

PART 581—BUMPER STANDARD

- Sec.
- 581.1 Scope.
- 581.2 Purpose.
- 581.3 Application.
- 581.4 Definitions.
- 581.5 Requirements.
- 581.6 Conditions.
- 581.7 Test procedures.
- 581.8 Exemptions.

AUTHORITY: 49 U.S.C. 32502; 322, 30111, 30115, 30117 and 30166; delegation of authority at 49 CFR 1.50.

SOURCE: 42 FR 24059, May 12, 1977, unless otherwise noted.

§ 581.1 Scope.

This standard establishes requirements for the impact resistance of vehicles in low speed front and rear collisions.

§ 581.2 Purpose.

The purpose of this standard is to reduce physical damage to the front and rear ends of a passenger motor vehicle from low speed collisions.

§ 581.3 Application.

This standard applies to passenger motor vehicles other than multipurpose passenger vehicles and low-speed vehicles as defined in 49 CFR part 571.3(b).

[63 FR 33217, June 17, 1998]

§ 581.4 Definitions.

All terms defined in 49 U.S.C. 32101 are used as defined therein.

Bumper face bar means any component of the bumper system that contacts the impact ridge of the pendulum test device.

[42 FR 24059, May 12, 1977, as amended at 64 FR 2862, Jan. 19, 1999]

§ 581.5 Requirements.

(a) Each vehicle shall meet the damage criteria of §§ 581.5(c)(1) through 581.5(c)(9) when impacted by a pendulum-type test device in accordance with the procedures of § 581.7(b), under the conditions of § 581.6, at an impact speed of 1.5 m.p.h., and when impacted by a pendulum-type test device in accordance with the procedures of § 581.7(a) at 2.5 m.p.h., followed by an

impact into a fixed collision barrier that is perpendicular to the line of travel of the vehicle, while traveling longitudinally forward, then longitudinally rearward, under the conditions of § 581.6, at 2.5 m.p.h.

(b) [Reserved]

(c) *Protective criteria.* (1) Each lamp or reflective device except license plate lamps shall be free of cracks and shall comply with applicable visibility requirements of S5.3.1.1 of Standard No. 108 (§ 571.108 of this chapter). The aim of each headlamp installed on the vehicle shall be adjustable to within the beam aim inspection limits specified in Table 1 of SAE Recommended Practice J599 AUG97, measured with the aiming method appropriate for that headlamp.

(2) The vehicle's hood, trunk, and doors shall operate in the normal manner.

(3) The vehicle's fuel and cooling systems shall have no leaks or constricted fluid passages and all sealing devices and caps shall operate in the normal manner.

(4) The vehicle's exhaust system shall have no leaks or constrictions.

(5) The vehicle's propulsion, suspension, steering, and braking systems shall remain in adjustment and shall operate in the normal manner.

(6) A pressure vessel used to absorb impact energy in an exterior protection system by the accumulation of gas pressure or hydraulic pressure shall not suffer loss of gas or fluid accompanied by separation of fragments from the vessel.

(7) The vehicle shall not touch the test device, except on the impact ridge shown in Figures 1 and 2, with a force that exceeds 2000 pounds on the combined surfaces of Planes A and B of the test device.

(8) The exterior surfaces shall have no separations of surface materials, paint, polymeric coatings, or other covering materials from the surface to which they are bonded, and no permanent deviations from their original contours 30 minutes after completion of each pendulum and barrier impact, except where such damage occurs to the bumper face bar and the components and associated fasteners that directly attach the bumper face bar to the chassis frame.

§581.6

(9) Except as provided in §581.5(c)(8), there shall be no breakage or release of fasteners or joints.

[42 FR 24059, May 12, 1977, as amended at 42 FR 38909, Aug. 1, 1977; 43 FR 40231, Sept. 11, 1978; 47 FR 21837, May 20, 1982; 64 FR 16360, Apr. 5, 1999; 64 FR 49092, Sept. 10, 1999]

§581.6 Conditions.

The vehicle shall meet the requirements of §581.5 under the following conditions.

(a) *General.* (1) The vehicle is at unloaded vehicle weight.

(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 AISI 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 tested vehicle.

49 CFR Ch. V (10-1-24 Edition)

(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.

(Authority: Sec. 102, Pub. L. 92-513, 86 Stat. 947 (15 U.S.C. 1912); secs. 103, 119, Pub. L. 89-563, 80 Stat. 718 (15 U.S.C. 1392, 1407); delegation of authority at 49 CFR 1.50 and 501.7)

[42 FR 24059, May 12, 1977, as amended at 42 FR 38909, Aug. 1, 1977; 48 FR 43331, Sept. 23, 1983]

§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.

(5) For each impact, align the vehicle so that it touches, but does not move, the test device, with the vehicle's longitudinal centerline perpendicular to the plane that includes Plane A of the test device and with the test device inboard of the vehicle corner test positions specified in §581.7(b).

(6) Move the test device away from the vehicle, then release it to impact the vehicle.

(7) Perform the impacts at intervals of not less than 30 minutes.

(b) *Corner impact test procedure.* (1) Impact a front corner and a rear corner

of the vehicle once each with the impact line at a height of 20 inches and impact the other front corner and the other rear corner 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 Figure 1 so that Plane A is vertical and the impact line is horizontal at the specified height.

(3) For an impact at a height between 16 inches and 20 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) Align the vehicle so that a vehicle corner touches, but does not move, the lateral center of the test device with Plane A of the test device forming an angle of 60 degrees with a vertical longitudinal plane.

(5) Move the test device away from the vehicle, then release it to impact the vehicle.

(6) Perform the impact at intervals of not less than 30 minutes.

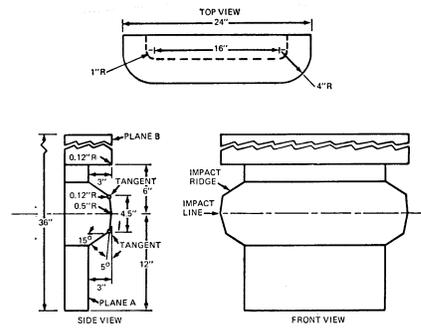


FIGURE 1

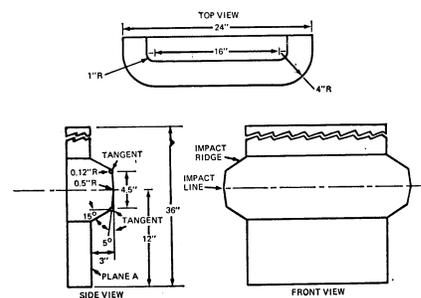


FIGURE 2

[42 FR 24059, May 12, 1977, as amended at 42 FR 38909, Aug. 1, 1977]

§ 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 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

manner set forth in §§555.8(c) and 555.8(f) of this chapter, and for the reasons set forth in §555.8(d) of this chapter. An exempted vehicle shall be labeled in accordance with §555.9 of this chapter. Information relating to an application shall be available to the public in the manner specified in §555.10 of this chapter.

[64 FR 2862, Jan. 19, 1999]

PART 582—INSURANCE COST INFORMATION REGULATION

Sec.

582.1 Scope.

582.2 Purpose.

582.3 Definitions.

582.4 Requirements.

582.5 Information form.

AUTHORITY: 49 U.S.C. 32303; delegation of authority at 49 CFR 1.50(f).

SOURCE: 40 FR 4918, Feb. 3, 1975, unless otherwise noted.

§ 582.1 Scope.

This part requires automobile dealers to make available to prospective purchasers information reflecting differences in insurance costs for different makes and models of passenger motor vehicles based upon differences in damage susceptibility and crashworthiness, pursuant to section 201(e) of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 1941(e)), herein “the Cost Savings Act.”

§ 582.2 Purpose.

The purpose of this part is to enable prospective purchasers to compare differences in auto insurance costs for the various makes and models of passenger motor vehicles, based upon differences in damage susceptibility and crashworthiness, and to realize any savings in collision insurance resulting from differences in damageability, and any savings in medical payment insurance resulting from differences in crashworthiness.

§ 582.3 Definitions.

(a) *Statutory definitions.* All terms used in this part which are defined in section 2 of the Cost Savings Act are used as so defined.

(b) *Definitions used in this part.* (1) *Automobile dealer* means any person who engages in the retail sale of new automobiles as a trade or business.

(2) *Collision insurance* means insurance that reimburses the insured party for physical damage to his property resulting from automobile accidents.

(3) *Insurance cost* means the insurance premium rate, as expressed in appropriate indices, for collision and medical payment, including personal injury protection in no-fault states.

(4) *Medical payment insurance* means insurance that reimburses the insured party for medical expenses sustained by himself, his family, and his passengers in automobile accidents.

[40 FR 4918, Feb. 3, 1975, as amended at 58 FR 12550, Mar. 5, 1993]

§ 582.4 Requirements.

(a) Each automobile dealer shall make available to prospective purchasers, without charge, the information specified in §582.5, at each location where he or she offers new vehicles for sale.

(b) Each automobile dealer shall maintain a sufficient quantity of booklets containing the information specified in §582.5 to assure that they are available for retention by prospective purchasers.

(c) The booklets shall be revised to reflect the updated data published by NHTSA each year within 30 days of NHTSA’s publication of the data in the FEDERAL REGISTER.

[58 FR 12550, Mar. 5, 1993]

§ 582.5 Information form.

The information made available pursuant to §582.4 shall be presented in writing in the English language and in not less than 10-point type. It shall be presented in the format set forth below, and shall include the complete explanatory text and the updated data published annually by NHTSA.