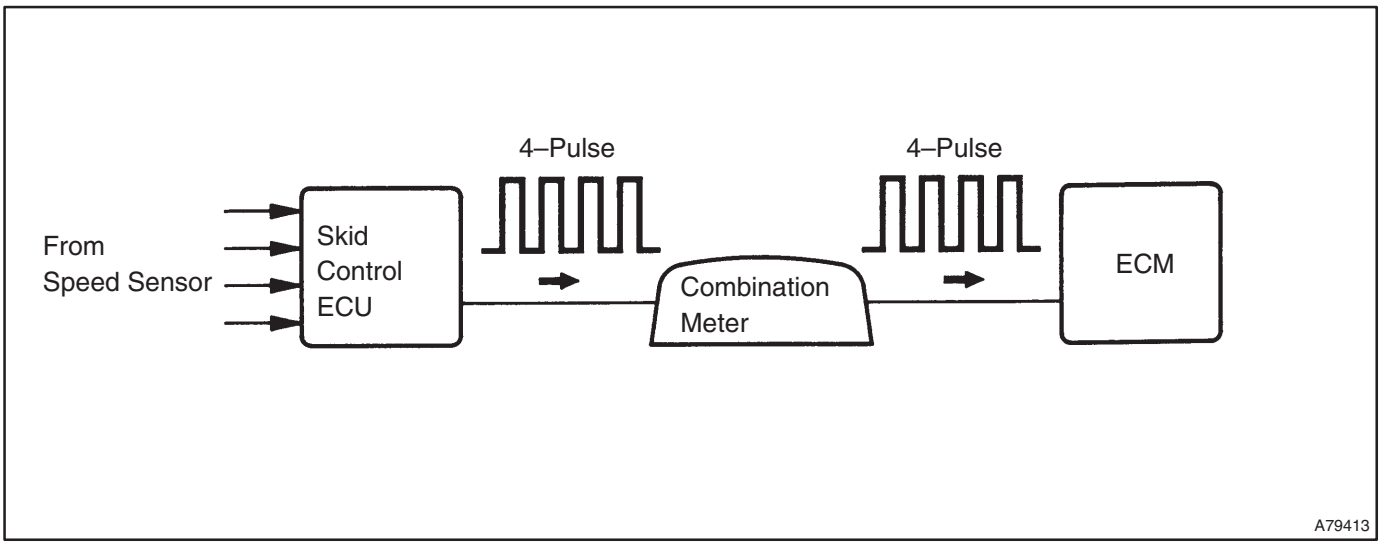
DTC	P0500/42	VEHICLE SPEED SENSOR ”A”

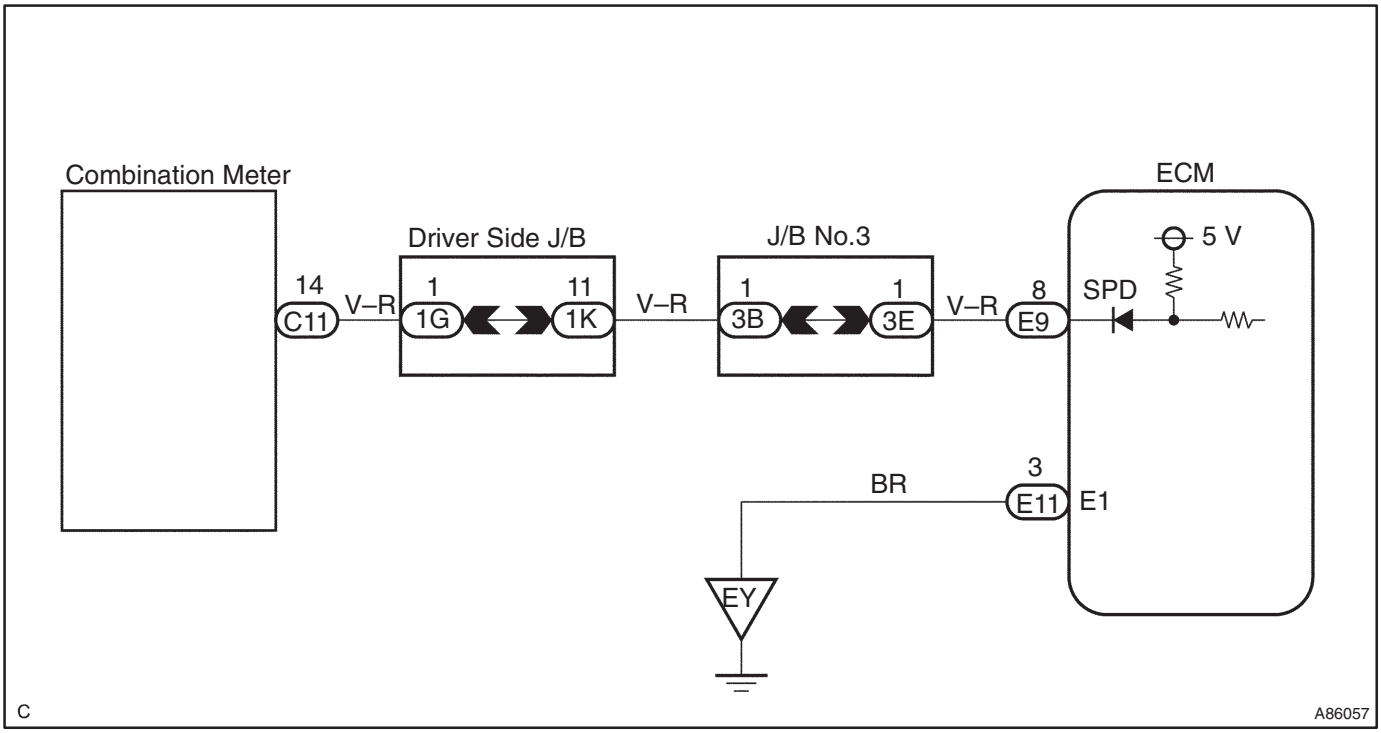
CIRCUIT DESCRIPTION

The speed sensor detects the wheel speed and sends appropriate signals to the skid control ECU. The skid control ECU converts these wheel speed signals into a 4–pulse signal and outputs it to the ECM via the combination meter. The ECM determines the vehicle speed based on the frequency of these pulse signals.



DTC No.	DTC Detection Condition	Trouble Area
P0500/42	Conditions (a), (b) and (c) continue for 8 seconds or more (2 trip detection logic): (a) Engine coolant temperature is more than 70°C (158°F) (b) Engine speed is between 2,000 rpm and 6,800 rpm (c) No speed signal is input to ECM	• Open or short in speed sensor circuit • Speed sensor • Combinationmeter • ECM • Skid control ECU

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:
Read freeze frame data using the intelligent tester II. Freeze frame data record the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, if the air–fuel ratio was lean or rich, and other data from the time the malfunction occurred.

1	CHECK OPERATION OF SPEEDOMETER

(a) 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 reading is normal.

NG → **CHECK SPEEDOMETER CIRCUIT (See Pub. No. RM990E, page 05–1560)**

OK

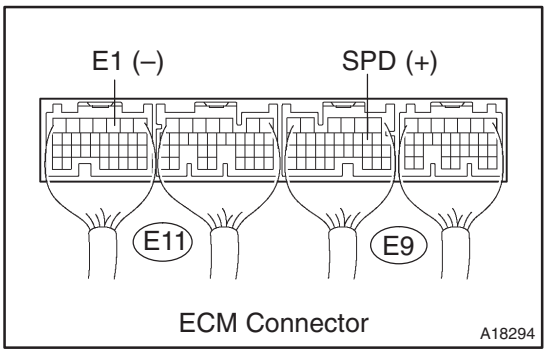
2	READ VALUE OF INTELLIGENT TESTER II(VEHICLE SPEED)

(a) Connect the intelligent tester ll to the DLC3.
(b) Start the engine and turn the intelligent tester ll ON.
(c) On the intelligent tester ll, select the following menu items: Powertrain / Engine and ECT / Data List / Vehicle SPD.
(d) Check the vehicle speed at the engine speed of 2,000 rpm or more when the vehicle is running.
Standard: Same value as the actual vehicle speed.

OK → **CHECK FOR INTERMITTENT PROBLEMS (See page 05–8)**

NG

3 INSPECT ECM(SPD VOLTAGE)

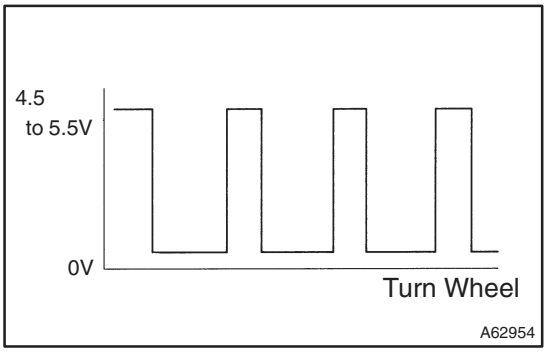


(a) Shift the transmission gear selector lever to the neutral position.
(b) Jack up the vehicle.
(c) Turn the ignition switch to ON.
(d) Measure the voltage according to the value(s) in the table below.

Standard:

Tester Connection	Specified Condition
SPD (E9–8) – E1 (E11–3)	Generated intermittently

HINT:
The output voltage should fluctuate up and down similarly to the diagram on the left when the wheel is turned slowly.



NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE ECM (See page 10–12)