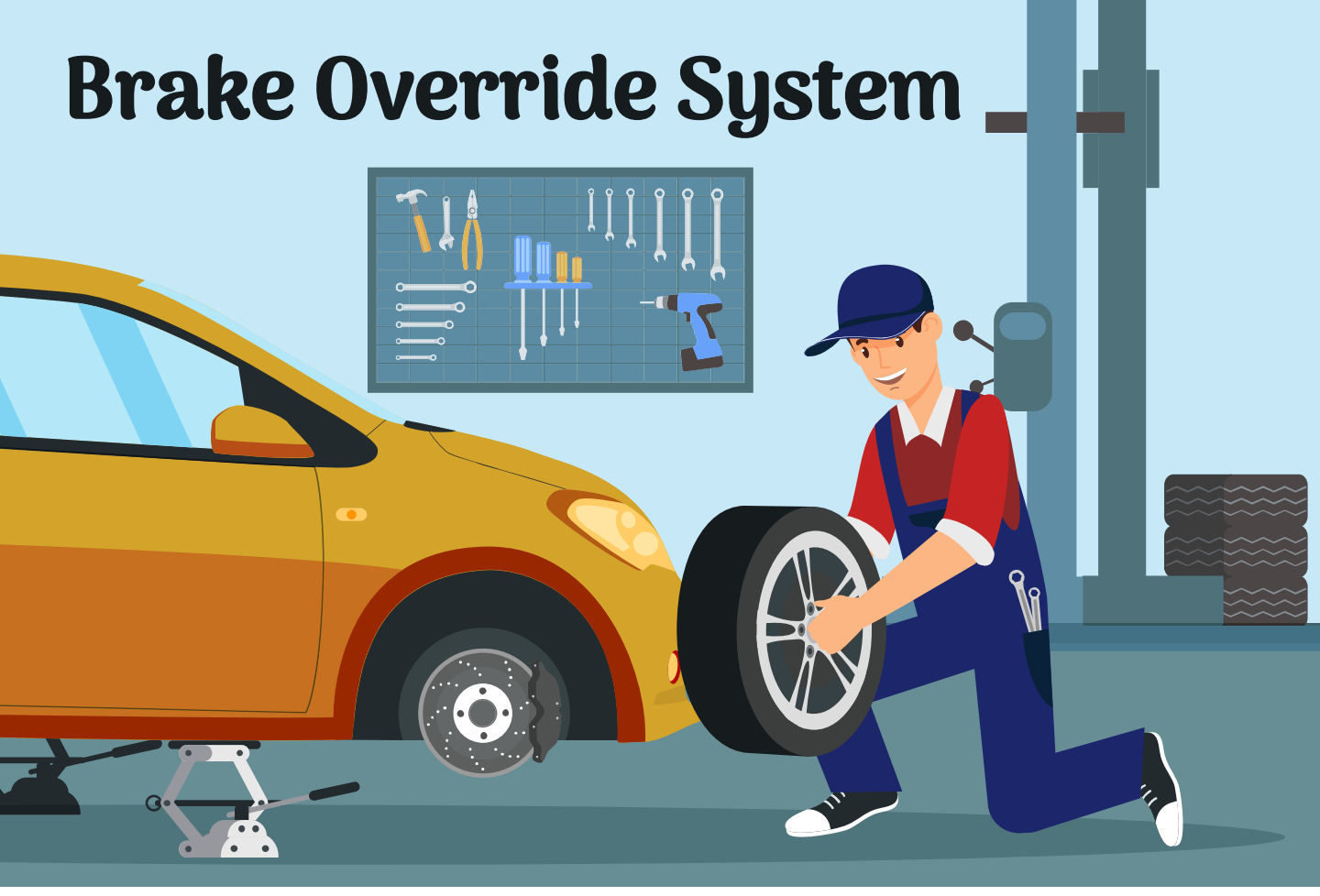
Brake Override System



Brake override is a fail proof safety feature, designed to work when a vehicle receives mixed signals of gas and brake pedal thus overwriting human commands with technological advanced sensors

Brake Override System

- Brake override is an active vehicle safety feature designed to work as a failsafe measure in the event a vehicle receives mixed signals (i.e. the gas and the brake are pushed down simultaneously) or an electrical malfunction causes the vehicle to continue accelerating in spite of applying brakes
- The brake pedal is enhanced with smart technology that detects abnormal activity

Benefits

- Increased safety by reducing the chances of a high-speed crash in case of human or electrical failure
- Decrease in fatalities, thereby, making the roads safer for driving
- Reduce automobile related expenses by reducing risk of a collision

Trends

Brake override system will be the key feature of autonomous vehicle trend and future cars will be capable of completely disregarding human input

As more and more models use integrated electronic systems (drive-by-wire) rather than mechanical accelerators, it's likely that more models will come with advanced safety systems like brake override

Drivers

Growth in safety concern & government's regulations pertaining to vehicle safety is expected to boost the market

Increase in demand of autonomous and premium vehicles is anticipated to drive the market

Challenges

The system might affect the costs of the automobiles; manufacturers believe it to be an economic challenge

Challenges in software design to achieve fault tolerant behavior due to redundancies required at various levels

All major automobile manufacturers are adopting the Brake Override system

Major players and their key developments

BMW was the first company to try out this technology in 1980s, and every BMW car built since 2001 has a brake override

Chrysler followed suit in 2003 and now most cars are built with brake override systems

Mitsubishi Motors All Mitsubishi's vehicle models since 2012 are equipped with the brake override system as a standard equipment

Nissan has been using brake override technology since 2002, in which the car will automatically brake if both the brake and accelerator are pressed at a time

Honda calls the system as Brake/Throttle Override and from 2012, the system is active on all Honda and Acura vehicles

Mercedes-Benz introduced 'smart pedal technology / brake override system' in its vehicles as early as 2002 and is now seen in all Mercedes-Benz models

Hyundai calls the system as brake-pedal-throttle override capability and is standard in all Hyundai models post 2012

Toyota began incorporating brake override in early 2010, and its 'smart stop technology' was seen in all Toyota, Lexus and Scion vehicles from 2010

KEY INSIGHTS

- Adoption of brake override system by major automobiles manufacturers has increased in the past few years
- Mandatory installation of brake override system has also been suggested by prominent public figures and research organizations such as National Highway Traffic Safety Administration, thus making it as one of the key features within the automotive space
- With an increase in demand for autonomous vehicles and stringent government road safety measures, the demand for brake override systems is anticipated to increase in the coming years

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