



TECHNICAL REPORT 1417

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Automobiles — Anchorages for seat belts

Automobile — Ancrages pour ceintures de sécurité

Technical Report 1417 was drawn up by Technical Committee ISO/TC 22, *Road vehicles*, and approved by the majority of its members. The reason which led to the decision to publish the document in the form of a Technical Report is as follows :

The document has been prepared so that the details contained therein are aligned with those given in Regulation No. 14 of the United Nations Agreement concerning the adoption of uniform conditions of approval and reciprocal recognition for motor vehicle equipment and parts : "Uniform provisions concerning the approval of vehicles with regard to safety-belt anchorages on passenger cars."

The opinion of ISO/TC 22/SC 12 is, however, that the document is not technically up to date and that it will be necessary to prepare a new version before it can be published as an International Standard. This is now under preparation and it is hoped that it will be possible to publish it in about 2 years' time. The present document, although of a temporary nature, is, however, informative and its publication in the form of a Technical Report is considered desirable

1 SCOPE

This Technical Report concerns anchorages for seat belts for drivers and passengers of automobiles. It specifies the requirements to be followed in the choice of position of the anchorages, the force that the anchorages must be able to withstand, the tests to which they are to be subjected and the conditions of their manufacture.

2 FIELD OF APPLICATION

The anchorages dealt with in this Technical Report are for seat belts for front and rear seats.

Unless otherwise indicated, the details which follow apply to types of seat belts known at the present time but not to seat belts fitted with inertia devices.

This Technical Report applies only to forward facing seats and to adult seat belts in passenger cars and vehicles derived from them.

This Technical Report establishes the basic requirements for anchorages which are integral with the vehicle and not effected by the intermediary of a seat.

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3 REFERENCE

ISO . . . , *Automobiles — Anchorages for seat belts — Test procedure for determining the H point.*¹⁾

4 DEFINITIONS

4.1 seat belt : Assembly of webbing and other items which permit the passenger in an automobile to be held in his seat, or at least within the body of the car, when the vehicle is stopped suddenly or overturned for any reason.

4.2 attachment fittings : Parts, usually of metal, which allow the seat belt assembly to be fixed to the structure of the vehicle by means of the anchorages.

4.3 anchorage proper : An appropriate part of the structure of the vehicle allowing the attachment fittings of the seat belt to be held in position on the vehicle. (It is generally a threaded hole — see clause 7.)

4.4 floor : The lower part of the bodywork which connects the side walls of the vehicle. The floor in this context includes ribs, swages and possibly other reinforcements, for example longitudinal and transverse members.

5 POSITION OF ANCHORAGES

Each seat belt shall have at least two anchorages. The anchorages may be in the floor or in the side parts of the structure of the vehicle.

Where a side anchorage is used in conjunction with a floor anchorage, the vertical planes parallel to the longitudinal plane of symmetry of the vehicle and passing through these two anchorage points shall be spaced not less than 350 mm apart.

5.1 Position of front floor anchorages

For one or two anchorages in the floor, the position of each anchorage is shown in figure 1.

Additional anchorages in the floor, other than those shown in figure 1, may be provided by the manufacturer of the vehicle.

5.1.1 Reference point

Point H (see figure 1) is a reference point fixed by ISO The position of point H with respect to the seat shall be specified by the manufacturer.

This reference point, generally called "hip point", represents the trace of the horizontal turning axis of the femur on the plane of symmetry of the seat.

For seats with adjustable seat backs, the angle of the seat back relative to the seat cushion shall be as near as possible to 90° when determining point H.

5.1.2 Relative positions of two floor anchorages

B_1 and B_2 are two floor anchorages which are projected horizontally (horizontal plane of B) at b_1 and b_2 and vertically (longitudinal plane of symmetry of the seat) at b_1' and b_2' .

The horizontal planes passing through B_1 and B_2 respectively may be different and the same applies to the vertical planes perpendicular to the longitudinal plane of symmetry of the vehicle and passing through these two points.

The dimension 350 mm corresponds to a minimum value.

However, if the structure of the vehicles makes it necessary, this distance may be reduced on condition that suitable arrangements ensure an appropriate spacing of the webbing where in contact with the motorist's body.

¹⁾ In preparation.