

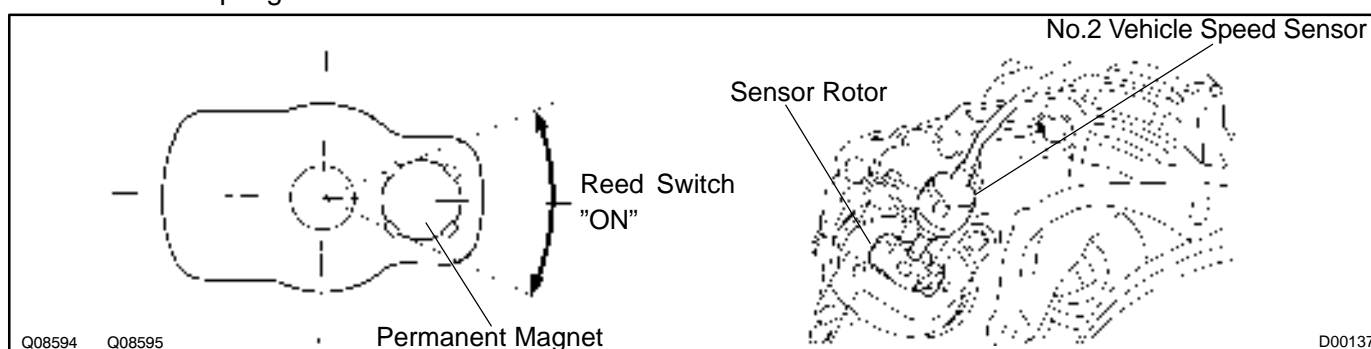
DTC	P1700	Speed Sensor No.2 Circuit Malfunction (No.2 Vehicle Speed Sensor)
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CIRCUIT DESCRIPTION

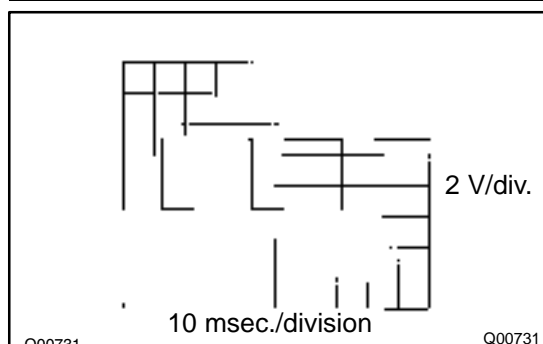
A rotor with built in permanent magnet is mounted on the output shaft. Every time the output shaft (and thus the rotor) makes one complete revolution, the permanent magnet activates the reed switch, which is built into the No.2 vehicle speed sensor, causing it to generate signal. This signal, which corresponds to the governor pressure in a conventional automatic transaxle, is sent to the ECM, which uses it in controlling the shift points and the operation of the lock-up clutch.

This sensor outputs one pulse for every one revolution of the output shaft.

If the No.2 vehicle speed sensor malfunctions, the ECM uses input signals from the No.1 vehicle speed sensor as a back-up signal.



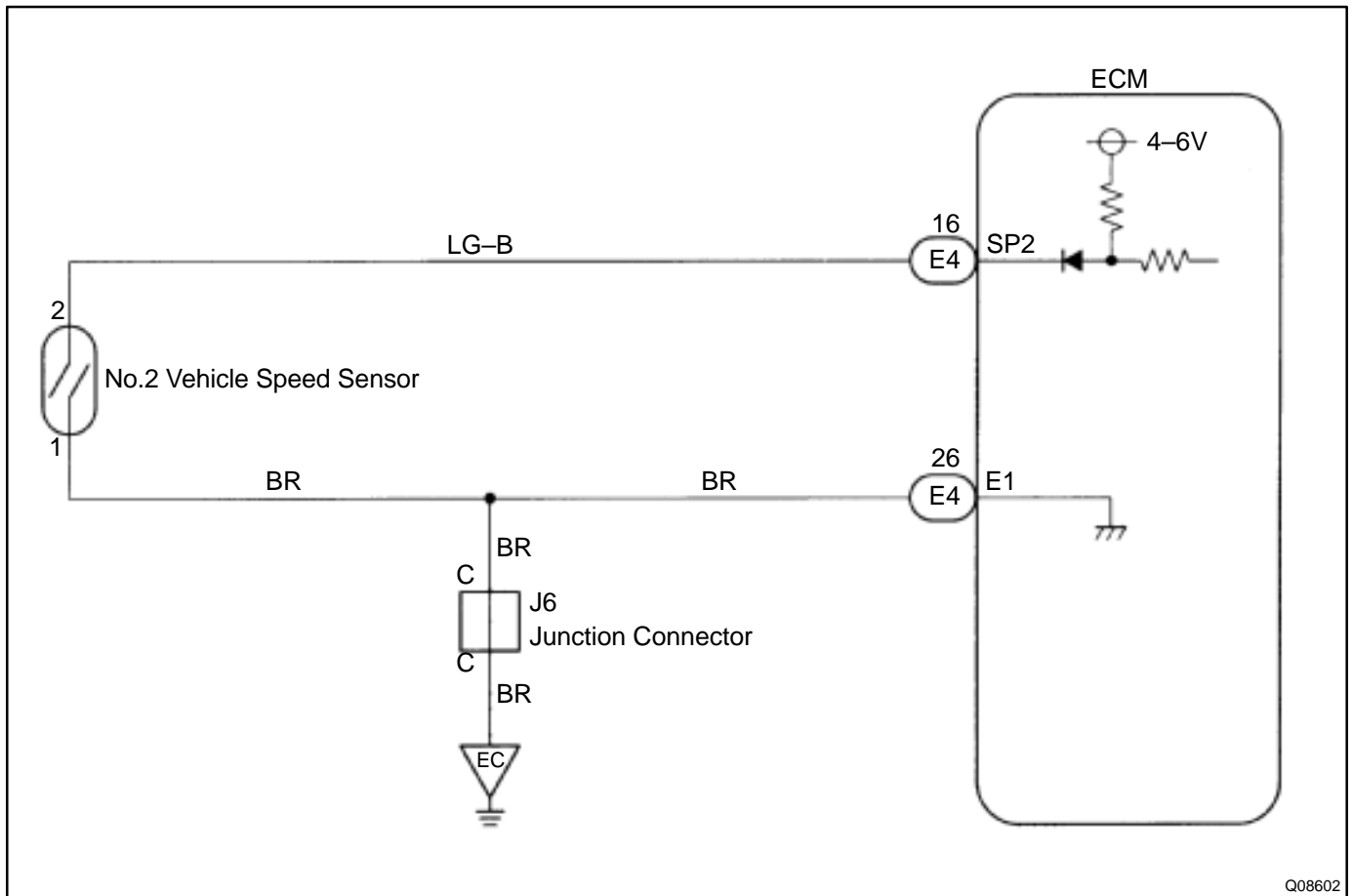
DTC No.	DTC Detecting Condition	Trouble Area
P1700	<p>All conditions below are detected 500 times or more continuously. (2 trip detection logic)</p> <p>(a) No No.2 vehicle speed sensor signal in 4 pulses of No.1 vehicle speed sensor signal.</p> <p>(b) Vehicle speed: 9 km/h (5.6 mph) or more for at least 4 sec.</p> <p>(c) Park/neutral position switch: OFF (Other than P or N position).</p>	<ul style="list-style-type: none"> • Open or short in No.2 vehicle speed sensor circuit • No.2 vehicle speed sensor • ECM



Reference:

- Waveform between terminals SP2 and E1 when vehicle speed is approx. 60 km/h (37 mph).

WIRING DIAGRAM



INSPECTION PROCEDURE

- | | |
|---|---|
| 1 | Check vehicle speed value or resistance between terminals SP2 and E1 of ECM. |
|---|---|

When using OBD II scan tool or TOYOTA hand-held tester:

PREPARATION:

- (a) Connect the OBD II scan tool or TOYOTA hand-held tester to the DLC3.
- (b) Start the engine and OBD II scan tool or TOYOTA hand-held tester main switch ON.

CHECK:

Drive the vehicle and read vehicle speed value.

OK:

Vehicle speed matches tester speed value.

When not using OBD II scan tool or TOYOTA hand-held tester:

PREPARATION:

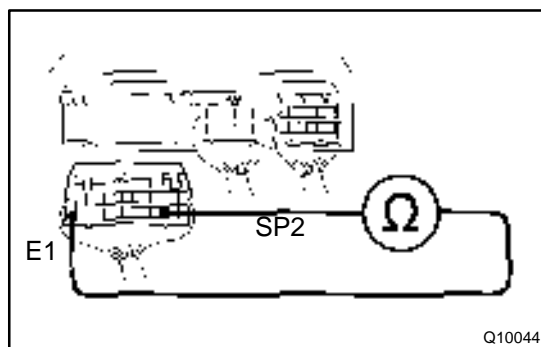
- (a) Disconnect the connector from ECM.
- (b) Shift the shift level to the N position.
- (c) Jack up one of the front wheels.

CHECK:

Check that there is continuity between terminals SP2 and E1 of ECM while slowly turning the jack-up wheel by hand.

OK:

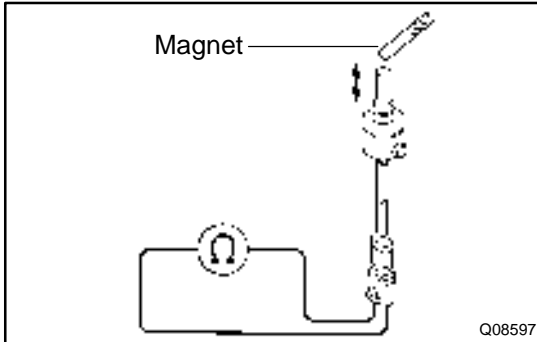
Resistance changes between: 0 Ω and ∞ Ω



OK

Check and replace ECM.

NG

2**Check No.2 vehicle speed sensor.****PREPARATION:**

Remove the No.2 vehicle speed sensor from transmission.

CHECK:

Check that there is continuity between terminals of No.2 vehicle speed sensor connector when a magnet is put close to it as shown.

OK:

Resistance changes between: 0 Ω and $\infty \Omega$

NG**Replace the No.2 vehicle speed sensor.****OK**

Check and repair harness and connector between ECM and No.2 vehicle speed sensor
(See page [IN-27](#))
Check and repair sensor rotor.