

System Description

Major Components

The Electrical Power Steering system is composed of the following major components:

- A steering gearbox that converts rotary operation of the steering wheel into transverse operation via a rack and pinion mechanism. Steering sensors and an actuating motor are incorporated.
- A control unit that computes the optimum amount of power assistance, taking into account steering torque, steering speed, and vehicle speed. Self-diagnosis functions are included.
- A power unit that drives the motor according to the signals from the EPS control unit. A current sensor is built in to give feedback information to the EPS control unit. Two relays shut off the power if a problem in the system occurs.
- The countershaft speed sensor on the automatic transmission or the differential speed sensor on the manual transmission sends a vehicle speed signal to the EPS control unit. Also the speedometer sends a vehicle speed signal to the EPS control unit. The two signals are used as a double-check.

