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DESCRIPTION

EPS (Electric power steering, Column assist type) system is an engine operation independent steering system that uses an electric motor to assist the steering force.

EPS control module controls the motor operation based on input signals from torque sensor and steering angle sensor via CAN (Controller Area Network), resulting in a more precise and timely control of steering assist than conventional engine-driven hydraulic systems.

Components (Steering Angle Sensor, Torque Sensor, Fail-safe relay, etc.) of the EPS system are located inside the steering column. EPS unit assembly, steering column, and EPS unit assembly must not be disassembled for inspection. They must be replaced if necessary.

Note With Regard to Diagnosis

Trouble factor	Check item	Trouble symptom	Explanation	Note
Drop, impact, and overload	Motor	Abnormal noise	- Visible or invisible damage may occur. The steering wheel may pull to one side when dropped parts are used. Precise parts of motor / ECU are sensitive to vibration and impact. Overload may cause unexpected damage.	- Do not use the impacted EPS. - Do not overload each part.
	ECU	- Circuit damage - Wrong welding point - Broken PCB - Damaged precise parts		
	Torque sensor	Insufficient steering effort	Overload to INPUT shaft can cause malfunction of the torque sensor	- Do not impact the connecting parts (when inserting and torquing). - Use the specified tool to remove the steering wheel. (Do not hammer on it.) - Do not use the impacted EPS.
	Shaft	Insufficient steering effort (Uneven between LH and RH)		Do not use impacted EPS
Pull/Dent	Harness	- Malfunctioning - Power operation impossible - Malfunction of EPS	Disconnection between harness connecting portion and harness	Do not overload the harness
Abnormal storage temperature	Motor/ECU	Abnormal steering effort by improper operation of the motor/ECU	- Waterproof at normal condition - Even a slight moisture can cause malfunction in precise parts of the motor / ECU	- Maintain normal storage temperature and humidity. - Avoid submerging in water.

1. Do not impact the electronic parts. If they are dropped or impacted, replace them with new ones.
2. Avoid heat and moisture to the electronic parts.
3. Do not contact the connect terminal to avoid deformation and static electricity.
4. Do not impact the motor and torque sensor parts. If they are dropped or impacted, replace them with new ones.
5. The connector should be disconnected or connected with ignition OFF.

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