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In accordance with Council Regulation (EEC, Euratom) No 354/83 of 1 February 1983 concerning the opening to the public of the historical archives of the European Economic Community and the European Atomic Energy Community (OJ L 43, 15.2.1983, p. 1), as amended by Regulation (EC, Euratom) No 1700/2003 of 22 September 2003 (OJ L 243, 27.9.2003, p. 1), this file is open to the public. Where necessary, classified documents in this file have been declassified in conformity with Article 5 of the aforementioned regulation.

In Übereinstimmung mit der Verordnung (EWG, Euratom) Nr. 354/83 des Rates vom 1. Februar 1983 über die Freigabe der historischen Archive der Europäischen Wirtschaftsgemeinschaft und der Europäischen Atomgemeinschaft (ABl. L 43 vom 15.2.1983, S. 1), geändert durch die Verordnung (EG, Euratom) Nr. 1700/2003 vom 22. September 2003 (ABl. L 243 vom 27.9.2003, S. 1), ist diese Datei der Öffentlichkeit zugänglich. Soweit erforderlich, wurden die Verschlussachen in dieser Datei in Übereinstimmung mit Artikel 5 der genannten Verordnung freigegeben.

COMMISSION OF THE EUROPEAN COMMUNITIES

COM(73) 2123 final

Brussels, 21 December 1973

PROPOSAL FOR A COUNCIL DIRECTIVE

concerning the approximation of the laws of the Member States
relating to fog lights for motor vehicles

(submitted to the Council by the Commission)

EXPLANATORY MEMORANDUM

This proposed Directive is to form part of the Community type-approval procedure referred to in Council Directive 70/156/EEC of 6 February 1970 (1).

This proposal concerns only technical requirements for the construction and testing of fog lights for motor vehicles, as technical requirements for their installation are included in another proposal concerning the installation of lighting and light signalling devices (2).

In drafting its proposal, the Commission based itself on the work (3) accomplished in this field by the Economic Commission for Europe, in Geneva; as far as trade is concerned, this is bound to offer an additional advantage as a very large number of states are represented in the ECE.

Articles 1 - 6 institute the EEC type-approval procedure for fog lights. By means of this procedure the Directive tends to permit free movement of fog lights within the Community by prohibiting the Member States from opposing their marketing, provided they satisfy the construction and testing requirements laid down in the Annexes and bear the EEC type-approval mark, a diagram of which appears in Annex II. This procedure includes a system of reciprocal notification of any grant, refusal, withdrawal or extension of type approval.

Article 7 incorporates the present Directive in the EEC type-approval procedure.

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- (1) O.J. No. L 42, 23 February 1970.
 - (2) COM (73) 2024
 - (3) Regulation No. 19 "Uniform provisions concerning the approval of motor vehicle fog lights" (Doc. E/ECE/324/E/ECE/TRANS/505/Rev. 1/Add 18).

Since certain Member States do not operate a type-approval system it is necessary to insert some provisions in order to ensure that vehicles complying with the requirements set out in the Directive can be used in these states. (Article 8)(1)

The directive is applicable to motor vehicles with at least four wheels and a maximum design speed exceeding 25 km/h (Article 9).

Article 10 contains the procedure for adapting directive to technical progress. This procedure is set out in Article 13 of the Council Directive of 6 February 1970 relating to the type-approval of motor vehicles and trailers.

Article 11 contains two deadlines: before expiry of the first deadline the Member States shall adopt and publish the measures necessary in order to comply with the Directive. The second deadline sets the date on which all of the Member States must simultaneously implement the common rules (Article 11 (1)).

Finally, the Commission must be informed in good time of all draft provisions drawn up by the Member States in the field referred to in the Directive in order to enable it to comment thereon (Article 11 (2)).

CONSULTATION OF THE EUROPEAN PARLIAMENT AND ECONOMIC AND SOCIAL COMMITTEE

Pursuant to the Rome Treaty, Article 100 (2), the opinion of these two institutions is required.

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- (1) OJ No. L 73, 27 March 1972 "Documents concerning the accession to the European Communities of the Kingdom of Denmark, Ireland, and the United Kingdom of Great Britain and Northern Ireland". Act concerning the conditions of accession and adjustments to the Treaties - Annex I, title X.

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the Opinion of the European Parliament,

Having regard to the Opinion of the Economic and Social Committee,

Whereas the technical requirements which motor vehicles must satisfy pursuant to national laws relate inter alia, to their fog lights,

Whereas those requirements differ from one Member State to another, whereas it is therefore necessary that all Member States adopt the same requirements either in addition to or in place of their existing requirements, in order, in particular, to allow the EEC type-approval procedure which was the subject of the 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 (1) to be applied in respect of each type of vehicle;

Whereas the common requirements for the installation of lighting and light signalling devices on motor vehicles and trailers were laid down by the Council Directive of(2);

whereas common requirements for the construction of other lighting and light signalling devices will be laid down at a later date;

Whereas a harmonized type-approval procedure for fog lights makes it possible for each Member State to check compliance with the common construction and testing requirements and to inform the other Member States of its findings by sending a copy of the type-approval certificate completed for each type of fog light; whereas the placing of an EEC type-approval mark on all fog lights manufactured in conformity with the approved type obviates any need for technical checks on these fog lights in the other Member States;

(1) O.J. No. L 42, 23 February 1970, p.1.

(2) COM (73) 2024

Whereas it is desirable to follow the technical requirements adopted by the U.N. Economic Commission for Europe in its Regulation No. 19 ("Uniform provisions concerning the approval of motor vehicle fog lights")(1) which is annexed to the agreement of 20 March 1958 concerning the adoption of uniform conditions for approval and reciprocal recognition of approval for motor vehicle equipment and parts;

Whereas the approximation of national laws relating to motor vehicles includes reciprocal recognition by Member States of the tests carried out by them individually on the basis of the common requirements; whereas if the system is to function properly these requirements must be applied by all Member States from the same date;

HAS ADOPTED THIS DIRECTIVE:

Article 1

1. Each Member State shall approve any type of fog light which satisfies the construction and testing requirements laid down in Annexes O, III, IV and V.
2. The Member State which has granted type approval shall take the measures required in order to verify, in so far as is necessary and if need be in co-operation with the competent authorities in the other Member States, that production models conform to the approved type. Such verification shall be limited to spot checks.

Article 2

Member States shall issue to the manufacturer, or to his authorized representative, an EEC type-approval mark which shall conform to the model shown in Annex II for each type of fog light which they approve pursuant to Article 1.

(1) Economic Commission for Europe document E/ECE/324 }
E/ECE/TRANS/505 } Rev 1/Add 17

Member States shall take all appropriate measures to prevent the use of marks liable to create confusion between fog lights which have been type-approved pursuant to Article 1 and other fog lights.

Article 3

1. No Member State may prohibit the placing on the market of fog lights on grounds relating to their construction or method of functioning if they bear the EEC type-approval mark.
2. Nevertheless, a Member State may prohibit the placing on the market of fog lights bearing the EEC type-approval mark which, by their design, do not conform to the approved prototype.

That State shall inform the other Member States and the Commission forthwith of the measures taken, specifying the reasons for its decision.

Article 4

The competent authorities of each Member State shall within one month send to the competent authorities of the other Member States a copy of the type approval certificates and of an extension of a type approval completed for each type of fog light which they approve or refuse to approve.

Article 5

1. If the Member State which has granted EEC type-approval finds that a number of fog lights bearing the same type-approval mark do not conform to the type which it has approved, it shall take the necessary measures to ensure that production models conform to the approved type. The competent authorities of that State shall advise those of the other Member States of the measures taken which may, where necessary, extend to withdrawal of EEC

type-approval. The said authorities shall take the same measures if they are informed by the competent authorities of another Member State of such failure to conform.

2. The competent authorities of Member States shall inform each other within one month of any withdrawal of EEC type-approval, and of the reasons for such measure.

Article 6

All decisions taken pursuant to the provisions adopted in implementation of this Directive which refuse or withdraw type-approval for a fog light or prohibit its use shall set out in detail the reasons on which they are based. A decision shall be notified to the party concerned, who shall at the same time be informed of the remedies available to him under the laws in force in the Member States and of the time limits allowed for the exercise of such remedies.

Article 7

No Member State may refuse to grant EEC type-approval or national type-approval of a vehicle on grounds relating to its fog lights if these bear the EEC type-approval mark and are fitted in accordance with the requirements laid down in the Council Directive of (1) on the approximation of the laws of the Member States concerning the installation of lighting and light signalling devices on motor vehicles and trailers.

(1) COM (73) 2024

Article 8

No Member State may refuse or prohibit the sale or registration, entry into service or use of a vehicle on grounds relating to its fog lights if these bear the EEC type-approval mark and are fitted in accordance with the requirements laid down in the Council Directive of (1) on the approximation of the laws of the Member States concerning the installation of lighting and light signalling devices on motor vehicles and trailers.

Article 9

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

Article 10

The amendments necessary for adjusting the requirements of Annexes 0 - V as well as Articles 7 and 8, so as to take account of the technical progress shall be adopted in accordance with the procedure laid down in Article 13 of the Council Directive (70/156/EEC) of 6 February 1970 on the approximation of the laws of Member States relating to the type-approval of motor vehicles and their trailers.

Article 11

1. The Member States shall adopt and publish the provisions needed in order to comply with this Directive before 1 January 1975 and shall forthwith inform the Commission thereof. They shall apply these provisions from 1 October 1975.

(1) COM (75) 2024

2. As soon as this Directive has been notified, the Member States shall take care to inform the Commission, in sufficient time to enable it to submit its comments, of any draft laws, regulations or administrative provisions which they intend to adopt in the field covered by the Directive.

Article 12

This Directive is addressed to the Member States.

LIST OF ANNEXES (*)

- Annex 0 - Definitions, application for EEC type-approval markings, EEC type-approval, general specifications, illumination, colour, determination of discomfort (dazzle), conformity of production, etc.
- Annex I - Model for an EEC type-approval certificate
- Annex II - Example of an EEC type-approval mark
- Annex III - Lamps for fog lights
- Annex IV - Standard (reference) lamps for fog lights
- Annex V - Measuring screen

(*) The text of the annexes is similar to that of Regulation No. 19 of the Economic Commission for Europe; in particular the breakdown into items is the same; for this reason, when an item of Regulation No. 19 has no counterpart in this directive, its number is given in brackets as a token entry.

ANNEX 0

DEFINITIONS, APPLICATION FOR EEC TYPE-APPROVAL,
MARKINGS, EEC TYPE-APPROVAL, GENERAL SPECIFICATIONS,
ILLUMINATION, COLOUR, DETERMINATION OF DISCOMFORT
(DAZZLE), CONFORMITY OF PRODUCTION.

1. DEFINITIONS

For the purposes of this Directive

- 1.1. "fog light" means that light on a vehicle which improves the illumination of the road in conditions of fog, snowfall, heavy rain or dust clouds;
- 1.2. fog lights of different "types" are fog lights which differ in such essential respects as:
 - 1.2.1. the trade name or mark;
 - 1.2.2. the characteristics of the optical system;
 - 1.2.3. the inclusion of components capable of altering the optical effects by reflection, refraction or absorption; and
 - 1.2.4. the type of lamp.

2. APPLICATION FOR EEC TYPE-APPROVAL.

- 2.1. The application for EEC type-approval shall be submitted by the holder of the trade name or mark or if necessary by his authorized representative.
- 2.2. The application relating to each type of fog light shall be accompanied by:
 - 2.2.1. a brief technical specification. If the light is not of the sealed-beam type, the type of lamp or lamps shall be specified; it shall be one of those whose characteristics shall be as shown in annex III;
 - 2.2.2. drawings in triplicate, sufficiently detailed to permit identification of the type and showing the light in cross (longitudinal) section and in front elevation, with details of the fluting, if any, of the glass; and
 - 2.2.3. two samples of the type of fog light.

3. MARKINGS

- 3.1. The samples of a type of fog light which are submitted for EEC type-approval shall bear the trade name or mark of the applicant, which shall be clearly legible and be indelible.
- 3.2. A space of sufficient size to accommodate the EEC type-approval mark shall be provided both on the glass and on the main body of every light ^{1/}; this space shall be shown on the drawings referred to in item 2.2.2. above.

4. EEC TYPE-APPROVAL.

(4.1.)

(4.2.)

- 4.3. As soon as an EEC type-approval or the extension for an EEC type-approval has been granted, the competent authorities shall notify the competent authorities of all the other Member States, by means of a certificate of which the model is shown in Annex I. The certificate shall be accompanied by a drawing, if possible actual sized, supplied by the person to whom the type-approval has been granted, in a format not longer than A4 (210 x 297 mm).
- 4.4. In addition to the mark prescribed in item 3.1., the following particulars shall be affixed in the spaces referred to in item 3.2. above to every fog light conforming to a type approved by the authorities of a Member State;
- 4.4.1. an EEC type-approval mark^{2/} consisting of:
- 4.4.1.1. a rectangle, within which shall be placed the letter "e" followed by the distinguishing number or letter of the country which has granted the EEC type-approval (1 for Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 6 for Belgium, 11 for the United Kingdom, 13 for Luxembourg, DK for Denmark and IRL for Ireland);
- 4.4.1.2. the EEC type-approval number, below the rectangle; and
- 4.4.1.3. the letter "B" in a square above the rectangle;

1/ If the glass cannot be separated from the main body, the provision of such a space on the glass of every light will suffice.

2/ If different types of fog lights have an identical glass, the glass may bear the several EEC type-approval marks of those types of fog lights on condition that the main body of the fog light, even if it cannot be separated from the glass, is also provided with the space referred to in item 3.2. above and bears the EEC type-approval mark of the type of fog light. If different types of fog lights have an identical main body, it may bear the several EEC type-approval marks of those types of fog lights.

- 4.4.(a) Where EEC type-approval is requested for a type of lighting and light signalling device comprising a fog light and other lights and lamps, a single EEC type-approval mark shall be issued provided that the fog light complies with the requirements of the present Directive and that each of the other lights and lamps forming part of the type of lighting and light signalling device for which EEC type-approval is requested complies with the specific Directive applying to it.
- 4.4.(b) The following provisions shall apply where a single EEC type-approval number is issued, as under Item 4.4.(a) above, for a type of lighting and light signalling device comprising a fog light and other lights or lamps:
- 4.4.(b) 1. in the case where, according to the specific Directive applying to it, a component must be marked with an arrow, the arrow and the category code, whether made up of numbers or not, shall appear along a clearly visible horizontal line in the right-hand part of a box, to the left-hand side of which the rectangle containing the letter "e" is located, followed by the distinguishing number or letter of the Member State which granted the EEC type-approval;
- 4.4.(b) 2. the dimensions of the various components of this mark must not fall below the minimum dimensions specified for individual markings.
- 4.5. The marks and symbols referred to in item 4.4. above shall be clearly legible and be indelible even when the fog light is mounted on the vehicle.
- 4.6. Annex II shows an example of the EEC type-approval mark referred to above.
5. GENERAL SPECIFICATIONS
- 5.1. Each sample submitted in conformity with item 2.2.3. above shall meet the specifications set forth in items 6 and 7.
- 5.2. The fog lights shall be so designed and constructed that in normal use, despite the vibration to which they may then be subjected, their satisfactory operation continues to be ensured and they retain the characteristics prescribed by this Directive. The correct position of the glass shall be clearly marked and the glass and reflector shall be so secured as to prevent any rotation during use.

- 5.3. Conformity with the requirements of this item shall be verified by visual inspection and, where necessary, by a trial fitting.

6. ILLUMINATION

- 6.1. Fog lights shall be so designed as to provide illumination with limited dazzle.
- 6.2. The illumination produced by the fog light shall be determined by means of a vertical screen set up 25 m forward of the glass of the fog light. The point HV is the base of the perpendicular from the centre of the light to the screen. The line hh is the horizontal through HV (See annex V).
- 6.3. In the case of a type of construction other than a sealed-beam type, a colourless-bulb standard (reference) lamp of the type specified by the manufacturer in conformity with the requirements of item 2.2.1. and of Annex IV, designed for a rated voltage of 12 V and supplied by the manufacturer, shall be used; it shall be supplied with electric current at a voltage such that it produces the flux prescribed for the tests corresponding to its type. In the case of a sealed-beam type of construction, current shall be supplied at the test voltage (6 V, 12 V or 24 V, as appropriate).
- 6.4. The beam shall produce on the screen, over a width of not less than 2.25 m on both sides of the line VV, a symmetrical cut-off approximating sufficiently closely to the horizontal to enable adjustment to be performed with its aid.
- 6.5. The fog light shall be so directed that the cut-off on the screen is 50 cm below the line hh.
- 6.6. When so adjusted, the fog light shall meet the requirement set out in item 6.7. below.

6.7. The illumination produced on the screen (see annex V) shall meet the following requirements:

| Position on measuring screen | | Illumination required, in lux |
|---|---|---|
| Zone | Zone limits | |
| On the line hh between points h_1 and h_2 | 225 cm on both sides of the line VV | $\geq 0,3$ |
| A | 225 cm on both sides of the line VV and 75 cm above hh | ≥ 0.15 and ≤ 1 |
| B | 1250 cm on both sides of the line VV and 150 cm above hh, including hh (except Zone A) | ≤ 1 |
| C | 1250 cm on both sides of the line VV and starting from 150 cm above hh | $\leq 0,5$ |
| D | 450 cm on both sides of the line VV and comprised between the parallels to hh respectively situated 75 and 150 cm below hh | On each vertical line in this zone there shall be at least one point (a,b,c) where the illumination is ≥ 1.5 |
| E | From 450 cm to 1000 cm on both sides of Zone D and comprised between the parallels to hh respectively situated 75 and 150 cm below hh | On each vertical line in this zone there shall be at least one point where the illumination is ≥ 0.5 . |

The illumination shall be measured either in white light or in coloured light as prescribed by the manufacturer for use of the fog light in normal service. No variations in illumination detrimental to satisfactory visibility shall exist in either of the zones B and C.

- 6.8. The screen illumination referred to in item 6.7. above shall be measured by means of a photo-electric cell having a useful area comprised within a square of 65 mm side.

7. COLOUR

EEC type-approval may be obtained for a type of fog light emitting either white or selective-yellow ^{3/} light. The colouring, if any, of the beam may be obtained either through the lamp bulb or through the glass of the fog light or by any other suitable means.

8. DETERMINATION OF DISCOMFORT (DAZZLE)

The discomfort dazzle caused by the fog light shall be determined.

(9)

(10) CONFORMITY OF PRODUCTION

Every fog light bearing an EEC type-approval mark shall conform to the type approved and satisfy the photometric requirements set out above.

(11)

(12)

3/ Definitions of "selective yellow"; Purity factor: at least equal to 0.820; limits towards white ($y \geq -x + 0.966$) then becoming: $y \geq -x + 0.940$ and $y = 0.440$.

ANNEX I

MODEL FOR AN EEC TYPE-APPROVAL CERTIFICATE
(Max. format: A4 (210 x 297 mm))

Name of the
competent authority

Notification concerning the grant, refusal, withdrawal
of EEC type-approval or the grant, refusal, withdrawal
of extension of EEC type-approval of a type of fog light

e 4

- Type-approval No.
1. Fog light designed to emit white/selective - yellow light*/ 1
 2. Fog light using a lamp of type F₁, F₂, F₃, H₁, H₂, H₃*/ 2
 3. Nominal voltage (in the case of a sealed-beam light) volts 3
 4. Trade name or mark 4
 5. Name and address of manufacturer 5
 6. If applicable, name and address of manufacturer's authorized representative 6
 7. Submitted for EEC type-approval on 7
 8. Technical service conducting EEC type-approval tests 8
 9. Date of report issued by that service 9
 10. Number of report issued by that service 10
 11. Extension of type approval: vehicle-yellow/colourless (*)..... 11
 12. Date of grant/refusal/withdrawal of EEC type-approval (*)..... 12
 13. Date of grant/refusal/withdrawal of extension of EEC type-approval (*) 13
 14. Single EEC type-approval granted on the basis of Items 4.4(a) and (b) of Annex 0, for a lighting and light signalling device comprising several lights and/or lamps, and in particular 14
 15. Date of refusal/withdrawal of single EEC type-approval (*)..... 15
 16. Done at 16
 17. Date 17
 18. Signature 18
 19. The attached drawing no. shows the fog light in front elevation with the fluting of the glass and in cross section 19

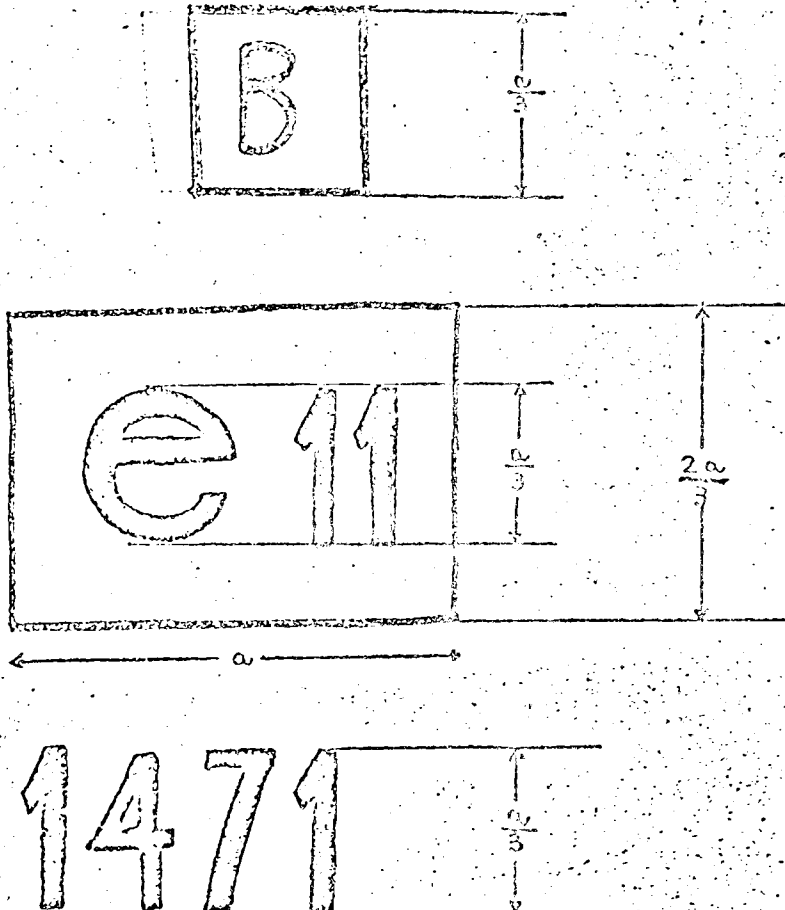
*/ Strike out what does not apply

(*) Delete items not applicable.

ANNEXE II

EXAMPLE OF AN EEC TYPE-APPROVAL MARK

a = 12 mm min.

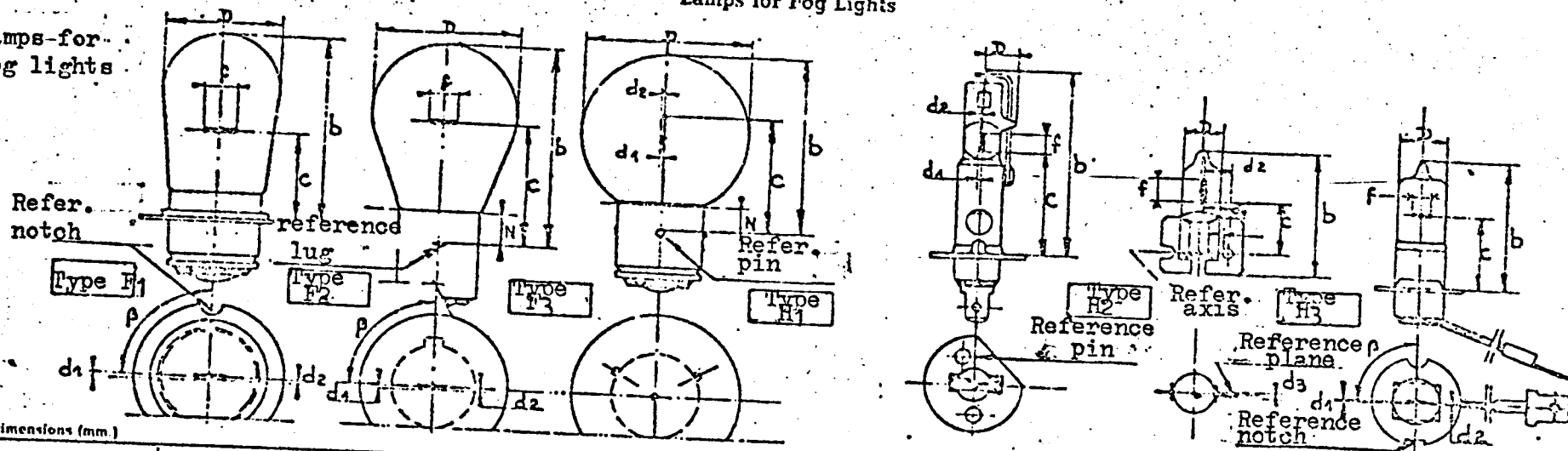


The fog light bearing the EEC type-approval mark above is a fog light type-approved in the United Kingdom (11) under No. 1471.

Annex III

Lamps for Fog Lights

Lamps for fog lights



Dimensions (mm.)

| Type | F ₁ | | | F ₂ | | | F ₃ | | | H ₁ | | | H ₂ | | | H ₃ | | | |
|--|----------------------|--------------------|--|----------------|--------|-----------|----------------|--------|----------|----------------|-------|-----------|----------------|----------|-----------|----------------|---------|----------|-------|
| | min. | nom. | max. | min. | nom. | max. | min. | nom. | max. | min. | nom. | max. | min. | nom. | max. | min. | nom. | max. | |
| D | | | 29.0 | | | 35.0 | | | | | | | | | | | | | |
| b | | | 46.0 | | | 50.0 | | | 41.0 | | | 10.0 | | | 9.0 | | | | |
| c | 21.0 (1) (5) | 21.5 | 22.0 (1) (5) | 29.65 (1) | 30.0 | 30.25 (1) | 28.0 (1) | 28.5 | 29.0 (1) | 24.75 (1) | 25.0 | 25.25 (1) | 14.75 (1) | 15.0 | 15.25 (1) | 17.5 (1) | 18.0 | 18.5 (1) | |
| d ₁ | -0.5 | 0 | +0.5 | -0.5 | 0 | +0.5 | -0.2 (2) | 0 | +0.2 (2) | -0.25 (2) | 0 | +0.25 (2) | -0.25 (2) | 7.1 | +0.25 | -0.25 | | | |
| d ₂ | | | | | | | | | | -0.5 (2) | | +0.5 (2) | -0.50 | | +0.50 | (5) | | (5) | |
| Ø | | | | | | | | | | | | | -0.25 | Ø/2-0.35 | +0.25 | | | | |
| coil diameter not specified | | | | | | | | | | | | | | | | | | | |
| f | | | 6.0 (6 V) 7.5 (12 V) 6.75 (24 V) | | | 7.0 | | | | | | | | | | | | | |
| N (1) | | | | 5.0 | | | 6.0 | | | 4.5 | 5.5 | 6.5 | 4.0 | | | 3.0 | | | |
| β | | 90° | | | 90° | | | | | | | | | | | | | | |
| Cap (4) | | P 36s (7) | | | BA 20s | | | BA 21s | | P 14.5s | | | | | | | 90° (5) | | |
| Electrical and Photometric Characteristics | | | | | | | | | | | | | | | | | | | |
| Designation by | Rated | Volts Watts | 6 | 12 | 24 | 6 | 12 | 24 | 6 | 12 | 24 | 6 | 12 | 24 | 6 | 12 | 24 | 24 | |
| | | | 36 | 48 | 44 | 35 | 45 | 50 | 55 | 70 | 55 | 70 | 55 | 70 | 55 | 70 | 55 | 70 | |
| | Data at Test Voltage | Test Voltage | 6.3 | 12.2 | 24.0 | 6.3 | 13.5 | 28.0 | 6.3 | 13.2 | 28.0 | 6.3 | 13.2 | 28.0 | 6.3 | 13.2 | 28.0 | 6.3 | 13.2 |
| | | Nominal Watts | 38.8 | 55.5 | 35.5 | 35 | 45 | 50 | 55 | 63 | 62 | 80 | 63 | 62 | 80 | 63 | 62 | 80 | 63 |
| | | toler. % (1) | | ± 10 | | ± 10 | ± 7.5 | | ± 7.5 | | ± 7.5 | | ± 7.5 | | ± 7.5 | | ± 7.5 | | ± 7.5 |
| | | Nominal Lumen Flux | 650 | 1150 | 1030 | 650 | 685 | 650 | 900 | 1350 | 1550 | 1900 | 1300 | 1800 | 2150 | 1050 | 1400 | 1700 | 1700 |
| toler. % (1) | | ± 15 | | ± 20 | ± 15 | | ± 15 | | ± 15 | | ± 15 | | ± 15 | | ± 15 | | ± 15 | | |
| Lumen Flux for Head Lamp Tests (6) | | | | 800 | | 540 | | 650 | | 1150 | | 1300 | | | | | | | |
| (*) Maximum value | | | | | | | | | | | | | | | | | | | |

(*) Maximum value

(1) Applicable to 90% of the production only

(2) Cylindrical tolerance

(3) This dimension must be checked by a ring gauge with a bore equal to the maximum permissible diameter of the cap (see I.E.C. publication 61)

(4) Cap in accordance with I.E.C. publication 61

(5) To be checked by a "Box System"

(6) For the light test only the 12 V. lamp is used

(7) For 24 V. lamps the P 36d cap is also sometimes used

ANNEX IV
STANDARD (REFERENCE) LAMPS FOR FOG LIGHTS

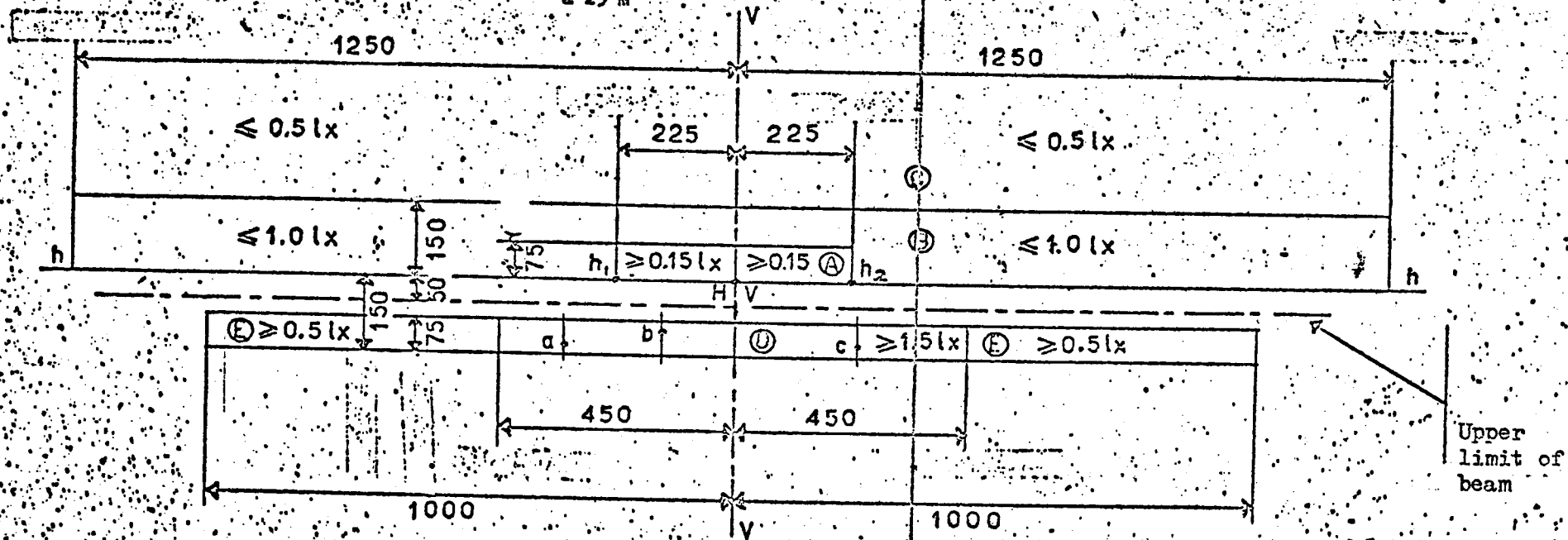
| TYPES dimensions (mm) | F ₁ | F ₂ | F ₃ | H ₁ |
|--|----------------|----------------|----------------|----------------|
| D | 29 max | 36 max | 41 max | 10 max |
| b | 46 max | 50 max | 45 max | 49 max |
| c | 21.5 ± 0.15 | 30 ± 0.15 | 28.5 ± 0.15 | 25 ± 0.15 |
| d ₁ | ± 0.2 | ± 0.2 | ± 0.2 | ± 0.2 |
| d ₂ | | | | ± 0.25 |
| f | 6 to 7.5 | 4 to 7 | 5 ± 1 | 5.5 ± 0.5 |
| β | 90° ± 3° | 90° ± 3° | | |
| Test voltage | 13.2 V | 13.5 V | 13.2 V | 13.2 V |
| Wattage at test voltage | 55.5 W ± 10% | 35 W ± 10% | 45 W ± 10% | 62 W ± 7.5% |
| Luminous flux for testing fog lights | 800 lm | 540 lm | 650 lm | 1,150 lm |

*/ The dimension from the end of the filament to the reference axis should be 2.5 ± 0.2.

Annexe V

MEASURING SCREEN

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HV: point of intersection of lines hh and VV

1. Dimensions in cm