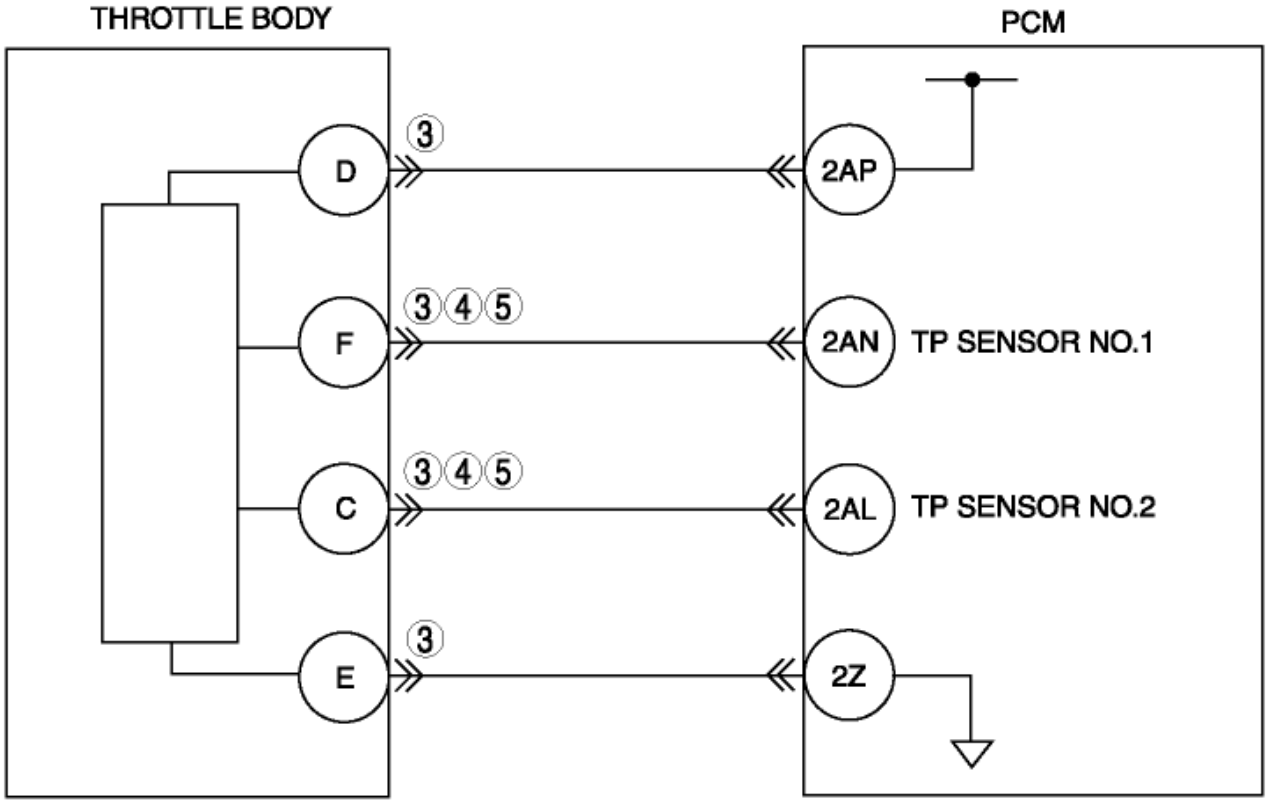
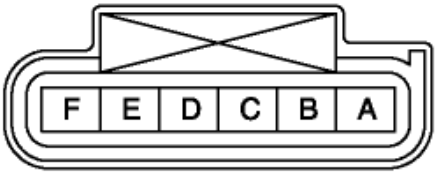
2012 - Mazda6 - Engine

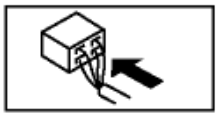
DTC P2135:00 [MZI 3.7 V6]

DTC P2135:00	TP sensor No.1/No.2 voltage correlation
DETECTION CONDITION	• The PCM flagged a concern indicating that TP sensor No.1 and TP sensor No.2 disagree by more than a calibrated limit.
POSSIBLE CAUSE	• TP sensor malfunction • Short to power supply between TP sensor No.1 terminal F and PCM terminal 2AN • Short to power supply between TP sensor No.2 terminal C and PCM terminal 2AL • TP sensor circuits are shorted each other

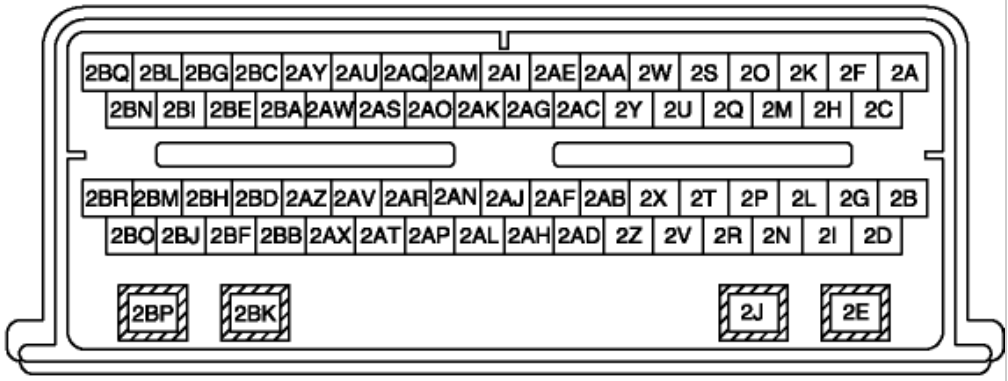


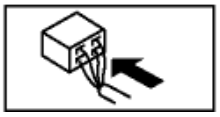
THROTTLE BODY
WIRING HARNESS-SIDE CONNECTOR





PCM
WIRING HARNESS-SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA HAS BEEN RECORDED** • Has FREEZE FRAME DATA been recorded?	Yes	Go to the next step.
		No	Record FREEZE FRAME DATA on the repair order, then go to the next step.

2	**VERIFY RELATED REPAIR INFORMATION AVAILABILITY** • Verify related Service Bulletins and/or on-line repair information availability. • Is any related Service Bulletins available?	Yes	Perform repair or diagnosis according to the available Service Bulletins. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	**INSPECT TP SENSOR RESISTANCE** • Switch the ignition off. • Disconnect the throttle body connector. • Measure the resistance between the following terminals (throttle body component side). ▪ Throttle body terminal F and D: 700—1,800 ohms ▪ Throttle body terminal F and E: 1,300—2,800 ohms ▪ Throttle body terminal C and D: 1,000—2,400 ohms ▪ Throttle body terminal C and E: 500—1,500 ohms ▪ Throttle body terminal D and E: 700—2,100 ohms • Are all the resistances within specifications?	Yes	Go to the next step.
		No	Replace the throttle body, then go to Step 6. (See **INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)
4	**INSPECT TP SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Switch the ignition ON (Engine off). • Measure the voltage between the following circuits: ▪ Throttle body terminal F (wiring harness-side) and body ground. ▪ Throttle body terminal C (wiring harness-side) and body ground. • Are there voltage **B+** ?	Yes	Repair or replace suspected part, then go to Step 6.
		No	Go to the next step.
5	**INSPECT TP SENSOR SIGNAL CIRCUITS FOR SHORT EACH OTHER** • Switch the ignition off. • Disconnect the throttle body and PCM connector. • Measure resistance between throttle body terminal F and C. • Is the resistance **more than 10 kilohms**?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to the next step.
6	**VERIFY TROUBLESHOOTING OF DTC P2135:00 HAS BEEN COMPLETED** • Verify that all disconnected connectors	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM.

	reconnected. • Clear the DTC from the PCM memory using the M-MDS. • Start the engine. • Is the same DTC present?		(See **PCM REMOVAL/ INSTALLATION [MZI 3.7 V6]**.) Go to the next step.
		No	Go to the next step.
7	**VERIFY AFTER REPAIR PROCEDURE** • Perform the "AFTER REPAIR PROCEDURE". (See **AFTER REPAIR PROCEDURE [MZI 3.7 V6]**.) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See **DTC TABLE [MZI 3.7 V6]**.)
		No	DTC troubleshooting completed.

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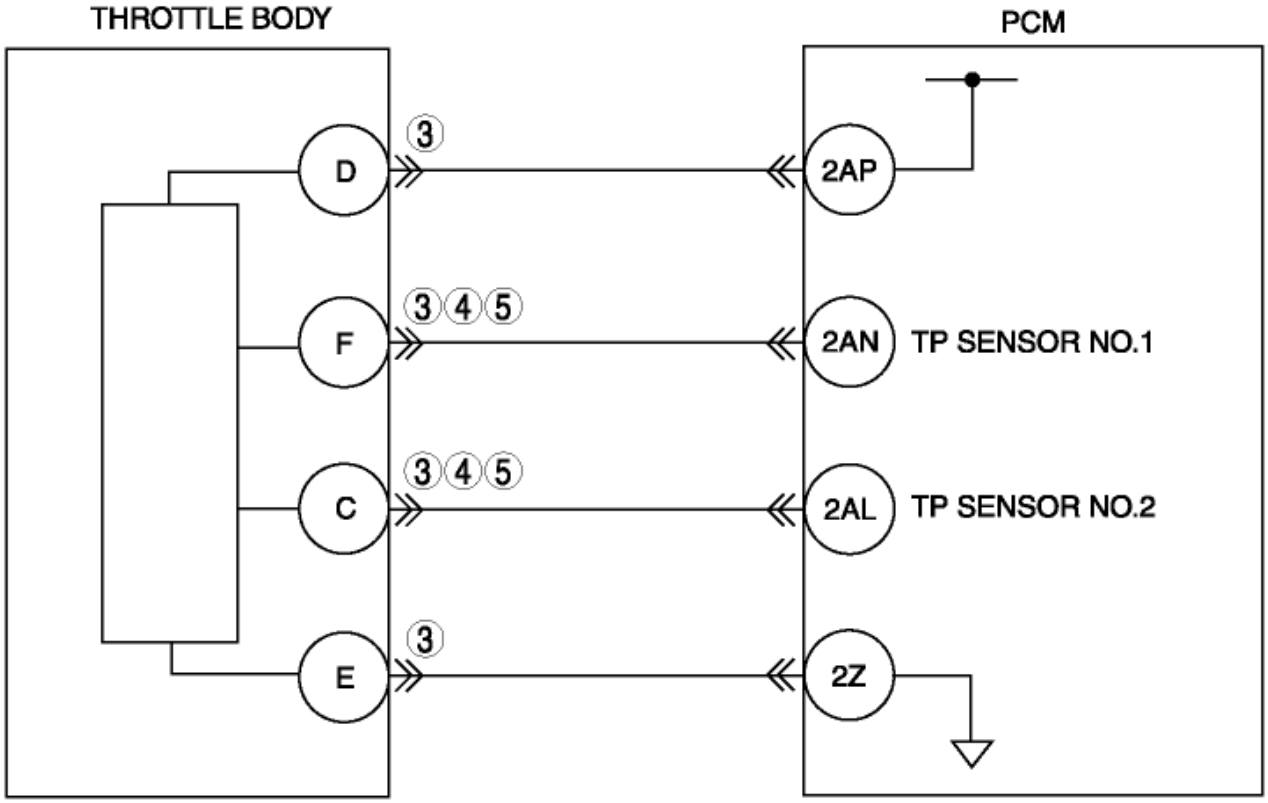
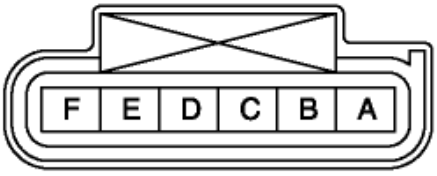
2012 - Mazda6 - Engine

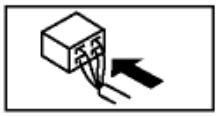
DTC P2135:00 [MZI 3.7 V6]

DTC P2135:00	TP sensor No.1/No.2 voltage correlation
DETECTION CONDITION	• The PCM flagged a concern indicating that TP sensor No.1 and TP sensor No.2 disagree by more than a calibrated limit.
POSSIBLE CAUSE	• TP sensor malfunction • Short to power supply between TP sensor No.1 terminal F and PCM terminal 2AN • Short to power supply between TP sensor No.2 terminal C and PCM terminal 2AL • TP sensor circuits are shorted each other

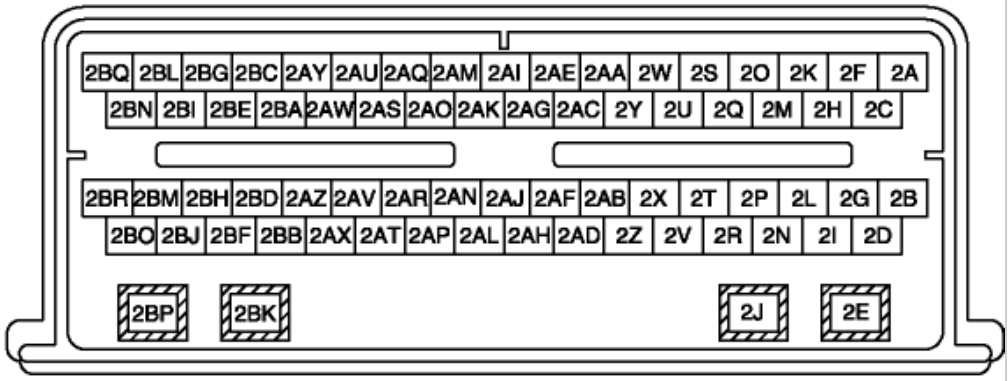


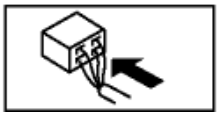
THROTTLE BODY
WIRING HARNESS-SIDE CONNECTOR





PCM
WIRING HARNESS-SIDE CONNECTOR





Diagnostic procedure

STEP	INSPECTION		ACTION
1	**VERIFY FREEZE FRAME DATA HAS BEEN RECORDED** • Has FREEZE FRAME DATA been recorded?	Yes	Go to the next step.
		No	Record FREEZE FRAME DATA on the repair order, then go to the next step.

2	**VERIFY RELATED REPAIR INFORMATION AVAILABILITY** • Verify related Service Bulletins and/or on-line repair information availability. • Is any related Service Bulletins available?	Yes	Perform repair or diagnosis according to the available Service Bulletins. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	**INSPECT TP SENSOR RESISTANCE** • Switch the ignition off. • Disconnect the throttle body connector. • Measure the resistance between the following terminals (throttle body component side). ▪ Throttle body terminal F and D: 700—1,800 ohms ▪ Throttle body terminal F and E: 1,300—2,800 ohms ▪ Throttle body terminal C and D: 1,000—2,400 ohms ▪ Throttle body terminal C and E: 500—1,500 ohms ▪ Throttle body terminal D and E: 700—2,100 ohms • Are all the resistances within specifications?	Yes	Go to the next step.
		No	Replace the throttle body, then go to Step 6. (See **INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZI 3.7 V6]**.)
4	**INSPECT TP SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY** • Switch the ignition ON (Engine off). • Measure the voltage between the following circuits: ▪ Throttle body terminal F (wiring harness-side) and body ground. ▪ Throttle body terminal C (wiring harness-side) and body ground. • Are there voltage **B+** ?	Yes	Repair or replace suspected part, then go to Step 6.
		No	Go to the next step.
5	**INSPECT TP SENSOR SIGNAL CIRCUITS FOR SHORT EACH OTHER** • Switch the ignition off. • Disconnect the throttle body and PCM connector. • Measure resistance between throttle body terminal F and C. • Is the resistance **more than 10 kilohms**?	Yes	Go to the next step.
		No	Repair or replace suspected part, then go to the next step.
6	**VERIFY TROUBLESHOOTING OF DTC P2135:00 HAS BEEN COMPLETED** • Verify that all disconnected connectors	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM.

	reconnected. • Clear the DTC from the PCM memory using the M-MDS. • Start the engine. • Is the same DTC present?		(See **PCM REMOVAL/ INSTALLATION [MZI 3.7 V6]**.) Go to the next step.
		No	Go to the next step.
7	**VERIFY AFTER REPAIR PROCEDURE** • Perform the "AFTER REPAIR PROCEDURE". (See **AFTER REPAIR PROCEDURE [MZI 3.7 V6]**.) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See **DTC TABLE [MZI 3.7 V6]**.)
		No	DTC troubleshooting completed.

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