GOVERNMENT OF WESTERN AUSTRALIA

FAQS

CONTENTS

SAFE VEHICLES

OVERVIEW

What are you considering as you choose a car? The price, efficient fuel consumption and even colour are often top of mind, but thinking about the safety of a vehicle may save your life, or that of a loved one.

The Australian Design Rules (ADR's) cover a minimum safety requirement, but there are many more safety features available to make a car safer both in the event of a crash and in preventing a crash in the first place.

WHAT VEHICLE SAFETY FEATURES SHOULD I CONSIDER?

Check your vehicle has the following:

Autonomous Emergency Braking: By constantly measuring the distance between you and the car in front - using radar, or lasers, or both – AEB can adjust the speed of your car. In an emergency, brakes are applied faster than a human reaction time.

Anti-locking braking systems: This a safety anti-skid braking system which operates by preventing the wheels from locking up during braking, maintaining traction with the road surface.

Side and Curtain Air Bags: Front driver and passenger air bags nflate at high speed, faster than the blink of an eye, slowing down the occupant

ROAD SAFETY COMMISSION

during a crash and absorbing energy, thereby reducing the potential of impact against hazards such as the dash, doors, windows and steering wheel. Side airbags perform a similar job to frontal airbags. The difference being they protect the occupants from striking the side of the vehicles interior. Curtain airbags provide additional protection for the head and front and rear occupants in a side impact. They may also provide protection from ejection in vehicle roll over after being hit on the side.

Head Restraints: A head restraint is designed to reduce the movement of the head and provide support in a crash. A properly adjusted head restraint will help to protect against whiplash, and potentially save you from a long term injury. The top of the head restraint should always be as high as the top of your head and as close to the rear of your head as possible.

Intelligent Speed Assist: A safety technology that alerts drivers when they exceed the speed limit. Audio and visual warnings activate to remind the driver that they are going too fast. ISA can also be fitted with a speed limiting function which increases the pressure on the accelerator when you exceed the posted speed limit, making it harder to accelerate.

Lane Departure Warning: Lane departure warning alerts you that your car is about to veer out of lane. All forms of lane departure warning employ a low-cost camera mounted in the windshield near the rear view mirror that continuously watches the striped and solid lane markings of the road ahead.

Electronic Stability Control: Using a number of intelligent sensors, ESC stabilises the vehicle by selectively braking individual wheels and reducing engine torque to bring the vehicle back on course if the driver starts to lose control.

A landmark Australasian study conducted by the Monash University Accident Research Centre (MUARC) has confirmed Electronic Stability Control (ESC) systems reduce the risk of single vehicle crashes by up to 50%.

Single vehicle crashes account for 64% of driver fatalities on Western Australian roads in 2004 and around 1,100 serious injuries each year.

The study found a reduction in the risk of single vehicle crashes of:

- 25% for ESC equipped cars;
- 51% for ESC equipped 4WDs; and
- 28% across all vehicle types equipped with ESC.

In single vehicle crashes involving a driver injury there were even bigger reductions of:

- 28% for ESC equipped cars;
- 66% for ESC equipped 4WDs; and
- 30% across all vehicle types equipped with ESC.

With the current level of road trauma in Western Australia, having ESC equipped in all cars would save around 50 lives each year and a further 310 serious injuries.

HOW DO I KNOW IF MY VEHICLE IS SAFE?

Look for the stars. Vehicles with five stars are safest and most effective at protecting occupants in a crash.

New vehicles are rigorously tested in crash labs to get their star safety ratings and the safety ratings for used vehicles are calculated using real crash data.

The Road Safety Commission encourages people driving a new or used car to choose a car that is at least four stars, preferably five, which is the highest safety rating.

The Australasian New Car Assessment Program (ANCAP) crashes the cars in controlled conditions and awards the car between 1 and 5 stars depending on the results. The Road Safety Commission recommends that people buy only 4 and 5 star cars. Cars tested after 1 January 2008 can only achieve a 5 star rating if they include Electronic Stability Control (ESC). ESC has been proven to decrease the chance of a crash, particularly single vehicle accidents.

HOW ARE CARS TESTED?

The majority of new cars are now are tested through the Australasian New Car Assessment Program (ANCAP). ANCAP purchases new vehicles and crashes them in controlled conditions. It then measures the impact of the crash on the test dummies.

The following six physical crash tests are carried out to determine a vehicle star rating:

- Offset Crash Test – 40% of the car, on the driver's side makes contact with a crushable aluminium barrier at at 64 km/h. This test simulates a collision with another vehicle.
- Full Width Test – simulates a head on crash with another car of the same mass, travelling at 50 km/h. The full width of the vehicle front makes contact with a solid wall.
- Side Impact Test – simulates two cars colliding at 90 degrees. It runs a 1,300 kg trolley into the side of the vehicle at 50 km/h.
- Pedestrian Impact Test – simulates the injuries that may be sustained by a pedestrian struck by a vehicle. The tests are conducted at 40km/h and target several locations on the vehicle.
- Oblique Pole Test – propels the vehicle at a 75 degree angle into a pole at 32 km/h, to simulate a crash into a tree or pole. Curtain air bags are particularly effective in reducing the chance of a serious injury in this type of crash.
- Whiplash Test – a seat from the vehicles is mounted to a test sled which is propelled forward at 16 km/h. The test assesses likely head and neck injury resulting from a rear impact crash.

ANCAP also tests active safety systems.

- Autonomous Emergency Braking Tests – there are over 100 AEB test scenarios in the assessment.
- Lane Support Systems are assessed on an outdoor test track, with the test driver intentionally leaving the vehicle's lane to determine who the vehicle's systems react and activate to prevent a collision.
- Speed Assistance Systems are assessed to determine the vehicle's ability to inform the driver of the present speed limit, warn the driver when the speed exceeds a set speed threshold and actively prevent the vehicle from exceeding the set speed and/or the present speed limit.

HOW DO I KNOW IF MY MAKE AND MODEL HAS BEEN TESTED BY ANCAP?

The ANCAP website shows the results of all cars that have been tested, and allows you to search for your own vehicle model.

WHAT ABOUT IF I'M BUYING A USED CAR?

You can check the stars on your used car by looking at the Used Car Safety Ratings (USCR) on the How Safe Is Your Car website.

UCSR measure the actual vehicle safety performance of passenger and light commercial vehicles in Australia and New Zealand. The UCSR are updated every year, based on statistics collected from car crashes in where someone was killed or seriously injured.

They differ from ANCAP ratings, which use results from crash testing on new vehicles in a laboratory environment.

The Vehicle Safety Research Group (VSRG) engages Monash University Accident Research Centre to estimate and develop the UCSR.

A vehicle model is not included in the ratings analysis until it has been involved in at least 100 crashes and at least 20 driver injuries have been recorded.

Ratings will not be released to the public unless they satisfy 2 criteria for minimum accuracy. In practice, these criteria are only satisfied once a vehicle has been involved in at least 300 crashes.

The Road Safety Commission recommends that people buying a used car look for a four or five star rating.

AREN'T OLDER CARS STRONGER?

This is a misconception when buying a used car.

In fact, a 'crumple zone' at the front of newer vehicles means that a crash has much less impact on a person inside the car.

ARE BIGGER CARS SAFER?

It depends on the type of crash.

Occupants of larger vehicles will usually have a lower risk of injury than those in smaller vehicles if involved in a 2 or more vehicle accident.

However, in many single vehicle crashes, weight and size does not offer any advantage. Many small and medium sized cars have a 4 or 5 star rating.

This fact sheet was correct at January 2019.