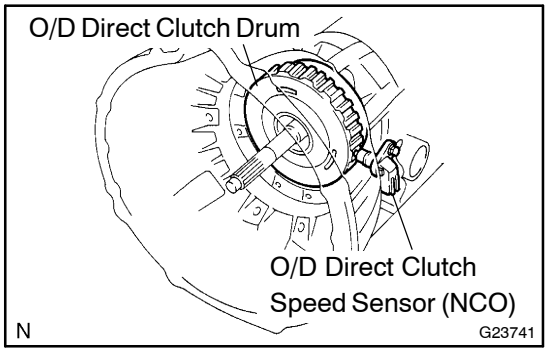
DTC	P0717/67	INPUT SPEED SENSOR CIRCUIT NO SIGNAL

CIRCUIT DESCRIPTION

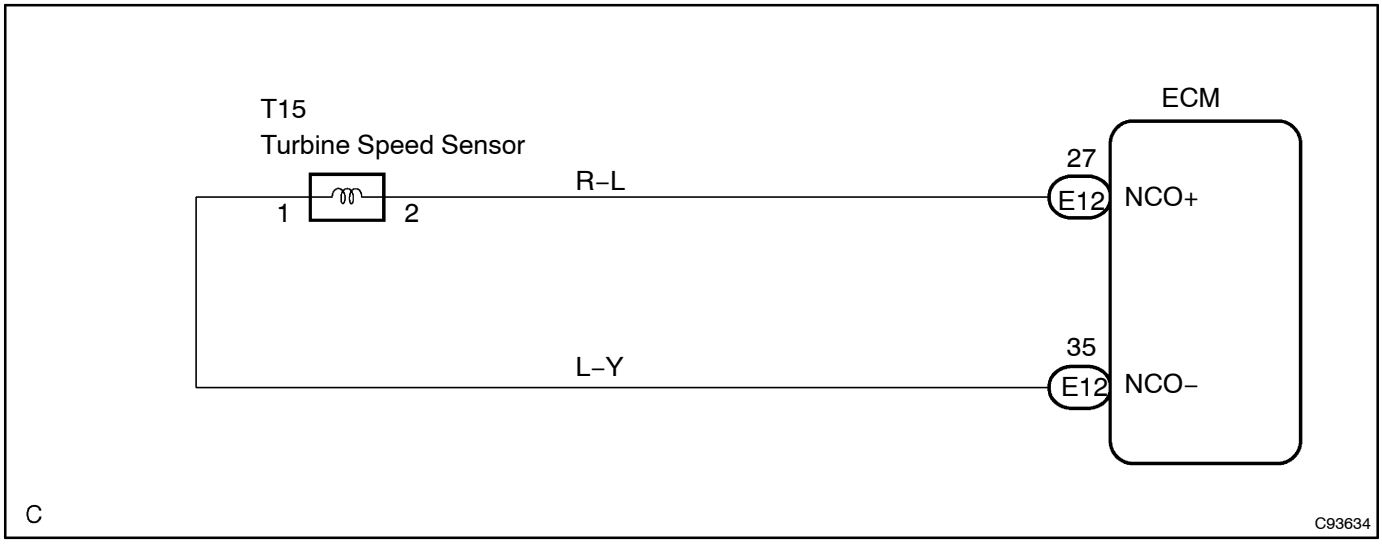


The O/D direct clutch speed sensor (NCO) detects the rotation speed of the O/D input shaft from the rotation of the O/D direct clutch drum. Its construction is the same as that of the No.2 vehicle speed sensor (SP2).

By comparing the O/D direct clutch speed signal and No.2 vehicle speed sensor (SP2) 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 doing smooth gear shift.

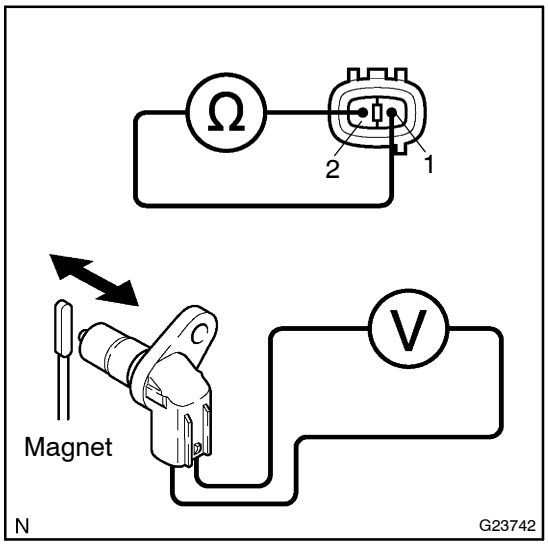
DTC No.	DTC Detection Condition	Trouble Area
P0717/67	All conditions below are detected for 5 secs. or more (1–trip detection logic) (a) Gear change not being performed (b) Gear position: 1st, 2nd, 3rd or O/D (c) T/M input shaft rpm: 300 rpm or less (d) T/M output shaft rpm: 1,000 rpm or more (e) Park/neutral position switch: OFF (f) Shift solenoid valves S1, S2, SL and vehicle speed sensor are in normal operation	• Open or short in O/D direct clutch speed sensor (NCO) circuit • O/D direct clutch speed sensor (NCO) • ECM

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT SPEED SENSOR (NCO)



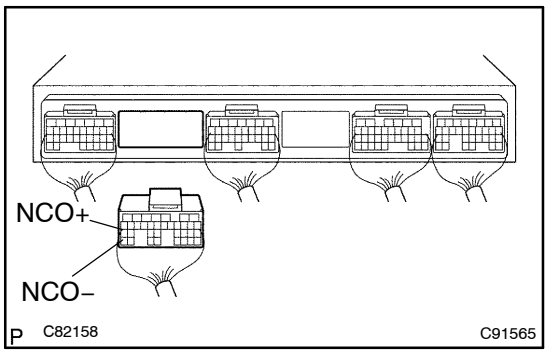
(a) Remove the speed sensor (NCO) from the transmission.
(b) Measure the resistance between terminals of speed sensor.
OK:
Resistance: 560 – 680 Ω at 20°C (68°F)
(c) Measure the voltage between the sensor terminals when a magnet is put close to the front end of the sensor then kept away quickly.
OK:
Sensor generates voltage intermittently

HINT:
The generated voltage is extremely low.

NG → **REPLACE SPEED SENSOR (NCO)**

OK

2 CHECK HARNESS AND CONNECTOR (SPEED SENSOR – ECM)



(a) Install the speed sensor (NCO).
(b) Disconnect the ECM connector.
(c) Measure the resistance between terminals NCO+ and NCO–.
OK:
Resistance: 560 – 680 Ω at 20°C (68°F)
(d) Check the continuity between the wire harness side connectors.
OK:
Standard (Check for short):

Symbols	Specified condition
NCO+ ⇔ Body ground	No continuity
NCO– ⇔ Body ground	

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (See page 01–35)**

OK

CHECK AND REPLACE ECM (See page 01–35)