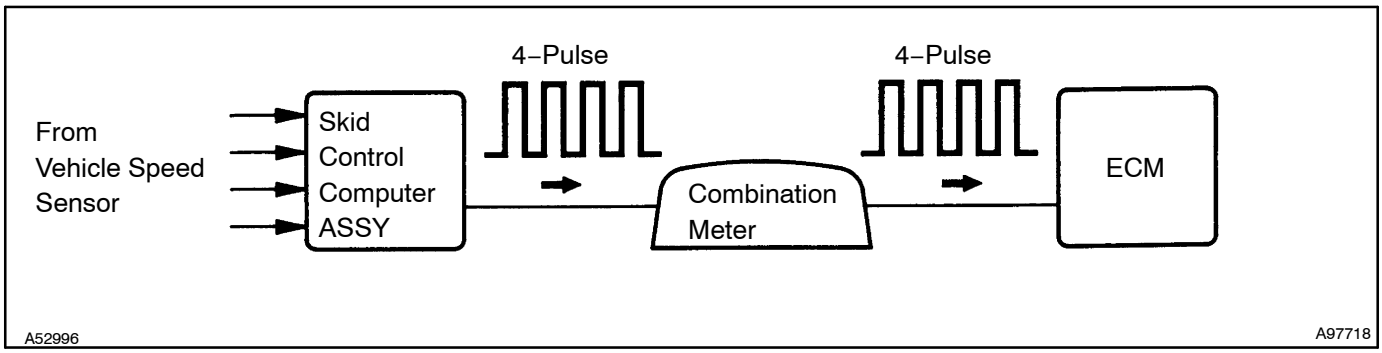
DTC	P0500/42	VEHICLE SPEED SENSOR ”A”

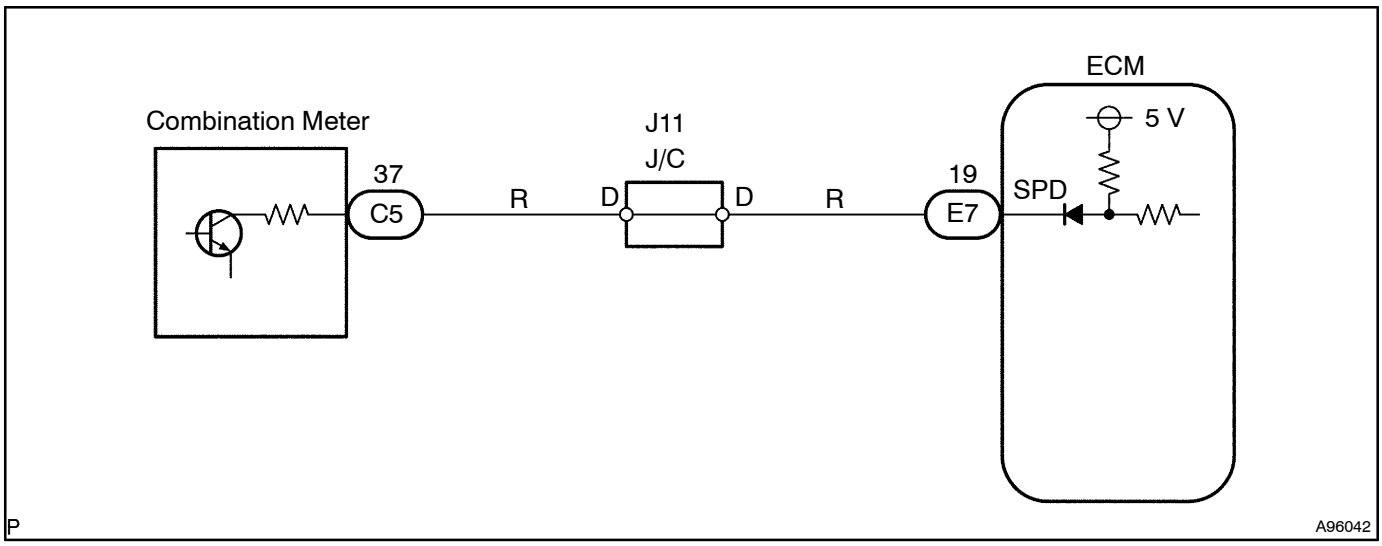
CIRCUIT DESCRIPTION

The speed sensor for skid control ECU detects the wheel speed and sends the appropriate signals to the skid control ECU.
The skid control 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
P0500/42	All conditions below are detected continuously for 7 seconds or more: (a) Vehicle speed signal: 0 km/h (0 mph) (b) Engine speed: 1,500 to 2,500 rpm (c) Engine coolant temp.: 70˚C (158˚F) or more (d) ECT sensor, accelerator pedal position sensor, and MAF meter are all normal	• Open or short in vehicle speed sensor circuit • Vehicle speed sensor • Combination meter • ECM

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:
Read freeze frame data using the hand–held tester. Freeze frame data records the engine conditions when a malfunction is detected. When troubleshooting, freeze frame data can help determine if the vehicle was running or stopped, 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.

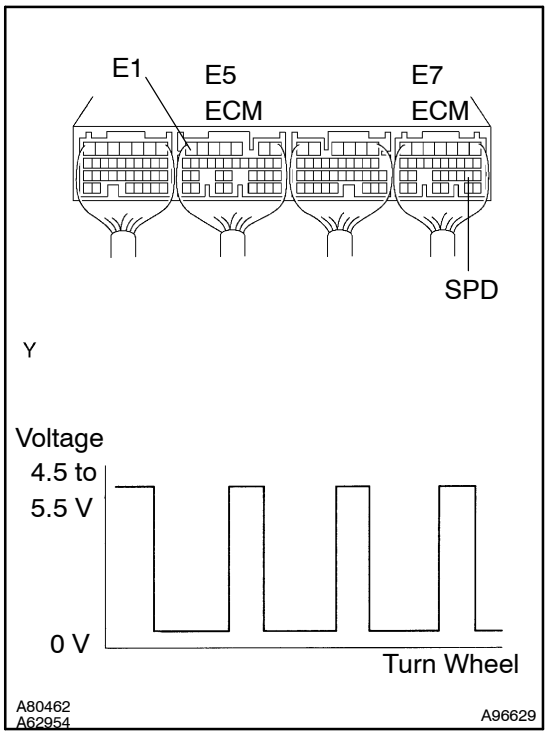
1	CHECK OPERATION OF SPEEDOMETER

Drive the vehicle and check if 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 → **Go to COMBINATION METER SYSTEM (See Pub. No. RM 1008E, page 71–2)**

OK

2	CHECK ECM (SPD VOLTAGE)



(a) Move the transmission gear selector lever to the neutral position.
(b) Jack up the vehicle.
(c) Turn the ignition switch ON.
(d) Measure the voltage of the ECM connectors as the wheel is turned slowly.
Standard:

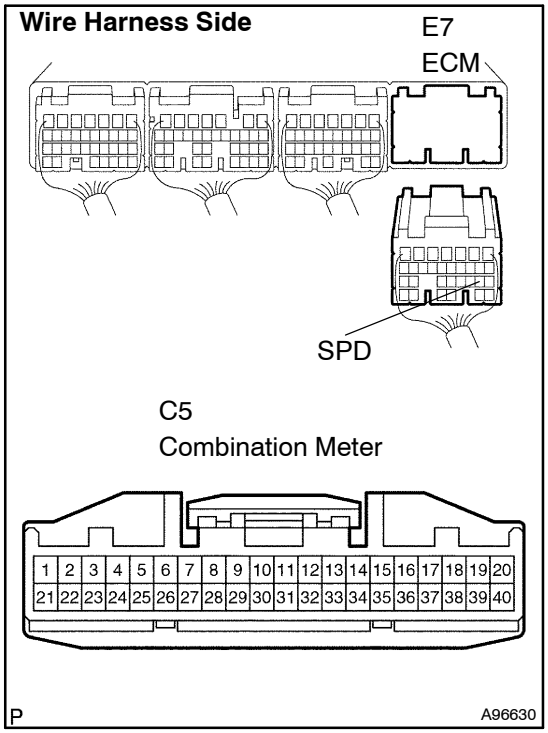
Tester Connection	Specified Condition
E7–19 (SPD) – E5–7 (E1)	Generated intermittently

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

OK → **REPLACE ECM (See page 10–10)**

NG

3 CHECK WIRE HARNESS (COMBINATION METER – ECM)



(a) Disconnect the C5 meter connector.
(b) Disconnect the E7 ECM connector.
(c) Measure the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
E7–19 (SPD) – C5–37 (Combination meter)	Below 1 Ω
E7–19 (SPD) – C5–37 (Combination meter)	10 kΩ or higher

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

OK

REPLACE ECM (See page 10–10)