

Chapter 15

NAME _____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

1. What are the types of electric power steering systems?

2. What are the advantages of using an electric power steering system?

3. How does an electrohydraulic power steering work?

4. What type of motor is used in electric power steering systems?

5. What sensors are needed for EPS systems?

Answer Key

Testname: EV1SHORT15

1. The two basic types of EPS systems are rack mounted and column mounted.

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2. • Allows the vehicle manufacturer to save vehicle weight and complexity because there is no need for all of the hydraulic lines and engine-driven pump.
- Improved cold weather starting because of reduced engine load without the drag of a power steering pump.
 - Simple two-wire connection in many cases, making vehicle assembly and vehicle service easier

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3. This system uses an electric motor to drive a hydraulic pump. The electrohydraulic power steering (EHPS) module controls the power steering motor, which has the function of providing hydraulic power to the brake booster and the steering gear.

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4. Some EPS motors operate on 12 volts whereas others operate from 42 volts and use an electronic controller and a brushless DC motor. Some use a 12-volt brushless DC reversible motor with a 65-ampere rating.

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5. The PSCM uses the steering shaft torque sensor as a main input for determining steering direction and the amount of assist needed. The PSCM uses the steering position sensor (SPS) to determine the steering system on-center position.

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