

Vehicles suitable for seniors

Choice of vehicle model can make a big difference for older drivers

- Good visibility and ease of use are key factors in which vehicle to purchase
- Important features should come with as few distractions as possible
- Assistance systems can partially offset reduced driving performance

DEKRA e.V. Corporate Communications Handwerkstraße 15 D-70565 Stuttgart

www.dekra.com/en/press

The number of senior citizens behind the wheel has been increasing for years. And many are willing to purchase age-appropriate vehicles to preserve their mobility. This makes this group, which is financially well off in many countries, extremely appealing for the automotive industry. While none of the large automakers has a model explicitly labeled as being intended for seniors, the market is served by appropriate vehicle designs along with selected comfort, convenience, and safety systems. As a result, particular vehicle models or users are not stigmatized – in fact, the advantages benefit every age group. "Direct and indirect visibility, driver assistance systems, and passive safety elements all have an important role to play when it comes to safety," says DEKRA accident researcher Markus Egelhaaf.

For many seniors, the use of their own car is an essential part of their individual mobility well into old age. However, to protect themselves and other road users, the vehicle they opt for should be tailored as closely as possible to the needs and possible driving limitations of those aged 65+.

This starts with the direct view from the driver's seat. "The less the line of sight is obstructed by wide columns or windows that are too small, the less relevant any physical limitations in the upper body and cervical spine or restricted fields of vision will be," Egelhaaf explains. The windshield in particular needs to fulfill a wide range of criteria – for instance, the area covered by the windshield wipers needs to be configured such that there is no notable "widening" of the A columns when it rains, or especially in snow, the DEKRA expert adds. "The position of the seat in relation to the windshield and, in particular, the position of the rear view mirror and the sensor or camera systems often fitted in this area must be designed to ensure that the driver has a good view of traffic lights. And this must be possible without the driver needing to strain their body significantly in any of the seat positions they would reasonably choose between," Egelhaaf recommends. In addition, large

Date Stuttgart, October 6, 2021 / No. 093-A Contact Wolfgang Sigloch Phone +49.711.7861-2386 Fax +49.711.7861-742386 E-Mail wolfgang.sigloch@dekra.com



mirrors that distort the view as little as possible enable drivers to notice the traffic behind them more quickly and help to compensate for restrictions in how far they can look over their shoulders, even if they are not a complete substitute for this extra perspective, he says. Another important aspect is the interior design, which must ensure that the view through the rear window via the rear-view mirror is as unobstructed as possible, the accident specialist notes. To make sure this is the case, drivers are advised to impartially try out models from different manufacturers when choosing a vehicle and to opt for the one in which they feel most comfortable – even if it may not be from the brand they have been driving for decades or bought from the dealership they have been visiting for just as long.

Important features must be usable without distraction

A tidy cockpit, clear and legible instruments, and a simple, clearly structured user interface can help to make the driver's life a lot easier, reducing the number of variables they need to consider and thus improving their safety and comfort. Displays and display elements should have a high-contrast design in all their lighting states. Numbers and other characters and symbols need to be of sufficient size and easy to read with even just a quick glance. While driving, it must be possible for the driver to operate the vehicle's key functions, such as the light and wiper controls, heating and ventilation settings, and radio controls, via haptic feedback, i.e. without the need to look at them. Screen menus operated by a single pushbutton and touchscreens can quickly overwhelm the driver or cause a dangerous distraction. "If safety-related functions are being relocated into touchscreen systems, a simple voice or gesture-operated system would undoubtedly be a better option for keeping distraction times to a minimum," Egelhaaf points out.

Driver assistance systems can make stressful situations more manageable

When it comes to selecting driver assistance systems, those that offer the greatest potential benefits, especially for senior citizens, are the ones that help in complex and taxing traffic situations. These include intersection assistants, blind spot warning systems, lane change assistants, night vision systems, and automated emergency braking systems. Road sign assistants, which use cameras to detect the local speed limit and display it on the dashboard, also help drivers to compensate to a certain extent for deficits in their attention, providing an added sense of safety. Vehicle backup cameras and parking assistants can also make stressful situations more manageable, thus improving safety. Particularly at dusk and in the dark, intelligent lighting systems and high-beam assistants can be an important way to help compensate for the reduced ability to see in twilight and darkness that comes with age. With GPS systems, the key criteria are up-to-date maps and clear visual and acoustic instructions. E-call systems, especially those with an additional service call-out function, can also help to increase a driver's sense of safety and reduce stress in accident and breakdown situations.



How safe are automatic transmissions for senior citizens?

When it comes to purchasing a vehicle, there are some markets in which older road users should be asking themselves whether to opt for a vehicle with an automatic transmission. In Germany, for example, there has been a rapid increase in the market share for new vehicles with automatic transmission. According to one statistic, it was over 55 percent in 2020, compared to just under 28 percent in 2010. However, this is nothing in comparison to the USA or Japan, where automatic vehicles account for around 90 percent of the market. It is safe to assume that manual transmissions will continue to lose their relevance in time – especially as some modern assistance systems only work in combination with automatic transmissions, and electric drives eliminate the need for gear shifting.

But are vehicles with automatic transmission less safe given that, unless the brake pedal is actuated, they will move when the engine is running – and is the risk of unintentional acceleration greater? After all, it is quite common to read police reports about older drivers who lost control of their automatic vehicles because they got the brake and gas pedals mixed up or put the vehicle into reverse by mistake. "To prevent these kinds of operator errors and the often resulting reactions of panic, senior citizens should ideally have a driving instructor show them the features of an automatic transmission before buying such a car, or take driver training courses to help them practice dealing with extreme situations," Egelhaaf advises. In addition to this, the DEKRA accident researcher advises switching to an automatic transmission as early as possible to allow drivers to get used to these systems before their cognitive capacity diminishes significantly because of aging.

For background information on this subject and to find out more about road safety for older people, look at the DEKRA 2021 Road Safety Report on Old-Age Mobility. It is available online at <u>www.dekra-roadsafety.com</u>.

About DEKRA

DEKRA has been active in the field of safety for almost 100 years. Founded in 1925 in Berlin as Deutscher Kraftfahrzeug-Überwachungs-Verein e.V., it is today one of the world's leading expert organizations. DEKRA SE is a subsidiary of DEKRA e.V. and manages the Group's operating business. In 2020, DEKRA generated turnover totaling almost EUR 3.2 billion. The company currently employs around 44,000 people in approximately 60 countries on all continents. With qualified and independent expert services, they work for safety on the road, at work and at home. These services range from vehicle inspection and expert appraisals to claims services, industrial and building inspections, safety consultancy, testing and certification of products and systems, as well as training courses and temporary work. The vision for the company's 100th birthday in 2025 is that DEKRA will be the global partner for a safe, secure, and sustainable world. With a platinum rating from EcoVadis, DEKRA is now in the top one percent of sustainable businesses ranked.