

TESLA

Transmission - How Does It Work?

Unique Transmission Design

Teslas have a unique single-speed fixed gear transmission, unlike traditional multi-gear systems.

Smooth Acceleration Mechanism

Tesla's transmission system eliminates the need for multiple gears, resulting in smooth acceleration without gear shifting.

Advanced Cybertruck Configuration

Tesla Cybertruck models have a higher overall final drive ratio of 15.02:1 for both front and rear motors.

Simplified Drivetrain Architecture

The single-speed transmission in Teslas simplifies the drivetrain, reducing complexity and the number of parts compared to traditional engines.

Instant Torque Optimization

The transmission in Teslas is designed to work with electric motors, which provide instant torque across a wide speed range.

Precise Motor Ratio

The overall final drive ratio for Tesla Model X is 7.56:1 for the front motor and 9.04:1 for the rear motor.

Innovative Reverse Functionality

Tesla's transmission system includes a reverse gear, which is achieved by reversing the direction of the motor, typically limited to 24 km/h.

Consistent Engineering Approach

Tesla's transmission design has remained largely unchanged since its introduction, continuing to enhance the driving experience by eliminating the need for manual gear shifting.