

Full braking: the right way to do it

## Even with assistant system: Drivers should apply brakes fully in emergency situation

- Electronic systems by no means make active braking pointless
- In an emergency, depress and hold the brake pedal with full force
- Recommendation: Practice emergency braking once a year

Even in cars with electronic emergency brake assistant systems, drivers must apply the brakes fully themselves in an emergency to reduce speed as much as possible. "During our driver training courses, we repeatedly hear the view that the emergency brake assistant will take over braking completely in an emergency. This is a misconception that can have devastating consequences under certain circumstances", warns Reinhard Buchsdrücker, driving instructor with the expert organization DEKRA in Germany.

"The emergency brake assistants installed today by no means make full braking by the driver pointless", says the driving instructor. "They are designed to warn the driver of an impending crash in certain situations and initiate emergency braking if the driver does not respond to the warning." However, brake assistant systems do not always slow the vehicle to a stop. For example, many of these systems – which will be mandatory for all new cars in the EU starting in 2024 – can only brake to a standstill from standard urban driving speeds, assuming optimal conditions. Nor can they reliably detect all critical situations. For example, many systems currently available still struggle to detect pedestrians and cyclists, and system limits are quickly reached in the dark or in bad weather.

"They are only assistants designed to support the driver in an emergency, not autopilots", emphasizes the driving coach. "Constant attention and, if necessary, properly executed emergency braking by the person behind the wheel are still the safest way to go."

## Keep the pressure on until the end

"In emergencies, the following therefore applies to all vehicles, whether with or without emergency brake assist: if an accident is imminent, immediately step on the brakes with full force and keep up this pressure until the end", Buchsdrücker

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emphasizes. "And while doing so, hold the steering wheel well with both hands and swerve if necessary. Everything else can be left to the built-in ABS." The vibration of the pedal is normal, so drivers should not let themselves be confused by it. When the emergency situation eases, brake pressure can be reduced.

The biggest mistake often made in emergency braking is dynamic braking: that is, applying the brakes weakly at first and then harder and harder. "This makes the braking distance unnecessarily long and leads to unnecessarily high impact forces", warns the driving coach. In addition, many emergency brake assistants switch off with the start of a reaction – such as steering, accelerating, braking, and sometimes also using the turn signal.

Another common mistake is to press against the steering wheel and seat back with outstretched arms during emergency braking. In this posture, there is a risk of serious injury to arms, joints, and collarbones in the event of a collision.

"The seating position must be correct not only in an emergency, because it also helps when steering and, above all, when swerving", Buchsdrücker emphasizes. The arms must be slightly bent and the pedals easily accessible for the feet. The seat should have a maximum slight backward tilt (about 90 to 110 degrees). The headrest should be level with the top of the head.

## Practice emergency braking once a year

"In an emergency situation, drivers must be able to call up the correct reaction within fractions of a second and be aware of the vehicle's reaction", explains the driving coach. "They can only do that if they have practiced the correct behavior." Therefore, it is necessary to practice emergency braking on a suitable terrain at least once a year. If one uses an unfamiliar vehicle, e.g., a rental car or a carsharing vehicle, test braking at the beginning of the trip should be just as standard as familiarizing oneself with controls and assistance systems before setting off. "In addition, driver safety training is strongly recommended every two years."

## About DEKRA

DEKRA was originally founded in 1925 to ensure road safety through vehicle inspection. With a much wider scope today, DEKRA is the world's largest independent non-listed expert organization in the testing, inspection, and certification sector. As a global provider of comprehensive services and solutions, we help our customers improve their safety, security, and sustainability outcomes. In 2022, DEKRA generated sales totaling nearly EUR 3.8 billion. The company currently employs almost 49,000 people who offer qualified and independent expert services in approximately 60 countries on five continents. With a platinum rating from EcoVadis, DEKRA is now in the top one percent of sustainable businesses ranked.