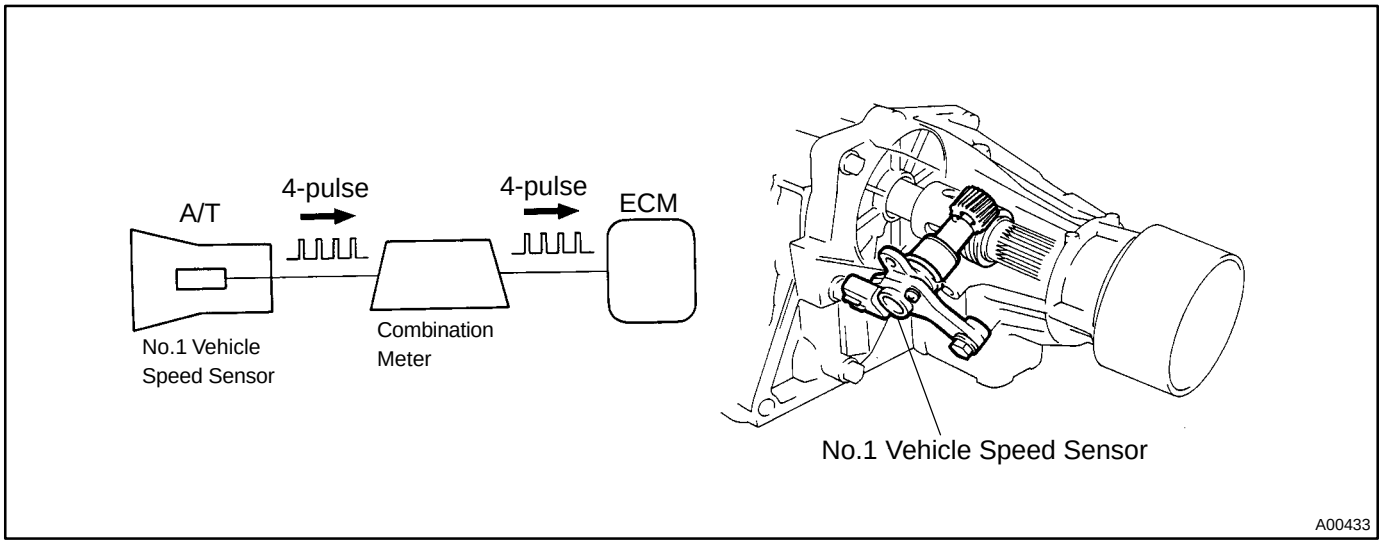
DI8ZV-01

DTC	P0500	Vehicle Speed Sensor Malfunction

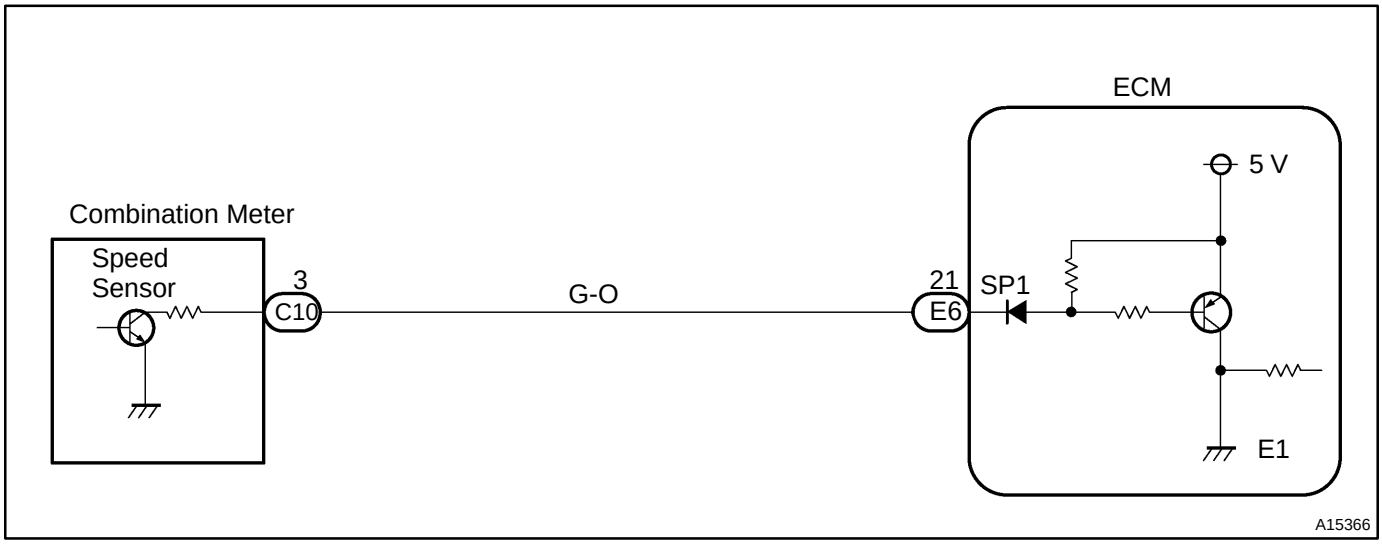
CIRCUIT DESCRIPTION

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 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 conditions: (2 trip detection logic) For A/T: (a) Park/neutral position switch is OFF (b) Vehicle is being driven For M/T: (a) Engine speed is between 1,800 rpm and 4,000 rpm	• Combination meter • Open or short in No.1 vehicle speed sensor circuit • ECM • No.1 vehicle speed sensor

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Read freeze frame data using TOYOTA hand-held tester or OBD II scan tool, as freeze frame data records the engine conditions when a malfunction is detected, when troubleshooting it is useful for determining whether the vehicle was running or stopped, 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.

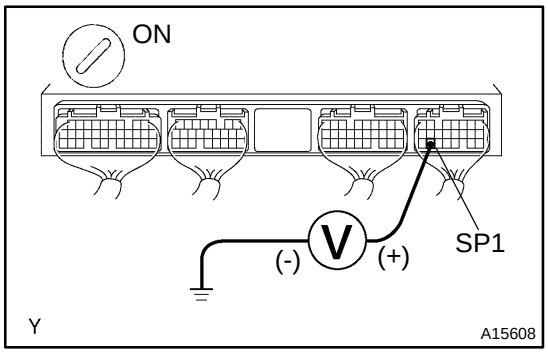
HINT:

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

NG → **Check speedometer (See page BE-39).**

OK

2	**Check voltage between terminal SP1 of ECM connector and body ground.**



PREPARATION:

(a) Remove the glove compartment (See page SF-49).
(b) Disconnect the cruise control 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 SP1 of the ECM connector and the body ground when the wheel is turned slowly.

OK:

Voltage is generated intermittently.

NG → **Check and repair harness and connector between combination meter and ECM.**

OK

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