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| **Model Year:** 2013 | **Model:** RAV4 | **Prod Date Range:** [12/2012 - ] |
| **Title:** POWER ASSIST SYSTEMS: POWER STEERING SYSTEM: GENERAL; 2013 MY RAV4 [12/2012 - ] | | |

# GENERAL

## 1. OUTLINE

(a) A rack and pinion type steering gear assembly is used.

(b) A vehicle speed sensing type Electric Power Steering (EPS) system is used.

(c) The EPS system uses a power steering motor, a reduction mechanism and a power steering torque sensor that are built into the steering column assembly to generate assist torque, in order to assist the driver's steering effort.

(d) The EPS system performs control in cooperation with the brake control system. The power steering ECU assembly controls the assist torque for the power steering motor based on the assist torque request sent from the skid control ECU. For details, see the Brake Control/Dynamic Control Systems section.

## 2. MAIN FEATURES

| FEATURE | OUTLINE |
|---|---|
| Fuel Efficiency | The conventional hydraulic power steering system ordinarily operates the oil pressure pump using the driving force of the engine. However, the EPS system activates the power steering motor only when the driver turns the steering wheel. As a result, no energy is consumed when the vehicle is traveling in a straight line, enhancing fuel economy. |
| Simple and Compact Structure | A power steering motor, a power steering ECU, a reduction mechanism and a power steering torque sensor that are contained in the EPS system are built into the steering column assembly. This achieves more simple structure. |
| Discontinuance of Oil Pressure System | Unlike the conventional hydraulic power steering system, the EPS system excels in serviceability because it does not require pipes, a vane pump, a pulley and power steering fluid. |
| Lightweight | In accordance with the discontinuance of the piping system and the reduction in size of the system overall, weight reduction has been achieved. |
| Steering Feeling | Assist characteristics have been optimized based on the signals from the speed sensor to achieve a steering torque feeling that is light at low speeds and effective at high speeds. |