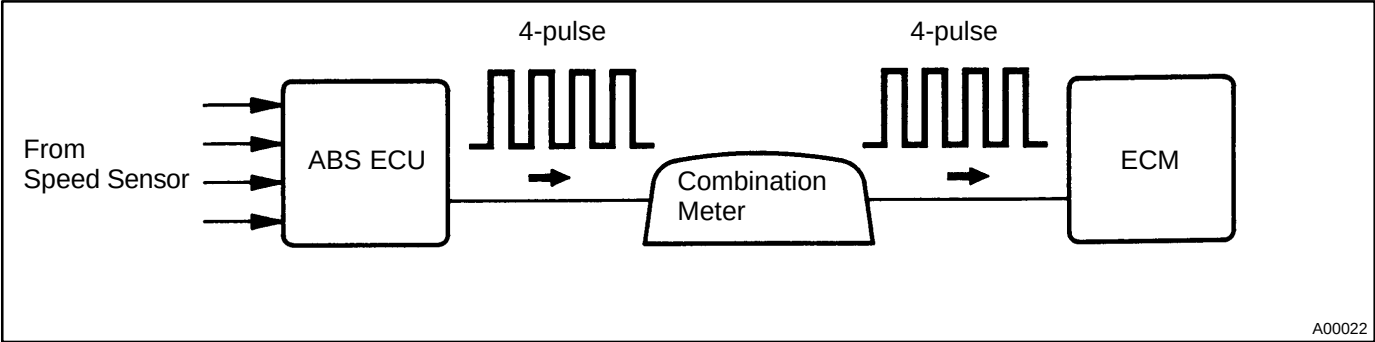


CIRCUIT INSPECTION

DTC	P0500	Vehicle Speed Sensor Malfunction
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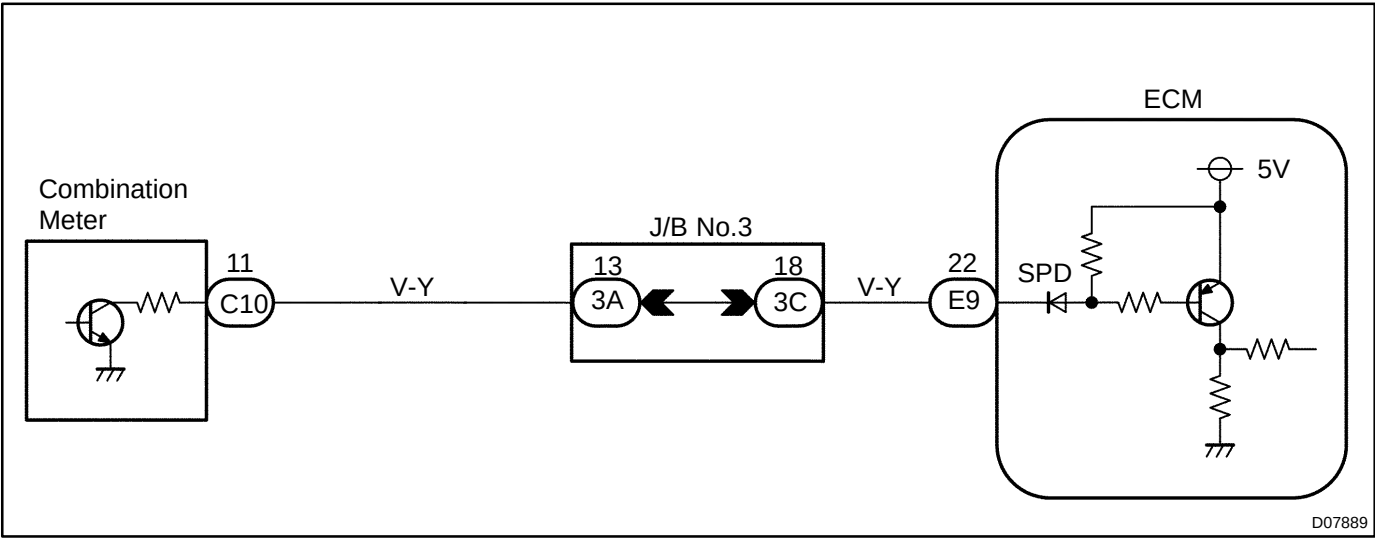
CIRCUIT DESCRIPTION

The speed sensor for ABS detects the wheel speed and sends the appropriate signals to the ABS ECU. The ECU converts these signals into a 4-pulse signal and outputs it to the combination meter. After this signal is converted into a more precise rectangular waveform by the waveform shaping circuit inside the combination meter, it is then transmitted to the ECM. The ECM determines the vehicle speed based on the frequency of these pulse signals.



DTC No.	DTC Detection Condition	Trouble Area
P0500	• No speed sensor signal to ECM under conditions (a) and (b): (2-trip detection logic) (a) Park/neutral position switch is OFF. (b) Vehicle is being driven. • Clutch or brake slips or gear is broken. (2-trip detection logic)	• Open or short in speed signal circuit • ABS speed sensor • Combination meter • ECM • ABS ECU • Automatic transaxle (clutch, brake or gear etc.)

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Read freeze frame data using TOYOTA hand-held tester or OBD II scan tool. Because freeze frame records the engine conditions when the malfunction is detected, when troubleshooting it is useful for determining whether the vehicle was running or stooped, the engine warmed up or not, the air-fuel ratio lean or rich, etc. at the time of the malfunction.

1 Check operation of speedometer.

CHECK:

Drive the vehicle and check if the operation of the speedometer in the combination meter is normal.

HINT:

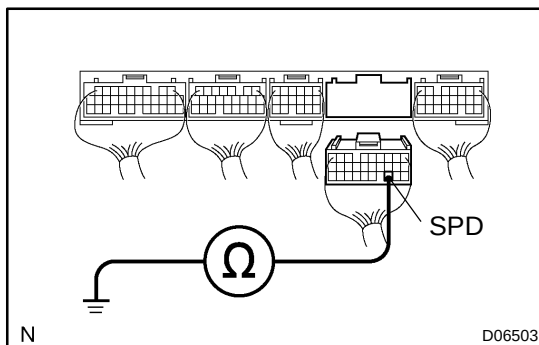
The vehicle speed sensor is operating normally if the speedometer display is normal.

NG

Check speedometer circuit.

OK

2 Check for short in harness and connector between terminal SPD of ECM and body ground.



PREPARATION:

- (a) Remove the glove compartment (See page [BO-101](#)).
- (b) Disconnect the connector of ECM.

CHECK:

Check continuity between terminal SPD of ECM and body ground.

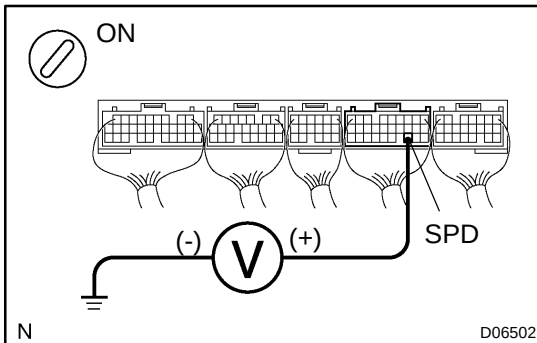
OK:

No continuity (1 MΩ or higher)

NG

Repair or replace harness or connector.

OK

3 Check voltage between terminal SPD of ECM connector and body ground.**PREPARATION:**

Turn the ignition switch ON.

CHECK:

Measure voltage between terminal SPD of the ECM connector and body ground.

OK:

Voltage: 9 - 14 V

NG

Check for open in harness and connector between junction connector (J15) and ECM (See page [IN-31](#)).

OK**4 Check for open in harness and connector between junction connector (J15) and combination meter (See page [IN-31](#)).****NG**

Repair or replace harness or connector.

OK**5 Check ECM (See page [IN-31](#)).****NG**

Replace ECM.

OK

Check repair transaxle (clutch, brake or gear etc.).