



# Protection systems for rear-seat passengers

▷ In accordance with its philosophy of “Safety for All”, Renault ensures that the passengers in the rear seats of its cars have **a level of safety identical to that of the front seat occupants.**



## ▷ BASIC FACTS

Renault has always wanted to deliver the best possible **safety** in all seats, including at the rear. In line with this policy, since 2001 Renault has equipped the safety belts of its rear side seats on new vehicles with pretensioners and load limiters.

### IN SHORT ▷▷

In addition to the traditional rear seat anti-submarining bars, the two side seat safety belts also have pretensioners and load limiters.



## HOW DOES IT WORK?

### 1 PROTECTION

Studies carried out by the Renault LAB accident researchers have uncovered a strong tendency of rear-seat passengers to slip under their safety belts at the moment of violent impact. This phenomenon is known as submarining. To prevent this, Renault has equipped the rear seat safety belts of its vehicles with pyrotechnic pretensioners and load limiters, and has designed a hump into the base or the under-seat structure that restrains the occupants.

In addition, the position of the seat-belt fastening points has been re-designed, in such a way that the belts remain perfectly taut at the level of the passengers' thighs and pelvis.

This new design, although it is invisible to the user, makes it possible to deliver excellent strapping of the passengers to the seat in the event of an impact.

### 2 COMPENSATION

Two items of equipment work together to manage safety belt deployment

**The pretensioner**, housed at the level of the seat-belt roller, clamps the users of the car to their seats by tautening the belts as soon as an impact is detected.

**The load limiter** releases the belt gradually after the impact, so that the force that the belt exerts on the body never exceeds a limit beyond which it could cause trauma and injuries.