shut down the installation manually.
- 2.7.3. After the installation has been shut down by a safety device, it must not be possible to restart it unless appropriate action has been taken.

2.8. *Maintainability*

The installation must be designed and constructed so as to enable routine or special maintenance and repair operations and procedures to be carried out safely.

2.9. *Nuisance*

The installation must be designed and constructed in such a way as to ensure that any internal or external nuisance resulting from noxious gases, noise emissions or vibrations falls within the prescribed limits.

3. **Infrastructure requirements**

3.1. *Layout, speed, distance between vehicles*

- 3.1.1. The installation must be designed to operate safely taking into account the characteristics of the terrain and its surroundings, atmospheric and meteorological conditions, any possible structures and obstacles located in the vicinity either on the ground or in the air in such a way as to cause no nuisance or pose no danger under any operational or servicing conditions or in the event of an operation to rescue persons.
- 3.1.2. Sufficient distance must be maintained laterally and vertically between vehicles, towing devices, tracks, cables, etc., and possible structures and obstacles located in the vicinity either on the ground or in the air, taking account of the vertical, longitudinal and lateral movement of the cables and vehicles or of the towing devices under the most adverse foreseeable operating conditions.
- 3.1.3. The maximum distance between vehicles and ground must take account of the nature of the installation, the type of vehicles and the rescue procedures. In the case of open cars it must also take account of the risk of fall as well as the psychological aspects associated with the distance between vehicles and ground.
- 3.1.4. The maximum speed of the vehicles or towing devices, the minimum distance between them and their acceleration and braking performance must be chosen to ensure the safety of persons and the safe operation of the installation.

3.2. *Stations and structures along the line*

- 3.2.1. Stations and structures along the line must be designed, installed and equipped so as to ensure stability. They shall permit safe guidance of the cables, vehicles and the towing devices, and enable maintenance to be safely carried out, under all operating conditions.

- 3.2.2. The entry and exit areas of the installation must be designed so as to guarantee the safety of the traffic of vehicles, towing devices and persons. The movement of vehicles and towing devices in the stations must be capable of taking place without risk to persons, taking into account their possible active collaboration to their movement.

#### 4. **Requirements relating to cables, drives and brakes and to mechanical and electrical installations**

##### 4.1. *Cables and their supports*

- 4.1.1. All measures must be taken in line with the latest technological developments:

- to avoid cables or their attachments breaking,
- to cover their minimum and maximum stress values,
- to ensure that they are safely mounted on their supports and prevent derailment,
- to enable them to be monitored.

- 4.1.2. It is not possible to prevent all risk of cable derailment, measures must be taken to ensure that cables can be retrieved and the installations shut down without risk to persons in the event of derailment.

##### 4.2. *Mechanical installations*

###### 4.2.1. Drives

The drive system of an installation must be of a suitable performance and capability, adapted to the various operating systems and modes.

###### 4.2.2. Standby drive

The installation must have a standby drive with an energy supply which is independent of that of the main drive system. A standby drive is not, however, necessary if the safety analysis shows that people can leave the vehicles and, in particular, towing devices easily, quickly and safely even if a standby drive is not available.

###### 4.2.3. Braking

- 4.2.3.1. In an emergency, it must be possible to shut down the installation and/or the vehicles at any moment, under the most unfavourable conditions in terms of authorised load and pulley adhesion during operation. The stopping distance must be as short as the security of the installation dictates.

- 4.2.3.2. Deceleration values must be within adequate limits fixed in such a way to ensure both the safety of the persons and the satisfactory behaviour of the vehicles, cables and other parts of the installation.

- 4.2.3.3. In all installations there must be two or more braking systems, each capable of bringing the installation to a halt, and coordinated in such a way that they automatically replace the active system when its efficiency becomes inadequate. The traction cable's last braking system must act directly on the driving pulley. These provisions do not apply to drag lifts.

- 4.2.3.4. The installation must be fitted with an effective clamp and locking mechanism to guard against premature restarts.

###### 4.3. *Control devices*

The control devices must be designed and constructed so as to be safe and reliable, to withstand normal operating stresses and external factors such as humidity, extreme temperatures or electromagnetic interference and so as not to cause dangerous situations, even in the event of operational error.

###### 4.4. *Communication devices*

Suitable facilities must be provided to enable operational staff to communicate with one another at all times and to inform users in case of emergency.

## 5. **Vehicles and towing devices**

- 5.1. Vehicles and/or towing devices must be designed and fitted out in such a way that under foreseeable operating conditions no person can fall out or encounter any other risks.
- 5.2. The fittings of vehicles and towing devices must be dimensioned and constructed so as not to:
- damage the cable, or
  - slip, except where slippage does not significantly affect the safety of the vehicle, the towing device or the installation
- under the most unfavourable conditions.
- 5.3. Vehicle doors (on cars, cabins) must be designed and constructed in such a way as to make it possible to close and lock them. The vehicle floor and walls must be designed and constructed so as to withstand pressure and loads exerted by users under any circumstances.
- 5.4. If for reasons of operational safety an operator is required on board the vehicle, the vehicle must be fitted with the equipment required for him to carry out his tasks.
- 5.5. Vehicles and/or towing devices and, in particular, their suspension mechanisms must be designed and fitted so as to ensure the safety of workers servicing them in accordance with appropriate rules and instructions.
- 5.6. In the case of vehicles equipped with disconnectable fittings, all measures must be taken to bring to a halt, without risk to users, at the moment of departure, any vehicle whose fitting has been incorrectly connected to the cable and, at the moment of arrival, any vehicle whose fitting has not been disconnected, and to prevent the vehicle from falling.
- 5.7. Funicular vehicles and, in so far as the configuration of the installation so permits, bi-cable cable cars must be equipped with an automatic braking device on the track, when the possibility of carrier cable breaking cannot reasonably be excluded.
- 5.8. Where all risk of derailment of the vehicle cannot be eliminated by other measures, the vehicle must be fitted with an anti-derailment device which enables the vehicle to be brought to a halt without risk to persons.

## 6. **Equipment for users**

The access to embarkation areas and exit from disembarkation areas and the embarkation and disembarkation of users must be organised with regard to the movement and stopping of vehicles in such a way as to ensure the safety of persons, in particular in areas where there is a risk of falling.

It must be possible for children and persons with reduced mobility to use the installation safely if the installation is designed for the transport of such persons.

## 7. **Operability**

### 7.1. *Safety*

- 7.1.1. All technical provisions and measures must be taken to ensure that the installation is used for its intended purpose according to its technical specification and to the specified operating conditions and that the instructions on safe operation and maintenance can be complied with. The instruction manual and the corresponding notes shall be drawn up in an official language or languages of the Community which may be determined in accordance with the Treaty by the Member State in the territory of which the installation is constructed.

- 7.1.2. The persons responsible for operating the installation must be provided with the appropriate material resources and must be qualified to carry out the task in hand.

### 7.2. *Safety in the event of immobilisation of the installation*

All technical provisions and measures must be adopted to ensure that users can be brought to safety within a set time appropriate to the type of installation and its surroundings when the installation is immobilised and cannot be restarted quickly.

7.3. *Other special provisions concerning safety*

7.3.1. Operators' stands and workplaces

Movable parts which are normally accessible in the stations must be designed, constructed and installed in such a way as to preclude any risks or, where such risks exist, be fitted with protective devices so as to prevent any contact with parts of the installation which may cause accidents. These devices must be of a type that cannot easily be removed or rendered inoperative.

7.3.2. Risk of falling

Workplaces and working areas, including those used only occasionally, and the access to them, must be designed and constructed in such a way as to prevent persons required to work or move in them from falling. Should the construction not be adequate, they must also be provided with anchorage points for personal protective equipment to prevent falls.

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## ANNEX III

**SAFETY ANALYSIS**

The safety analysis required for every cableway installation referred to in Article 1(5) of this Directive must take into account every mode of operation envisaged. The analysis must follow a recognised or established method and take into account the current state of the art and the complexity of the installation in question. The aim is also to ensure that the design and configuration of the installation should take account of the local surroundings and the most adverse situations in order to ensure satisfactory safety conditions.

The analysis must also cover the safety devices and their effect on the installation and related subsystems that they bring into action so that either:

- they are capable of reacting to an initial breakdown or failure detected so as to remain either in a state that guarantees safety, in a lower operating mode or in a fail-safe state,
- they are redundant and are monitored, or
- they are such that the probability of their failure can be evaluated and they are of a standard equivalent to that achieved by safety devices that meet the criteria in the first and second indents.

Safety analysis must be used to draw up the inventory of risks and dangerous situations in accordance with Article 4(1) of this Directive and to determine the list of safety components referred to in Article 4(2) thereof. The result of the safety analysis must be summarised in a safety report.

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## ANNEX IV

**SAFETY COMPONENTS: EC DECLARATION OF CONFORMITY**

This Annex applies to the safety components referred to in Article 1(5) of this Directive with a view to establishing their compliance with the essential requirements which concern them referred to in Article 3(1) of the Directive and defined in Annex II.

The EC declaration of conformity and the accompanying documentation must be dated and signed. It must be drawn up in the same language or languages as the instruction manual referred to in point 7.1.1 of Annex II.

The declaration must state the following particulars:

- the references of this Directive,
  - name, business name and full address of the manufacturer or his authorised representative established in the Community. An authorised representative must also give the name, business name and full address of the manufacturer,
  - description of the component (make, type, etc.),
  - details of the conformity declaration procedure used (Article 7 of this Directive),
  - all relevant provisions with which the component must comply and, in particular, the conditions of use,
  - the name and address of any body notified, involved in the conformity procedure and the date of the EC examination certificate with details, where appropriate, of the duration and conditions of validity of the certificate,
  - where appropriate, the reference of the harmonised standards applicable,
  - identification of the person empowered to sign on behalf of the manufacturer or his authorised representative established in the Community.
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## ANNEX V

**SAFETY COMPONENTS: ASSESSMENT OF CONFORMITY****1. Scope**

This Annex applies to safety components with a view to checking compliance with the essential requirements referred to in Article 3(1) of this Directive and defined in Annex II. It concerns the assessment by one or more notified bodies of the intrinsic conformity of a component, considered in isolation, with the prescribed technical specifications.

**2. Procedures**

The assessment procedures implemented by the notified bodies both at the design and production stage are based on the modules defined in Council Decision 93/465/EEC along the lines indicated in the following table. The solutions in this table are considered to be equivalent and can be used at the manufacturer's discretion.

## ASSESSMENT OF THE CONFORMITY OF SAFETY COMPONENTS

	Design	Production
1.	EC type-examination Module 'B'	1(a) Production quality assurance Module 'D'
		1(b) Product verification Module 'F'
2.	Full quality assurance Module 'H'	2. Full quality assurance Module 'H'
3.	Unit verification Module 'G'	3. Unit verification Module 'G'

Modules must be applied taking into account the specific supplementary conditions in each module.
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## MODULE B: EC TYPE-EXAMINATION

- This module describes that part of the procedure by which a notified body ascertains and attests that a specimen, representative of the production envisaged, meets the provisions of this Directive.
- The application for EC type-examination must be lodged by the manufacturer or by his authorised representative established within the Community with a notified body of his choice.

The application must include:

- the name and address of the manufacturer and, if the application is lodged by the authorised representative, his name and address as well,
- a written declaration that the same application has not been lodged with any other notified body,
- the technical documentation, as described in point 3.

The applicant must place at the disposal of the notified body a specimen, representative of the production envisaged and hereinafter called 'type'. The notified body may request further specimens if needed for carrying out the test programme.

- The technical documentation must enable the conformity of the component with the requirements of this Directive to be assessed. It must, as far as is relevant for such assessment, cover the design, manufacture and operation of the component.

The documentation must contain as far as is relevant to assessment:

- a general type-description,
- conceptual design and manufacturing drawings and schemes of components, subassemblies, circuits, etc.,
- descriptions and explanations necessary for the understanding of the said drawings and schemes and the operation of the product,
- the list of the European specifications referred to in Article 2(2) of this Directive, applied in full or in part, and descriptions of the solutions adopted to meet the essential requirements where the European specifications referred to in Article 2(2) of this Directive do not exist,
- the results of design calculations made, examinations carried out, etc.,
- test reports.

It must also indicate the field of use of the component.

4. The notified body:

- 4.1. must examine the technical documentation, verify that the type has been manufactured in conformity with the technical documentation and identify the components which have been designed in accordance with the relevant provisions of the European specifications referred to in Article 2(2) of this Directive as well as those which have been designed without applying the relevant provisions of those European specifications;
  - 4.2. must perform or have performed the appropriate examinations and necessary tests to check whether, where the European specifications referred to in Article 2(2) of this Directive have not been applied, the solutions adopted by the manufacturer meet the essential requirements of this Directive;
  - 4.3. must perform or have performed the appropriate examinations and necessary tests to check whether, where the manufacturer has chosen to apply the relevant European specifications, these have actually been applied;
  - 4.4. must agree with the applicant the location where the examinations and necessary tests are to be carried out.
5. Where the type meets the provisions of this Directive, the notified body must issue an EC type-examination certificate to the applicant. The certificate must state the name and address of the manufacturer, the conclusions of the examination, the conditions for its validity, the duration thereof and give the necessary data for identification of the approved type.

A list of the relevant parts of the technical documentation must be annexed to the certificate and a copy kept by the notified body. If the notified body refuses to issue an EC-type certificate to the manufacturer, the former must provide detailed reasons for such refusal. Provision must be made for an appeals procedure.

6. The applicant must inform the notified body that holds the technical documentation concerning the EC type-examination certificate of all modifications of the approved component which must receive additional approval where such changes may affect the conformity of the component with the essential requirements for the prescribed conditions for its use. This additional approval is given in the form of an addition to the original EC type-examination certificate.
7. Each notified body must communicate to the other notified bodies the relevant information concerning the EC type-examination certificates and additions issued and withdrawn.
8. The other notified bodies may receive copies of the EC type-examination certificates and/or their additions. The Annexes to the certificates must be kept at the disposal of the other notified bodies.
9. The manufacturer or his authorised representative must keep with the technical documentation copies of EC type-examination certificates and their additions for at least 30 years after the last component has been manufactured.

Where neither the manufacturer nor his authorised representative is established within the Community, the obligation to keep the technical documentation available is the responsibility of the person who places the component on the Community market.

#### MODULE D: PRODUCTION QUALITY ASSURANCE

1. This module describes the procedure whereby the manufacturer who satisfies the obligations of point 2 ensures and declares that the components concerned are in conformity with the type as described in the EC type-examination certificate and satisfy the requirements of this Directive. The manufacturer or his authorised representative established within the Community must affix the CE marking to each component and must draw up a written declaration of conformity. The CE marking must be accompanied by the identification symbol of the notified body responsible for monitoring as specified in point 4.
2. The manufacturer must operate an approved quality system for production, final component inspection and testing as specified in point 3, and is subject to monitoring as specified in section 4.
3. Quality system
  - 3.1. The manufacturer must lodge an application for assessment of his quality system with a notified body or his choice, for the components concerned.

The application must include:

- all relevant information for the component category envisaged,
- the documentation concerning the quality system,
- if applicable, the technical documentation of the approved type and a copy of the EC type-examination certificate.

- 3.2. The quality system must ensure compliance with the type as described in the EC type-examination certificate and with the requirements of this Directive.

All the elements, requirements and provisions adopted by the manufacturer must be documented in a systematic and orderly manner in the form of written policies, procedures and instructions. The quality system documentation must permit a consistent interpretation of the quality programmes, plans, manuals and records.

It must in particular contain an adequate description of:

- the quality objectives and the organisational structure, responsibilities and powers of the management with regard to competent quality,
- the manufacturing, quality control and quality assurance techniques, processes and systematic actions that will be used,
- the examinations and tests that will be carried out before, during and after manufacture, and the frequency with which they will be carried out,
- the quality records, such as inspection reports and test data, calibration data, qualification reports of the personnel concerned, etc.,
- the means to monitor the achievement of the required component quality and the effective operation of the quality system.

- 3.3. The notified body must assess the quality system to determine whether it satisfies the requirements referred to in point 3.2. It presumes conformity with these requirements in respect of quality systems that implement the relevant harmonised standards.

The auditing team must have a least one member with experience of evaluating in the component technology concerned. The evaluation procedure must include an inspection visit to the manufacturer's premises.

The decision must be notified to the manufacturer. The notification must contain the conclusions of the examination and the reasoned assessment decision.

- 3.4. The manufacturer must undertake to discharge the obligations arising from the quality system as approved and to maintain it in an appropriate and efficient manner at a proper and efficient level.

The manufacturer or his authorised representative must keep the notified body that has approved the quality system informed of any intended updating of the quality system.

The notified body must evaluate the modifications proposed and decide whether the modified quality system will still satisfy the requirements referred to in paragraph 3.2 or whether a reassessment is required.

It must notify its decision to the manufacturer. The notification must contain the conclusions of the examination and the reasoned assessment decision.

#### 4. Surveillance under the responsibility of the notified body

- 4.1. The purpose of surveillance is to make sure that the manufacturer duly fulfils the obligations arising out of the approved quality system.

- 4.2. The manufacturer must allow the notified body entrance for inspection purposes to the places of manufacture, inspection and testing, and storage, and must provide it with all necessary information, in particular:

- the quality system documentation,
- the quality records, such as inspection reports and test data, calibration data, qualification reports of the personnel concerned, etc.

- 4.3. The notified body must periodically carry out audits to make sure that the manufacturer maintains and applies the quality system and must provide an audit report to the manufacturer.

- 4.4. Additionally the notified body may pay unexpected visits to the manufacturer. During such visits the notified body may carry out or cause to be carried out, tests to verify that the quality system is functioning correctly, if necessary. The notified body must provide the manufacturer with a visit report and, if a test has taken place, a test report.

5. The manufacturer must, for period ending at least 30 years after the last component has been manufactured, keep at the disposal of the national authorities:

- the documentation referred to in the second indent of the second subparagraph of point 3.1,
- the updating referred to in the second paragraph of point 3.4,
- the decisions and reports from the notified body which are referred to in points 3.4, 4.3 and 4.4.

6. Each notified body must give the other notified bodies the relevant information concerning all quality system approvals issued and withdrawn.

#### MODULE F: PRODUCT VERIFICATION

1. This module describes the procedure whereby a manufacturer or his authorised representative established within the Community checks and attests that the components subject to the provisions of point 3 are in conformity with the type described in the EC type-examination certificate and satisfy the requirements of this Directive.

2. The manufacturer must take all measures necessary in order that the manufacturing process ensures conformity of the components with the type as described in the EC type-examination certificate and with the requirements of this Directive. He shall affix the CE marking to each component and shall draw up a declaration of conformity.

3. The notified body must carry out the appropriate examinations and tests in order to check the conformity of the components to the requirements of this Directive either by examination and testing of every component as specified in point 4 or by examination and testing of components on a statistical basis, as specified in point 5, at the choice of the manufacturer.

The manufacturer or his authorised representative resident within the Community must keep a copy of the declaration of conformity for a period ending at least 30 years after the last component has been manufactured.

4. Verification by examination and testing of every component
- 4.1. All components must be individually examined and appropriate tests as set out in the relevant European specification(s) referred to in Article 2 or equivalent tests shall be carried out in order to verify their conformity with the type described in the EC type-examination certificate and to the requirements of this Directive.
  - 4.2. The notified body must affix or cause to be affixed, its identification symbol to each approved component and draw up a written certificate of conformity relating to the tests carried out.
  - 4.3. The manufacturer or his authorised representative must ensure that he is able to supply the notified body's certificates of conformity on request.

5. Statistical verification

- 5.1. The manufacturer must present his components in the form of homogeneous lots and shall take all measures necessary in order that the manufacturing process ensures the homogeneity of each lot produced.
- 5.2. All components must be available for verification in the form of homogeneous lots. A random sample must be drawn from each lot. Components in a sample must be individually examined and appropriate tests as set out in the European specification(s) referred to in Article 2(2) of this Directive, or equivalent tests, shall be carried out to ensure their conformity with the requirements of this Directive and to determine whether the lot is accepted or rejected.
- 5.3. The statistical procedure must use the following elements:
  - a statistical method,
  - a sampling plan with its operational characteristics.
- 5.4. In the case of accepted lots, the notified body must affix, or cause to be affixed, its identification number to each component, and shall draw up a written certificate of conformity relating to the tests carried out. All components in the lot may be put on the market, except those components from the sample which were found not to be in conformity.

If a lot is rejected, the notified body or the competent authority must take appropriate measures to prevent the putting on the market of that lot. In the event of the frequent rejection of lots the notified body may suspend statistical verification.

The manufacturer may, under the responsibility of the notified body, affix the latter's identification number during the manufacturing process.

- 5.5. The manufacturer or his authorised representative must ensure that he is able to supply the notified body's certificates of conformity on request.

MODULE G: UNIT VERIFICATION

1. This module describes the procedure whereby the manufacturer ensures and declares that the component concerned, which has been issued with the certificate referred to in point 2, conforms to the requirements of this Directive that apply to it. The manufacturer or his authorised representative established within the Community must affix the CE marking to the component and must draw up a declaration of conformity.
2. The notified body must examine the component and must carry out the appropriate tests as set out in the relevant European specifications referred to in Article 2(2) of this Directive, or equivalent tests, to ensure its conformity with the relevant requirements of this Directive.

The notified body must affix, or cause to be affixed, its identification number on the approved component and shall draw up a certificate of conformity concerning the tests carried out.

3. The aim of the technical documentation is to enable conformity with the requirements of this Directive to be assessed and the design, manufacture and operation of the component to be understood.

For the purposes of assessment, the documentation must include the following:

- a general description of the type,
- conceptual design and manufacturing drawings and schemes of components, sub-assemblies, circuits, etc.,
- descriptions and explanations necessary for the understanding of said drawings and schemes and the operation of the component,
- a list of the relevant European specifications applied in total or partially referred to in Article 2(2) of this Directive, as well as a description of the solutions adopted by the manufacturer to meet the essential requirements of the Directive, where the European specifications referred to in Article 2(2) have not been applied,
- the results of the design calculations made, examinations carried out, etc.,
- test reports,
- fields of use of components.

#### MODULE H: FULL QUALITY ASSURANCE

1. This module describes the procedure whereby a manufacturer who satisfies the obligations of paragraph 2 must ensure and declare that the components concerned satisfy the relevant requirements of this Directive. The manufacturer or his authorised representative established within the Community must affix the CE marking to the component and must draw up a written declaration of conformity. The CE marking must be accompanied by the identification symbol of the notified body responsible for the surveillance as specified in point 4.
2. The manufacturer must operate an approved quality system for design, manufacture and final component inspection and testing as specified in point 3 and shall be subject to surveillance as specified in point 4.
3. Quality system
  - 3.1. The manufacturer must lodge an application for assessment of his quality system with a notified body.

The application must include:

- all relevant information for the category of component envisaged,
- the documentation relating to the quality system.

- 3.2. The quality system must ensure compliance of the components with the relevant requirements of this Directive.

All the elements, requirements and provisions adopted by the manufacturer must be documented in a systematic and orderly manner in the form of written policies, procedures and instructions. This quality system documentation shall ensure a common understanding of the quality policies and procedures such as quality programmes, plans, manuals and records.

It must in particular include an adequate description of:

- the quality objectives and the organisational structure, responsibilities and powers of the management with regard to design and component quality,
- the technical design specifications, including the European specifications referred to in Article 2(2) of this Directive, that will be applied and, where the European specifications will not be applied in full, the means that will be used to ensure that the essential requirements of this Directive that apply to the products will be met,
- the design control and design verification techniques, processes and systematic actions that will be used when designing the components pertaining to the category of components covered,
- the corresponding manufacturing, quality control and quality assurance techniques, processes and systematic actions that will be used,

- the examinations and tests that will be carried out before, during and after manufacture, and the frequency with which they will be carried out,
- the quality records, such as inspection reports and test data, calibration data, qualification reports of the personnel concerned, etc.,
- the means to monitor the achievement of the required design and component quality and the effective operation of the quality assurance system.

- 3.3. The notified body must assess the quality system to determine whether it satisfies the requirements referred to in point 3.2. It shall presume compliance with these requirements in respect of quality systems that implement the relevant harmonised standard.

The auditing team must have at least one member experienced as an assessor in the product technology concerned. The evaluation procedure shall include an assessment visit to the manufacturer's premises.

The decision must be notified to the manufacturer. The notification must contain the conclusions of the examination and the reasoned assessment decision.

- 3.4. The manufacturer must undertake to fulfil the obligations arising from the quality system as approved and to uphold it so that it remains adequate and efficient.

The manufacturer or his authorised representative must keep the notified body that has approved the quality system informed of any intended updating of the quality system.

The notified body must evaluate the modifications proposed and decide whether the amended quality system will still satisfy the requirements referred to in paragraph 3.2 or whether a reassessment is required.

It must notify its decision to the manufacturer. The notification shall contain the conclusions of the examination and the reasoned assessment decision.

#### 4. Surveillance under the responsibility of the notified body

- 4.1. The purpose of surveillance is to make sure that the manufacturer duly fulfils the obligations arising out of the approved quality system.

- 4.2. The manufacturer must allow the notified body entrance for inspection purposes to the places of design, manufacture, inspection and testing, and storage, and shall provide it with all necessary information, in particular:

- the quality system documentation,
- the quality records as provided for by the design part of the quality system, such as results of analyses, calculations, tests, etc.,
- the quality records as provided for by the manufacturing part of the quality system, such as inspection reports and test data, calibration data, qualification reports of the personnel concerned, etc.

- 4.3. The notified body must periodically carry out audits to make sure that the manufacturer maintains and applies the quality system and shall provide an audit report to the manufacturer.

- 4.4. Additionally, the notified body may pay unexpected visits to the manufacturer. At the time of such visits, the notified body may carry out tests or have them carried out in order to check the proper functioning of the quality system where necessary; it must provide the manufacturer with a visit report and, if a test has been carried out, with a test report.

5. The manufacturer must, for a period ending at least 30 years after the last component has been manufactured, keep at the disposal of the national authorities:

- the documentation referred to in the second indent of the second subparagraph of point 3.1,
- the updating referred to in the second subparagraph of point 3.4,
- the decisions and reports from the notified body which are referred to in points 3.4, 4.3 and 4.4.

6. Each notified body must forward to the other notified bodies the relevant information concerning the quality system approvals issued and withdrawn.
  7. Supplementary requirements; design examination
    - 7.1. The manufacturer must lodge an application for examination of the design with a single notified body.
    - 7.2. The application must enable the design, manufacture and operation of the component to be understood, and shall enable conformity with the requirements of this Directive to be assessed.

It must include:

      - the technical design specifications, including the European specifications referred to in Article 2(2) of this Directive that have been applied,
      - the necessary supporting evidence for their adequacy, in particular where the European specifications referred to in Article 2(2) of this Directive have not been applied in full. This supporting evidence must include the results of tests carried out by the appropriate laboratory of the manufacturer or on his behalf.
    - 7.3. The notified body must examine the application and where the design meets the provisions of this Directive, must issue an EC design examination certificate to the applicant. The certificate shall contain the conclusions of the examination, conditions for its validity, the necessary data for identification of the approved design and, if relevant, a description of the component's functioning.
    - 7.4. The applicant must keep the notified body that issued the EC design examination certificate informed of any modification to the approved design. Modifications to the approved design must receive additional approval from the notified body that issued the EC design examination certificate where such changes may affect conformity to the essential requirements referred to in Article 3(1) of this Directive or the prescribed conditions for use of the component. This additional approval is given in the form of an addition to the original EC design examination certificate.
    - 7.5. The notified bodies must forward to the other notified bodies the relevant information concerning:
      - the EC design examination certificates and additions issued,
      - the EC design approvals and additional approvals withdrawn,
      - the EC design examination certificates and additions refused.
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## ANNEX VI

**SUBSYSTEMS: EC DECLARATION OF CONFORMITY**

This Annex applies to the subsystems referred to in Article 9 of this Directive in order to ensure that they fulfil the essential requirements concerning them referred to in Article 3(1) of this Directive.

The EC declaration of conformity must be drawn up by the manufacturer, or his authorised representative established in the Community, or, where such a person is not available, any natural or legal person, who places the subsystem on the market; the declaration and the accompanying technical documentation must be dated and signed.

This EC declaration of conformity and the technical documentation must be drawn up in the same language or languages as the instruction manual, referred to in point 7.1.1 of Annex II and must contain the following information:

- the reference of this Directive,
  - the name and address of the person who ordered EC examination,
  - a description of the subsystem,
  - the name and address of the notified body which carried out the EC examination, referred to in Article 11 of this Directive,
  - all relevant provisions with which the subsystem must comply, in particular any operating restrictions or operating conditions,
  - the outcome of EC examination referred to in Annex VII (EC conformity certificate),
  - particulars of the person who is authorised to sign a legally binding declaration for the manufacturer, or his authorised representative or, where such a person is not available, the natural or legal person, who places the subsystem on the market.
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## ANNEX VII

**SUBSYSTEMS: ASSESSMENT OF CONFORMITY**

1. EC examination is the procedure whereby, at the request of the manufacturer or his authorised representative established in the Community or, where such a person is not available, any natural or legal person who assumes responsibility for placing the subsystem on the market, a notified body checks and attests that a subsystem is:
    - in conformity with the provisions of the Directive and other relevant provisions in compliance with the Treaty,
    - in conformity with the technical documentation, and
    - completed
  2. The examination of the subsystem is carried out at each of the following stages:
    - design,
    - construction and acceptance trials once the subsystem has been completed.
  3. The technical documentation accompanying the examination certificate must comprise the following:
    - construction plans and calculations, electrical and hydraulic diagrams, control circuit diagrams, description of computer and automatic systems, operating and servicing instructions, etc.,
    - a list of the safety components referred to in Article 4(2) of this Directive which are used in the subsystem,
    - copies of the EC declaration of conformity as provided for in Annex IV for these safety components together with the corresponding construction plans and a copy of the reports on any other tests and trials carried out.
  4. Documentation and correspondence in connection with EC examination procedures must be drawn up in the same language or languages as the instruction manual referred to in point 7.1.1 of Annex II.
  5. Surveillance
    - 5.1. It shall be ensured by means of surveillance that during construction of the subsystem the obligations arising from the technical documentation are fulfilled.
    - 5.2. The notified body responsible for EC examination must have permanent access to the production shops, storage areas and, where necessary, to prefabrication areas, testing plants and more generally to any locations it feels it needs to visit in order to perform its task. The manufacturer or his authorised representative or, where such a person is not available, the natural or legal person who places the subsystem on the market must provide it with, or arrange for it to be provided with, any documents required to that end, notably the plans and technical documentation relating to the subsystem.
    - 5.3. The notified body responsible for EC examination must periodically carry out audits to ensure compliance with the provisions of this Directive. On each visit it must provide the site supervisor responsible with an audit report. It may ask to be brought in to inspect various stages of the work.
    - 5.4. In addition, the notified body may pay unexpected visits to the production shops. During such visits it may carry out full or partial audits. The notified body must draw up a report on the visit and, where necessary, submit an audit report to the site supervisor responsible.
  6. Each notified body must publish periodically the relevant information concerning:
    - all applications for EC examination received,
    - all EC examination certificates issued,
    - all EC examination certificates refused.
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## ANNEX VIII

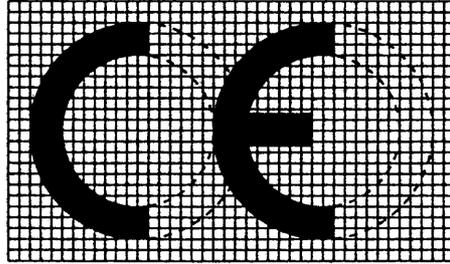
**MINIMUM CRITERIA TO BE TAKEN INTO ACCOUNT BY MEMBER STATES FOR THE NOTIFICATION OF BODIES**

1. The notified body, its director and the staff responsible for carrying out the verification operations may not be either the designer, manufacturer, supplier or installer of the safety components or subsystems which they inspect or the authorised representative of any of those parties or the natural or legal person, who places these safety components or subsystems on the market. They may not become involved, either directly or as authorised representatives, in the design, manufacture, construction, marketing, servicing or operation of these safety components or subsystems. This does not preclude the possibility of exchanges of technical information between the manufacturer and the notified body.
  2. The notified body and its inspection staff must carry out the verification operations with the highest degree of professional integrity and technical competence and must be free from all pressures and inducements, particularly financial, which might influence their judgement or the results of the inspection, especially from persons or groups of persons with an interest in the result of the verifications.
  3. The notified body must have at its disposal the necessary staff and possess the necessary facilities to enable it to perform properly the administrative and technical tasks connected with the verification operations; it must also have access to the equipment required for special verification.
  4. The staff responsible for inspection must have:
    - sound technical and professional training,
    - satisfactory knowledge of the requirements of the tests they carry out and adequate experience of such tests,
    - the ability required to draw up the certificates, records and reports required to authenticate the performance of the tests.
  5. The impartiality of inspection staff must be guaranteed. Their remuneration must not depend on the number of tests carried out or on the results of such tests.
  6. The notified body must take out civil liability insurance unless its liability is assumed by the State in accordance with national law or the Member State itself is directly responsible for the inspections.
  7. The staff of the body must be bound by professional secrecy (except vis-à-vis the competent administrative authorities of the State in which its activities are carried out) with regard to all information it acquires in carrying out its tasks under this Directive or any provision of national law giving effect to it.
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## ANNEX IX

**CE CONFORMITY MARKING**

The CE conformity marking shall consist of the letters 'CE' taking the following form:



If the CE marking is reduced or enlarged, the proportions given in the above drawing must be respected.

The various components of the CE marking must have substantially the same vertical dimension, which may not be less than 5 mm. This minimum dimension may be waived for small-scale safety components.

The CE marking shall be followed by the last two figures of the year in which it was affixed and by the identification number of the notified body that deals with the procedures referred to in Article 7(3) of this Directive.

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