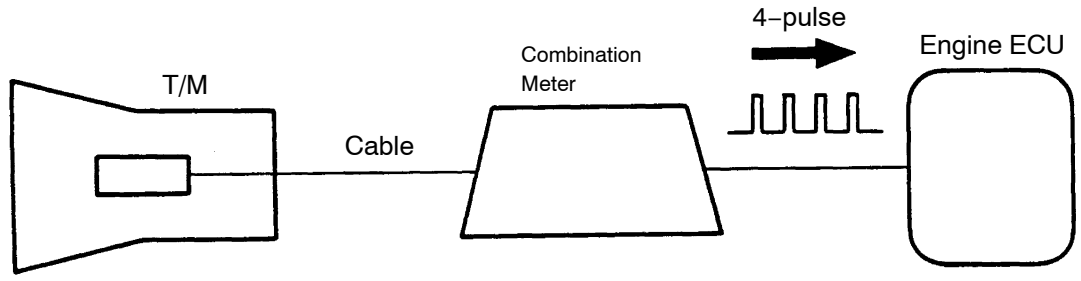
DI9T2–01

DTC	P0500	Vehicle Speed Sensor Malfunction

CIRCUIT DESCRIPTION

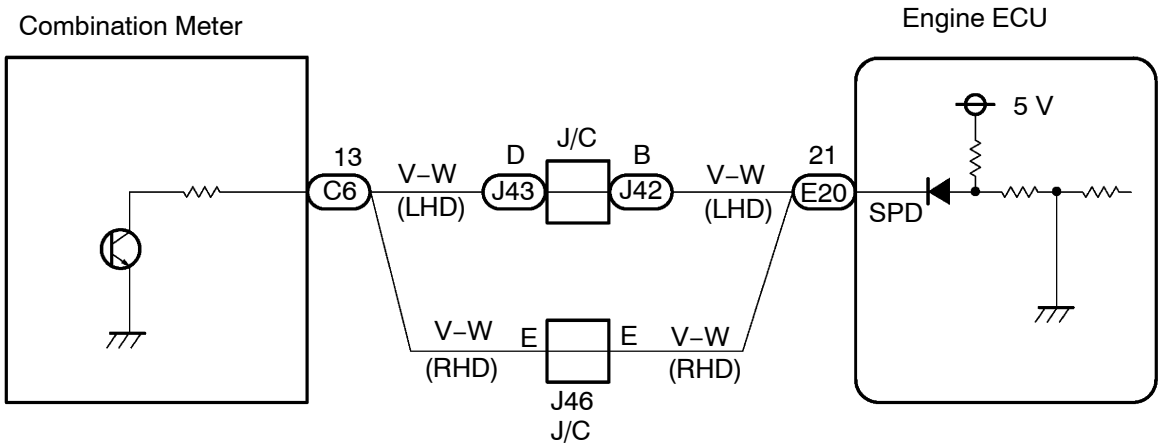
The vehicle speed sensor outputs a 4–pulse signal for every revolution of the rotor shaft, which is rotated by the transmission output shaft via the driven gear. After this signal is converted into a more precise rectangular waveform by the waveform shaping circuit inside the combination meter, it is then transmitted to the engine ECU. The engine ECU determines the vehicle speed based on the frequency of these pulse signals.



A07574

DTC No.	DTC Detecting Condition	Trouble Area
P0500	No vehicle speed sensor signal to engine ECU under condition (a), (b) and (c): (2 trip detection logic) (a) Vehicle is being driven (b) Water temperature is 70°C (158°F) or more (c) Engine speed is between 2,000 and 4,000 rpm	• Combination meter • Open or short in vehicle speed sensor circuit • Engine ECU • Vehicle speed sensor

WIRING DIAGRAM



Y

A17390

INSPECTION PROCEDURE

HINT:
Read freeze frame data using the hand–held tester. Because freeze frame data 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.

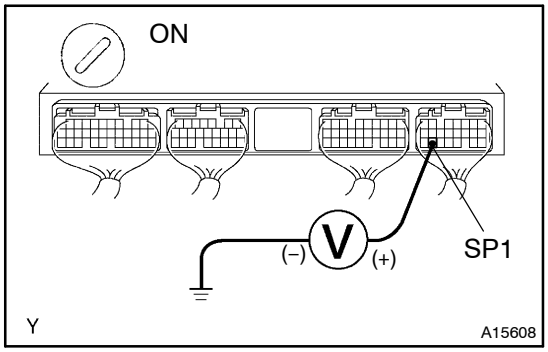
1	**Check operation of speedometer.**

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.**

OK

2	**Check for short in harness and connector between terminal SPD of engine ECU and body ground.**



PREPARATION:
(a) Remove the glove compartment.
(b) Disconnect the E20 connector of the engine ECU.

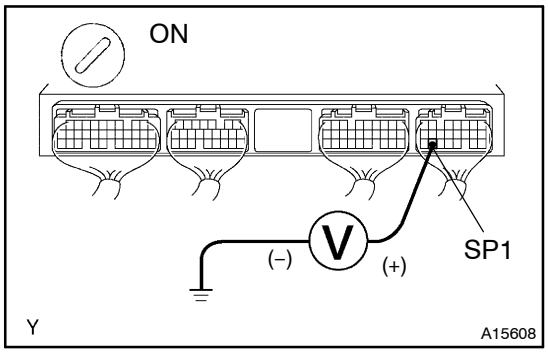
CHECK:
Check the continuity between terminal SPD of the engine ECU and the body ground.

OK:
No continuity (1MΩ. or higher)

NG → **Check and repair harness or connector.**

OK

3	Check voltage between terminal SPD of engine ECU and body ground.



PREPARATION:

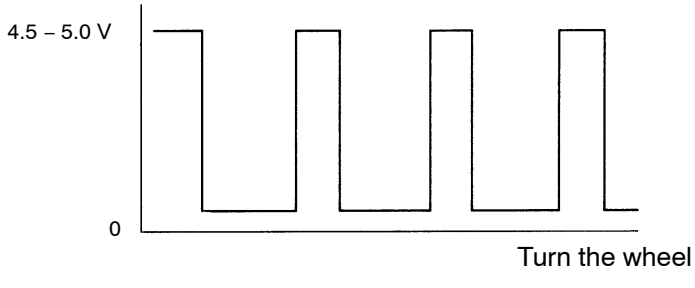
(a) Remove the glove compartment.
(b) Disconnect the cruise control engine ECU connector.
(c) Shift the shift lever the to neutral.
(d) Jack up the rear wheels on one side.
(e) Turn the ignition switch ON.

CHECK:

Measure the voltage between terminal SPD of the engine ECU connector and the body ground when the wheel is turned slowly.

OK:

Voltage is generated intermittently.



NG → **Repair or replace harness or connector.**

OK

Check and replace engine ECU (See page IN–19).