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COUNCIL DIRECTIVE

of 22 July 1974

on the approximation of the laws of the Member States relating to the interior fittings of motor vehicles (strength of seats and of their anchorages)

(74/408/EEC)

(OJ L 221, 12.8.1974, p. 1)

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▼B**COUNCIL DIRECTIVE****of 22 July 1974****on the approximation of the laws of the Member States relating to the interior fittings of motor vehicles (strength of seats and of their anchorages)**

(74/408/EEC)

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⁽¹⁾;

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 interior fittings for the strength of seats and their anchorages;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 regulations in order, in particular, to allow of the EEC type-approval procedure, which was the subject of Council Directive No 70/156/EEC⁽²⁾ of 6 February 1970 on the approximation of laws of the Member States relating to the type-approval of motor vehicles and their trailers, to be applied in respect of each type of vehicle;Whereas common requirements for the interior fittings of the passenger compartment, the layout of the controls, the roof, the backrests and the rear part of the seats have been laid down by Council Directive No 74/60/EEC⁽³⁾ of 17 December 1973; whereas requirements for the internal fittings for the behaviour of the steering mechanism in the event of an impact have been laid down by Council Directive 74/297/EEC⁽⁴⁾ of 4 June 1974; whereas other requirements for the internal fittings, and in particular those relating to the head restraint, the seat belt anchorages and the layout of the controls, will be adopted at a later date;Whereas it is appropriate to utilize basically certain technical requirements adopted by the UN Economic Commission for Europe in its Regulation No 17⁽⁵⁾ (Uniform provisions concerning the approval of vehicles with regard to the strength of the seats and of their anchorages) which is annexed to the Agreement of 20 March 1958 concerning the adoption of uniform conditions of approval and reciprocal recognition of approval for motor vehicle equipment and parts;

Whereas the approximation of national laws relating to motor vehicles entails mutual recognition by Member States of inspection carried out by each of them on the basis of common provisions; whereas such a system must, if it is to function smoothly, be applied by all Member States with effect from the same date,

HAS ADOPTED THIS DIRECTIVE:

Article 1

1. For the purposes of this Directive, 'vehicle' means any motor vehicle designed for use on the road, with or without bodywork, having

⁽¹⁾ OJ No C 108, 10. 12. 1973, p. 75.⁽²⁾ OJ No L 42, 23. 2. 1970, p. 1.⁽³⁾ OJ No L 38, 11. 2. 1974, p. 2.⁽⁴⁾ OJ No L 165, 20. 6. 1974, p. 16.⁽⁵⁾ EEC document from Geneva.(E/ECE/324
E/ECE/TRANS/505) Rev. 1/Add. 16.

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at least four wheels and a maximum design speed exceeding 25 km/h, with the exception of vehicles which run on rails, agricultural and forestry tractors and machinery and public works vehicles.

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2. This Directive does not apply to folding (tip-up) seats or to side-facing or rearward-facing seats.

▼B*Article 2*

No Member State may refuse to grant EEC type-approval or national type-approval of a vehicle on grounds relating to the strength of the seats or their anchorages if these meet the requirements set out in Annexes I and II when the vehicle belongs to category M₁ and the requirements set out in Annex III when the vehicle belongs to categories M₂, M₃, N₁, N₂ or N₃. The vehicle categories are defined in Annex I to Directive No 70/156/EEC.

Article 3

No Member State may refuse to register or prohibit the sale, entry into service or use of any vehicle on grounds relating to the strength of the seats or their anchorages if these meet the requirements set out in Annex I and II when the vehicle belongs to category M₁, and the requirements of Annex III when the vehicle belongs to categories M₂, M₃, N₁, N₂ or N₃.

Article 4

The Member State which has granted type-approval must take the necessary measures to ensure that it is informed of any modification of any part or characteristic referred to in Annex I, 2.2. The competent authorities of that State shall determine whether fresh tests should be carried out on the modified vehicle and a fresh report drawn up. Where such tests reveal failure to comply with the requirements of this Directive, the modification shall not be approved.

Article 5

Modifications which are necessary to adapt the provisions of Annexes I to IV to take account of technical progress shall be adopted in accordance with the procedure laid down in Article 13 of Directive No 70/156/EEC.

Article 6

1. By 1 March 1975, the Member States shall adopt and publish the provisions necessary to comply with this Directive and shall immediately inform the Commission thereof.

They shall apply these provisions from 1 October 1975.

2. As soon as this Directive has been notified, the Member States shall ensure that any draft laws, regulations or administrative provisions which they intend to adopt in the field covered by this Directive are communicated to the Commission in sufficient time for the latter to submit its comments thereon.

Article 7

This Directive is addressed to the Member States.

▼B*ANNEX I⁽¹⁾***GENERAL, DEFINITIONS, APPLICATION FOR EEC TYPE-APPROVAL, EEC TYPE-APPROVAL, GENERAL SPECIFICATIONS, TESTS, INSPECTION, CONFORMITY OF PRODUCTION**

1. GENERAL
 - 1.1. The specifications set out in this Annex apply to vehicles in category M₁ only.
2. DEFINITIONS

For the purposes of this Directive:

(2.1.)

 - 2.2. 'vehicle type with regard to the strength of the seats and their anchorages': motor vehicles which do not differ in such essential respects as:
 - 2.2.1. the structure, shape, dimensions and materials of the seats,
 - 2.2.2. the types and dimensions of the seat-back adjustment and locking systems,
 - 2.2.3. the types and dimensions of the seat anchorage and of the affected parts of the vehicle body-shell;
 - 2.3. 'anchorage' means the system by which the seat assembly is secured to the vehicle body, including the affected parts of the vehicle body-shell;
 - 2.4. 'adjustment system' means the device by which the seat or its parts can be adjusted to a position suited to the morphology of the seated occupant; this device may, in particular, permit of:
 - 2.4.1. longitudinal displacement,
 - 2.4.2. vertical displacement,
 - 2.4.3. angular displacement;
 - 2.5. 'displacement system' means a device enabling the seat or one of its parts to be displaced angularly or longitudinally, without a fixed intermediate position, to facilitate access by passengers;
 - 2.6. 'locking system' means a device ensuring that the seat and its parts are maintained in the position of use;

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- 2.7. 'folding (tip-up) seat' means an auxiliary seat intended for occasional use and which is normally folded out of the way.

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3. APPLICATION FOR EEC TYPE-APPROVAL
 - 3.1. The application for EEC type-approval of a vehicle type with regard to the strength of the seats and their anchorages shall be submitted by the vehicle manufacturer or by his authorized representative.
 - 3.2. It shall be accompanied by the undermentioned documents, in triplicate, and by the following particulars:
 - 3.2.1. a detailed description of the vehicle type with regard to the design of the seats, their anchorages and their adjustment and locking system,
 - 3.2.2. drawings, on an appropriate scale and in sufficient detail, of the seats, their anchorages to the vehicle and their adjustment and locking systems.
 - 3.3. The following must be submitted to the technical service responsible for conducting the type-approval tests:

⁽¹⁾ The text of this Annex I is basically similar to that of UN Economic Commission for Europe Regulation No 17; in particular, the subdivisions of the sections are the same. Where an item of Regulation No 17 has no corresponding item in this Annex, the number is shown in brackets for the record.

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- 3.3.1. a vehicle representative of the vehicle type to be approved,
- 3.3.2. an additional set of the seats with which the vehicle is equipped, with their anchorages.
4. EEC TYPE-APPROVAL
 - (4.1.)
 - (4.2.)
 - 4.3. A certificate conforming to the model shown in Annex IV shall be attached to the EEC type-approval certificate.
 - (4.4.)
 - (4.4.1.)
 - (4.4.2.)
 - (4.5.)
 - (4.6.)
5. GENERAL SPECIFICATIONS
 - 5.1. Every adjustment and displacement system provided shall incorporate a locking system, which shall operate automatically.
 - 5.2. The unlocking control for a device as referred to in item 2.5 shall be placed on the outside of the seat close to the door. It shall be easily accessible, even to the occupant of the seat immediately behind the seat concerned.
6. TESTS
 - 6.1. **Test of strength of seat back and of its locking systems**
 - 6.1.1. For this test, the seat back, if adjustable, shall be locked in a position corresponding to a rearward inclination as near as possible to 25° from the vertical of the reference line of the torso of the manikin described in item 3 of Annex II, unless otherwise specified by the manufacturer.
 - 6.1.2. A force producing a moment of 53 mdaN in relation to the H point shall be applied longitudinally and rearwards to the upper part of the seat-back by a component simulating the back of the manikin described in item 3 of Annex II.
 - 6.2. **Test of strength of seat anchorage and of seat locking systems**
 - 6.2.1. The systems shall, in all seated positions, withstand the forces prescribed in item 6.2.2. Nevertheless, this requirement shall be deemed to be met if the test carried out in the positions specified in item 6.2.5 and, where appropriate, in item 6.2.6 is satisfactory.
 - 6.2.2. A horizontal longitudinal force passing through the centre of gravity of the complete seat and equal to 20 times the weight of the complete seat shall be applied to the seat frame. Two tests shall be performed on the same seat, the force being applied once in the forward and once in the rearward direction. If the seat comprises separate parts each of which is secured to the frame, the tests shall be performed on each part in the manner described above. If the seat comprises components secured in part to the vehicle body-shell and supporting one another by some of their parts, the tests shall be performed simultaneously by applying to the centre of gravity of each part the forces corresponding to each component considered separately.
 - 6.2.3. For the test prescribed in item 6.2.1, the link between the seat back and the cushion may be reinforced, on condition that the reinforcing components are secured to the frame of the seat back, level with the point of application of the force and at the most forward point of the frame of the cushion.
 - 6.2.4. The conditions laid down in item 6.2.2 may be regarded as met if two forces, each equal to one-half of the prescribed force, are applied level with the centre of gravity to the lateral load-bearing components of the seat frame.
 - 6.2.5. The seat shall be tested:

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- 6.2.5.1. in the position in which the occupant is seated furthest forward, the cushion being placed in the highest forward position when the force is applied in a forward direction, and
- 6.2.5.2. in the position in which the occupant is seated furthest rearward, the cushion being placed in the lowest rearward position when the force is applied in a rearward direction.
- 6.2.6. In cases where the arrangement of the locking systems is manifestly such that in a seat position other than those defined in items 6.2.5.1 and 6.2.5.2 a distribution of the forces on the locking systems and seat anchorage would be less favourable than with the configurations defined in those items, the tests shall be repeated in that seat position.

6.3. Tests of resistance of locking systems to inertia effects

- 6.3.1. If a horizontal longitudinal acceleration of 20 g is applied in the forward and in the rearward direction to the seat assembly, no release of the locking systems shall be determinable.
- 6.3.2. A calculation of inertia effects on all components of the locking systems may be accepted in place of the dynamic test prescribed in item 6.3.1. Frictional forces shall be disregarded in such a calculation.
- 6.4. Equivalent methods of testing shall be permitted provided that the results specified in items 6.1, 6.2 and 6.3 can be obtained either entirely by means of the substitute test or by calculation from the results of the substitute test. If any method other than that described in items 6.1, 6.2 and 6.3 is used, proof of its equivalence shall be required.

7. INSPECTION

- 7.1. No failure shall be determinable in the seat frame or in the seat anchorage, adjustment and displacement systems or their locking devices during the tests prescribed in items 6.1 and 6.2. The adjustment and displacement systems and their locking devices shall not, however, be required to be in working order after these tests. The displacement system referred to in item 2.5 must, however, be capable of being unlocked after testing.

(8.)

9. CONFORMITY OF PRODUCTION

(9.1.)

- 9.2. In order to verify conformity with the approved type, a sufficient number of random checks shall be performed on serially-produced vehicles.
- 9.3. As a general rule, the checks shall be confined to measuring dimensions. If necessary, however, the vehicles or the seats shall be subjected to tests conforming to the requirements of item 6.

(10.)

(11.)



ANNEX II

PROCEDURE FOR DETERMINING THE H POINT AND THE ACTUAL SEAT-BACK ANGLE AND FOR VERIFYING THEIR RELATIONSHIP TO THE R POINT AND THE DESIGN SEAT-BACK ANGLE

0. GENERAL

The specifications in this Annex apply to vehicles in category M₁ only.

1. DEFINITIONS

- 1.1. The H point: see item 1.1 of Directive No 74/60/EEC.
- 1.2. The R point: see item 1.2 of Directive No 74/60/EEC.
- 1.3. 'Seat-back angle' means the inclination of the seat back in relation to the vertical.
- 1.4. 'Actual seat-back angle' means the angle formed by the vertical through the H point with the torso reference line of the human body represented by the manikin described in item 3.
- 1.5. 'Design seat-back angle' means the angle indicated by the manufacturer which:
 - 1.5.1. determines the seat-back angle for the lowest and rearmost normal driving or travelling position of each seat provided in the vehicle by the manufacturer,
 - 1.5.2. is formed at the R point by the vertical and the torso reference line,
 - 1.5.3. corresponds theoretically to the actual seat-back angle.

2. DETERMINATION OF H POINTS

See item 2 of Annex IV to Directive No 74/60/EEC.

3. DESCRIPTION OF THE MANIKIN

See item 3 of Annex IV to Directive No 74/60/EEC.

4. SETTING UP THE MANIKIN

See item 4 of Annex IV to Directive No 74/60/EEC.

5. RESULTS

- 5.1. When the manikin has been set up as described in point 4, the H point of the vehicle seat concerned shall be the H point on the manikin.
- 5.2. Each of the coordinates of the H point and the actual seat back angle shall be measured as accurately as possible. The same shall apply to the coordinates representing specific points of the passenger compartment. The projections of these points on a vertical longitudinal plane shall then be plotted on a graph, which would also indicate the actual seat back angle measured.

6. VERIFYING THE RELATIVE POSITIONS OF THE R AND H POINTS AND THE RELATIONSHIP BETWEEN THE DESIGN SEAT-BACK ANGLE AND THE ACTUAL SEAT-BACK ANGLE

- 6.1. The results of the measurements carried out in conformity with item 5.2 for the H point and the actual seat-back angle shall be compared with the coordinates of the R point and the design seat-back angle as supplied by the vehicle manufacturer.
- 6.2. The checking of the relationship between the two points shall be considered satisfactory for the seating position in question, provided that the H point coordinates lie within a longitudinal rectangle whose horizontal and vertical sides are 30 mm and 20 mm respectively, and whose diagonals intersect at the R point. The checking of the seat-back angle shall be considered satisfactory if the actual seat-back angle is within 3° of the design seat-back angle. If these conditions are met, the R point and the design seat-back angle shall be used for the test and, if necessary, the manikin shall be so adjusted that the H point coincides with the R point and the actual seat-back angle coincides with the design seat-back angle.

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- 6.3. If the H point or the actual seat-back angle does not satisfy the requirements of item 6.2, two further determinations of the H point shall be carried out (three in all).

In two of the three points so determined lie within the rectangle, the result of the test shall be considered satisfactory.

- 6.4. If at least two of the three points determined lie outside the rectangle, the result of the tests shall be considered unsatisfactory.

- 6.5. In the case referred to in point 6.3 or when verification cannot be carried out because the vehicle manufacturer has failed to provide data on the position of the R point, the average result of the three determinations of the H point may be used and considered applicable in all cases where the R point is mentioned in this Directive.

- 6.6. When checking the relationship of the R and the H points in a vehicle in current production, the rectangle mentioned in point 6.2 above shall be replaced by a square whose side measures 50 mm.

▼B*ANNEX III***GENERAL SPECIFICATIONS**

1. GENERAL
 - 1.1. The requirements set out in this Annex apply to vehicles in categories M₂, M₃, N₁, N₂ or N₃.
2. GENERAL SPECIFICATIONS
 - 2.1. Seats and bench seats must be firmly attached to the vehicle.
 - 2.2. Sliding seats and bench seats must be automatically lockable in all the positions provided.
 - 2.3. Adjustable seat backs must be lockable in all the positions provided.
 - 2.4. All seats which can be tipped forward or have fold-down backs must lock automatically in the normal position.

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ANNEX IV

SAMPLE

Name of administration

**ANNEX TO THE EEC VEHICLE TYPE-APPROVAL CERTIFICATE APPROVAL OF
STRENGTH OF SEATS AND SEAT ANCHORAGES**

(Article 4 (2) and Article 10 of the Council Directive 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)

Type-approval No

1. Trade name or mark of the vehicle
2. Vehicle type
3. Manufacturer's name and address
4. If applicable, name and address of manufacturer's authorized representative
5. Description of seats
6. Description of adjustment, displacement and locking systems of the seat or seat parts
7. Description of seat anchorages
8. Vehicle submitted for type-approval on
9. Technical service conducting type-approval tests
10. Date of report issued by that service
11. Number of report issued by that service
12. Type-approval in respect of the strength of the seats and their anchorages is granted/refused ⁽¹⁾
13. Place
14. Date
15. Signature
16. The following documents, bearing the type-approval number shown above, are annexed to this certificate:
 - drawings, diagrams and plans of the seats and their anchorages to the vehicles and of the adjustment, displacement and locking systems of the seats and seat parts.
 - photographs of the seats and their anchorages and of the adjustment, displacement and locking systems of the seats and seat parts.

⁽¹⁾ Delete as appropriate.