

DTC	P0500/21	VEHICLE SPEED SENSOR "A"
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DTC	P0503/23	VEHICLE SPEED SENSOR "A" INTERMITTENT/ERRATIC/HIGH
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CIRCUIT DESCRIPTION

1MZ-FE, 3MZ-FE:

The speed sensor for skid control computer assy detects the wheel speed and 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.

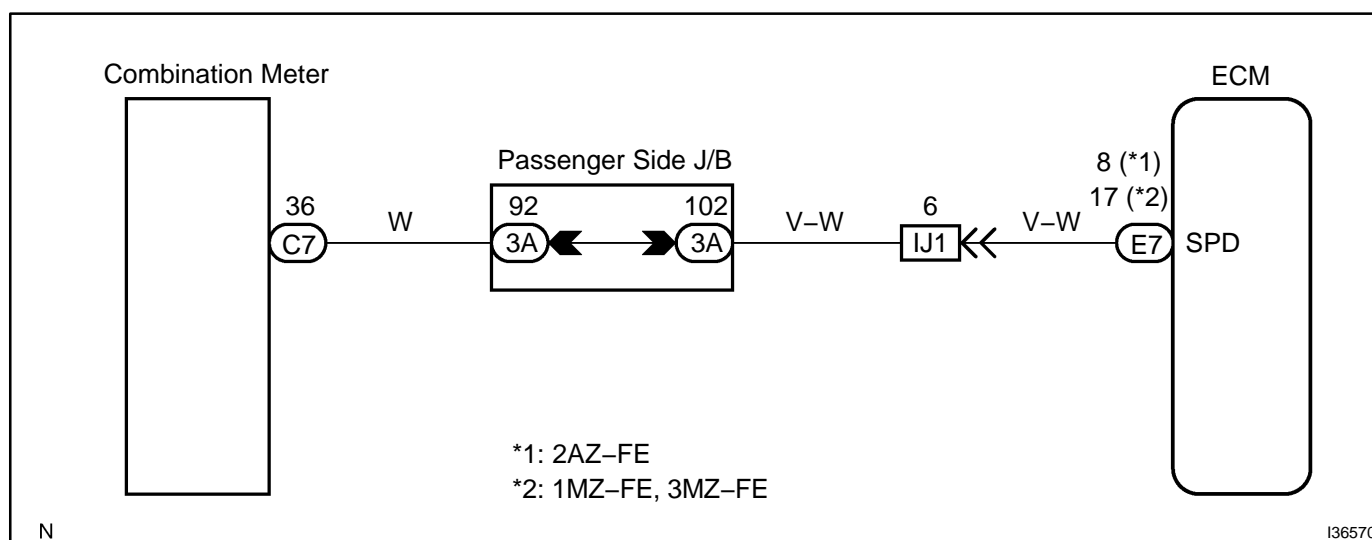
After this signal is converted into a more precise rectangular waveform by the waveform shaping circuit inside the combination meter, it is then transmitted to the ECM. The ECM determines the vehicle speed based on the frequency of these pulse signals.

2AZ-FE:

The 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 ECM. The ECM determines the vehicle speed based on the frequency of these pulse signals.

DTC No.	DTC Detecting Condition	Trouble Area
P0500/21 P0503/23	No vehicle speed sensor signal to ECM under following conditions (a) and (b): (1 trip detection logic) (a) Park/neutral position switch is OFF (b) Vehicle is being driven	<ul style="list-style-type: none"> • Combination meter • Vehicle speed sensor circuit • Vehicle speed sensor • ECM

WIRING DIAGRAM



INSPECTION PROCEDURE

1 READ VALUE OF HAND-HELD TESTER

- (a) Connect the hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push the hand-held tester main switch ON.
- (c) Select the item "VEHICLE SPD" in the DATA LIST and read its value displayed on the hand-held tester.

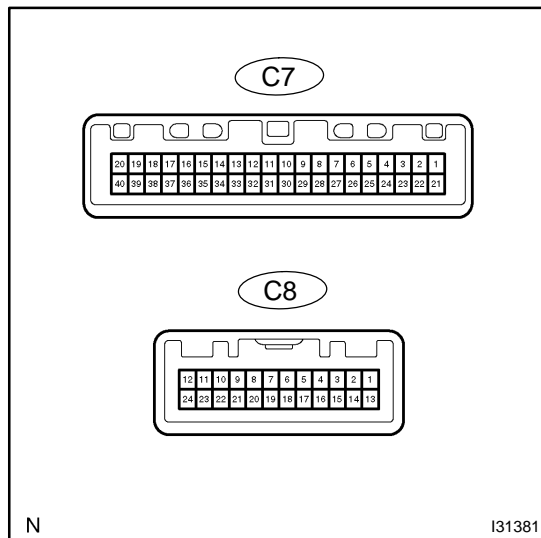
OK: Actual vehicle speed

OK

**PROCEED TO NEXT CIRCUIT INSPECTION
SHOWN IN PROBLEM SYMPTOMS TABLE
(See page 05-2218)**

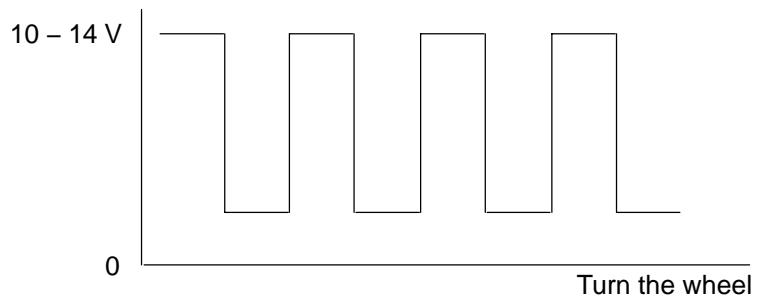
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2 INSPECT COMBINATION METER ASSY



- (a) Remove the combination meter with the connector.
- (b) Put a car into neutral.
- (c) Jack up one of the wheel.
- (d) Turn the ignition switch ON.
- (e) Measure the voltage between terminal C7-36 of combination meter and body ground when the wheels are turned slowly.

Voltage is generated intermittently.



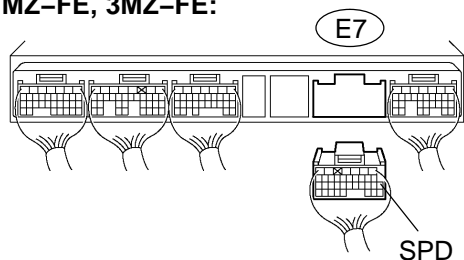
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**GO TO COMBINATION METER SYSTEM
(See page 05-1999)**

OK

3 CHECK HARNESS AND CONNECTOR

1MZ-FE, 3MZ-FE:



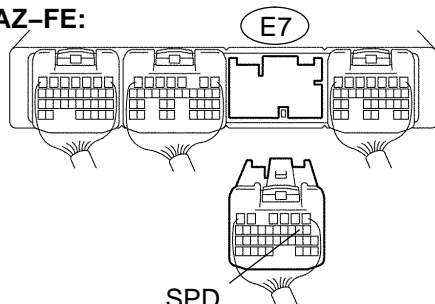
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- Remove ECM with the connector.
- Put a car into neutral.
- Jack up the wheel on one side.
- Disconnect the E7 connector from ECM.
- Measure the voltage between terminal SPD of the ECM connector and body ground when the wheel is turned slowly.

Voltage is generated intermittently.

2AZ-FE:



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OK

CHECK AND REPLACE ECM

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REPAIR OR REPLACE HARNESS OR CONNECTOR