

FAQs on Vehicle Safety Features

RSA

What are vehicle safety features? These are systems in a vehicle designed to prevent a crash or protect you in the event of one occurring, e.g. electronic stability control (ESC) helps control the vehicle in hazardous conditions such as skidding on ice or aquaplaning on surface road water; an airbag is a safety feature that will activate to protect you from being injured in a collision.

Why is it important to have safety features in a car? Choosing a car with safety features not only offers serious protection in the event of a crash, it could prevent the crash altogether. Research from [Parliamentary Advisory Council for Transport Safety 2016](#) shows that the risk of fatal injury in the event of a crash is reduced by 66% in cars which have performed well in terms of safety features when tested by the European new car assessment programme (Euro NCAP).

What is European New Car Assessment Programme (Euro NCAP)? This is a vehicle safety rating system which awards 'stars' based on the performance of a vehicle in a variety of tests that aim to replicate real life crash scenarios. The top rating is five stars which means a vehicle has an overall good performance in crash protection and is well equipped with crash avoidance technology.

How do I know which car has the best safety features? Look for the Euro NCAP rating of the vehicle. The more the stars the better the safety features. [Euro NCAP](#) provide a detailed list of vehicles and their respective star ratings.

Are there safety ratings on used cars? Yes. It is important to note however that these ratings apply to vehicle makes and models in general over set time periods. They do not take into account factors such as mileage, driving conditions, regular maintenance etc. So you should always get a used vehicle independently checked by a qualified mechanic before you buy to ensure that all of the safety features are still intact and operating correctly.

What are the most important safety features available?

Vehicle safety features can be divided into four main categories with some of the most important listed in descending order in each:

1. Crash Protection

- **Safety restraints** – Three point seat belts, Isofix child restraint anchors, inflatable rear seat belts, active head restraints
- **Airbags** - front airbags, side airbags, knee airbags and curtain airbags
- **Crumple zones** - areas of a car which have been designed to absorb the impact during a collision
- **Roll-over protection** – a structure which protects occupants when the vehicle overturns or rolls over
- **Pre-crash sensor systems** – where the vehicle senses a collision and automatically activates safety items such as seat belt sensors, airbags etc.

2. Vehicle Control

- **Anti-lock braking systems (ABS)** prevents the brakes from locking which would cause the car to skid
- **Electronic braking systems (EBS)** - applies appropriate braking pressure to each wheel to maximize stopping power while keeping the vehicle in control
- **Electronic stability control** - ESC uses ABS and traction control to reduce the danger of skidding
- **Emergency brake assist** - assists to stabilise the vehicle when brakes are forcefully applied
- **Automatic braking** - vehicle senses a collision and brakes automatically
- **Trailer stability control** - recognises early signs of dangerous swinging motion and activates the brakes automatically to slow the trailer down and return stability
- **Roll over warning or stability** - vehicle detects a possible rollover and warns driver or automatically starts corrective action
- **Adaptive cruise control** - automatically adjusts the vehicle speed to maintain a safe distance from the vehicle ahead
- **Hill launch assist** - prevents the vehicle from rolling when a hill start is needed

3. Safety Assist

- **Seat belt reminder** – reminds the driver if seat belt is not worn while vehicle is in motion
- **Speed alert systems** – the driver is alerted if they are going over the speed limit or if the gap between them and the vehicle in front is closing too quickly
- **Tyre pressure monitoring** – a dashboard signal which warns driver when the tyre pressure is low
- **Lane support systems** – warns driver if the vehicle is departing from a lane
- **Fatigue reminder or detection** - systems which detects long periods of driving or driver behaviour associated with drowsiness e.g. veering into the middle of the road and warns the driver.
- **Alcohol or drug ignition interlock** – a breath measuring instrument that can prevent a vehicle from being started if the driver's breath alcohol or drug concentration is high.
- **eCall** - automatically calls the emergency services in the event of a collision

4. Lighting & Visibility

- **Daytime running lights (DRL's)** – lights which automatically turn on when the vehicle is moving forward. These increase its visibility during the day.
- **Reversing collision avoidance or intelligent parking systems** – these sensor systems assist the driver to reverse or park by warning them if another vehicle, pedestrian or object is nearby
- **Blind spot monitoring** – a sensor which detects other vehicles to the side or rear and notifies the driver
- **Reversing cameras** – provides additional visibility to driver when reversing
- **High intensity discharge (HID) headlamps** – these are lamps which are much brighter and so drivers can see better during times of low light and are equally more visible
- **Adaptive front lighting systems** – where the vehicle's headlights adapt to suit the road conditions e.g. when turning corners the lights will follow the curve of the road
- **Emergency stop signal (ESS)** – this is a system which causes the hazard lights to flash if the driver suddenly brakes when travelling at speed
- **Night vision enhancement** – a system which uses an infrared camera to improve a driver's vision in darkness or poor weather
- **Automatic high beam** - switches beam from high to low for safer night-time driving