

COMMISSION OF THE EUROPEAN COMMUNITIES

COM(89) 377 final - SYN 210

Brussels, 27 July 1989

Proposal for a

COUNCIL DIRECTIVE

on the approximation of the laws of the Member States relating
to the spray-suppression devices of certain categories of
motor vehicles and their trailers

(presented by the Commission)

EXPLANATORY MEMORANDUM

This proposal for a directive concerns the approximation of the laws of the Member States relating to the spray-suppression devices of certain categories of motor vehicles and their trailers and replaces that set out in document COM(87) 132 final, which was addressed to the Council on 12 August 1987.

The historical background, justification and contents of this new proposal are set out below.

I. HISTORICAL BACKGROUND

1. The framework procedure governing the EEC type approval of motor vehicles and trailers at Community level, which is dealt with in Council Directive 70/156/EEC of 6 February 1970¹ includes, inter alia, a point on special provisions for goods vehicles (point 12.4 of Annex II).

It authorizes the preparation of one or more separate Directives in which technical requirements and test methods will be determined which, in particular, goods vehicles must fulfil in respect of their construction and equipment if EEC approval for these aspects or for these types of vehicle is applied for.

2. Also, with the aim of improving road safety, the Commission included this point in its programme of legislative actions in the Road Safety Year of 1986.

The Council stressed the importance of these and similar activities in its Resolution of 19 December 1984 on road safety².

¹ OJ L 42, 23.2.1970, p. 1.

² OJ C 341, 21.12.1984, p. 1.

In addition, the European Parliament has repeatedly insisted on the need for Community legislation in this area³.

3. In August 1987 the Commission sent to the Council an initial proposal based on Article 100A of the Treaty, the technical content of which was based on the provisions in force in certain Member States, and on proposals from various experts.

The essential aim of this proposal was to improve road safety by using spray-suppression devices that are intended to limit the spraying of water, mud or pebbles by the tyres of heavy commercial vehicles when in motion.

4. In October 1987 the Council initiated the first discussions which ended with an invitation to the Commission to convene its working party on "motor vehicles" in order to examine certain technical aspects thereof, since this working party was the most appropriate forum for discussions of this type.

This working party was convened by the Commission in March 1988, and in the same month the European Parliament delivered its opinion on first reading.

II. JUSTIFICATION

The Commission has noted several new aspects since this initial proposal was put forward, and the present time. In order to take account of these new factors, of the results of the discussions within the working party and the opposition of the Member States to the solutions put forward with regard to the method of harmonization and to the fitting of these devices to vehicles already on the road, the Commission, in view of the scope of the amendments to be made and in order to achieve greater legal clarity, considered it appropriate and necessary to replace its initial proposal by a new proposal.

³ Resolution of the Council and of the representatives of the Member States of the Community of 19.12.1984, OJ C 341, 21.12.1984, page 1.

III. CONTENTS OF THIS PROPOSAL

i. Enacting terms.

In comparison with the first proposal the enacting terms basically consist of two differing solutions with regard to the method of harmonization and to vehicles already on the road.

The Commission has reverted to the "optional" method of harmonization since this proposal forms part of a whole series of separate directives that have already been adopted by the Council, together with the same optional method of harmonization. These separate directives form the core of the complete EEC type-approval procedure for a type of vehicle which is governed by the framework Directive 70/156/EEC. As it is a separate directive relating to devices which, while important in terms of improving road safety, do not have the same economic and technical impact as those designed to combat air pollution, for which the Commission has proposed complete harmonization, there is not the same urgent need to propose such a harmonization method at present, by way of derogation from the general motor vehicle technical harmonization procedures. However, the Commission does not intend to disregard this important matter, above all with a view to the large single market in 1993 and, since it feels that the "total" method of harmonization should be imposed in order fully to achieve that large market, it intends to put forward proposals in that respect when the framework Directive 70/156/EEC is amended. A change in the "optional" method of harmonization currently in use in the motor vehicle sector is only conceivable as part of an overall approach, i.e. there should be an amendment of this type and it should cover all of the EEC type approval procedure for a type of vehicle as part of the basic Directive 70/156/EEC referred to above. An amendment of this type would automatically involve extension of the new method of harmonization to all of the separate directives already adopted and needed in order to obtain EEC type-approval.

In the opinion of the Member States the requirements relating relating to the fitting of spray-suppression devices of this type to motor vehicles already on the road would not be an appropriate addition to this proposal which, just like all of the other separate directives needed for the

granting of EEC type-approval, only refers to new vehicles. However, the Commission is still convinced that the extension of the fitting of devices of this type to all vehicles on the road can only ensure greater road safety and intends later to put forward proposals in this area that are based on more appropriate provisions of the Treaty.

Finally, the Commission intends, with regard to the procedure relating to the adaptation of the directive to technical progress, to apply the provisions of the Single Act, which provide for a delegation of powers to the Commission in order to proceed with this task. This proposal thus retains the Advisory Committee procedure and not that of the Regulatory Committee.

2. Technical annexes

As compared with the first proposal the technical annexes include several amendments relating to the dimensional requirements and to the laying-down of a test for a device of the air/water separator type, a test of this type having since been defined. It will therefore be possible to grant EEC type-approval to all spray-suppression devices of this type that are already on the market. However, this test, which is neither equivalent nor comparable to the test for spray-suppression equipment of the energy-absorption type, is a preliminary stage which will have to lead, subsequently and in the light of the studies carried out, to the research and tests which are currently under way with a view to amending the two tests in order to make them equivalent, without excluding the possibility of achieving a single means of testing the performance of vehicles fitted with devices of this type.

The technical content of the proposal takes broad account of the provisions either in force or at the advanced draft stage in certain Member States. Reference has been made, in particular as regards the dimensional requirements, to the provisions in force in the United Kingdom and at the draft stage in Belgium while, however, making a number of amendments to these. Basically the amendments concern the distance from the ground to the lower edge of the spray-suppression equipment and

its minimum enclosure angle and the minimum percentage of water retention required at the end of the test to which energy-absorption devices must be submitted in order to obtain EEC type-approval.

In view of the fixed horizontal distance between the spray-suppression device and the wheel, the distance from the ground to the lower edge of the spray-suppression device has been increased from 150 mm to 200 mm in order to extend the durability of such devices once they have been fitted and are in use on vehicles. A greater increase in this distance, to take account of the clearance required for certain mechanical suspensions - in particular the rear axle of some trailer-towing vehicles - would result in the efficiency of the device being reduced. However, given that the trend is to fit vehicles with pneumatic suspensions, which remain at a constant height, this problem should not cause major difficulties. At the same time the minimum enclosure angle of the spray-suppression device has been reduced from 45° to 30°. It has been noted that beyond 30°, i.e. between 30° and 45°, the presence of a spray-suppression device on each mudguard may, in particular when it covers the inside of the mudguard, cause interference with the wheel where the wheel and mudguard approach each other dynamically.

The minimum water retention percentage proposed for the energy-absorbing types of device has been increased by 5%, i.e. from 65% to 70% in order to improve their efficiency.

Proposal for a
COUNCIL DIRECTIVE

on the approximation of the laws of the Member States relating to the
spray-suppression devices of certain categories of motor vehicles and their
trailers

THE COUNCIL OF THE EUROPEAN COMMUNITIES

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

Having regard to the proposal from the Commission,

In cooperation with the European Parliament,

Having regard to the opinion of the Economic and Social Committee¹,

Whereas it is important to adopt measures with the aim of progressively
establishing the internal market over a period expiring on 31 December 1992;
whereas the internal market shall comprise an area without internal frontiers
in which the free movement of goods, persons, services and capital is ensured;

Whereas the technical requirements which certain categories of motor vehicles
and their trailers must satisfy pursuant to national laws relate, inter alia,
to the spray-suppression devices of such motor vehicles;

Whereas these requirements differ from one Member State to another; whereas
it is therefore necessary that all Member States adopt the same requirements
either in addition to or in place of their existing rules in order, in
particular, to enable the EEC type-approval procedure which was the subject of
Council Directive 70/156/EEC of 6 February 1970 on the approximation of the

Member States relating to the type-approval of motor vehicles and their trailers¹, as last amended by Directive 87/403/EEC, to be implemented²;

Whereas, with a view to improving road safety, it is considered important that all commercial vehicles in higher weight categories and with a certain minimum design speed should be equipped with efficient spray-suppression devices in order to retain water and small objects thrown upwards and sideways from the vehicle tyres;

Whereas since it is still not possible to establish a single performance test for devices of this type when they are fitted to the various types of vehicle, it is appropriate - in order to make a first step towards improving the situation - to provide for EEC component type-approval of spray-suppression devices of this type; whereas for the EEC component type-approval of devices of this type account has been taken of the two types of device currently on the market, i.e. those of the energy-absorption type and those of the air/water separator type, and whereas it has been necessary to provide for two different tests depending on the types of device to be component type-approved; whereas these two tests are neither equivalent nor comparable and thus inevitably lead to different minimum values as regards the efficiency required for the granting of EEC component type-approval;

Whereas, in the light of the studies, research and tests currently in progress, these two tests will subsequently be amended in order to make them equivalent, without ruling out the possibility of being able to replace them by a single performance test on the types of vehicle fitted with these devices;

Whereas the approximation of national laws relating to motor vehicles entails the mutual recognition by Member States of the inspections carried out by each of them on the basis of common requirements,

¹ OJ No L 42, 23.2.1970, p. 1.

² OJ No L 220, 8.8.1987, p. 44.

HAS ADOPTED THIS DIRECTIVE :

Article 1

1. Member States shall grant EEC component type-approval for any type of device, hereinafter referred to as "spray-suppression device", intended to reduce the production of spray or the throwing-up of mud and pebbles, coming from tyres of moving vehicles, where this satisfies the requirements regarding design and testing provided for in Annex II.
2. A Member State which has granted EEC component type-approval shall take the measures required to verify, in so far as is necessary and, if need be, in cooperation with the competent authorities of the other Member States, that production models conform to the approved type. For this purpose the Member State shall apply the provisions of Annex IV.

Article 2

Member States shall, for each spray-suppression device which they approve pursuant to Article 1, issue to the manufacturer or to his authorized representative an EEC component type-approval mark in conformity with the specimen in Annex II, Appendix 3.

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

Article 3

No Member State may prohibit the placing on the market of spray-suppression devices on grounds relating to their construction or their operation if they bear the EEC component type-approval mark.

Nevertheless, this provision does not prevent a Member State from taking such measures with regard to spray-suppression devices bearing the EEC component type-approval mark which consistently fail to conform to the approved type.

That Member State shall forthwith inform the other Member States and the Commission of the measures taken, specifying the reasons for its decision. The provisions of Article 5 shall also apply.

Non-conformity with the approved type, within the meaning of the first subparagraph, shall exist if the requirements of Annex II have not been respected.

Article 4

The competent authorities of each Member State shall, within one month, send the competent authorities of the other Member States copies of the EEC component type-approval certificates completed for each type of spray-suppression device which they approve or refuse to approve.

Article 5

1. If the Member State which has granted EEC component type-approval finds that a number of spray-suppression devices bearing the same EEC component 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 extend to withdrawal of EEC component 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 the Member State shall, within one month, inform each other of any withdrawal of EEC component type-approval granted by means of a copy of the component type-approval certificate, signed and dated and bearing in large letters the words "EEC TYPE-APPROVAL WITHDRAWN", and of the reasons for any such measure.

3. If the Member State which has granted the EEC component type-approval challenges the alleged lack of conformity, the Member States concerned shall endeavour to settle the disagreement. The Commission shall be kept informed. Where necessary, it shall arrange for appropriate discussions with a view to arriving at a solution.

Article 6

Any decision taken pursuant to the provisions adopted in implementation of this Directive to refuse or withdraw EEC component type-approval for, or to prohibit the marketing or use of spray-suppression devices, shall set out in detail the reasons on which it is based. Such decisions 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 fixed for availing himself of such remedies.

Article 7

For the purposes of this Directive, "vehicle" means any motor vehicle in category N and any trailer in category O as defined in Annex I to Directive 70/156/EEC, designed for use on the road, and with a maximum design speed exceeding 50 km/h.

Article 8

No Member State may refuse to grant EEC type-approval or national type-approval, nor refuse or prohibit the sale, registration, placing in service or use of vehicles on grounds relating to their spray-suppression devices, if the latter bear the EEC component type-approval mark and have been fitted pursuant to the provisions of Annex III.

Article 9

Any amendments necessary in order to adapt the requirements of the Annexes to this Directive so as to take account of technical progress shall be adopted by the Commission in accordance with the procedure laid down in Article 10.

Article 10

The Commission shall be assisted by a committee of an advisory nature composed of the representatives of the Member States and chaired by the representative of the Commission.

The representative of the Commission shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time-limit which the Chairman may lay down according to the urgency of the matter, if necessary by taking a vote.

The opinion shall be recorded in the minutes; in addition, each Member State shall have the right to ask to have its position recorded in the minutes.

The Commission shall take the utmost account of the opinion delivered by the committee. It shall inform the committee of the manner in which its opinion has been taken into account.

Article 11

1. Member States shall bring into force the provisions necessary in order to comply with this Directive by 1 October 1991. They shall forthwith inform the Commission thereof.

The provisions adopted pursuant to the first indent shall make express reference to this Directive.

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

Article 12

This Directive is addressed to the Member States.

Done at Brussels,

For the Council
The President

LIST OF ANNEXES

Annex I - Definitions

Annex II - Requirements relating to the EEC component type approval of spray-suppression devices

Appendix 1 : Tests on spray-suppression devices of the water-energy absorption type.

Appendix 2 : Tests on spray-suppression devices of the air/water separator type.

Appendix 3 : Model of the EEC component type-approval mark

Appendix 4 : Model of the EEC component type-approval certificate

Annex III - Requirements relating to the EEC type approval of a type of vehicle with regard to the fitting of spray-suppression devices.

Appendix: Annex to the EEC type-approval certificate in respect of a type of vehicle with regard to the fitting of spray-suppression devices.

Annex IV - Conformity of production - General specifications - Cessation of production.

Figures

ANNEX I

Definitions

1. Spray-suppression device

A device intended to reduce the pulverization of water and the spraying of mud or pebbles thrown upwards by the tyres of the vehicle in motion. The spray-suppression device is variously made up of a mudguard, rain flaps and valances equipped with an air/water separator or an energy-absorption device.

2. Mudguard

A rigid or semi-rigid component intended to trap the water, mud or pebbles thrown up by the tyre in motion and to direct it towards the ground. Mudguards may entirely or partially form an integral part of the vehicle bodywork or other parts of the vehicle such as the lower part of the load platform, etc. ...

3. Rain flap

A flexible component mounted vertically behind the wheel, on the lower part of the chassis or the loading surface, or on the mudguard.

The rain flap must also reduce the risk of small objects, and in particular pebbles, being picked up from the ground by the tyres and thrown upwards or sideways towards other road users.

4. Air/water separator

A component forming part of the valance and/or of the rain flap through which air can pass whilst reducing pulverized water emissions.

5. Energy absorber

Component forming part of the mudguard and/or valance and/or rain flap which absorbs the energy of water spray, thus reducing pulverized water spray.

6. Valance

Component located approximately within a vertical plane that is parallel to the longitudinal plane of the vehicle. It may form part of a mudguard or of the vehicle bodywork.

7. Steered wheels

The wheels actuated by the vehicle's steering system.

8. Self-tracking axle

An axle pivoted about a central point in such a way that it can describe a horizontal arc. For the purposes of this Directive, a self-tracking axle of the "pivot steering" type is considered to be, and treated as, an axle fitted with steered wheels.

9. Self-steering wheels

Wheels which swivel through an angle not exceeding 20° owing to the friction exerted by the ground.

10. Lifting axle

An axle which can be lifted from the road during normal vehicle use.

11. Unladen vehicle

A bodied vehicle (or with representative component(s)) and, where appropriate, with coolant liquid, lubricants, fuel, tools, spare wheel and driver having an estimated total mass of 75 kg.

12. Tyre contact patch

The part of the tyre, in contact with the road (surface), which provides grip.

13. Type of spray-suppression device

The expression "type of spray-suppression device" means devices which do not differ with respect to the following main characteristics :

- the physical principle adopted in order to reduce emissions (for example: water-energy absorption, air/water separator, etc. ...)
- materials
- shape
- dimensions (in so far as they may influence the behaviour of the material).

Annex II

REQUIREMENTS RELATING TO THE EEC COMPONENT TYPE-APPROVAL OF SPRAY-SUPPRESSION DEVICES

1. Tests to be carried out

1.1 Depending on their physical operating principle spray-suppression devices are to be subjected to the relevant tests as described in appendices 1 and 2 and must deliver the results required in item 4 of said appendices.

2. Application for EEC component type-approval

2.1 Application for the EEC component type approval of a type of spray-suppression device shall be submitted by the holder of the trade mark or name or by his authorized representative.

2.2 For each type the application shall be accompanied by the following documents in triplicate, and by the following information and materials :

2.2.1 A technical description of the spray-suppression device indicating its physical operating principle and the relevant test to which it must be subjected, the materials used and one or more drawings in sufficient detail and to an appropriate scale to enable this (or these) to be identified.

2.2.2 Four samples: three of which for tests and a fourth to be kept by the laboratory for any subsequent verification. The test laboratory may require further samples.

2.3 Markings

Each sample must be clearly and indelibly marked with the applicant's trade name or mark and include a space that is large enough to receive the EEC component type-approval mark.

3. EEC component type approval

3.1 Where the samples that are representative of the type of device to be type approved pass the relevant tests as described in appendices 1 and 2, EEC type-approval is issued for that type of spray-suppression device.

3.2 A component type-approval number is assigned to each type of EEC component type-approved spray-suppression device.

3.3 Any spray-suppression device in conformity with a type approved pursuant to this Directive shall bear an EEC component type-approval mark, which shall be so affixed as to be indelible and easily legible even when the device is fitted to the vehicle.

3.4 The EEC component type-approval mark (a model of which is shown in Appendix 3 to this annex) shall consist of :

3.4.1 a rectangle surrounding the lower-case letter "e", followed by the distinguishing letter(s) or number of the Member State which has granted the EEC component type-approval;

1 for the Federal Republic of Germany, 2 for France, 3 for Italy, 4 for the Netherlands, 6 for Belgium, 9 for Spain, 11 for the United Kingdom, 13 for Luxembourg, 18 for Denmark, 21 for Portugal, EL for Greece and IRL for Ireland;

3.4.2 the EEC component type-approval number (corresponding to the number on the component type-approval certificate, a model of which is shown in Appendix 4 to this annex), which shall be placed close to the rectangle, either below the letter "e", or to the left or right of that letter. The digits of the component type-approval number shall be placed on the same side of the letter "e" and shall face in the same direction. The use of Roman numerals in component type-approval numbers must be avoided in order to prevent any confusion with other symbols;

3.4.3 the letter "A" or the letter "S", depending on whether the device is of the energy-absorption type (A) or of the air/water separator type (S), located in any position above and close to the rectangle.

APPENDIX 1

Tests on spray-suppression devices of the water energy-absorption type

1. Principle

The aim of this test is to quantify the ability of a device to retain the water directed against it by a series of jets. The test assembly is intended to reproduce the conditions under which the equipment is to function when fitted to a vehicle as regards the volume and speed of the water thrown up by the tyre tread in contact with the ground.

2. Equipment

See Figure 8 for a description of the test assembly. The tests shall be carried out in a still-air environment.

3. Procedure

- 3.1 Secure a 500 (+0/-5) mm wide, 750 mm long sample of the equipment to be tested, to the vertical frame of the testing equipment, making sure that the sample lies well within the limits of the collector, and that no obstacle is able to deflect the water, either before or after its impact.
- 3.2 Set the water flowrate at 0.675 (+ 0.01) l/s and direct at least 90 l on to the sample from a horizontal distance of 500 (+/-2) mm (Figure 8).
- 3.3 Allow the water to trickle from the sample into the collector and calculate the percentage (difference) between the quantity of water collected and the quantity of water sprayed.
- 3.4 Repeat the test five times and calculate the average percentage amount of water collected.

4. Results

- 4.1 The calculated average percentage of water collected during the five tests shall not be less than 70% of the amount of water directed on to the device.
- 4.2 If the highest and lowest percentages of water collected depart from the average percentage by more than 5%, the test will not be valid and shall be repeated.

If even in this second test the highest and lowest percentages of water recovered again depart from the average percentage by more than 5%, and/or if the average value does not satisfy the requirements of item 4.1 of this Appendix, approval shall be refused.

- 4.3 Where the vertical position of the material or the device influences the results obtained, the procedure described in items 3.1 and 3.4 above must be repeated in the positions giving the highest and lowest percentages of water collected; the requirements of item 4.2 remain in force.

The requirements of item 4.1 above remain in force in order to give the results of each test.

APPENDIX 2

Tests on spray-suppression devices of the air/water separator type

1. Principle

This test is intended to determine the effectiveness of a porous material intended to retain the water with which it has been sprayed by means of a pressurized air/water pulverizer.

The equipment used for the test must simulate the conditions to which the material would be submitted, with regard to the volume and speed of the water sprays produced by the tyres, if it were fitted to a vehicle.

2. Equipment

2.1 The test assembly is as described in Figure 9.

3. Procedure

3.1 Secure a 305 x 100 mm sample vertically in the test assembly, check that there are no air bubbles between the sample and the upper curved plate and that the tray is properly in position. Fill the pulverizer tank with exactly one litre of water and place this as described in the diagram.

3.2 The pulverizer shall be regulated as follows :

pressure (at pulverizer) : 5 bar + 10%/-0%

flowrate : 1 litre/minute +/- 5 seconds

pulverization : circular, roughly 50 mm in diameter at 200 mm from the sample, nozzle 5 mm in diameter.

3.3 Pulverize until there is no more water vapour and note the time taken. Let the water flow out of the sample onto the tray for 60 seconds and measure the volume of water collected. Possibly measure the quantity of water remaining in the pulverizer tank. Calculate the percentage by volume of water collected versus the volume of water pulverized.

3.4 Repeat the test five times and calculate the average percentage of the quantity collected. Check before each test that the tray, pulverizer tank and measuring vessel are dry.

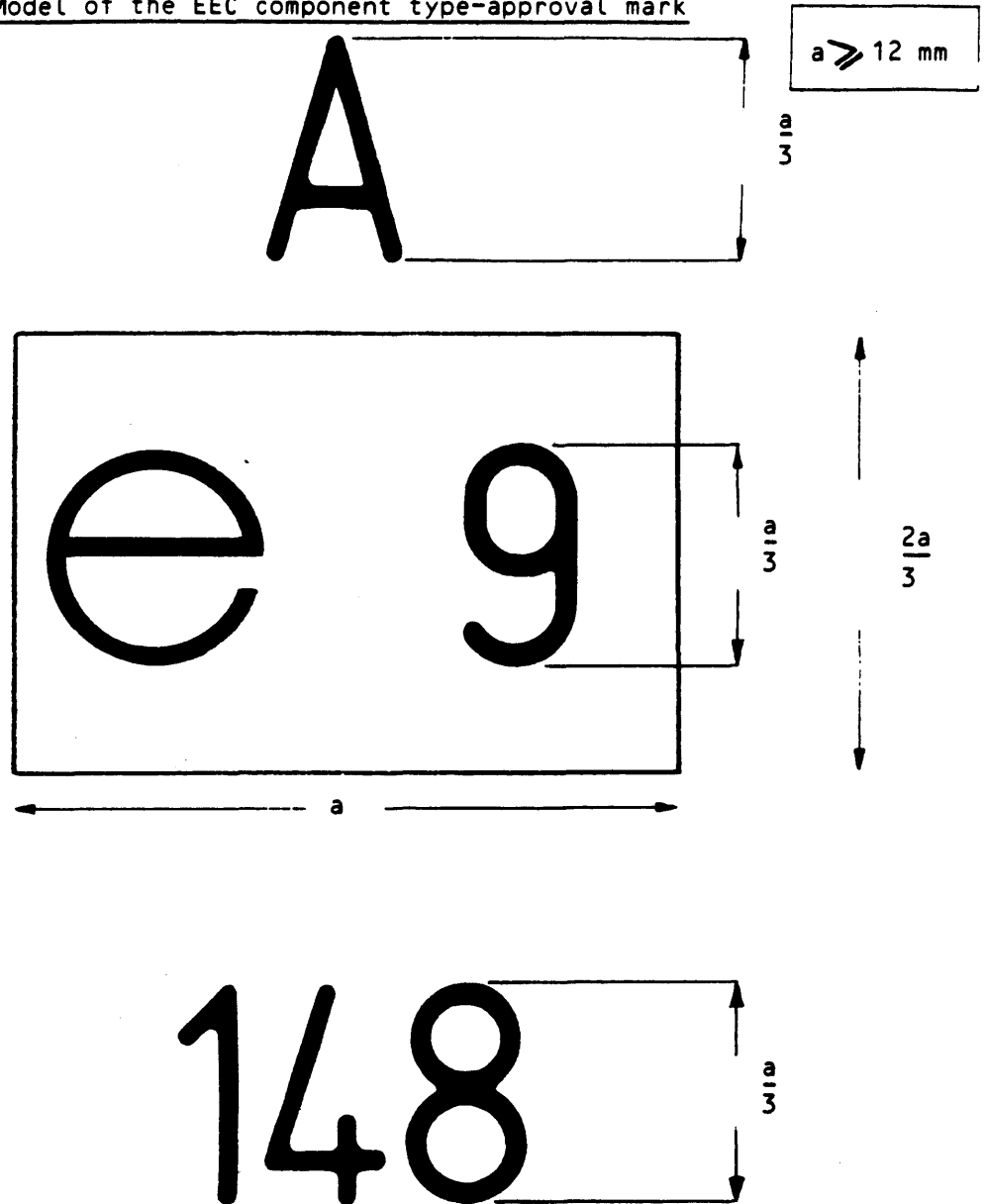
4. Results

4.1 The calculated average percentage of water collected at the end of five tests must not be less than 85% of the quantity of water sprayed on to the device.

4.2 If the highest and lowest percentages of water collected vary by more than 5% of the average percentage, the test is not valid and must be repeated.

APPENDIX 3

Model of the EEC component type-approval mark



The spray-suppression device bearing the above EEC type-approval mark is a device of the energy-absorption type (A), which has been approved in Spain (e9) under number 148. The figures used are only indicative.

APPENDIX 4

Model of the EEC component type-approval certificate

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

e Name of Administration

Communication concerning the granting, refusal, withdrawal or extension of EEC component type-approval in respect of a type spray-suppression device

EEC component type-approval number Extension number

1. Trade mark or name of device
2. Type and category of device : energy-absorption/air/water separator¹
3. Name and address of manufacturer
4. Name and address of manufacturer's authorized representative (if any)
5. Characteristics of spray-suppression devices mounted on the vehicle (brief description, trade mark or name, numbers)
6. Date on which the device was submitted for EEC component type-approval
7. Technical service responsible for the EEC component type-approval tests
8. Date and number of test report issued by the technical service
9. Date on which EEC component type-approval was granted/refused/withdrawn/extended
10. Reason(s) for the extension of EEC component type-approval (where applicable)
11. Place
12. Date
13. Signature
14. Annexed is a list of documents making up the EEC component type-approval file, deposited with the competent authority which granted that approval; a copy can be obtained on request.
15. Remarks (if any)

¹ Delete as appropriate.

ANNEX III

REQUIREMENTS RELATING TO THE EEC TYPE-APPROVAL OF A TYPE OF VEHICLE WITH REGARD TO THE FITTING OF SPRAY-SUPPRESSION DEVICES

SCOPE

1. All category N2, N3, 03 and 04 vehicles must be constructed and/or fitted with spray-suppression devices in such a way as to meet the following requirements.
2. The requirements laid down in item 1 above shall, however, not apply to chassis/cab vehicles, or unbodied vehicles, to "off-road" vehicles as defined in Directive 70/156/EEC, or to vehicles in which the presence of spray-suppression devices is incompatible with their use.

GENERAL REQUIREMENTS

3. Axles

Where a vehicle is fitted with one or more lifting axles, the spray suppression device must :

- 3.1 cover all of the wheels when the axle is lowered and the wheels in contact with the ground when the axle is raised;
- 3.2 satisfy the conditions applicable to rigid axles if mounted on the pivoting part. If not mounted on that part it must satisfy the conditions that are applicable to steered wheels.

4. Position of outer valance

- 4.1 In the case of non-steered wheels the distance "c" between the longitudinal plane tangential to the outer tyre wall, apart from any tyre bulge near the ground, and the inner edge of the valance shall not exceed 75 mm unless the radius of the inner edge of the valance, as defined in items 7.2, 8.2 and 9.2, is less than 1,0 R, in which case it must not exceed 100 mm (Fig. 1).
- 4.2 In the case of steered and self-steering wheels distance "c" shall not exceed 100 mm.

5. State of vehicle

For the checking of compliance with this Directive the vehicle must be in the following state :

- (a) it must be unladen and tractors for articulated units must be connected to their semi-trailers. In every case the wheels shall be in the straight-ahead position;

(b) the loading surfaces of semi-trailers must be horizontal;

(c) the tyres must be inflated to their normal pressure.

6. Mudguards and rain flaps

6.1 The mudguards and rain flaps of non-steered wheels that are covered by the bodywork floor, or by the lower part of the load platform, must meet the specification set out in item 7 or 8 or 9 below.

6.2 Mudguards and rain flaps for the other wheels must meet the specifications set out in item 7 or 9 below.

SPECIFIC REQUIREMENTS

7. Requirements concerning spray-suppression devices for axles fitted with steered or self-steering or non-steered wheels

7.1 Mudguards

7.1.1 The mudguards must cover the zone immediately above, ahead and behind the tyre or tyres :

(a) in the case of a single or multiple axle where distance "d" (Fig. 4) between the tyres fitted to the adjacent axles exceeds 300 mm, the forward edge (Fig. 2, tip C) must extend forwards to reach a line O-Z where $\theta = 30^\circ$ above the horizontal at the most for axles fitted with steering or self-steering wheels, or 20° at the most for axles fitted with non-steered wheels.

The rearmost edge (Fig. 2, tip A) must extend downwards in such a way as not to be more than 100 mm above a horizontal line passing through the centre of the wheel.

(b) in the case of multiple axles where the distance "d" between the tyres fitted to the adjacent axles does not exceed 300 mm, the mudguard must be as shown in Figure 4a.

(c) the mudguard must possess a total width "q" (Fig. 1) at least adequate to cover the entire width of the tyre "b" or the entire width of two tyres "t" in the case of twin wheels, account being taken of the extremes for the tyre/wheel unit specified by the manufacturer. Dimensions "b" and "t" shall be measured at hub height, excluding any markings, ribs, protective bands, etc. on the tyre walls.

7.1.2 The front side of the rear part of the mudguard must be fitted with a spray-reduction device complying with the specifications set out in Annex II. This material must cover the inside of the mudguard up to a height determined by a straight line running from the centre of the wheel and forming an angle of at least 30° with the horizontal (Fig. 3).

7.1.3 If the mudguards are made up of several components, where these are fitted, they must not incorporate any aperture enabling spray to exit while the vehicle is in motion.

7.2 Outer valances

7.2.1 In the case of single axles, or multiple axles where the distance "d" between the tyres on adjacent axles exceeds 300 mm, the lower edge of the outer valance may not be situated beyond the following distances and radii, as measured from the centre of the wheel (see Figure 2).

(a) Axles fitted with steered wheels or self-steering wheels

front edge (towards the front of the vehicle) (tip C at 30°)
rear edge (towards the rear of the vehicle) (tip A at 100 mm) $R_v = 1.5 R$
top (immediately above the tyre)

(b) Axles fitted with non-steered wheels

front edge (tip C at 20°))
rear edge (tip A at 100 mm)) $R_v = 1.25 R$
top (immediately above tyre))

where R is the radius of the tyre fitted to the vehicle, and R_v the distance, expressed as a radius, at which the lower edge of the outer valance is situated.

7.2.2 In the case of multiple axles where distance "d" between the tyres on adjacent axles does not exceed 300 mm, the outer valances located in the space between the axles shall be located at the distances set out in 7.2.1 and must extend downwards in such a way as not to be more than 150 mm above a horizontal line passing through the centre of the wheels, or in such a way that the horizontal distance between their lower extremities does not exceed 60 mm, (Figure 4a).

7.2.3 The depth of the outer valance must extend to not less than 45 mm, at all points behind a vertical line passing through the centre of the wheel. The depth of the valances may be gradually reduced in front of this line.

7.3 Rain flaps

7.3.1 The width of the flap must fulfil the requirement for "q" in item 7.1.1 (c), except where the flap is within the mudguards, in which case it must be at least equal in width to the tread of the tyre.

7.3.2 The basic orientation of the flap must be essentially vertical.

7.3.3 The distance to the lower edge of the flap shall not exceed 200 mm from the ground (Figure 3).

7.3.4 The rain flap shall not be more than 300 mm from the rearmost edge of the tyre, measured horizontally.

- 7.3.5 In the case of multiple axles where distance "d" between the tyres on adjacent axles is less than 250 mm, only the rear set of wheels must be fitted with rain flaps. There must be a rain flap behind each wheel when distance "d" between the tyres on adjacent axles is at least 250 mm. (Figure 4b).
- 7.3.6 Rain flaps shall not be deflected by more than 100 mm towards the rear under a force of 3 N per 100 mm of flap width, applied to a point located 50 mm above the lower edge of the flaps.
- 7.3.7 The whole of the front face of the part of the rain flap having the minimum dimensions required must be fitted with a spray-suppression device that meets the specifications set out in Annex II, appendix 1.
- 7.3.8 No aperture enabling spray to emerge may exist between the lower rear edge of the mudguard and the rain flaps.
- 7.3.9 Where the spray-suppression device meets the specifications relating to rain flaps (item 7.3) no additional rain flap is required.

8. Requirements relating to spray-suppression devices fitted with energy absorbers for certain axles that are fitted with non-steered or self-steering wheels (see item 6.1 above).

8.1 Mudguards

- 8.1.1 Mudguards shall cover the zone immediately above the tyre or tyres. Their front and rear extremities must extend at least to the horizontal plane that is tangent to the upper edge of the tyre or tyres (Figure 5). However, the rear extremity may be replaced by the rain flap, in which case this must extend to the upper part of the mudguard (or equivalent component).
- 8.1.2 All of the inner rear part of the mudguard must be fitted with a spray-suppression device that meets the requirements set out in Annex II, appendix 1.

8.2 Outer valances

- 8.2.1 In the case of single or multiple axles where the distance between the adjacent tyres is at least 250 mm, the outer valance must cover the surface extending from the lower to the upper part of the mudguard up to a straight line formed by the tangent to the upper edge of the tyre or tyres and lying between the vertical plane formed by the tangent to the front of the tyre and the mudguard or rain flap located behind the wheel or wheels (Figure 5b).

In the case of multiple axles an outer valance must be by each wheel.

- 8.2.2 No aperture enabling spray to emerge may exist between the outer valance and the inner part of the mudguard.

- 8.2.3 Where rain flaps are not fitted behind each wheel (see item 7.3.5), the outer valance must be unbroken between the outer edge of the rain flap to the vertical plane that is tangent to the point furthest to the front of the tyre (Fig. 5a) of the first axle.
- 8.2.4 The entire inner surface of the outer valance, the height of which must not be less than 100 mm, must be fitted with an energy absorber complying with the specifications set out in Annex II, appendix 1.

8.3 Rain flaps

These flaps must extend to the lower part of the mudguard and comply with items 7.3.1 to 7.3.9.

9. Requirements concerning spray-suppression devices fitted with air/water separators for axles with steered and non-steered wheels.

9.1 Mudguards

9.1.1 Mudguards shall comply with item 7.1.1 (c).

9.1.2 Mudguards for single or multiple axles where the distance between the tyres on adjacent axles exceeds 300 mm shall also comply with item 7.1.1. (a).

9.1.3 In the case of multiple axles where the distance between the tyres on adjacent axles does not exceed 300 mm the mudguards must also conform to the model shown in Figure 7.

9.2 Outer valances

9.2.1 The low edges of the outer valances must be fitted with spray-suppression devices complying with the provisions in appendix 2 of Annex II.

9.2.2 In the case of single or multiple axles where the distance between the tyres on adjacent axles exceeds 300 mm, the lower edge of the spray-suppression device fitted to the outer valance must have the following maximum dimensions and radii, starting from the centre of the wheel (Figure 6):

(a) Axles fitted with steered wheels or self-steering wheels

Front edge (towards the front of the vehicle))
(tip C at 30°))
Rear edge (towards the rear of the vehicle)) Rv = 1,05 R
(tip A at 100 mm))
Top (immediately above the tyre))

(b) Axles fitted with non-steered wheels

Front edge (tip C at 20°))
Rear edge (tip A at 100 mm)) Rv = 1,00 R
Top (immediately above tyre))

where R = radius of tyre fitted to vehicle

and R_v = radial distance from the lowest edge of the outer valance to the centre of the wheel.

- 9.2.3 In the case of multiple axles where the distance between the tyres on adjacent axles does not exceed 300 mm, the outer valances located in the inter-axle spaces must follow the path specified in 9.1.3, and must extend downwards in such a way as not to be more than 100 mm above a horizontal straight line passing through the wheel centres (Figure 7).
- 9.2.4 The depth of the outer valance must extend to not less than 45 mm, at all points behind a vertical line passing through the centre of the wheel. This depth may be gradually reduced in front of this line.
- 9.2.5 No aperture enabling spray to emerge must exist in the outer valances or between the outer valances and the mudguards.

9.3 Rain flaps

9.3.1 Rain flaps shall :

- a) comply with item 7.3 (Figure 3) or
- b) comply with items 7.3.1, 7.3.2, 7.3.8 and 9.3.2 (Figure 6)

9.3.2 Spray suppression equipment complying with the specifications set out in Annex II, appendix 2, shall be fitted to the rain flaps referred to in item 9.3.1(b), at least along the full edge.

9.3.2.1 The lower edge of this device shall be not more than 200 mm from the ground.

9.3.2.2 This device must be at least 100 mm deep.

9.3.3 The rain flap shall not be more than 200 mm from the rearmost edge of the tyre, measured horizontally.

9.3.4 Item 7.3.5 applies as well.

9.3.5 Apart from the lower part, which includes the air/water separator type of spray-suppression device, the rain flap must not bend by more than 100 mm towards the rear under the effect of a force of 3 N per 100 mm of width of the rain flap applied immediately to the spray-suppression device in its working position.

APPENDIX

Model

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

ANNEX TO THE EEC TYPE-APPROVAL CERTIFICATE IN RESPECT OF A TYPE OF VEHICLE WITH REGARD TO THE FITTING OF SPRAY-SUPPRESSION DEVICES (Articles 4(2) and 10 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)

e..

Name of administration

- EEC type-approval number Extension number
1. Trade mark or name of vehicle
 2. Type of vehicle and category
 3. Name and address of manufacturer
 4. Name and address of manufacturer's authorized representative (if any)
 5. Characteristics of the spray-suppression devices (type, brief description, trade mark or name, component type-approval number(s))
 6. Vehicle submitted for EEC type-approval tests on
 7. Technical service responsible for the EEC type-approval tests
 8. Date of test report issued by the technical service
 9. Number of test report issued by the technical service
 10. Reason(s) for the extension of EEC type-approval (where applicable)..
 11. The extension of EEC type-approval in respect of the fitting of spray-suppression devices has been granted/refused¹⁾
 12. Place
 13. Date
 14. Signature
 15. Annexed is a list of documents making up the type-approval file, deposited with the competent authority which granted EEC type-approval; a copy can be obtained on request.
 16. Remarks (if any)

1) Delete as appropriate

ANNEX IV

CONFORMITY OF PRODUCTION, GENERAL SPECIFICATIONS, CESSATION OF PRODUCTION

1. Conformity of production

- 1.1 Any spray-suppression device bearing the EEC component type-approval mark shall conform to the type that has been component type-approved. The authority issuing the type-approval mark shall keep one sample which, together with the EEC component type-approval certificate, may be used to establish whether the devices marketed which bear the EEC component type-approval mark meet the stated requirements.
- 1.2 A type of device shall be defined by the model and descriptive documents lodged at the time of application for EEC component type-approval. Devices whose characteristics are identical with those of the pattern device and whose other components do not differ from those of the pattern device except for variants not effecting the properties referred to in this annex may be considered to belong to the same type.
- 1.3 The manufacturer shall carry out routine checks in order to guarantee the conformity of production of the type that has been component type-approved.

To this end the manufacturer shall :

- either have available a laboratory which is sufficiently well-equipped for the execution of the essential tests, or
- have the production-conformity tests carried out by an approved laboratory.

The results of the production conformity checks shall be made available for inspection by the competent authorities for at least one year.

- 1.4 The competent authorities may also conduct spot checks.
- 1.5 Conformity of production with the type of device that has been component type-approved shall be checked under the conditions and in accordance with the methods provided for in Annex II.
- 1.6 Conformity of production exists if 9 out of 10 specimens chosen at random satisfy the requirements of item 4 of Annex II, Appendices 1 and 2.
- 1.7 If the condition specified in 1.6 is not satisfied, a further 10 specimens chosen at random must be examined. The average of all measurements taken must be in conformity with the specifications of item 4 of Annex II, Appendices 1 and 2 and no individual measurement must be less than 95% of the value specified.

2. General specifications

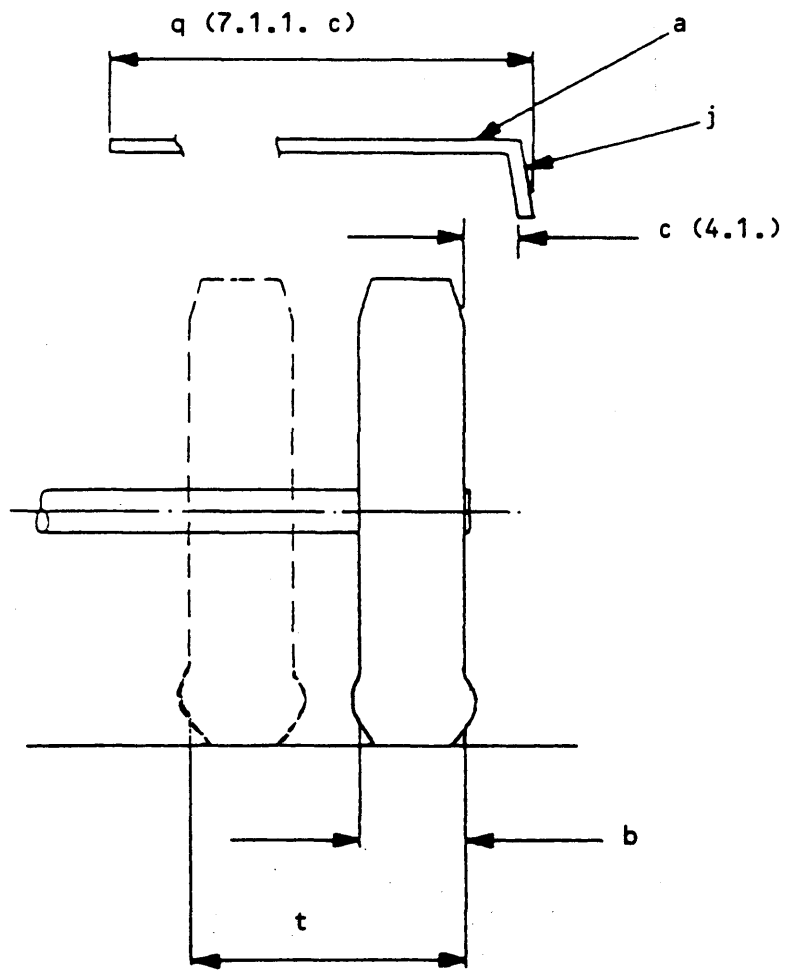
- 2.1 Spray-suppression devices of this type shall be constructed in such a way that they operate properly when used normally on wet roads. Moreover, they shall incorporate no structural or manufacturing defect detrimental to their proper functioning or behaviour.

3. Cessation of production

- 3.1 If the holder of an EEC component type-approval entirely ceases production, he shall forthwith inform the competent authorities thereof.

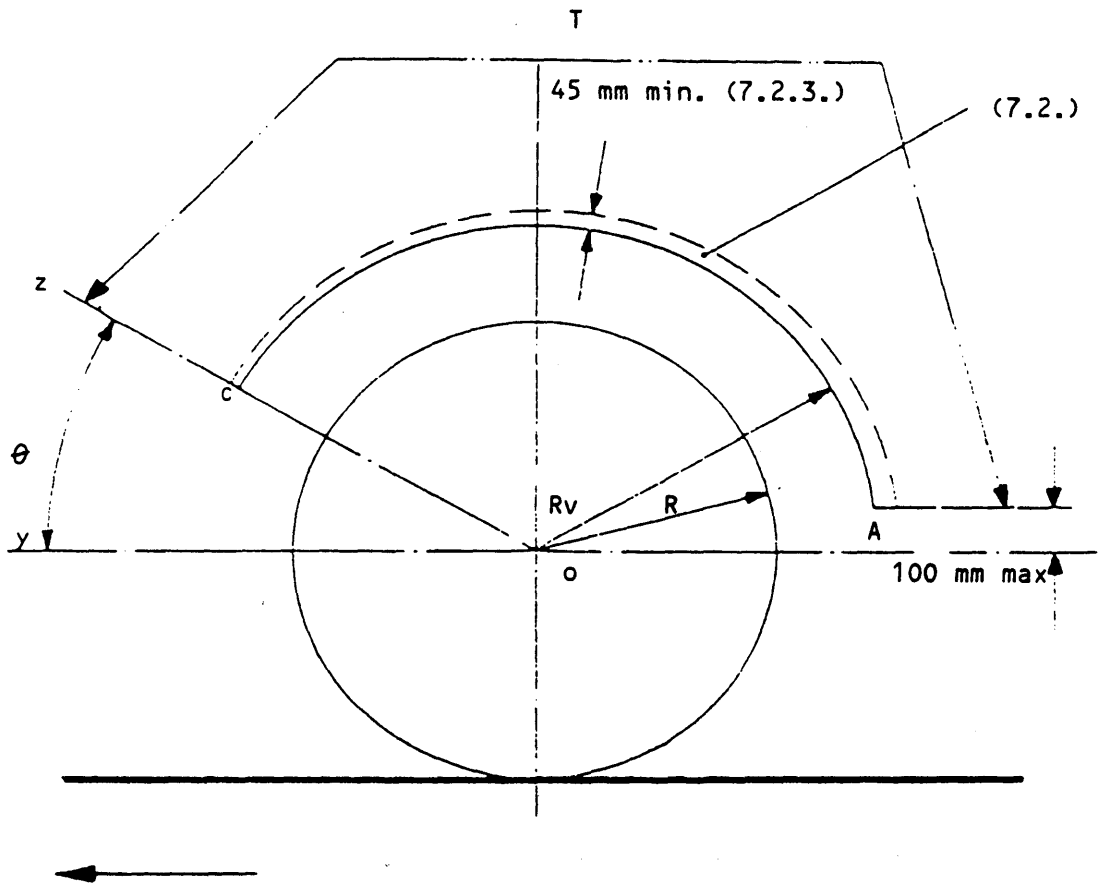
FIGURES

Figure 1: Width (q) of mudguard (a)
and position of valance (j)



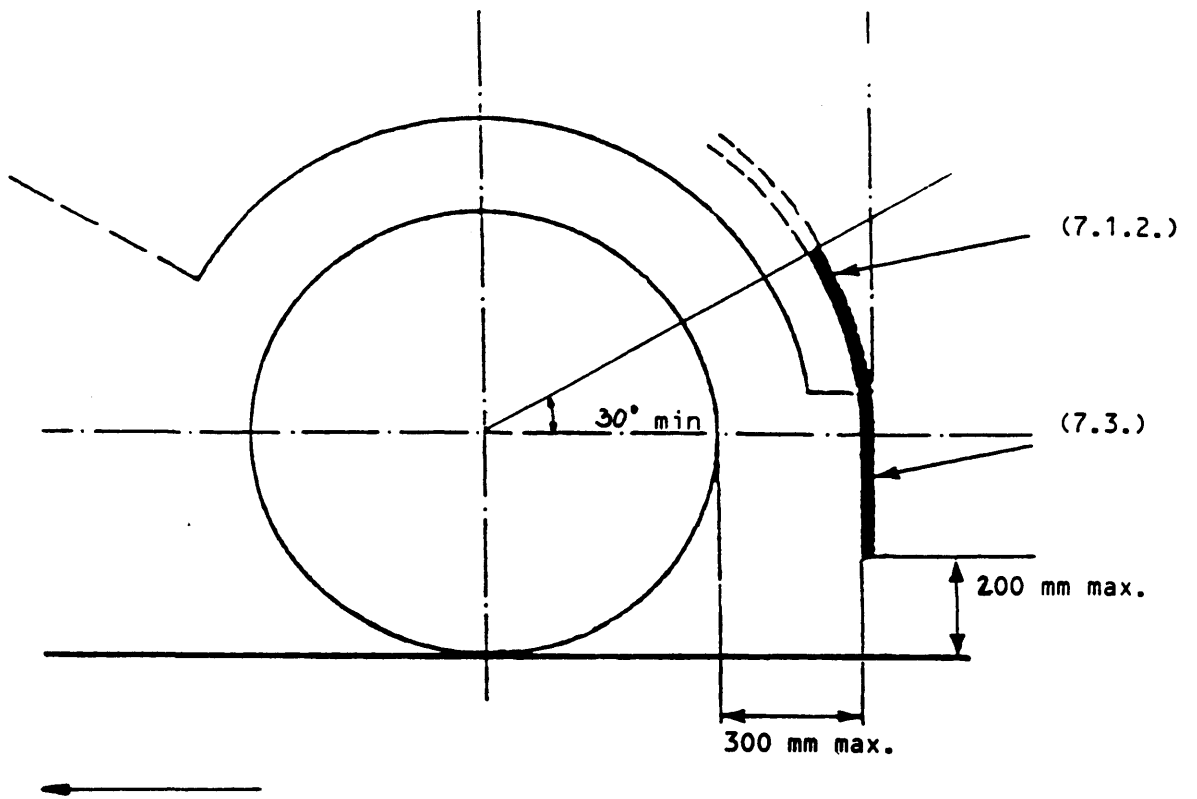
Note : The figures refer to the corresponding items in Annex III.

Figure 2 : Dimensions of mudguard and outer valance



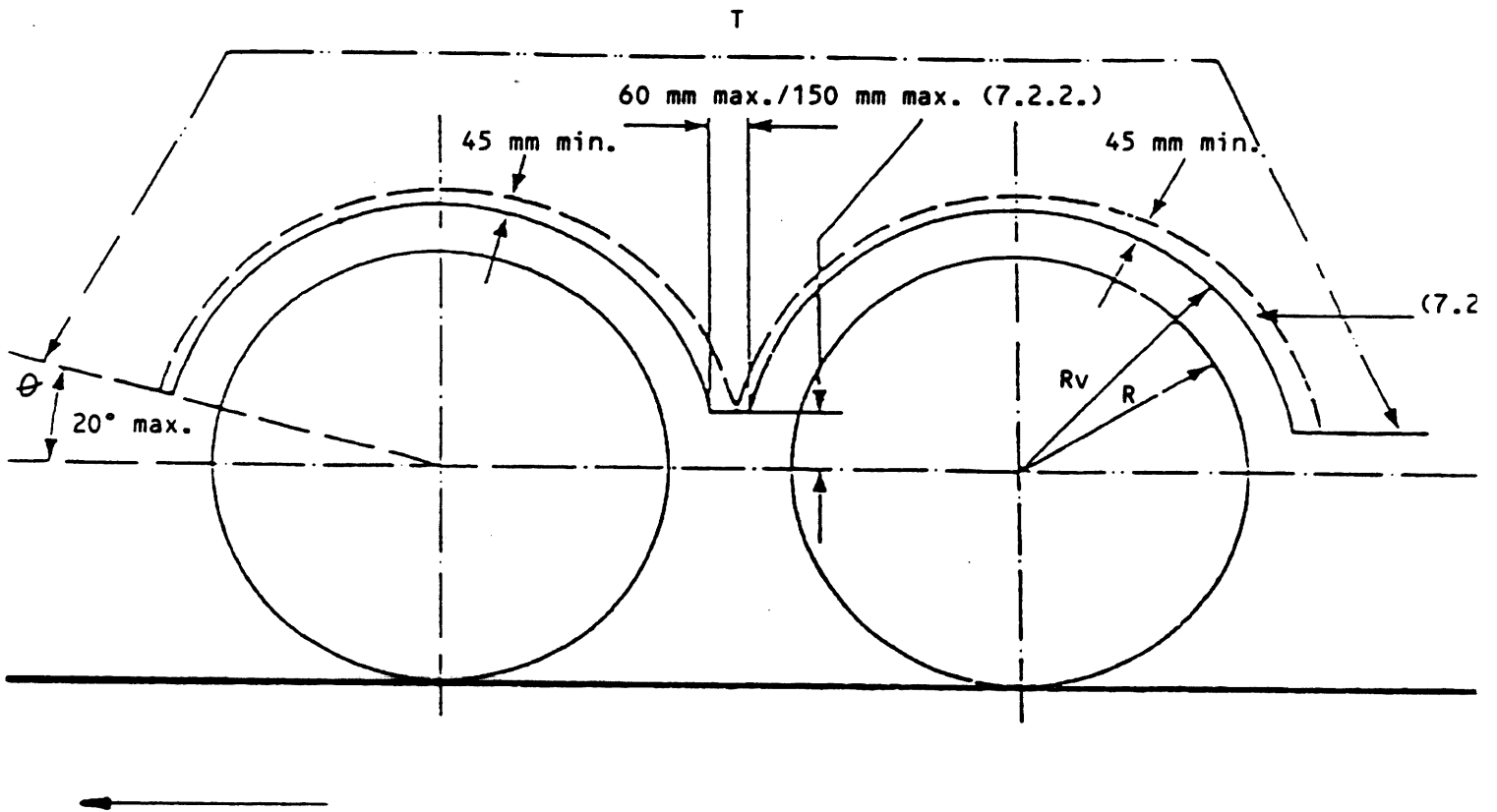
- Note :
1. The figures quoted relate to the corresponding items in Annex III
 2. T: extent of mudguard

Figure 3 : Position of mudguard and rain flap



Note : The figures quoted relate to the corresponding items in Annex III.

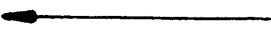
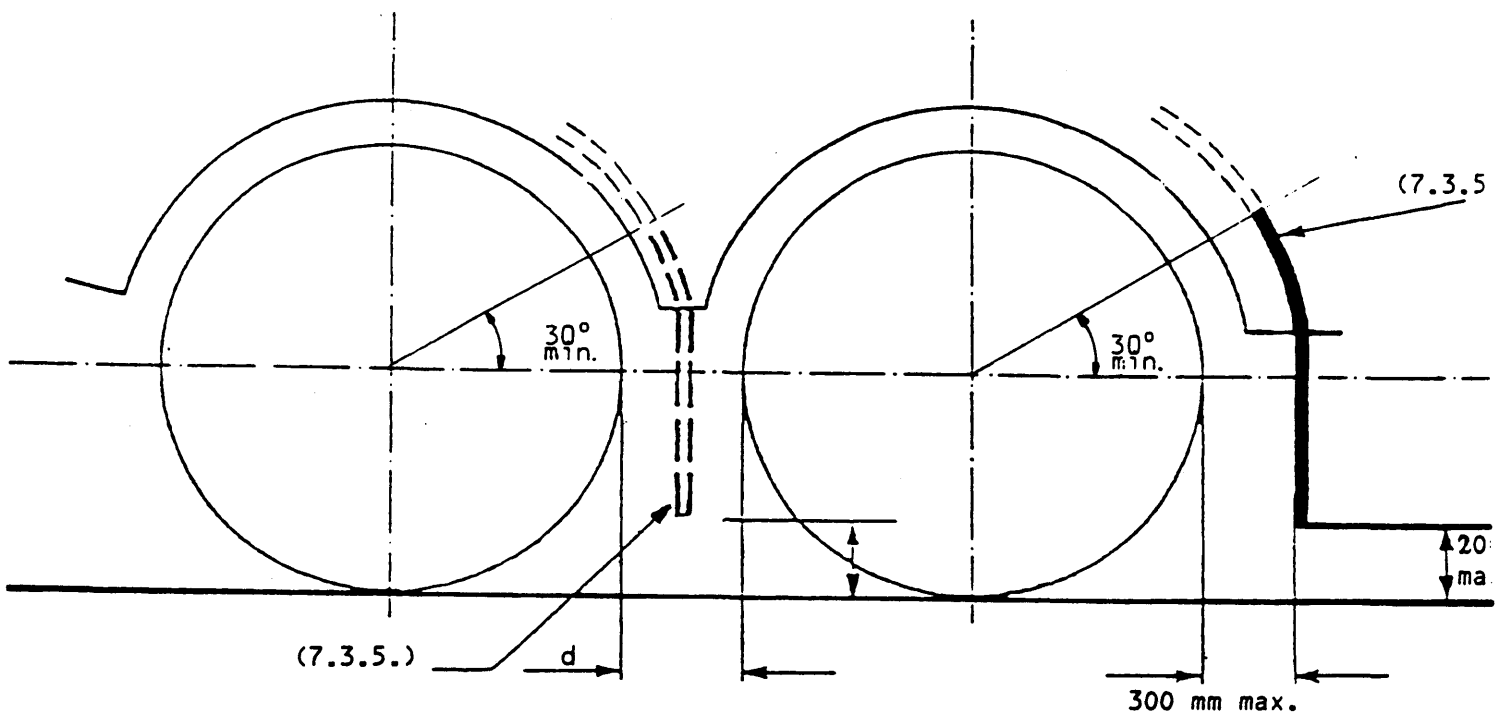
Figures 4 : Mudguards and outer valance for steered or self-steering or non-steered wheels



a. Dimensions of mudguards and outer valances for multiple axles

Note: 1. The figures quoted relate to the following items in Annex III

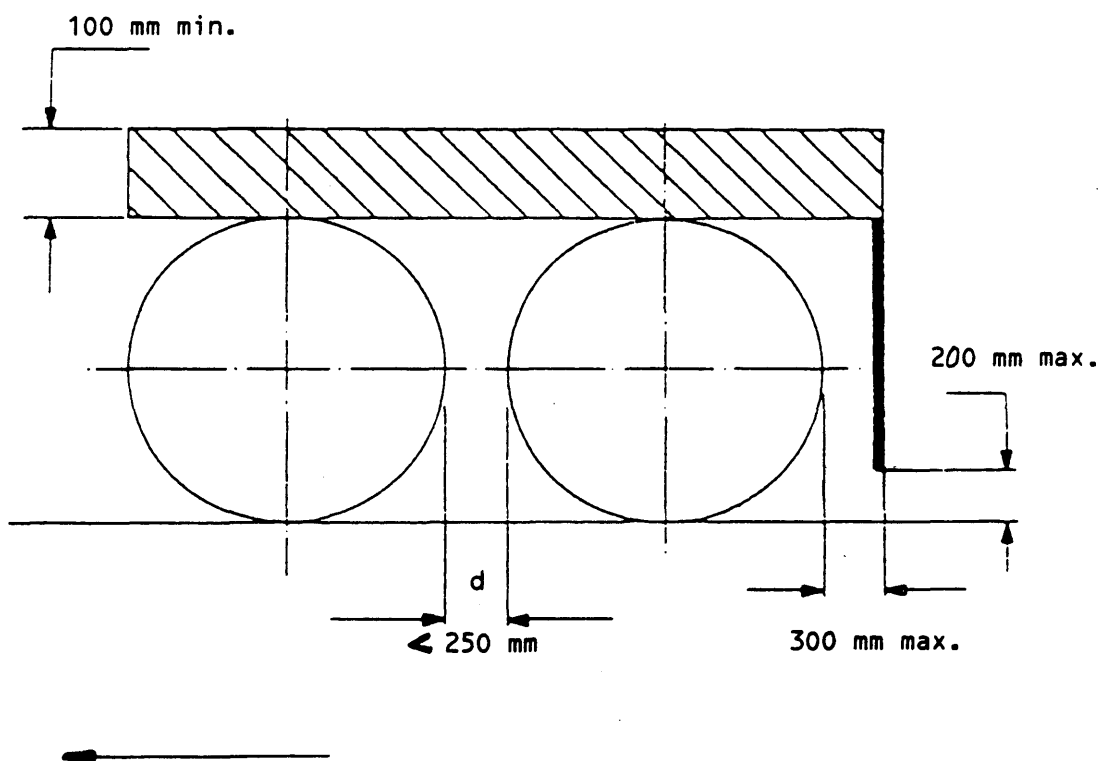
2. T: extent of mudguard



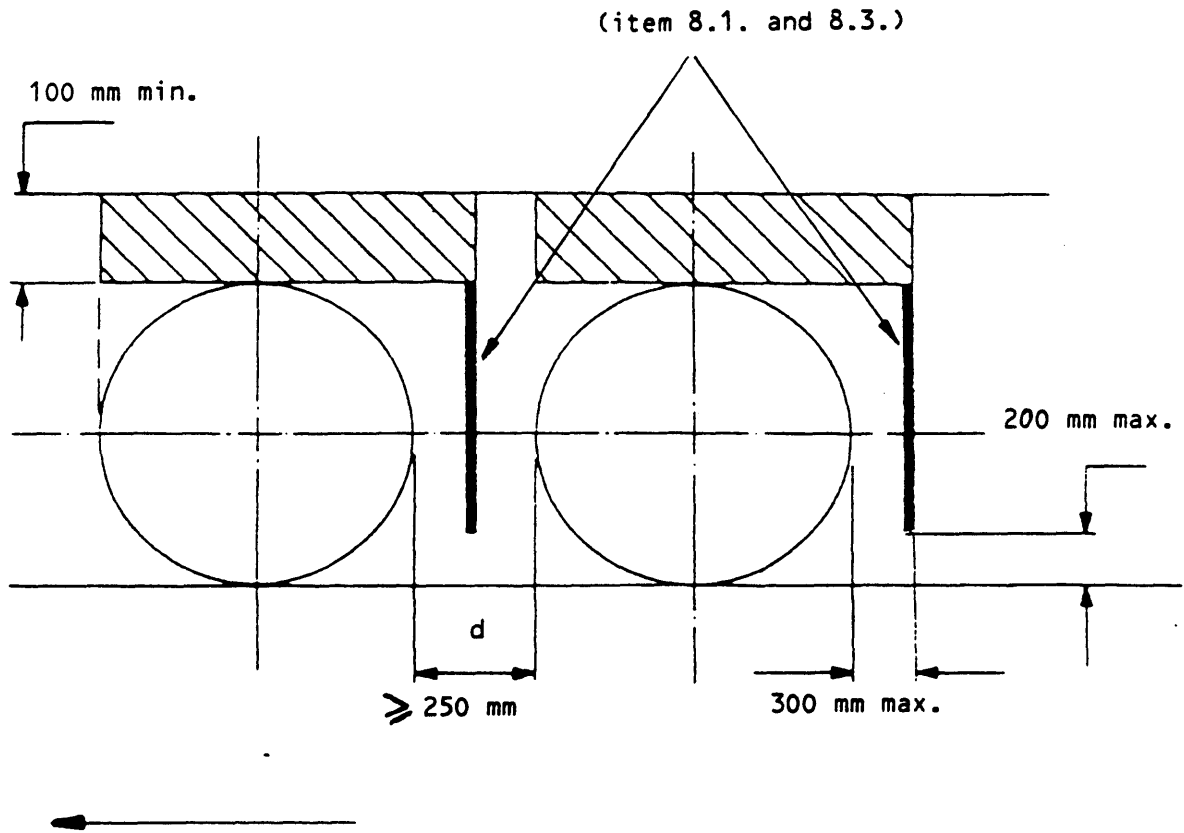
b. Position of spray-suppression devices for multiple axles

Note : The figures relate to the corresponding items in Annex III

Figure 5: Position of spray-suppression devices fitted with energy absorbers for axles fitted with non-steered or self-steering wheels (Annex III - items 6.2 and 8)

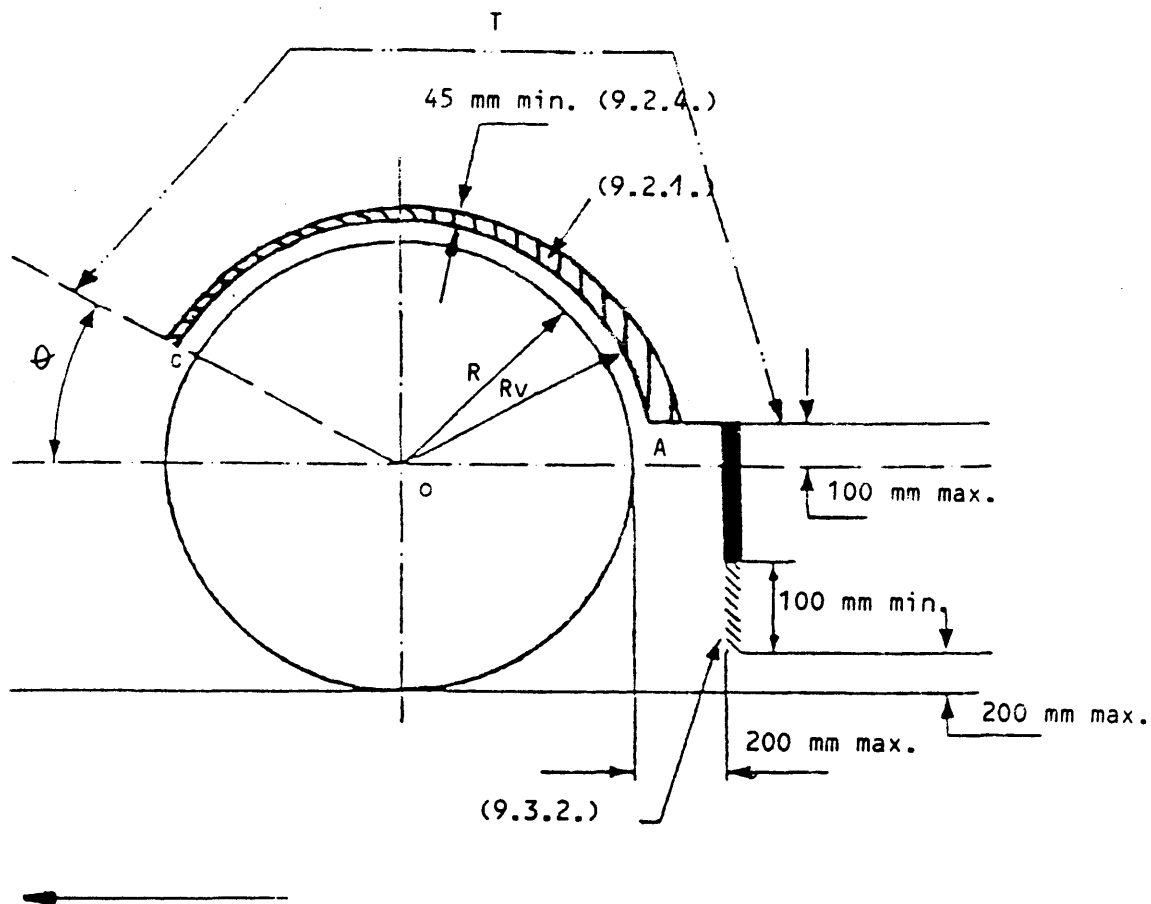


- a. Multiple axles where the distance between the tyres is less than 250 mm.



- b. Single axles or multiple axles where the distance between the tyres is not less than 250 mm.

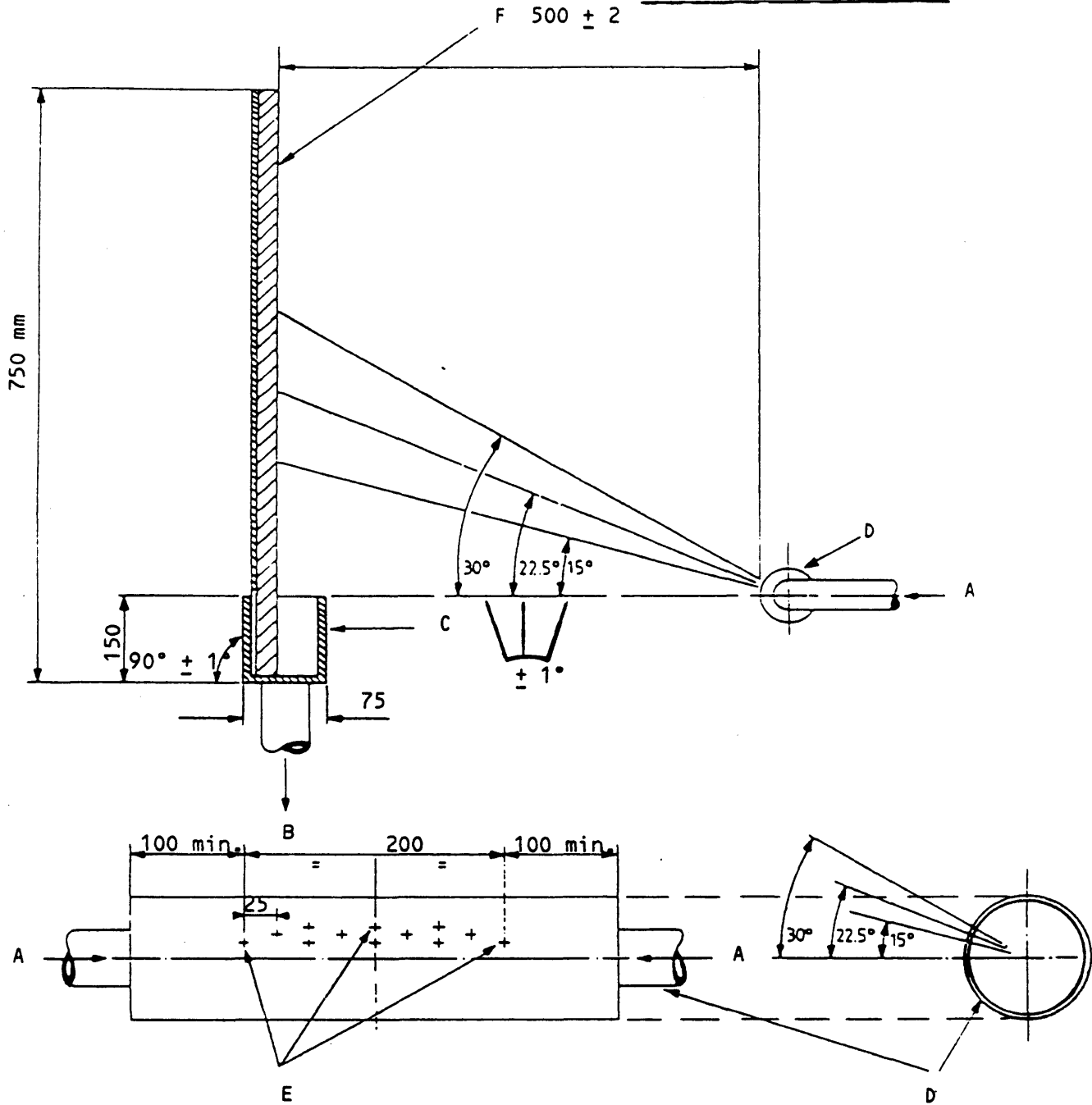
Figure 6: The location of spray-suppression devices fitted with air/water separators for axles fitted with steered and non-steered wheels



- Note:
1. The figures relate to the corresponding items in Annex III
 2. T: extent of mudguard

Figure 8: Test assembly for energy absorbers

(See Annex II, Appendix 1)



Note : A - water supply from pump

B - flow towards collector tank

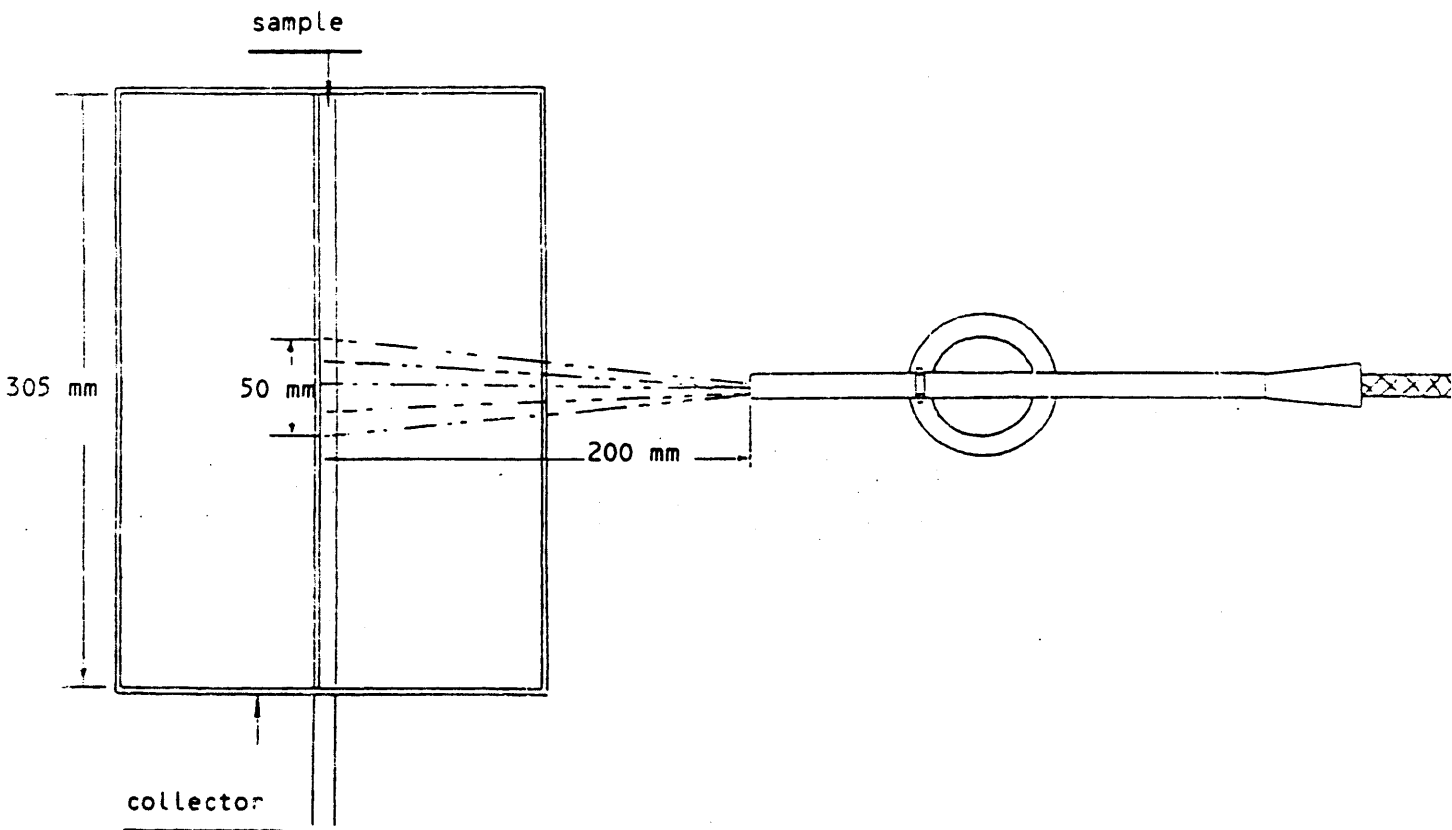
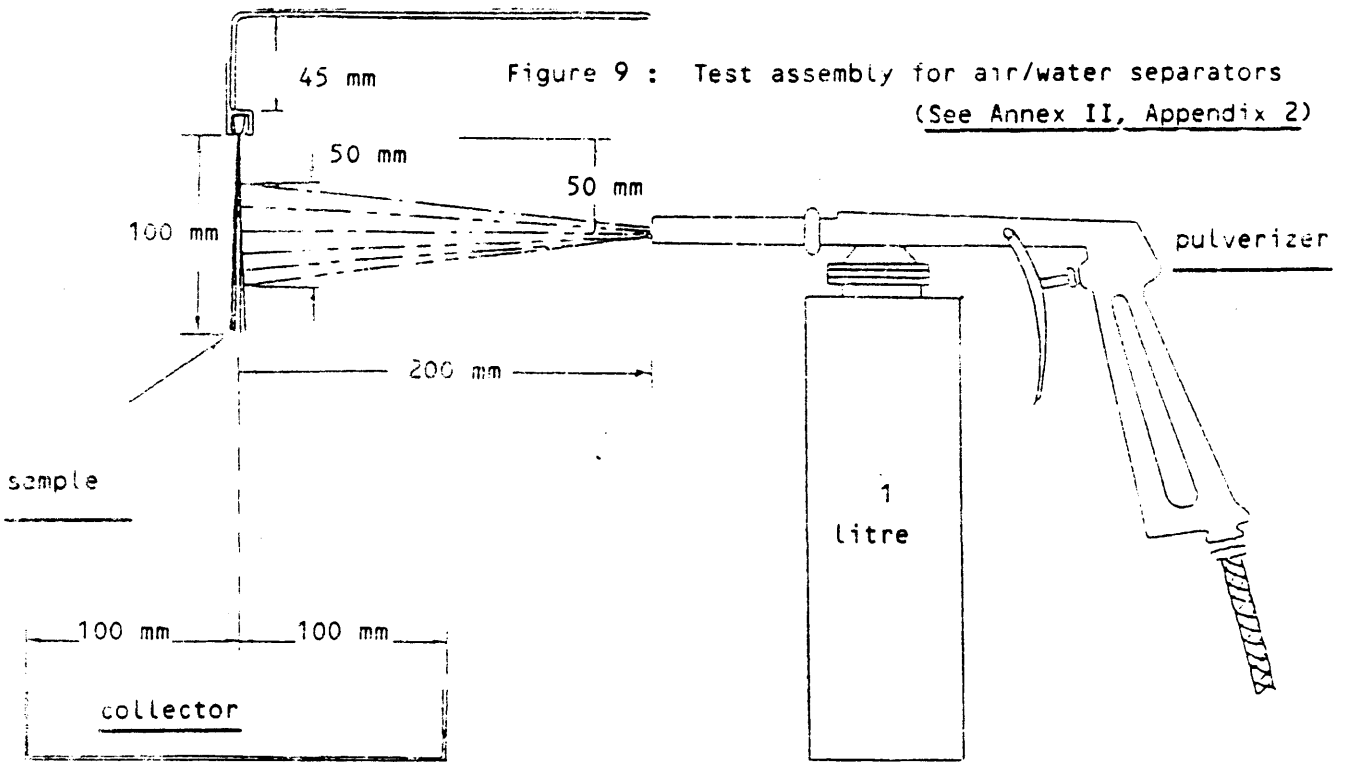
C - collector with inside dimensions of $500 \begin{smallmatrix} +5 \\ -0 \end{smallmatrix}$ mm length and $75 \begin{smallmatrix} +2 \\ -0 \end{smallmatrix}$ mm width

D - thin-wall, 54 mm diameter pipe

E - 12 holes drilled radially as shown, diameter $1.68 \begin{smallmatrix} +0.25 \\ -0 \end{smallmatrix}$ mm

F - $500 \begin{smallmatrix} +0 \\ -0 \end{smallmatrix}$ mm-wide sample to be tested

All linear dimensions are shown in millimetres



FICHE D'IMPACT SUR LA COMPETITIVITE ET L'EMPLOI

=====

Proposition de directive du Conseil concernant le rapprochement des législations des Etats membres relatives aux dispositifs anti-projections de certaines catégories de véhicules à moteur et de leurs remorques.

- I. Quelle est la justification principale de la mesure ?
Harmonisation des législations nationales. Elimination des entraves techniques aux échanges. Augmentation de la sécurité de la circulation routière.
- II. Caractéristiques des entreprises concernées
En particulier :
- y-a-t-il un grand nombre de PME ? Non. Les véhicules en circulation ne sont pas affectés par cette directive.
 - note-t-on des concentrations dans des régions :
 - . éligibles aux aides régionales des E.M. ? Non
 - . éligibles au Feder ? Non
- III. Quelles sont les obligations imposées aux entreprises ?
Installation de dispositifs anti-projections sur certaines catégories de véhicules à moteur et leurs remorques.
- IV. Quelles sont les obligations susceptibles d'être imposées indirectement aux entreprises via les autorités locales ?
Aucune obligation supplémentaire.
- V. Y-a-t-il des mesures spéciales pour les PME ? Non
- lesquelles ?
- VI. Quel est l'effet prévisible :
- sur la compétitivité des entreprises ?
- sur l'emploi ? Un impact sur l'emploi est prévisible, sans qu'il soit toutefois possible, à l'heure actuelle, de le quantifier.
- VII. Les partenaires sociaux ont-ils été consultés ? Oui
- Avis des partenaires sociaux : Très favorable.

ISSN 0254-1475

COM(89) 377 final

DOCUMENTS

EN

06 07

27.7.1989

Catalogue number : CB-CO-89-371-EN-C

ISBN 92-77-52602-5

Office for Official Publications of the European Communities
L-2985 Luxembourg