

Active Safety - Equipment to Help Avoid a Crash

ANCAP's crash test program provides comparative ratings on how different vehicle models protect their occupants in common types of crashes. Vehicle buyers should consult these ratings before making a purchase.

However, it is obviously better if you can avoid a crash in the first place and there is now a range of equipment which can help you do that.

Brake Based Systems

These act on the brakes of your car to give you better control and stopping power:

Anti-lock brakes (ABS)

This system prevents the wheels locking during hard braking. ABS uses sensors on each wheel to detect when a wheel is about to lock and momentarily releases the brake before re-applying it. The system cycles on each wheel between brake on and off very quickly, much more quickly than a human can, to stop the wheels locking no matter how hard you press the brake pedal.

ABS allows you to steer the vehicle and turn away from the object you're trying to avoid while braking hard – something you can't do if the wheels are locked. When ABS is working, you will hear and feel a "chattering" through the brake pedal and "rapid vibration" through the whole vehicle. This confirms the system is working and you should keep pressing the brake pedal hard and steering away from danger until you stop.

ABS also minimises stopping distances on slippery surfaces like ice, and helps maintain direction when one side of the vehicle is on a slippery surface and the other is not, such as when pulling over on a snowy road shoulder.

For vehicles equipped with ABS brakes, "stomp and steer", is a good message to remember when braking to avoid a crash.

Electronic brake stabilisation (EBS)

This is also known as electronic brake-force distribution or electronic brake assist. These systems provide the best balance of brake force to all four wheels, stopping the car in a shorter distance.



2.

Emergency brake assistance/optimisation (EBA/EBO)

This system monitors how quickly the brake pedal is pressed. If the pedal is pressed very suddenly, such as in an emergency, but the driver is not, or cannot, apply maximum braking force, the brake pressure is boosted to reduce the stopping distance.

Traction Control System (TCS)

This system operates to improve stability by preventing wheel spin when accelerating on wet and slippery roads. TCS applies the brakes momentarily to the wheel that has lost traction to stop it slipping, giving better grip on the road. In some systems engine power is reduced to prevent wheel spin.

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Contact: Jack Haley ANCAP 0439 133 645