



# **SNS COLLEGE OF TECHNOLOGY**

**Coimbatore-35**

**An Autonomous Institution**

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



## ***DEPARTMENT OF MECHATRONICS ENGINEERING***

### **19MCE402 – AUTOTRONICS**

**Topic: Centralized Door Locking System**



# Centralized Door Locking System



A centralized door locking system, commonly found in modern vehicles, refers to a security feature that enables the simultaneous locking and unlocking of all doors using a single control point.

## 1. Centralized Control Unit:

- The system is controlled by a centralized unit often integrated into the vehicle's key fob, a dedicated control panel on the dashboard, or a smartphone app in more advanced systems.

## 2. Electronic Actuators:

- Each door is equipped with an electronic actuator that can be controlled by the central unit. The actuator is responsible for physically locking or unlocking the door.

## 3. Locking/Unlocking Signals:

- When the driver activates the lock or unlock command through the key fob, control panel, or smartphone app, a signal is sent to the centralized control unit.



# Centralized Door Locking System



## 4. Communication with Door Actuators:

- The centralized control unit then communicates with each door's electronic actuator individually, sending the appropriate command based on whether the driver is locking or unlocking the doors.

## 5. Simultaneous Operation:

- The electronic actuators receive the command simultaneously, resulting in all doors locking or unlocking at once. This feature enhances convenience and security, especially when entering or exiting the vehicle.



# Centralized Door Locking System



## 1.Indicator Feedback:

- Many centralized door locking systems provide visual or audible feedback to confirm that the doors have been successfully locked or unlocked. This feedback can include flashing lights, horn honks, or a display on the key fob.

## 2.Safety Features:

- Centralized door locking systems often come with safety features, such as preventing the doors from being unlocked while the vehicle is in motion or automatically re-locking the doors if they are not opened within a certain timeframe.

## 3.Integration with Other Systems:

- In modern vehicles, centralized door locking systems may be integrated with other security and convenience features. For example, they can be linked to anti-theft systems, immobilizers, or keyless entry systems.



# Centralized Door Locking System



## 4. Customization Options:

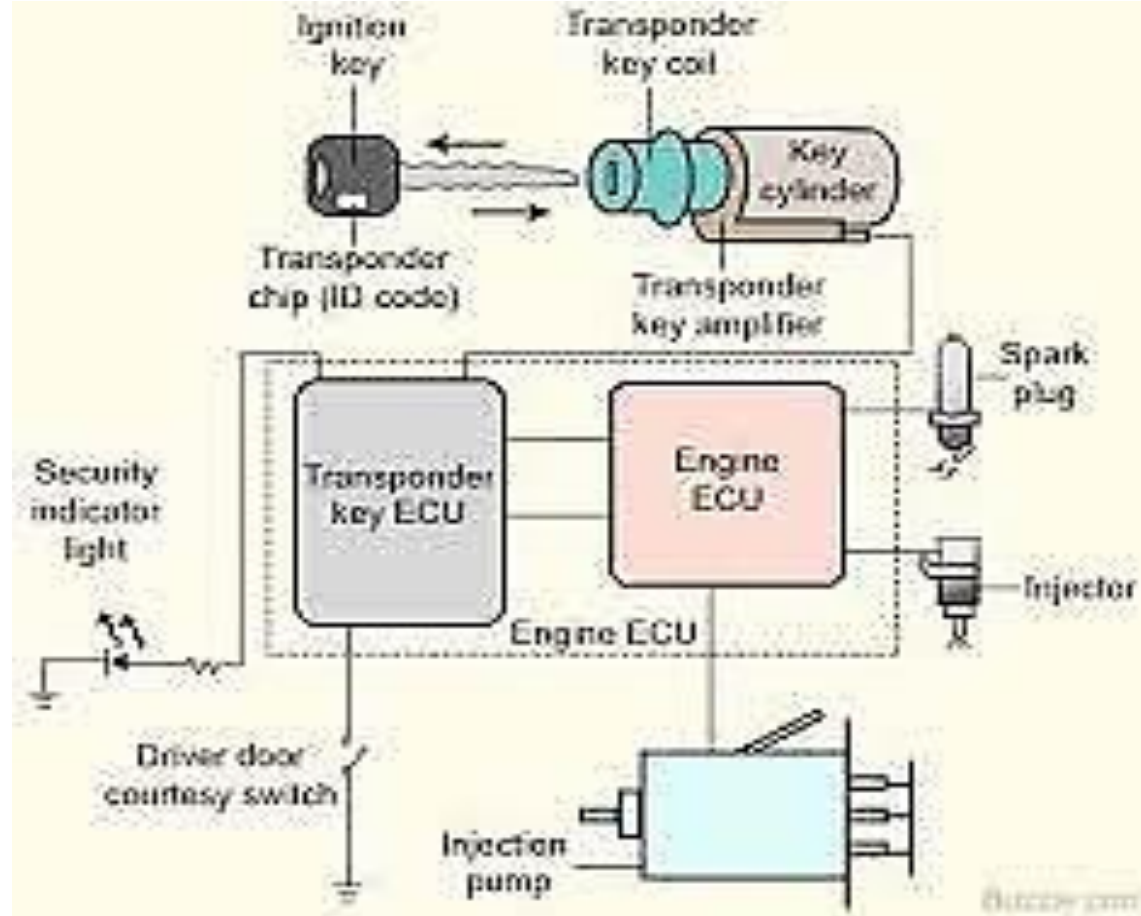
- Some vehicles allow drivers to customize their centralized door locking preferences, such as choosing whether all doors unlock with one press or only the driver's door unlocks initially.

## 5. Remote Operation:

- In addition to physical controls within the vehicle, many centralized door locking systems allow remote operation through key fobs or smartphone apps. This enables users to lock or unlock their vehicle from a distance.



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*Thank You*