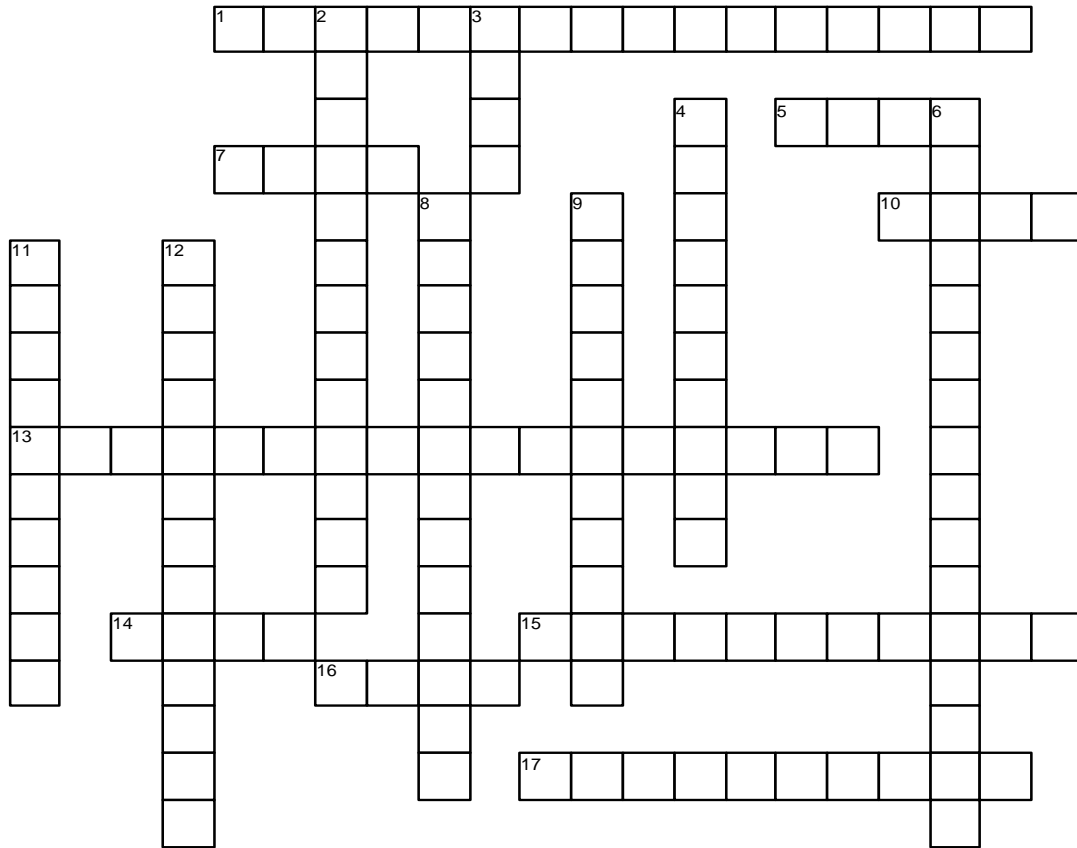


# Electric Power Steering Systems

## Chapter 32



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### ACROSS

- 1 The \_\_\_\_\_ power steering module controls the power steering motor, which has the function of providing hydraulic power to the brake booster and steering gear.
- 5 \_-\_\_ (abbrev) has sensors and the assist motor located inside the vehicle so they are not exposed to heat and outside elements as is the rack-mounted system.
- 7 The \_\_\_\_ (abbrev) and power steering motor are serviced as an assembly and are serviced separately from the steering column assembly.
- 10 A \_-\_\_ (abbrev) is not directly mounted on the column itself. This system has the assist motor connected to the pinion shaft of the rack-and-pinion steering gear.
- 13 The EPS is controlled by the EPS \_\_\_\_\_ unit (ECU), which calculates the amount of needed assist based on the input

from the steering torque sensor.

- 14 A design that has the assist motor surrounding the rack is called a \_-\_\_ system (abbreviated).
- 15 Several vehicle manufacturers offer a \_-\_\_ feature that uses the electric power steering to steer the vehicle.
- 16 Another name for electric power steering systems is \_\_\_\_ (abbrev).
- 17 If the power steering system is exposed to excessive amounts of static steering conditions, the PSCM will go into a \_\_\_\_\_ mode to avoid thermal damage due to overheating of the power components.

### DOWN

- 2 Many of today's vehicles use \_\_\_\_\_ steering systems.
- 3 Another name for a rack mounted system is \_-\_\_ system (abbrev).
- 4 Most electric power steering \_\_\_\_\_ trouble codes will be "C" codes for chassis-related faults

or "U" codes for data communication faults.

- 6 The PSCM uses the \_\_\_\_\_ sensor to determine the steering system on-center position.
- 8 The PSCM uses the \_\_\_\_\_ torque sensor as a main input for determining steering direction and the amount of assist needed.
- 9 The \_\_\_\_-\_\_\_\_\_ system has the assist motor attached to the rack.
- 11 The \_\_\_\_\_ position sensor outputs an analog signal, referenced to 5 volts, that increases or decreases with brake pedal depression.
- 12 An advantage to EPS systems is that they allow the vehicle manufacturer to save \_\_\_\_\_ and complexity because there is no need for all of the hydraulic lines and engine-driven pump.