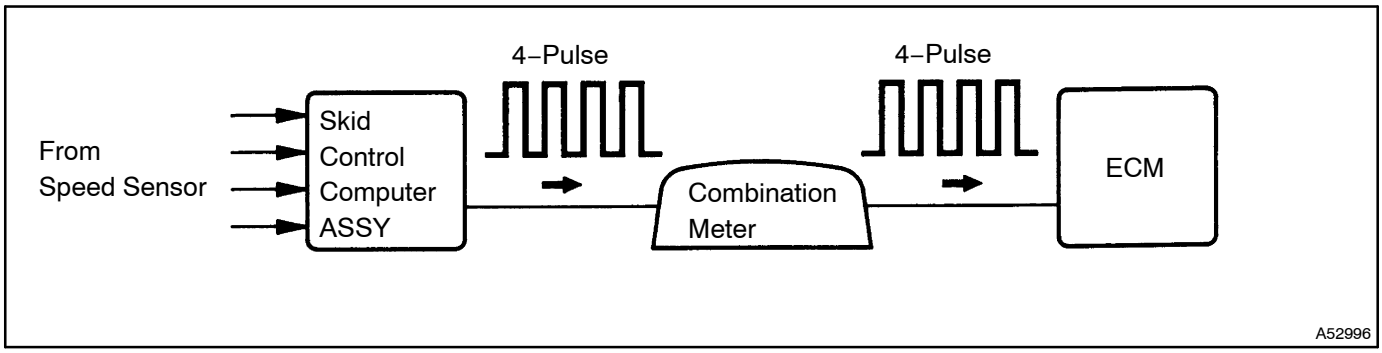
DTC	42	VEHICLE SPEED SENSOR SIGNAL CIRCUIT MALFUNCTION

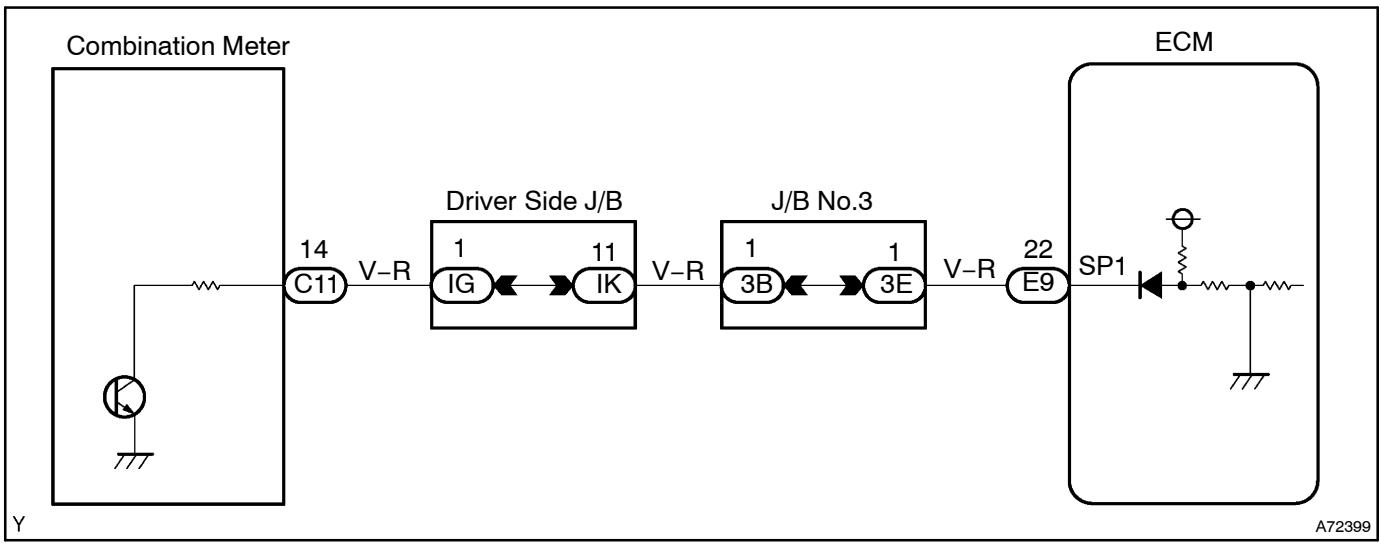
CIRCUIT DESCRIPTION

The speed sensor for skid control computer assy detects the wheel speed amd sends the appropriate signals to the skid control computer assy.
The ECM 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
42	All conditions below are detected continuously for 8 sec. or more: (a) Vehicle speed signal: 0 km/h (0 mph) (b) Engine speed: 2,400 – 4,000 rpm (c) Engine coolant temp.: 60°C (176°F) or more (d) Accelerator pedal opening angle : 50 % or more	• 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, as freeze frame 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 was warmed up or not, etc. at the time of the malfunction.

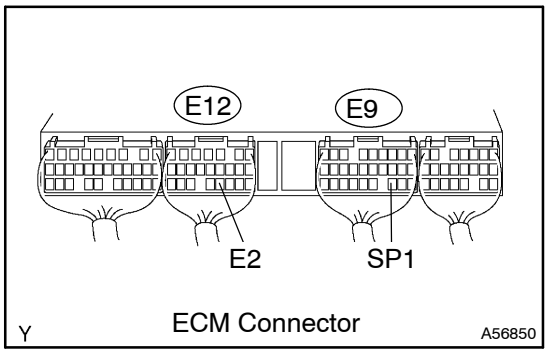
1	CHECK OPERATION OF SPEEDOMETER

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.

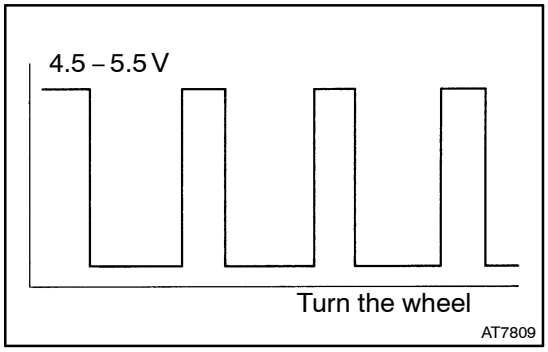
NG → **CHECK SPEEDOMETER CIRCUIT (See page 05–1560)**

OK

2	INSPECT ECM(CHECK VOLTAGE)



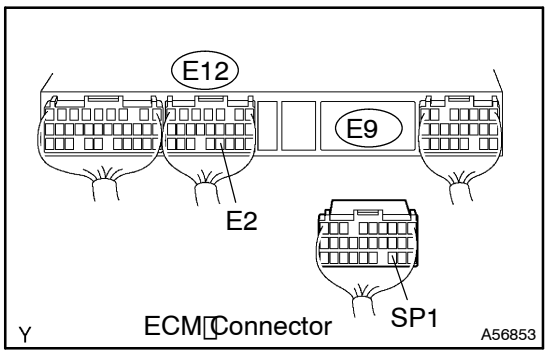
(a) Shift the shift lever to the neutral.
(b) Jack up the vehicle.
(c) Turn the ignition switch ON.
(d) Measure the voltage between terminal SP1 and E2 of the ECM connector when the wheel is turned slowly.
Result: Voltage is generated intermittently.



OK → **CHECK AND REPLACE ECM**

NG

3 CHECK HARNESS AND CONNECTOR (COMBINATION METER – ECM)



(a) Disconnect the combination meter C11 connector. (See page 71–25)

(b) Disconnect the ECM E9 connector.

(c) Check the continuity between the wire harness side connector.

Standard (Check for open):

Symbols (Terminal No.)	Specified condition
+S (C11 – 14) (Terminal arrangement on 05–1554) ⇔ SP1 (E9 – 22)	Continuity

Standard (Check for short):

Symbols (Terminal No.)	Specified condition
SP1 (E9 – 22) ⇔ E2 (E12 – 20)	No continuity

OK → **CHECK AND REPLACE ECM**

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR