Central locking

A central locking system enables all doors and hatches on a passenger car to be centrally locked and unlocked.

Function

The central locking system enables all doors, tailgates and fuel-tank flaps to be centrally locked and unlocked. In the process, the simultaneous locking and unlocking is either actuated via one of the locks or by remote control.

A transmitter is incorporated into the car key which sends a radio signal to a control unit when the vehicle is locked and unlocked. In turn, this actuates the vehicle doors. The signal is encoded for security reasons. Doing so is intended to prevent unauthorised persons from receiving the signal and gaining access to the vehicle. On many modern passenger cars, the key merely needs to be carried upon one’s person for the doors to be opened: the doors then open independently when the handle is touched. This variant is known as “Keyless Go”.

Furthermore, the central locking system can be operated from within the vehicle by actuating a separate switch, by removing the key or by opening the driver-side door. In addition, the doors are automatically unlocked if the crash sensors detect that an accident has occurred.

The locking mechanism of a vehicle is incorporated into the doors themselves. It contains a latch and an electric motor which is responsible for the central locking mechanism (actuator element). The latch opens or closes the doors, whereas the door lock locks or unlocks the vehicle. Today, all door latches are powered by electric drives.

Nowadays, many modern passenger cars are locked automatically when a given speed is exceeded. In combination with a remote control system, a lock is now only present in the driver-side door of many newer vehicles for reasons of cost.

Safety

Modern locking systems help to increase both the security and safety of a vehicle. Where security is concerned, they provide protection against theft and, in conjunction with an alarm system, act as a deterrent. In terms of road safety, they make a contribution through the integrated actuation of lighting elements when the doors are released. This may be the case when the doors are opened, for example.

Images

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