



SUSTAINABLE DEVELOPMENT

Active Safety Is More Than Just Brakes

Although active safety is a widely-used term, not everybody knows what it really means. Having first-class active safety parameters, the second-generation Škoda Octavia is a good example in illustrating what the concept of active safety is actually all about.

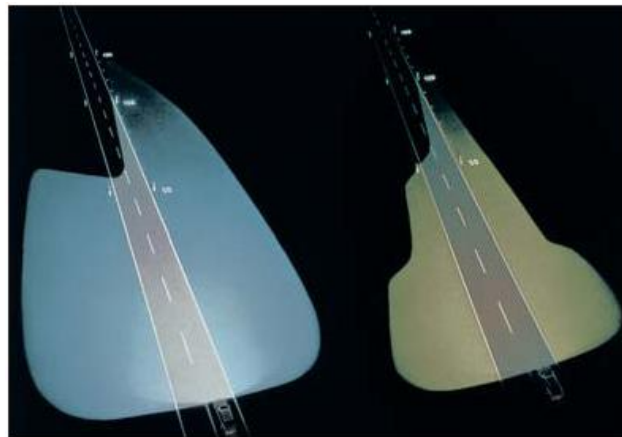
Active safety involves vehicle design elements and features supposed to help in traffic accident prevention, especially vehicles' handling and dynamic characteristics, as well as all elements and systems improving driving control and enhancing the passenger's and, in particular, the driver's comfort.

The key items include:

Modern and structurally advanced chassis guaranteeing safe vehicle handling characteristics. The chassis design and setup play a major role in how the vehicle behaves in bends, on rough surfaces, in emergency situations, etc.

Efficient disc brakes on all wheels ensure safe braking.

The vehicle's outside lighting based on the "see and be seen" rule includes: - efficient clear lens headlamps or xenon headlamps; - fog lamps that dramatically increase road lighting characteristics in bad weather; - tail lamps with "brilliant" effect and large backlit areas; - side direction indicators integrated to external rear view mirrors (an element improving the indicators visibility). The key benefits of xenon lamps as compared to halogen ones are approximately a double quantity of light, higher light colour warmth (is more similar to daylight), as much as 30 % lower power consumption, and durability more than six times longer (3,000 and more hours). Other benefits of xenon headlamps include better road lighting characteristics, higher contrasts, better perception of obstacles and, as a result, drivers' faster reactions to unexpected events.



Comparison of road illumination by xenon tube (LH picture) or halogen bulb (RH picture) headlights

Škoda designers have dealt with the widely-discussed problem of glaring light by using state-of-the-art reflector systems with intelligent light reach control. In this way, dispersed light and potential glaring have been minimised and the "feeling of being glared" that drivers sometimes talk about is more about the driver's natural reaction to a different colour of light emitted by the on-coming vehicle that automatically captures the driver's attention.



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Modern engines with good elasticity are enough responsive to guarantee sufficient vehicle dynamics that is necessary e.g., for safe overtaking.

ABS, brake assistant, EBV and ASR are part of basic equipment packages, ESP is an optional item; these systems contribute significantly to vehicle control, e.g., on a wet road, especially in emergency situations. They are an invaluable aid to the driver.

Excellent all-direction visibility from the vehicle is necessary for safe driving and is ensured by means of large glass surfaces, efficient Aero windscreen wipers that can be controlled by a rain sensor for greater ease of control and less distraction on the driver's part, heated external rear view mirrors ensuring good vision also in cold or rainy weather, as well as automatic dimming of the internal rear view mirror, a feature that is also available for external rear view mirrors and which reduces the intensity of glaring from vehicles behind.

Driver's comfort is important in terms of concentration on driving. Items supporting drivers' comfort include ergonomic arrangement of the dashboard elements and all controls, height- and length-adjustable steering wheel, height-adjustable seat enabling optimum sitting position when driving, "Climatic" or "Climatronic" air conditioning ensuring optimum thermal comfort inside the vehicle.

Child locks in the rear doors block the doors from the inside to ensure sufficient safety for children. Other child safety items include the possibility of locking the rear window controls and anti-trap systems in electrically controlled windows and sunroofs.

Text: Martin Šidlák; Foto: ARCHIV

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