

Steering Column - Overview

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The steering column system consists of the following components:

- Steering wheel
- SCCM
- Telescope and tilt motors (power steering column)
- Upper and lower steering shafts
- Steering column control switch (power steering column)

The steering column is the mechanical linkage between the steering wheel and the steering gear. The steering wheel is mounted to a shaft which passes through the center of the steering column to the steering gear. The steering column shaft utilizes non-servicable U-joint type couplings.

Vehicles with the manual tilt/telescope steering column are controlled by a mechanical lever on the underside of the steering column to lock and unlock the steering column. When the lever is pulled down, the steering column can be adjusted up or down and in or out to the desired position. While holding the steering wheel in the desired position, pulling the lever up to its original position locks the steering column.

Vehicles with the power tilt/telescope steering column are controlled by operating the steering column control switch, using the steering column tilt/telescope motors to achieve the desired steering column position. The steering column can be adjusted up or down and in or out to the desired position. The power tilt/telescope steering column is also part of the driver memory feature, positioning the seat, column and mirrors to programmed positions.

Vehicles with adaptive steering have a Steering Effort Control Module (SECM) that is contained in the steering wheel assembly. The SECM changes the steering ratio based on vehicle speed and the direction of steering wheel rotation. At low vehicle speeds, the SECM activates the adaptive steering motor to add clockwise or counterclockwise rotations to the steering shaft, which enables the driver to control the direction of the vehicle with fewer rotations of the steering wheel.

Refer to: Power Steering (211-02 Power Steering, Diagnosis and Testing).
