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Experimental test to determine the strength of the seat belt anchorages

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Abstract

Experimental tests on the type-approval of motor vehicles with regard to safety belt anchorages, ISOFIX anchorages and ISOFIX top anchorages have been carried out in accordance with Regulation No. 14 UNECE [1]. From the design stage, the safety belt anchorages must comply with the requirements for the installation of a safety belt and reduce slipping and damage to the belt while wearing it. These can be components of the seat structure or of the body's resistance structure, which have the role of fastening the seat belts. The position of the anchor points is determined by the R point. The R point is defined as the seat reference point on the seat. This point is set by the vehicle manufacturer for each seat in the vehicle. In this paper, two models of chairs were tested. Both seat models are equipped with seat belts anchored at three anchor points. Seat belt anchorages were tested simultaneously using parallel force devices. These traction devices are placed on the seat cushion and are pressed into the seat back. The pulling device has a vertical pulling arm, which has the role of anchoring the steel wire cables. Two test forces are applied simultaneously to the anchor points during the test.

Keywords: safety belts, anchorages, safety belts anchorages

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