(2) The front wheels are in the straight-ahead position.
(3) Tires are inflated to the vehicle manufacturer's recommended pressure for the specified loading condition.
(4) Brakes are disengaged and the transmission is in neutral.
(5) Trailer hitches, license plate brackets, and headlamp washers are removed from the vehicle. Running lights, fog lamps, and equipment mounted on the bumper face bar are removed from the vehicle if they are optional equipment.

(b) Pendulum test conditions. The following conditions apply to the pendulum test procedures of §581.7 (a) and (b).

(1) The test device consists of a block with one side contoured as specified in Figure 1 and Figure 2 with the impact ridge made of A1S1 4130 steel hardened to 34 Rockwell “C.” The impact ridge and the surfaces in Planes A and B of the test device are finished with a surface roughness of 32 as specified by SAE Recommended Practice J449A, June 1963. From the point of release of the device until the onset of rebound, the pendulum suspension system holds Plane A vertical, with the arc described by any point on the impact line lying in a vertical plane (for §581.7(a), longitudinal; for §581.7(b), at an angle of 30° to a vertical longitudinal plane) and having a constant radius of not less than 11 feet.

(2) With Plane A vertical, the impact line shown in Figures 1 and 2 is horizontal at the same height as the test device's center of percussion.

(3) The effective impacting mass of the test device is equal to the mass of the vehicle.

(4) When impacted by the test device, the vehicle is at rest on a level rigid concrete surface.

(c) Barrier test condition. At the onset of a barrier impact, the vehicle's engine is operating at idling speed in accordance with the manufacturer's specifications. Vehicle systems that are not necessary to the movement of the vehicle are not operating during impact.


§ 581.7 Test procedures.

(a) Longitudinal impact test procedures.

(1) Impact the vehicle's front surface and its rear surface two times each with the impact line at any height from 16 to 20 inches, inclusive, in accordance with the following procedure.

(2) For impacts at a height of 20 inches, place the test device shown in Figure 1 so that Plane A is vertical and the impact line is horizontal at the specified height.

(3) For impacts at a height between 20 inches and 16 inches, place the test device shown in Figure 2 so that Plane A is vertical and the impact line is horizontal at a height within the range.

(4) For each impact, position the test device so that the impact line is at least 2 inches apart in vertical direction from its position in any prior impact, unless the midpoint of the impact line with respect to the vehicle is to be more than 12 inches apart laterally from its position in any prior impact.

(b) Corner impact test procedure.

(1) Impact a front corner and a rear corner of the vehicle once each with the impact line at any height from 16 to 20 inches, inclusive, in accordance with the following procedure.

(2) For an impact at a height of 20 inches, place the test device shown in
§581.8 Exemptions.

A manufacturer of a passenger motor vehicle to which a bumper standard issued under this part applies may apply to the Administrator:

(a) For rulemaking as provided in part 552 of this chapter to exempt a class of passenger motor vehicles from all or any part of a bumper standard issued under this part on the basis that the class of vehicles has been manufactured for a special use and that compliance with the bumper standard would unreasonably interfere with the special use of the class of vehicle; or

(b) To exempt a make or model of passenger motor vehicle on the basis set forth in paragraph (a) of this section or part 555 of this chapter.

(c) An application filed for exemption on the basis of paragraph (a) of this section shall contain the information specified in §555.5 of this chapter, and set forth data, views, and arguments in support that the vehicle has been manufactured for a special use and that compliance with the bumper standard would interfere unreasonably with the special use of the vehicle.

(d) An application filed for exemption under part 555 of this chapter shall be filed in accordance with the requirements of that part.

(e) The NHTSA shall process exemption applications in accordance with §555.7 of this chapter. An exemption granted a manufacturer on the basis of paragraph (a) of this section is indefinite in length but expires when the manufacturer ceases production of the exempted vehicle, or when the exempted vehicle as produced has been so modified from its original design that the Administrator decides that it is no longer manufactured for the special use upon which the application for its exemption was based. The Administrator may terminate an exemption in the