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A New Type of Crash Test Dummy: Biofidelic Model Maximizes Safety

The 'family' of dummies used for vehicle crash tests has grown over the past few years. Dummies designed to represent a man, woman, and child have long been used to assess safety in these test scenarios. In recent years, these three designs have been joined by another type of dummy which represents unprotected people in the tests.

Novice Drivers: Total Ban on Alcohol When Behind the Wheel

When novice drivers in Germany get behind the wheel of a motor vehicle, they are subject to stricter requirements than other drivers. For example, during the carnival season which is currently taking place in Germany, there is a zero tolerance policy toward drink driving for novice drivers – the permissible blood alcohol concentration (BAC) for them is zero. Under German law, more experienced drivers can get away with small quantities of alcohol (at least up to a BAC level of 0.03%) – although these drivers would also be safer if they were sober.

Be Careful When Purchasing a Used Car: Watch Out For Previous Damage

Your joy at buying a new used car can quickly evaporate if you find out that the car that initially seemed a bargain was, in fact, previously involved in an accident. Time and time again, vehicles are cunningly put back together after an accident and 'polished up' for sale. However, these types of repairs also leave behind telltale marks that reveal the vehicle's true history.

Further topics

- A properly prepared vehicle keeps you safe on your winter vacation
- Parking on the left-hand side of the road in Germany: convenient but expensive
- Watch out for concealed accident damage



Purchasing a used car: Are there signs of previous damage?

Be careful when purchasing a used car!

Watch Out For Previous Damage

Your joy at buying a new used car can quickly evaporate if you find out that the car that initially seemed a bargain was, in fact, previously involved in an accident. Time and time again, vehicles are cunningly put back together after an accident and 'polished up' for sale. However, these types of repairs also leave behind telltale marks that reveal the vehicle's true history. "Take care if you uncover these signs when viewing the vehicle," warn DEKRA's experts.

- Uneven gaps at doors, hoods, trim panels, and headlamps indicate that the vehicle was previously damaged. Panel gap widths that converge at the top or bottom or differences between the left and right sides of the vehicle are a sure sign of accident damage.
- Irregularities in painted surfaces, such as trapped particles of dust, differences in color, waves, and sanding marks, also indicate that the paintwork has been repaired, as do 'varnish tears' which may occur if paint is applied retrospectively.
- Looking under the hood and in the wheel wells will reveal whether the trim panels are complete, undamaged, and fitted without any gaps. Is there a lack of age-related stone chips on the windows, headlamps, hood, or wheel arches? Are there remnants of adhesive tape or overspray in hard-to-reach places like the engine compartment? Do the doors, tailgate, and hood close easily and smoothly?
- One simple check for professionals and laypeople alike is whether the tires have worn down unevenly on the inside and outside – this can also indicate previous damage. If you test drive the vehicle and it pulls to one side, the chassis may be twisted. This must be checked by a professional.

"It's all too easy to overlook key details when viewing a used car," explains DEKRA expert Ronald Hufnagel. "That's why you should never view a car in the dark, during or after rain, or when it is dirty." If you're not sure, the best thing is to consult a professional or have the used car checked by a neutral expert. "The money for the inspection will certainly be well spent." (DEKRA Info)

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A new type of crash test dummy **Biofidelic Model Maximizes Safety**

The 'family' of dummies used for vehicle crash tests has grown over the past few years. Dummies designed to represent a man, woman, and child have long been used in crash tests to make vehicles safer for people. In recent years, these three designs have been joined by another type of dummy which represents unprotected people when analyzing the crash.

"This dummy has been developed to play the role of vulnerable road users in crash tests and, during the collision, to cause vehicle damage that is comparable to the damage caused in real accidents," explains Andreas Schäuble from DEKRA Accident Research. The dummies used in passenger car crash tests are not designed for this purpose: "They are relatively rigid and cause much stronger deformation than a real human during an impact with a vehicle," he says.

The new dummy is much better at mimicking the processes and damage that occur in a real accident involving vulnerable road users. It has been dubbed a 'biofidelic' model, which means it resembles the human body as closely as possible. According to the manufacturer, the bones of the dummy's skeleton have a comparable breaking strength to human bones. The artificial tissue has pseudoelastic properties like humans – it deforms under pressure before returning to its original shape.

For DEKRA's experts and accident researchers, the biofidelic dummy opens up new possibilities when simulating and investigating accidents involving pedestrians and cyclists. In addition to the damage caused to the vehicle, the 'injuries' that the test dummy suffers in a crash test can also be used to analyze the injury mechanisms, i.e., the way in which injuries occur.

This, in turn, will enable conclusions to be drawn about the nature of the accident, such as how and from which direction the person was hit. 'Biofidelic' dummies already play a valuable role in accident analysis and research. However, the dummies themselves are also still being researched. For example, DEKRA Accident Research is running projects looking into how meaningful different 'injury patterns' are, and into other future applications. (DEKRA Info)



*Winter tires must have 4
millimeters of tread depth left*

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Proper preparations will keep drivers safe in winter

Practice Fitting Snow Chains at Home

A trip out to the ski slopes is one of the finer things in life. However, anyone heading out to the pistes in their own car will need to prepare it properly for wintry conditions such as snow, ice, and slush. DEKRA's experts provide a few tips below.

It's clear that wintry roads require the use of **winter tires** in order to cope with black ice, hard-packed snow, slush, or generally icy or slippery conditions. Tires with the three-peak mountain snowflake symbol are now the only ones that can be used for these scenarios. Take care: M+S (Mud + Snow) tires are no longer permitted for winter use in Germany as from this season. In Austria, winter tires must have a tread depth of at least four millimeters. Drivers risk fines otherwise. This minimum tread depth also applies elsewhere.

When heading out into the mountains, you also need to have suitable **snow chains** on board to ensure you get to where you're going in the event of heavy snowfall or if there are signs mandating their use. The best thing is to practice putting them on beforehand in your garage at home rather than waiting until you're stuck in a snowstorm. If snow chains have been fitted, you must keep to a speed limit of 50 km/h.

The vehicle can only truly be considered winter-ready if the **antifreeze** in the windshield washer system protects against freezing down to minus 20 to 25 degrees Celsius. An ice scraper, broom to clear snow, door lock deicer, and gloves will also serve you well. Take drinks, emergency provisions, and a warm blanket with you to make long traffic jams or a breakdown easier to bear.

If the vehicle is covered with snow, all snow and ice must be cleared before you drive off – simply clearing a **hole** for the driver to see out of isn't enough. Letting the engine warm up while the vehicle is stationary doesn't help and is prohibited in Germany. To ensure the assistance systems work reliably, the **sensors and cameras** on the vehicle also need to be free of snow and ice. Always driving with the low beams on during the day as well as at night is another way to increase safety in winter.

If you're driving on a wet, icy, or snow-covered road, you will need to **keep further back** from the vehicle in front. DEKRA's experts highlight that at a speed of just 50 km/h, the braking distance until the vehicle comes to a stop is at least twice as long in snowy and icy conditions as on a dry road. Safe driving in winter also requires the driver to be attentive and not distracted by things like a smartphone. (DEKRA Info)



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Novice drivers: Zero tolerance policy toward drink driving

Strict rules for novice drivers

Total Ban on Alcohol When Behind the Wheel

When novice drivers in Germany get behind the wheel of a motor vehicle, they are subject to stricter requirements than other drivers. For example, during the carnival season which is currently taking place in Germany, there is a zero tolerance policy toward drink driving for novice drivers – the permissible blood alcohol concentration (BAC) for them is zero. Under German law, more experienced drivers can get away with small quantities of alcohol (at least up to a BAC level of 0.03%) – although these drivers would also be safer if they were sober.

A novice driver is classed as any driver who is still in their two-year probationary period or is under 21 years of age. "We know that a person's fitness to drive is impaired from a BAC level of just 0.02%. Alcohol makes drivers more willing to take risks, less attentive, it narrows their field of vision, and it makes it harder for them to judge distances," explains Dr. Thomas Wagner, who is in charge of assessing drivers' fitness to drive at DEKRA.

Even if there is no evidence that they are unfit to drive, one sip from a bottle can result in a fine of 250 euros and one penalty point being added to their license in the German driving aptitude register. And that's not all: any violations run the risk of the probationary period being extended by two years. Moreover, the driver will be required to attend a special advanced driving aptitude seminar at their own expense. Things get even more expensive if they have a BAC level of over 0.05%, or if their BAC level is 0.03% or more and they caused an accident resulting in material damage or personal injury, as they then sometimes have to fork out one to several month's salary. In addition, they will lose their license for at least six months.

If no accident has been caused, more experienced drivers with a BAC level of 0.05% or higher will also incur hefty penalties such as a fine of 500 euros, two points added to their license, and a temporary driving ban. In Germany, cyclists or pedelec riders will fall foul of the law as from a BAC level of 0.16%, or a lower level in certain circumstances, and can even be required to attend a medical-psychological examination (known as an 'MPU') due to this high BAC.

"If you want to celebrate without any worries and have a drink, you should be consistent and not get behind the wheel," says Wagner. "If you're out celebrating, we recommend leaving the car where it is from the outset. Taking public transport, getting a taxi, or having someone pick you up are all better options." This would prevent many serious accidents and avoid expensive penalties. In 2024 more than 76,000 criminal offenses and over 30,000 administrative offenses were recorded in Germany in connection with alcohol. This means that most of the criminal offenses committed out on the road (32 percent) are drink driving offenses. (DEKRA Info)



Parking on the left-hand side of the road is prohibited in Germany, even if you're not obstructing anyone

Parking on the left-hand side of the road in Germany

Convenient But Expensive

The German Road Traffic Act (*Straßenverkehrsordnung*) stipulates that drivers are only allowed to park on the right-hand side of the road, in the direction of the traffic. However, it is often easier to park contrary to the flow of traffic on the other side of the road. Many drivers don't want the hassle of turning around in order to park and simply park up in a free space on the left-hand side, in contravention of the rules. Doing so can result in a parking ticket, as these vehicles will, of course, catch the eye of traffic control officers during their inspections in inner-city areas. Even if their vehicle is not obstructing anyone, these drivers will end up with a fine of at least 15 euros. This increases to 25 euros if the vehicle is causing an obstruction or has been parked like this for more than an hour, and 35 euros if both criteria apply. DEKRA's experts highlight that parking on the left-hand side is permitted in only two cases: on one-way streets, and on streets with rail tracks on the right-hand side. These rules apply provided that there are no traffic signs to the contrary. (DEKRA Info)



After a mini-crash, check that the vehicle is OK

Watch out for concealed accident damage

Check the Vehicle After a 'Mini-Crash'

Sometimes there's a collision out on the road but an external inspection of the vehicle afterward reveals nothing but a few scratches. "This doesn't mean that everything is fine with the vehicle," say DEKRA's experts. Damage to hidden parts of the vehicle (such as cross members, brackets, or sensors) cannot be ruled out, even if no damage is visible from the outside. The reason for this is flexible plastic bumpers, which completely recover their original shape after a low-speed collision. If you simply drive on after such a 'mini-crash', you may lose important claims for damages against the person responsible for the accident. For this reason, the experts recommend that if the collision was anything more than a small bump, you should play it safe and visit a workshop or expert to have the vehicle inspected for any hidden damage. (DEKRA Info)

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