

## ELECTRIC POWER STEERING (EPS) MOTOR

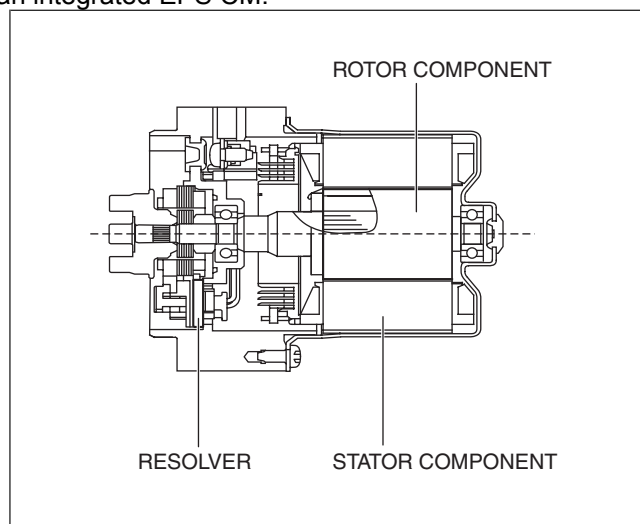
id061300245600

### Purpose, Function

- The EPS motor is driven by the control current from the EPS CM (control module) and generates assist torque to manual steering mechanism.

### Construction

- The EPS motor is installed to the steering column with an integrated EPS CM.
- The EPS motor is a brushless motor which consists of a three-phase star-connected stator, a permanent magnet rotor, and resolver sensor.



ac5wzn00000270

### Operation

- Current flows from the EPS CM to the stator to rotate the motor axis which is integrated with the rotor.
- A resolver sensor for detecting rotation angle is built into the EPS motor and outputs a motor rotation angle signal to the EPS CM.
- The EPS CM switches the current flowing to each stator based on the rotation angle signal from the resolver sensor.

### Fail-safe

| DTC No.  | Fail-safe function  |
|----------|---|
| C200D:1C | <ul style="list-style-type: none"><li>Control disabled</li><li>Power steering malfunction indicator light: Illuminated</li></ul>  |
| C200D:64 |   |
| U2011:19 |   |
| U2011:1C |   |
| U2011:62 | <ul style="list-style-type: none"><li>Phase 1 open circuit malfunction is detected in the EPS motor<ul style="list-style-type: none"><li>Control is maintained in the backup control</li></ul></li><li>Other malfunction detected in EPS motor internal circuit<ul style="list-style-type: none"><li>Control disabled</li></ul></li></ul> |
| U2011:72 |   |
| U2011:92 | <ul style="list-style-type: none"><li>Control disabled</li><li>Power steering malfunction indicator light: Illuminated</li></ul>  |