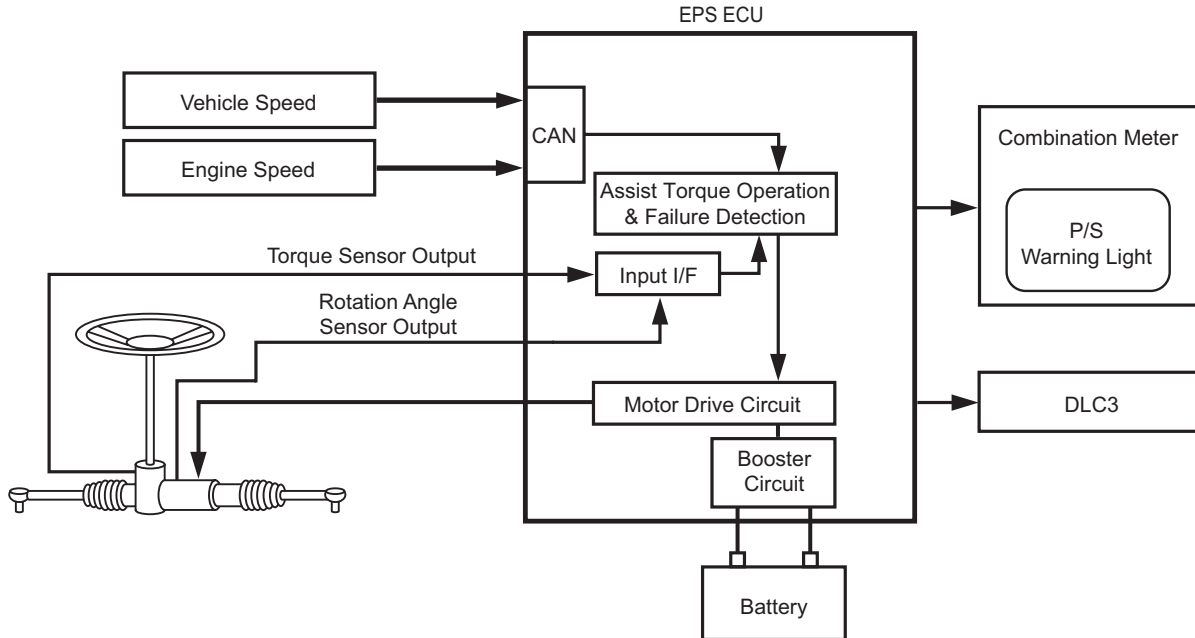


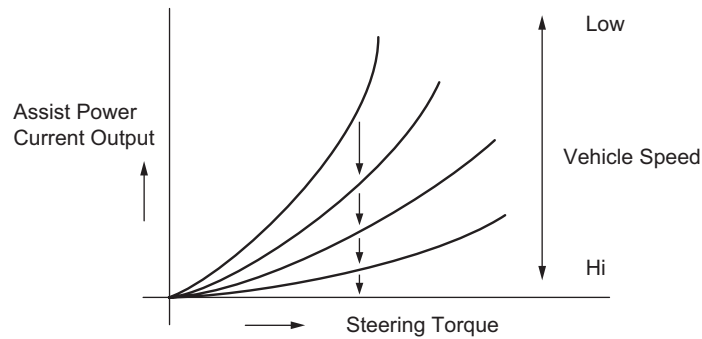
EPS ECU

- Based on the steering torque and vehicle speed, this ECU calculates the assist current, and drives the motor based on the data obtained from the rotational angle sensor.
- It contains a failsafe function and a diagnostic function in case of a failure in the system.



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- The EPS ECU receives signals from various sensors, judges the current vehicle condition, and determines the relationship between the steering torque and the assist power current output.



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Assist Control function

- The power assist control consists of the following functions

List of Power Steering Control

Item	Function
Basic Control	Calculates the assist current based on the steering torque and vehicle speed, and controls the drive circuit based on the data obtained from the rotational angle sensor, in order to drive the motor with a specified current.
Inertia Correction Control	Reduces the drag feel of the motor at the start of a steering movement.
Return Control	Ensures the return characteristics during a steering operation.
Damper Control	Ensures the convergence of steering during high speed driving.
Boost Control	Boosts the battery voltage to create a voltage that is necessary for driving the motor.
System Overheat Protection Control	Uses the motor and controller under optimal conditions.

Fail Safe

- If a failure occurs in the system, the failsafe function operates to illuminate the P/S warning light in the combination meter. Then, it gradually cuts off or reduces the output current to allow the system to operate in the manual steering mode or maintain the output current in the limited state.

List of Fail Safe

Item	Fail Safe Function
Torque Sensor System Failure b/ Prohibits assist.	Assist is prohibited.
Motor Rotational Angle Sensor System Failure	Assist is prohibited.
Motor Overheat	Limits the assist force.
Motor Short (including drive system failure)	Assist is prohibited.
Motor overcurrent	Assist is prohibited.
Electric Power Steering ECU Overheat	Limits the assist force.
Electric Power Steering ECU Internal Temperature Sensor Failure	Limits the assist force.
Electric Power Steering ECU System Failure (including boost circuit system failure)	Assist is prohibited.
Vehicle Speed System Failure	Limits the assist force.
Power Supply Voltage Failure	Interrupts assist (reverts to the normal assist after the voltage is restored)

Diagnosis Function

- A diagnostic function is provided to facilitate the inspection of the system. The results of the diagnosis can be obtained by using a service tool to access the output DTCs (Diagnostic Trouble Codes).