

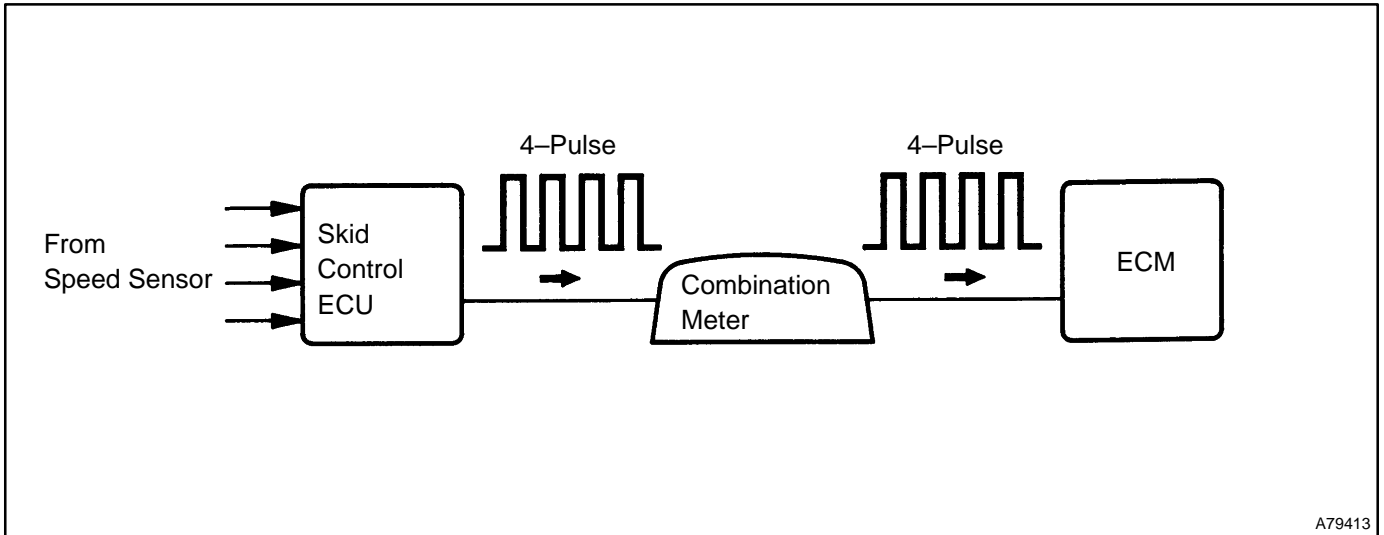
DTC	P0500	VEHICLE SPEED SENSOR "A"
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CIRCUIT DESCRIPTION

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 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	The ECM detects following conditions simultaneously for 1 sec (1 trip detection logic: A/T) (2 trip detection logic: M/T): • No SPD (speed sensor) signal to ECM • Park/Neutral position switch is OFF (Shift lever is in other than P and N positions)	<ul style="list-style-type: none"> • Open or short in speed sensor circuit • Speed sensor • Combination meter • ECM • Skid control ECU

MONITOR DESCRIPTION

The ECM assumes that the vehicle is driven when the RPM of the transmission counter gear indicates more than 300 rpm and it has been over 30 seconds since the park/neutral position switch was turned OFF. If there is no signal from the vehicle speed sensor with these conditions satisfied, the ECM concludes that there is a fault in the vehicle speed sensor. The ECM will turn on the MIL and a DTC is set.

MONITOR STRATEGY

Related DTCs	P0500	Vehicle speed sensor "A" pulse input error
Required sensors/components	Main sensors	Vehicle speed sensor
	Related sensors	Park/Neutral position switch, engine coolant temperature sensor, combination meter
Frequency of operation	Continuous	
Duration	8 sec	
MIL operation	Immediately	
Sequence of operation	None	

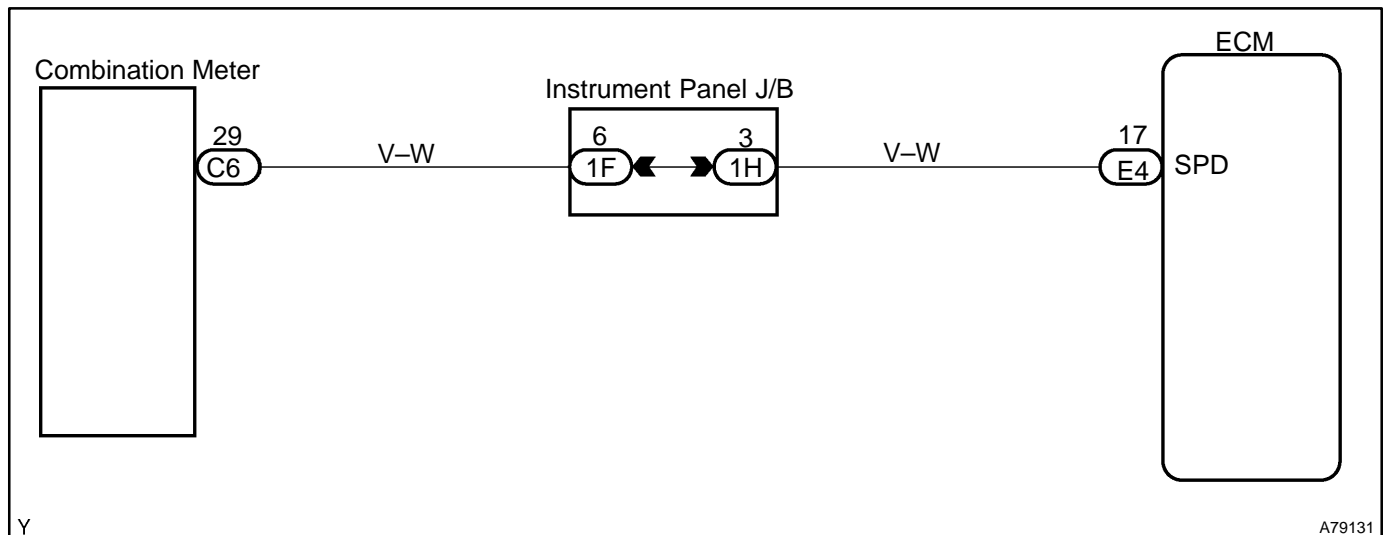
TYPICAL ENABLING CONDITIONS

Item	Specification	
	Minimum	Maximum
The monitor will run whenever the following DTCs are not present	See "List of Disable a Monitor" table (On page 05-24)	
Case 1:		
Engine coolant tepeartuer	70°C (158°F)	-
Engine speed	2,000 rpm	5,000 rpm
Intake air amount par revolution	0.33 g/rev	-
Case 2:		
Eithe the following condition is met:	A or B	
A. Following conditions are met:	1 and 2	
1. Time after park/neutral position switch ON to OFF	10 sec	-
2. Engine coolant temperature	20°C (68°F)	-
B. Following conditions are met:	1 and 2	
1. Time after park/neutral position switch ON to OFF	30 sec	-
2. Engine coolant temperature	-	20°C (68°F)
Time after ignition SW ON	3 sec	-
Engine speed	2,550 rpm (vary with throttle opening angle)	-
Detection time on intake air temperature -10°C (14°F) or more	2 sec	-
Detection time on intake air temperature less than -10°C (14°F)	8 sec	-

TYPICAL MALFUNCTION THRESHOLDS

Detection Criteria	Threshold
Vehicle speed sensor signal	No pulse input

WIRING DIAGRAM



Y

A79131

INSPECTION PROCEDURE

HINT:

Read freeze frame data using the hand-held tester or the OBD II scan tool. 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 was warmed up or not, the air-fuel ratio was lean or rich, etc. at the time of the malfunction.

1 CHECK OPERATION OF SPEEDOMETER

(a) Drive the vehicle and check if the operation of the speedometer in the combination meter is normal.

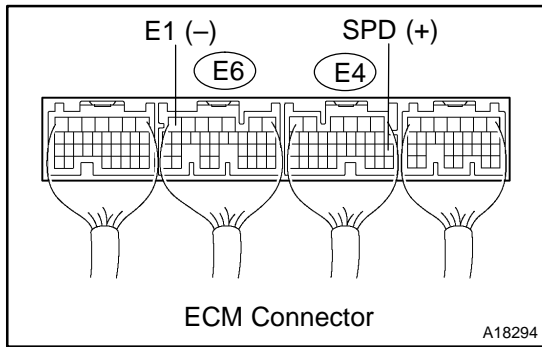
HINT:

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

NG → **CHECK SPEEDOMETER CIRCUIT**
(See page 05-601)

OK

2 INSPECT ECM(SPD VOLTAGE)



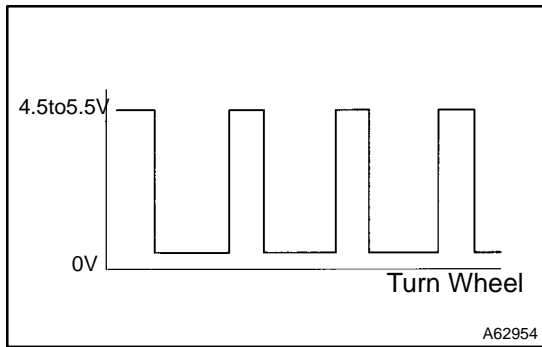
- (a) Shift the lever to the neutral position.
- (b) Jack up the vehicle.
- (c) Turn the ignition switch ON.
- (d) Measure the voltage between the specified terminals of the E4 and E6 ECM connectors as the wheel is turned slowly.

Standard:

Tester Connection	Specified Condition
SPD (E4-17) - E1 (E6-7)	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 10-17)