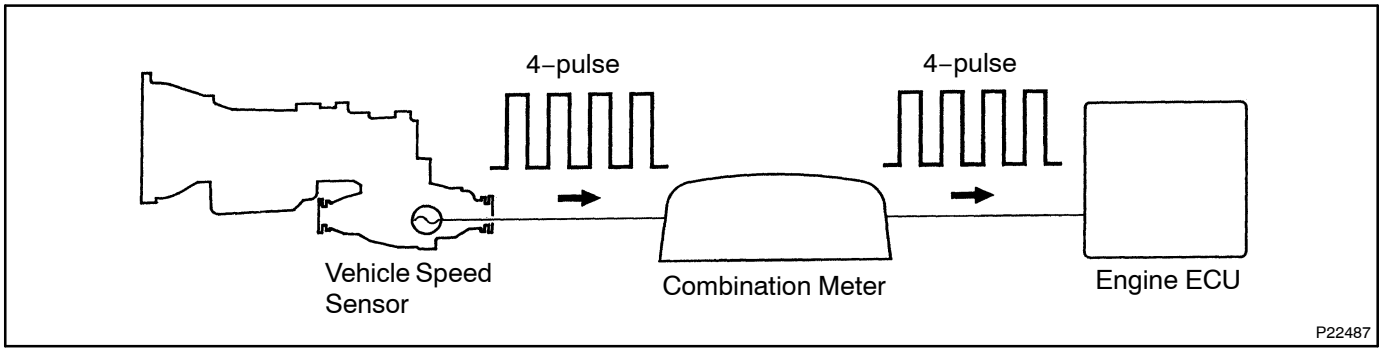
DI1IM–07

DTC	P0500/42	Vehicle Speed Sensor Malfunction

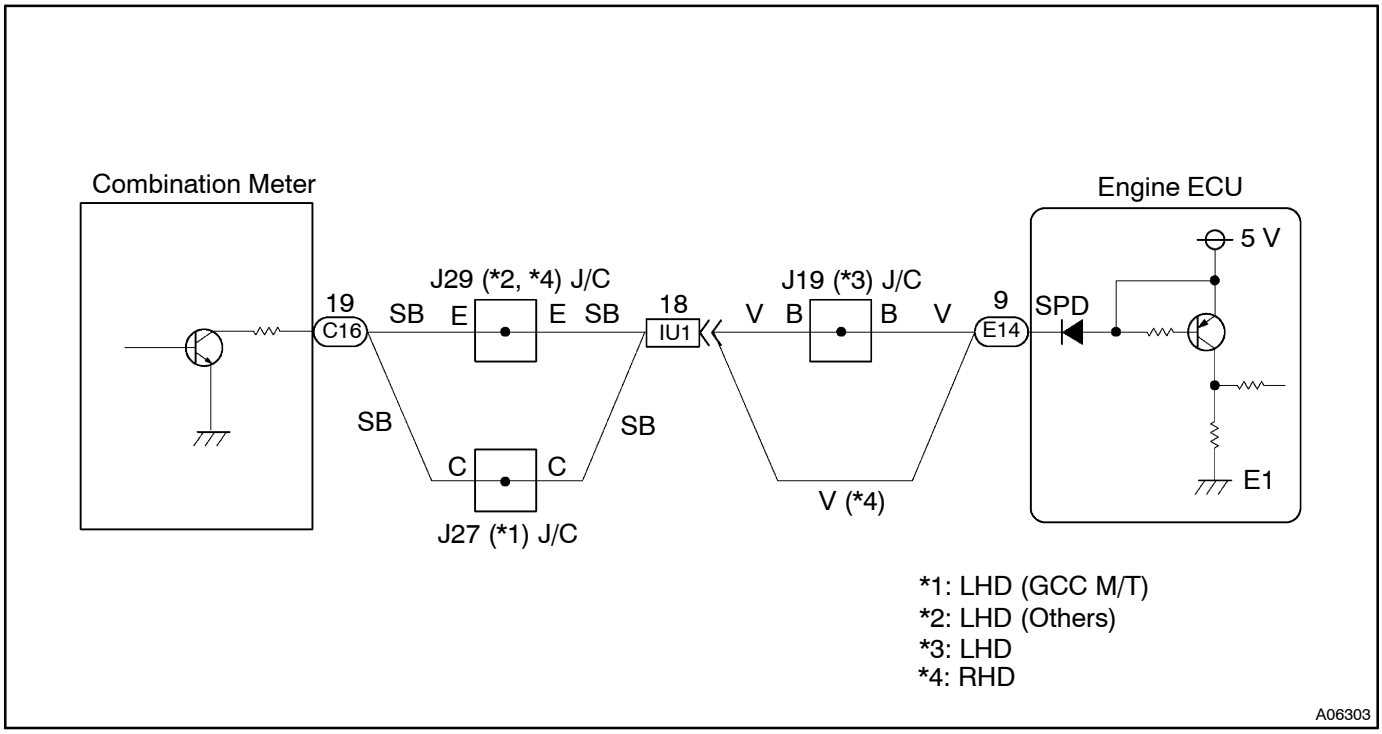
CIRCUIT DESCRIPTION

The No.1 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.



DTC No.	DTC Detecting Condition	Trouble Area
P0500/42	No vehicle speed sensor signal to engine ECU under conditions (a) and (b): (a) Neutral start switch is OFF (b) Vehicle is being driven	• Open or short in vehicle speed sensor circuit • Vehicle speed sensor • Combination meter • Engine ECU

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:
Read freeze frame data using hand–held tester. 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 warmed up or not, the air–fuel ratio lean or rich, etc. at the time of the malfunction.

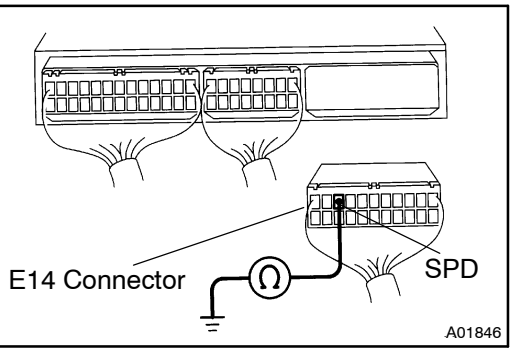
1	**Check operation of speedometer.**

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 engine ECU and body ground.**

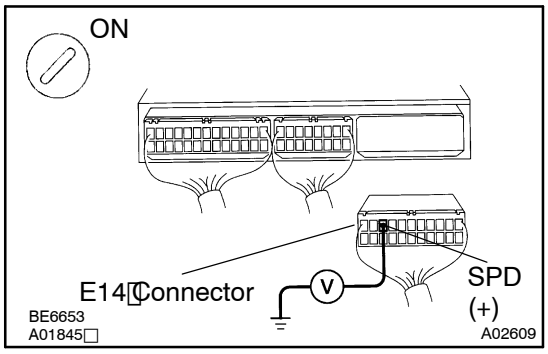


PREPARATION:
(a) Remove the glove compartment door.
(b) Disconnect the E14 engine ECU connector.
CHECK:
Check continuity between terminal SPD of engine ECU and body ground.
OK:
No continuity (1MΩ. or higher)

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 door.

(b) Disconnect the E14 engine ECU connector.

(c) Turn the ignition switch ON.

CHECK:

Measure voltage between terminal SPD of engine ECU and body ground.

OK:

Voltage: 9 – 14 V

NG → **Check for open in harness and connector between combination meter and engine ECU (See page IN–19).**

OK

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