

BUMPERS: TRAFFIC SAFETY TIPS

Has your vehicle ever been *dinged* in a parking lot or tapped from behind in traffic? Ever back into an unforgiving concrete pillar in your office building garage? That's the common fender-bender where annoyance often exceeds damage.

The Bumper

A car bumper is designed to avoid or reduce damage in a low-speed collision. **It is not a safety device to prevent or reduce injuries to people in the car.** Rather, the bumper is designed to protect the hood, trunk, and grille, as well as safety-related equipment such as parking lights, headlamps and taillights, in low speed collisions.

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U.S. Department
of Transportation
National Highway
Traffic Safety
Administration

The Standard

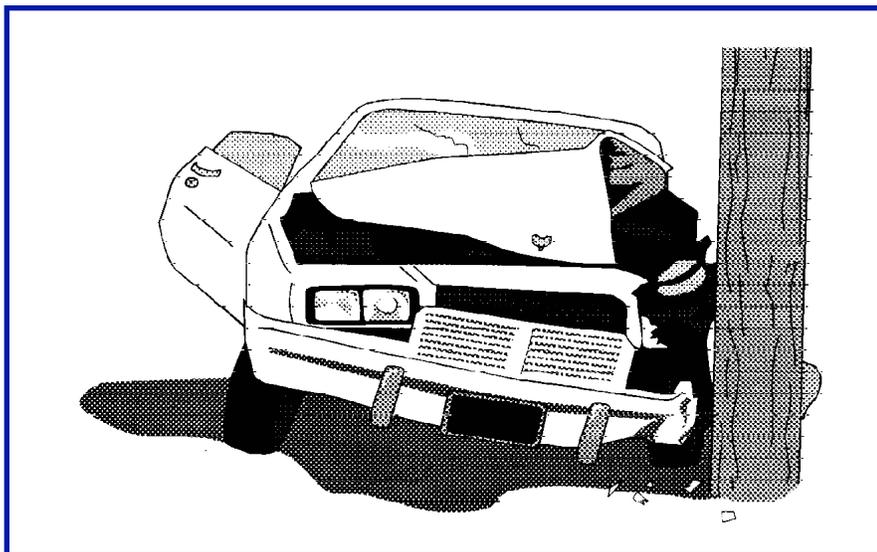
The federal government requires bumpers on passenger cars to prevent damage to the car body and safety-related equipment at barrier impact speeds of up to 2-1/2 miles per hour. This is equivalent to a 5 m.p.h. crash into a parked vehicle of the same weight. The standard requires protection in the region 16 to 20 inches above the road surface, and the manufacturer can provide the protection by any means it wants. For example, some vehicles do not have a solid bumper across the vehicle, but meet the standard by strategically placed bumper guards and corner guards.

How a Bumper Works

A bumper is simply a shield made of steel, aluminum, or plastic that is mounted on the front and rear of a car. When a low-speed collision occurs, the bumper system absorbs the shock to prevent or reduce damage to the car. Some bumpers use energy absorbers or brackets and others are made with a cushioning material.

Cost Factors

The average driver may be involved in two or three low speed collisions over the typical life (10 years) of a car. In many cases, the bumper itself will be damaged in the process of protecting the more vulnerable parts of the car and will need to be replaced.



▲ Figure 1. A bumper is effective in avoiding or reducing damage to the vehicle only in a low speed collision.

If you have an elaborate, multi-material bumper system or one that offers protection at speeds well beyond the 2-1/2 m.p.h. minimum standard, it may cost more to replace. On the other hand, the greater protection may help you avoid more costly repairs. The federal government analyzed these trade offs and found the 2-1/2 m.p.h. standard to be the most cost effective on a nationwide basis.

Be aware of these cost factors when buying a car. Remember that each model will likely have a unique bumper system since styling plays a key role in bumper design. You cannot tell anything about a bumper's protection capability by just looking at it. Think about the type of driving you do when you look at different bumpers. Ask about the collision speed the bumper is designed for

if you wish to protect your car parts at collision speeds beyond the minimum. Some manufacturers make a point of advertising such facts about their bumpers. Most bumper designs for today's cars strike a balance between the value of what they can protect and replacement cost. It does, however, pay to shop smart and that means asking for bumper information. ■

IF YOU THINK YOUR VEHICLE HAS A SAFETY PROBLEM, WE WANT TO HEAR FROM YOU

**AUTO SAFETY HOTLINE
(800) 424-9393**

If you think that your vehicle has a safety problem, you can assist the National Highway Traffic Safety Administration (NHTSA) by completing and mailing back the Vehicle Owner's Questionnaire (VOQ) included with this fact sheet, or calling the Auto Safety Hotline.

The toll-free Hotline number, (800) 424-9393, can be reached from anywhere in the United States. If you are calling from the Washington, D.C. metropolitan area, the number is (202) 366-0123. A Spanish-speaking operator is available weekdays from 8 a.m. to 4 p.m., Eastern time. The Hotline is available to the hearing impaired through a teleprinter

(TTY) number, (800) 424-9153. In the Washington, D.C. area the TTY number is (202) 366-7800.

If it is determined that a safety defect exists, the manufacturer has to fix the problem at no cost to the owner.

If there are any documents relevant to your case, including copies of repair bills and letters to the manufacturer, attach them to your completed VOQ.

If you are not sure of any information requested in the VOQ, leave the box blank. But we must have the Vehicle Identification Number (VIN) to process your questionnaire. The VIN is a 17-

digit number that can be seen through the front windshield on the driver's side of the dashboard. When reporting a tire problem, the DOT identification (located on the sidewall) is needed.

The VOQ asks if you authorize NHTSA to provide a copy of your report to the manufacturer. If so, check YES on the VOQ and sign and date it. When we send the report to the manufacturer, it often results in a satisfactory solution of individual problems. But NHTSA cannot order corrective action unless the vehicle or item of equipment is determined to have a defect and a safety recall campaign is conducted.

Check out our home page for information on a variety of vehicle safety topics.
<http://www.nhtsa.dot.gov/>



