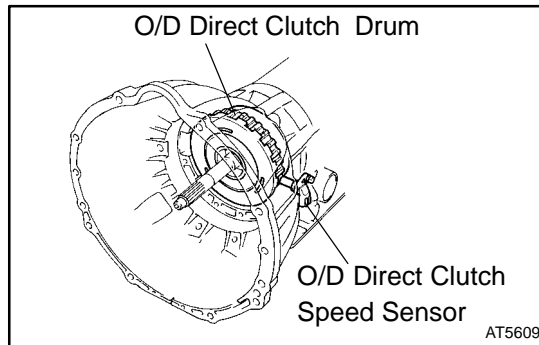


DTC	P0715	Input/Turbine Speed Sensor Circuit Malfunction (O/D Direct Clutch Speed Sensor)
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CIRCUIT DESCRIPTION



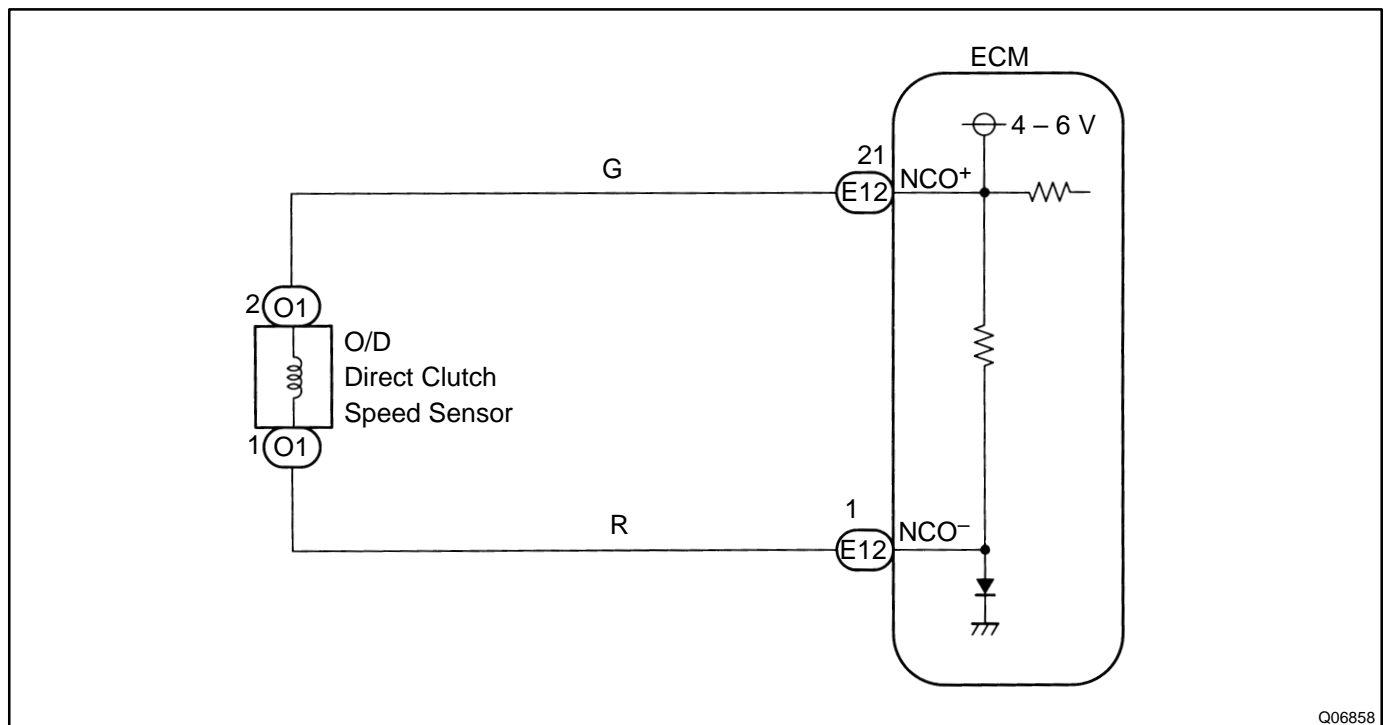
This sensor detects the rotation speed of the O/D input shaft from the rotation of the O/D direct clutch drum.

Its construction is the same as that of the No.2 vehicle speed sensor (See page [DI-384](#)).

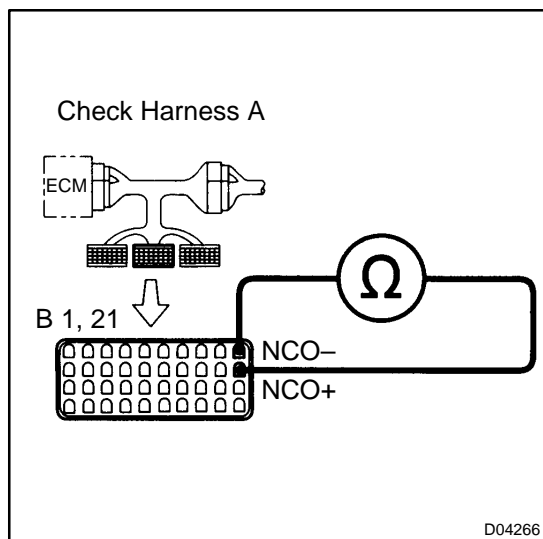
By comparing the O/D direct clutch speed signal and the vehicle speed sensor signal, the ECM detects the shift timing of the gears and appropriately controls the engine torque and hydraulic pressure in response to various conditions, thus performing smooth gear shift.

DTC No.	DTC Detecting Condition	Trouble Area
P0715	<p>All conditions below are detected 5 secs. or more (2 trip detection logic)</p> <p>(a) Gear change not being performed</p> <p>(b) Gear position: 1st, 2nd or 3rd</p> <p>(c) T/M input shaft rpm: 300 rpm or less</p> <p>(d) T/M output shaft rpm: 1,000 rpm or more</p> <p>(e) Park/neutral position switch: OFF</p> <p>(f) Shift solenoid valves No.1, No.2, SLU and vehicle speed sensor are normal operation</p>	<ul style="list-style-type: none"> • Open or short in O/D direct clutch speed sensor circuit • O/D direct clutch speed sensor • ECM

WIRING DIAGRAM



INSPECTION PROCEDURE

1 Check resistance between terminals NCO⁺ and NCO⁻ of ECM.**PREPARATION:**

- (a) Connect the check harness A to ECM.
- (b) Turn ignition switch ON.

NOTICE:

Do not connect the check harness A to ECM.

CHECK:

Check resistance between terminals NCO⁺ and NCO⁻ of check harness A connector.

OK:

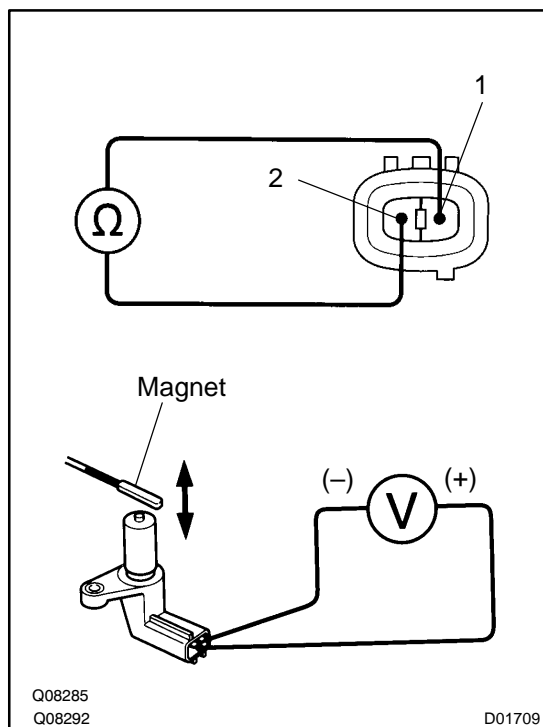
Resistance: 560 – 680 Ω

OK

Check and replace ECM.

NG

2 Check O/D direct clutch speed sensor.

**PREPARATION:**

Remove the O/D direct clutch speed sensor from transmission.

CHECK:

Measure resistance between terminals 1 and 2 of O/D direct clutch speed sensor.

OK:

Resistance: 560 – 680 Ω

Reference: Check the speed sensor function.

CHECK:

Check voltage between terminals 1 and 2 of the speed sensor when a magnet is put close to the front end of the speed sensor then kept away quickly.

OK:

Voltage is generated intermittently.

HINT:

The generated voltage is extremely low.

NG

Replace O/D direct clutch speed sensor.

A rectangular button with a black border and a black downward-pointing arrow at the bottom. The text "OK" is centered in the rectangle.

OK

Check and repair harness and connector between ECM and O/D direct clutch speed sensor (See page [IN-29](#)).