COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 30.03.2000
COM(2000) 176 final

1998/0071 (COD)

OPINION OF THE COMMISSION

**pursuant to Article 251 (2) (c) of the EC Treaty,
on the European Parliament's amendments
to the Council's common position regarding the
proposal for a**

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

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

AMENDING THE PROPOSAL OF THE COMMISSION
pursuant to Article 250 (2) of the EC Treaty

EXPLANATORY MEMORANDUM

Article 251, paragraph 2 (c) of the EC Treaty foresees that the Commission gives an opinion on the amendments proposed by the European Parliament in its second reading.

The Commission gives its opinion below on the two amendments proposed by Parliament. In accordance with Article 250 paragraph 2 of the EC Treaty, a modified proposal is attached which wholly incorporates the two Parliamentary amendments, which were accepted by the Commission.

1. BACKGROUND

Commission original proposal published: 23 April 1998

Date of transmission to the EP and Council: 24 April 1998

Date of opinion of the EP on first reading: 9 February 1999

Date of opinion from ESC: 9 September 1998

Commission amended proposal published: 4 May 1999 (Document COM(1999) 217 final – 1998/0071 (COD))

Date of the common opinion: 12 July 1999

Commission's opinion on the common position: 16 July 1999 (Document SEC(1999) 1185 final – 1998/0071 (COD))

Date of opinion of the EP on second reading: 27 October 1999

In document SEC(1999) 1185 final, it was concluded that the Commission was satisfied that the common position was supported unanimously by the Member States and the Commission supported the common position.

2. OBJECTIVE OF THE COMMISSION PROPOSAL

The objective of the Commission's proposal is to introduce into Council Directive 70/221/EEC on the approximation of the laws of the Member States relating to liquid-fuel tank and rear underrun protection of motor vehicles and their trailers, new provisions for tanks, made of plastic material. The objective is also to extend the title and scope of Directive 70/221/EEC to tanks for fuels other than liquid fuels (i. e. gaseous fuels) and to amend Article 3 of this Directive concerning the adaptation to technical progress of the Annexes so that in future, technical provisions for tanks for all kinds of fuels can be introduced and modified by the committee procedure.

3. COMMISSION'S OPINION ON PARLIAMENT'S AMENDMENTS

The Commission accepts wholly the two amendments proposed by Parliament. They are incorporated in the new modified proposal, so that they can be re-examined by the Council.

3.1. Amendments accepted by the Commission

Amendment 1 introduces a new recital in connection with the new items 5.9.1 (introduced in the common position) and 5.9.1.1 (amendment 2), in order to avoid diesel spillage, which may, especially when the road surface is wet, be a hazard to motor cyclists. The amendment is accepted entirely.

Amendment 2 the proposed amendment introduces items 5.9.1.1, which contain requirements related to avoid diesel spillage. The proposed amendment proposes a mechanical solution of the problem, an automatically opening and closing non-removable fuel filler cap or similar solutions with the same effect. The amendment is also accepted entirely.

1998/0071 (COD)

Proposal for a

EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE

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

(Text with EEA relevance)

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[1],

Having regard to the opinion of the Economic and Social Committee[2],

Acting in accordance with the procedure laid down in Article 251 of the Treaty[3],

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[4] is one of the separate Directives within the EC type-approval procedure which was established by Council Directive 70/156/EEC of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers[5]; whereas, 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; whereas 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 for vehicles of category M_1;

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1 OJ C 164, 29.5.1998, p. 16

2 OJ C 407, 28.12.1998, p. 58.

3 Opinion of the European Parliament of 10 February1999 (OJ C 150, 28.5.1999, p. 168), Council Common Position of 12 July 1999 (OJ C 249, 1.9.1999 p. 25) and Decision of the European Parliament of .... (not yet published in the Official Journal).

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

5 OJ L 42, 23. 2.1970, p. 1. Directive as last amended by Directive 98/14/EC. (OJ L 91, 25.3.1998, p. 1).

(3) The accidental spillage of fuel (especially diesel) onto the road is a significant hazard to the riders of two wheel 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; whereas for this purpose the title and the scope of Directive 70/221/EEC should be amended accordingly; whereas 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; whereas provision should consequently be made at the earliest opportunity for Community type-approval of liquid and gas fuel tanks as separate technical entities, 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 only to fuel tanks made of a plastic material; whereas it is unnecessary therefore to invalidate existing approvals granted under Directive 74/60/EEC[6] and to prevent the sale registration, and entry into service of new vehicles having metal liquid fuel tanks covered by such approvals;

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

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

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6 OJ L 38, 11.2.1997, p. 2. Directive as last amended by Directive 78/632/EEC (OJ L 206, 29.7.1978, p. 26).

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.

Article 2

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

2. With effect from [.....](**), 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 [.....](***), 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

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(*) 12 months after the date of entry into force of this Directive.
(**) 24 months after the date of entry into force of this Directive.
(***) 36 months after the date of entry into force of this Directive

- 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 [....] (*) 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 4

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

Article 5

This Directive is addressed to the Member States.

Done at Brussels,

For the European Parliament	*For the Council*
The President	*The President*

(*) 12 months after the date of entry into force of this Directive.

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_1[7] 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.

[7] As defined in Annex II A 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.

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 fillerpipe: 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[8], subject to the provision that the examples listed in the third indent of that section do not apply to vehicles in categories other than M1 or N1.

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

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8 OJ L 76, 6.4.1970, p 1.

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 5 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 5 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 5 minutes in this position.

The tank must be rotated 90° further in the same direction. This completely inverted position must be maintained for at least 5 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 K ± 2 K (-40°C ± 2 °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 K ± 2 K (53 °C ± 2 °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 of 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 per cent of its capacity with testing fuel and stored, without being sealed, at an ambient temperature of 313 K ± 2 K (40 °C ± 2 °C) until the weight loss per unit time becomes constant.

6.3.3.3. The tank must then be emptied and refilled to 50 per cent of its capacity with test fuel, after which it must be hermetically sealed and be stored at a temperature of 313 K ± 2 K (40 °C ± 2 °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 K ± 2 K (23 °C ± 2 °C), but under the same conditions otherwise. The loss so measured shall not exceed 10g per 24 hours.

6.3.4. Resistance to fuel

After the test referred to in Section 6.3.3 above, 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 per cent 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 then 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 cm ± 1 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 - 4 cm smaller than the interior dimensions of the pan so that a gap of 1 cm - 2 cm exists between the frame and the wall of the pan to allow ventilation.

6.3.5.7. When the test 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 K ± 5 K (35 °C ± 5 °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 per cent of its capacity with water at 293 K (20 °C), must be subjected for one hour to an ambient temperature of 368 K ± 2 K

(95 °C ± 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."

“Appendix 1

TEST OF RESISTANCE TO FIRE

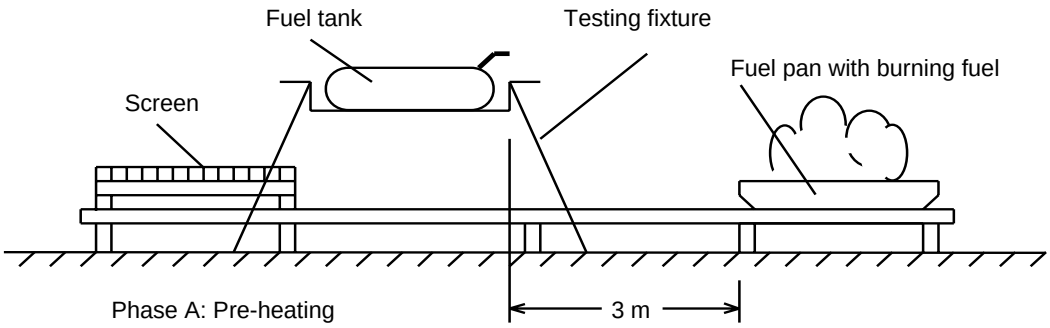
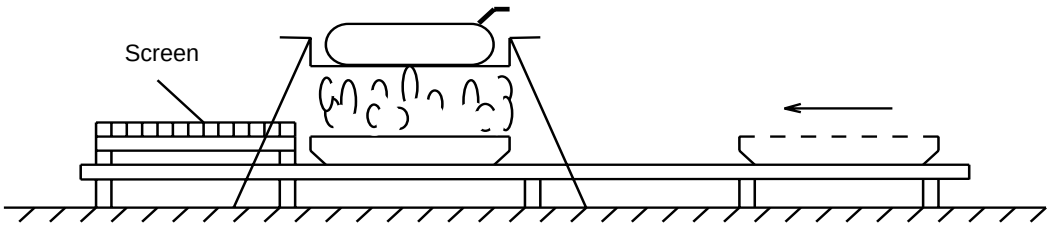
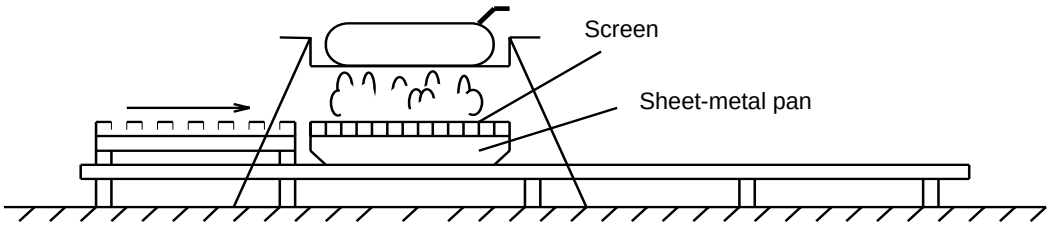


Figure 1



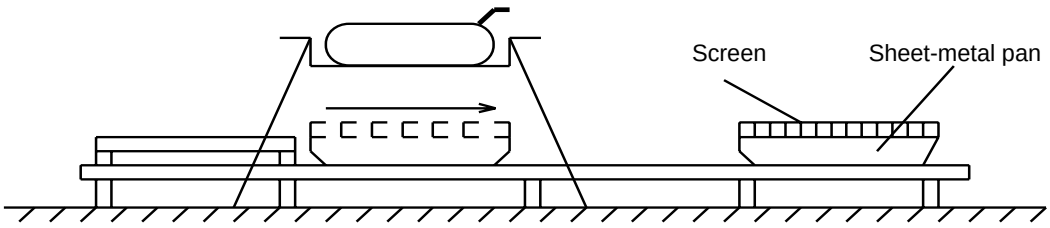
Phase B: Direct exposure to flame

Figure 2



Phase C: Indirect exposure to the flame

Figure 3

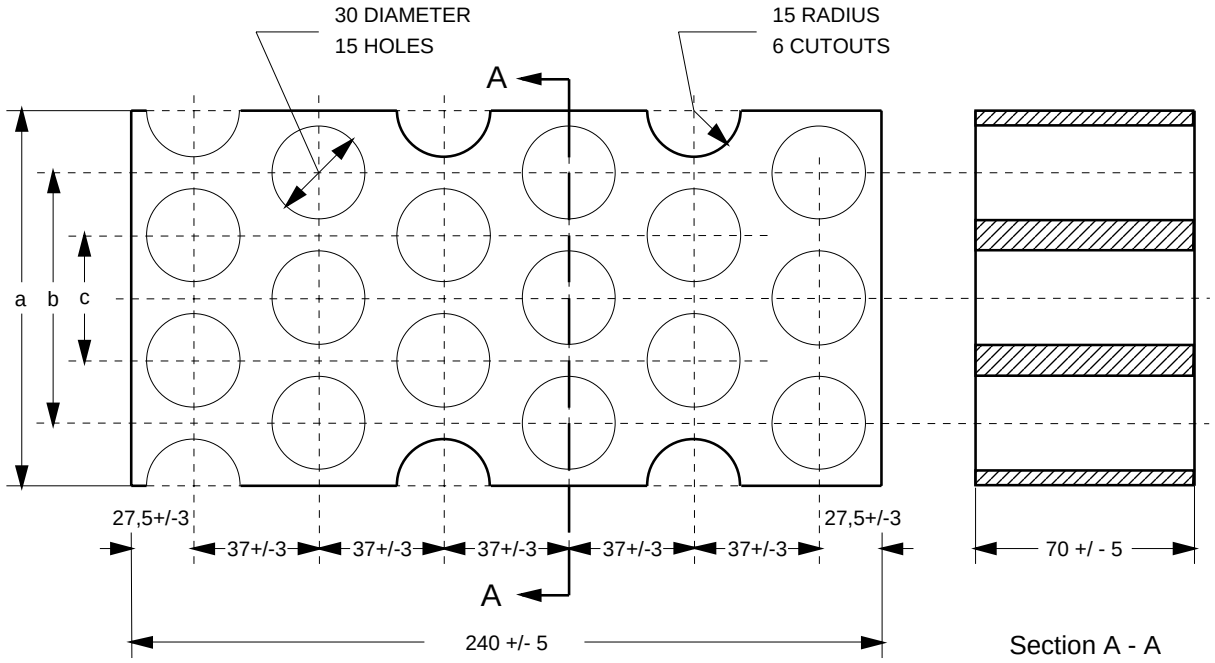


Phase D: End of test

Figure 4

Appendix 2

DIMENSIONS AND TECHNICAL DATA OF FIREBRICKS



a = 120 +/- 5
b = 80 +/- 3
c = 40 +/- 3

(Dimensions are in mm)

Fire resistance (Seger-Kegel) SK 30

Al_2O_3 content 30 - 33 %

Open porosity (Po) 20 – 22 % vol.

Density 1900 - 2000 kg/m^3

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 .../.../EC)

(*) 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.

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:

0.3. Means of identification of type, if marked on the vehicle ([b]):

0.3.1. Location of that marking:

0.4. Category of vehicle ([c]):

0.5. Name and address of the manufacturer:

0.8. Address(es) of assembly plant(s):

1. GENERAL CONSTRUCTION CHARACTERISTICS OF THE VEHICLE

1.1. Photographs and/or drawings of a representative vehicle (different body styles only):

3. POWER PLANT ([d])

3.2.2. Fuel: diesel oil/petrol/LPG/any other[9]

3.2.3. Fuel tank(s)

3.2.3.1. Service fuel tank(s)

3.2.3.1.1. Number, capacity, material:

3.2.3.1.2. Drawing and technical description of the tank(s) with all connections and all lines of the breathing and venting system, locks, valves, fastening devices:

3.2.3.1.3. Drawing showing clearly the position of the tank(s) in the vehicle:

3.2.3.2. Reserve fuel tank(s)

3.2.3.2.1. Number, capacity, material:

3.2.3.2.2. Drawing and technical description of the tank(s) with all connections and all lines of the breathing and venting system, locks, valves, fastening devices:

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[9] Delete where not applicable.

3.2.3.2.3. Drawing showing clearly the position of the tank(s) in the vehicle:

.....

(Date, file)

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Appendix 4

MODEL

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

EC TYPE-APPROVAL CERTIFICATE

Stamp of administration

Communication concerning the:

– type-approval ([1]),

– extension of type-approval ([1]),

– refusal of type-approval ([1]),

– withdrawal of type-approval ([1]),

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

Type-approval number:

Reason for extension:

SECTION I

0.1. Make (trade name of manufacturer):

0.2. Type:

0.3. Means of identification of type, if marked on the vehicle/component/separate technical unit ([1])([2]):

0.3.1. Location of that marking:

0.4. Category of vehicle ([1])([3]):

0.5. Name and address of manufacturer:

0.7. In the case of components and separate technical units, location and method of affixing of the EC approval mark:

0.8. Address(es) of assembly plant(s):

SECTION II

1. Additional information (where applicable): see Addendum

2. Technical service responsible for carrying out the tests:

3. Date of test report:

4. Number of test report:

5. Remarks (if any): see Addendum

6. Place:

7. Date:

8. Signature:

9. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.

_____

([1]) Delete where not applicable.

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

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

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

concerning the type-approval of a vehicle with regard to

Directive 70/221/EEC (fuel tanks)

as last amended by Directive .../.../EC

1. Additional information

1.1. Material:

1.2. Capacity:

1.3. Location(s):

1.4. Fuel: diesel oil/petrol/any other ([1])

5. Remarks:

([1]) Delete where not applicable.

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