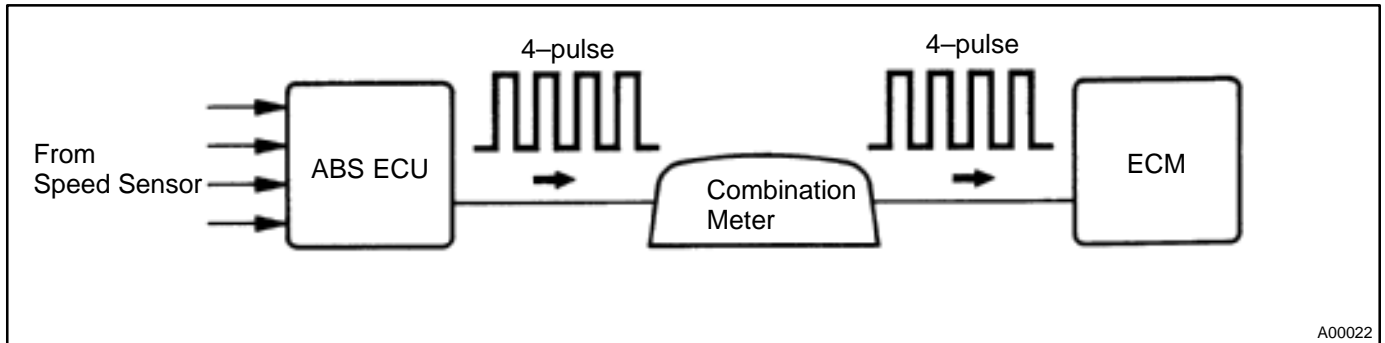


DTC	P0500	Vehicle Speed Sensor Malfunction
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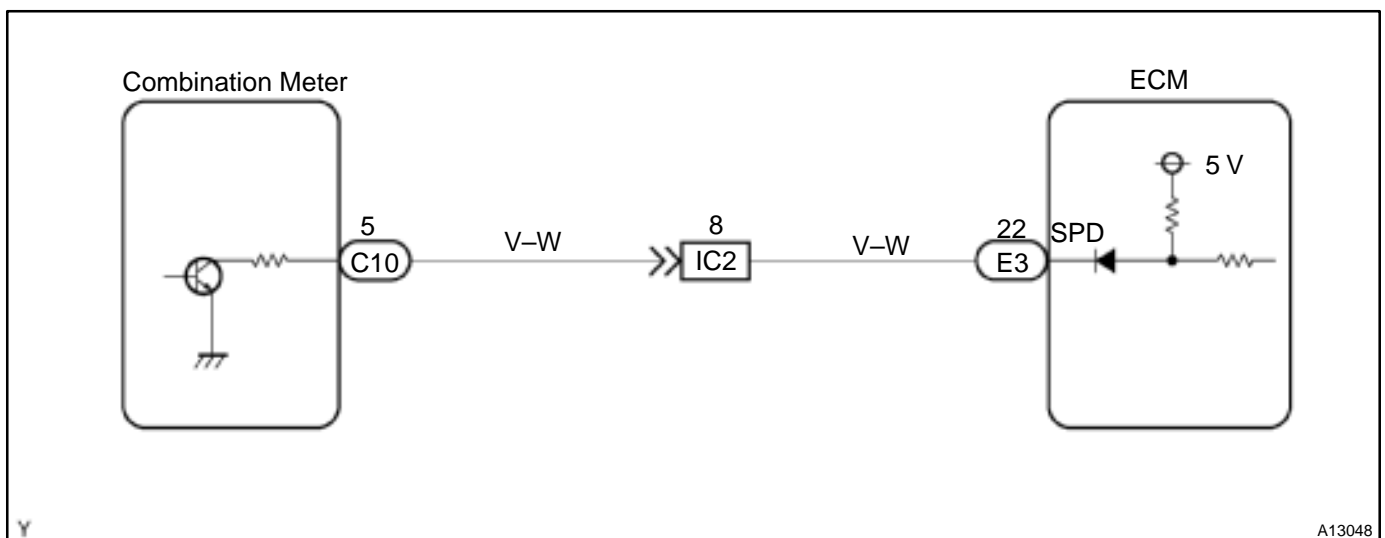
CIRCUIT DESCRIPTION

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 vehicle speed sensor signal to ECM under following condition: (2 trip detection logic) (a) Vehicle is being driven (b) Clutch or brake slips or gear is broken (2-trip detection logic)	<ul style="list-style-type: none"> • Combination meter • Open or short in vehicle speed sensor circuit • Vehicle speed sensor • ABS ECU • ECM

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 stopped, the engine was warmed up or not, the air-fuel ratio was 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:

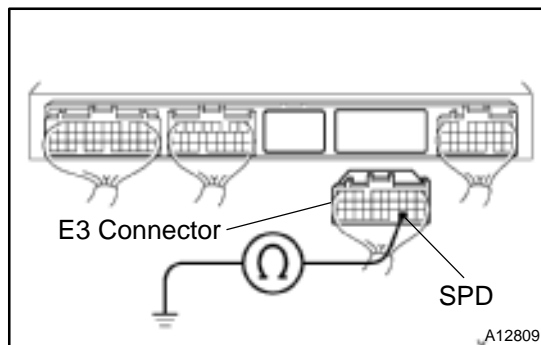
The vehicle speed sensor is operating normally if the speedometer display is normal.

NG

Check speedometer circuit (See page [BE-38](#)).

OK

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



PREPARATION:

- Disconnect the ECM with connector from body panel (See page [SF-62](#)).
- Disconnect the E3 connector from the ECM.

CHECK:

Check the continuity between terminal SPD of the ECM connector and body ground.

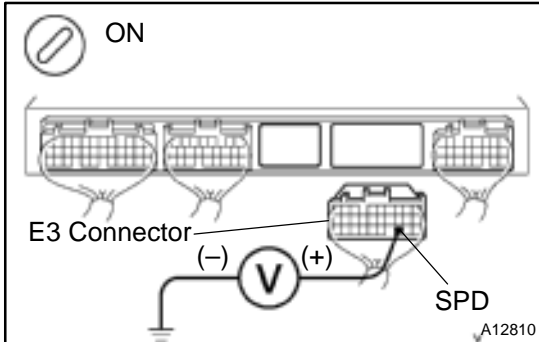
OK:

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:**

- (a) Disconnect the ECM with connector from body panel (See page [SF-62](#)).
- (b) Disconnect the E3 connector from the ECM.
- (c) Turn the ignition switch ON.

CHECK:

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

OK:

Voltage: 9 – 14 V

NG

Repair or replace harness and connector between combination meter and ECM (See page [IN-28](#)).

OK

Check and replace ECM (See page [IN-28](#)).