# 2012 - Mazda6 - Engine

## DTC P0122:00 [MZR 2.5]

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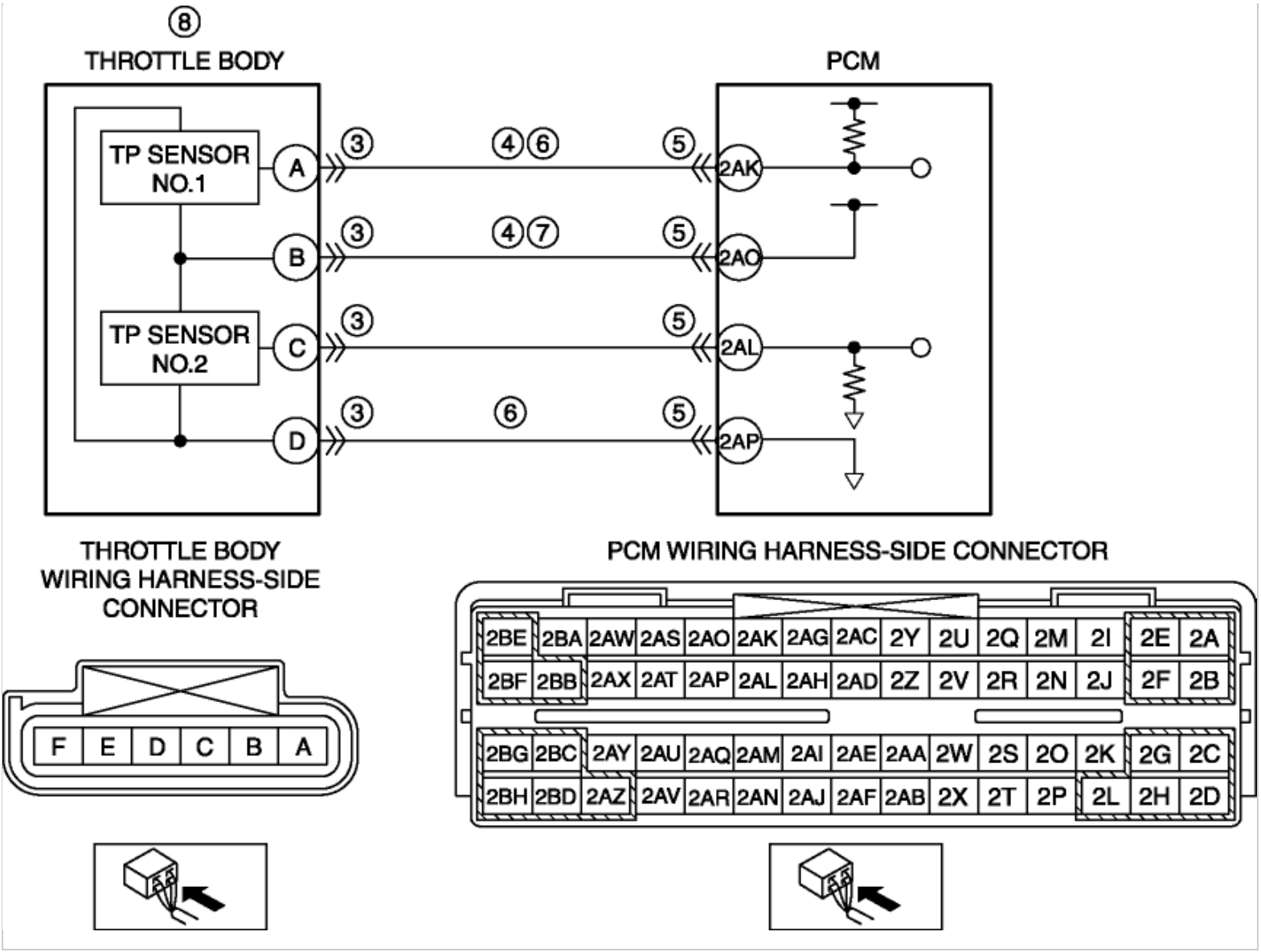
|---|---|
| DTC P0122:00 | TP sensor No.1 circuit low input |
| **DETECTION CONDITION** | • If the PCM detects that the TP sensor No.1 voltage is **below 0.2 V** while the engine is running, the PCM determines that the TP circuit has a malfunction.<br>**Diagnostic support note**<br>• This is a continuous monitor (CCM).<br>• The MIL illuminates if the PCM detects the above malfunction conditions in first drive cycle.<br>• FREEZE FRAME DATA (Mode 2)/Snapshot data is available.<br>• The DTC is stored in the PCM memory. |
| **POSSIBLE CAUSE** | • Throttle body connector or terminal malfunction<br>• Short to ground in wiring harness between throttle body terminal A and PCM terminal 2AK<br>• Short to ground in wiring harness between throttle body terminal B and PCM terminal 2AO<br>• PCM connector or terminal malfunction<br>• Short circuit in TP sensor No.1 signal circuit and ground circuit each other<br>• Open circuit in wiring harness between throttle body terminal B and PCM terminal 2AO<br>• TP sensor No.1 malfunction<br>• PCM malfunction |




**Diagnostic procedure**

| STEP | INSPECTION | | ACTION |
|---|---|---|---|
| 1 | **VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED**<br>• Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded? | Yes | Go to the next step. |
| | | No | Record the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step. |
| 2 | **VERIFY RELATED REPAIR INFORMATION AVAILABILITY**<br>• Verify related Service Bulletins and/or on-line repair information availability.<br>• Is any related repair information available? | Yes | Perform repair or diagnosis according to the available repair information.<br>• If the vehicle is not repaired, go to the next step. |
| | | No | Go to the next step. |
| 3 | **INSPECT THROTTLE BODY CONNECTOR CONDITION**<br>• Switch the ignition to off. | Yes | Repair or replace the terminal and/or connector, then go to Step 9. |

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| | • Disconnect the throttle body connector.<br>• Inspect for poor connection (such as damaged/pulled-out pins, corrosion).<br>• Is there any malfunction? | No | Go to the next step. |
| 4 | **INSPECT TP SENSOR NO.1 CIRCUIT FOR SHORT TO GROUND**<br>• Throttle body connector is disconnected.<br>• Inspect for continuity between the following terminals and body ground:<br>▪ Throttle body terminal A (wiring harness-side)<br>▪ Throttle body terminal B (wiring harness-side)<br>• Is there continuity? | Yes | If the short to ground circuit could be detected:<br>• Repair or replace the wiring harness for a possible short to ground.<br>If the short to ground circuit could not be detected:<br>• Replace the PCM (short to ground in PCM internal circuit).<br>(See **PCM REMOVAL/INSTALLATION [MZR 2.5]**.)<br>Go to Step 9. |
| | | No | Go to the next step. |
| 5 | **INSPECT PCM CONNECTOR CONDITION**<br>• Disconnect the PCM connector.<br>• Inspect for poor connection (such as damaged/pulled-out pins, corrosion).<br>• Is there any malfunction? | Yes | Repair or replace the terminal and/or connector, then go to Step 9. |
| | | No | Go to the next step. |
| 6 | **INSPECT TP SENSOR NO.1 SIGNAL AND GROUND CIRCUITS FOR SHORT EACH OTHER**<br>• Throttle body and PCM connectors are disconnected.<br>• Inspect for continuity between throttle body terminals A and D (wiring harness-side).<br>• Is there continuity? | Yes | Repair or replace the malfunctioning wiring harness, then go to Step 9. |
| | | No | Go to the next step. |
| 7 | **INSPECT TP SENSOR NO.1 POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT**<br>• Throttle body and PCM connectors are disconnected.<br>• Inspect for continuity between throttle body terminal B (wiring harness-side) and PCM terminal 2AO (wiring harness-side).<br>• Is there continuity? | Yes | Go to the next step. |
| | | No | Repair or replace the wiring harness for a possible open circuit, then go to Step 9. |
| 8 | **INSPECT TP SENSOR NO.1**<br>• Reconnect all disconnected connectors.<br>• Inspect the TP sensor No.1. | Yes | Replace the throttle body, then go to the next step.<br>(See **INTAKE-AIR SYSTEM** |

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| | (See **THROTTLE POSITION (TP) SENSOR INSPECTION [MZR 2.5]**.)<br>• Is there any malfunction? | | **REMOVAL/ INSTALLATION [MZR 2.5]**.) |
| | | No | Go to the next step. |
| 9 | **VERIFY DTC TROUBLESHOOTING COMPLETED**<br>• Make sure to reconnect all disconnected connectors.<br>• Clear the DTC from the PCM memory using the M-MDS.<br>(See **AFTER REPAIR PROCEDURE [MZR 2.5]**.)<br>• Perform the KOEO or KOER self test.<br>(See **KOEO/ KOER SELF TEST [MZR 2.5]**.)<br>• Is the same DTC present? | Yes | Repeat the inspection from Step 1.<br>• If the malfunction recurs, replace the PCM.<br>(See **PCM REMOVAL/ INSTALLATION [MZR 2.5]**.)<br>Go to the next step. |
| | | No | Go to the next step. |
| 10 | **VERIFY AFTER REPAIR PROCEDURE**<br>• Perform the "AFTER REPAIR PROCEDURE".<br>(See **AFTER REPAIR PROCEDURE [MZR 2.5]**.)<br>• Are any DTCs present? | Yes | Go to the applicable DTC inspection.<br>(See **DTC TABLE [MZR 2.5]**.) |
| | | No | DTC troubleshooting completed. |

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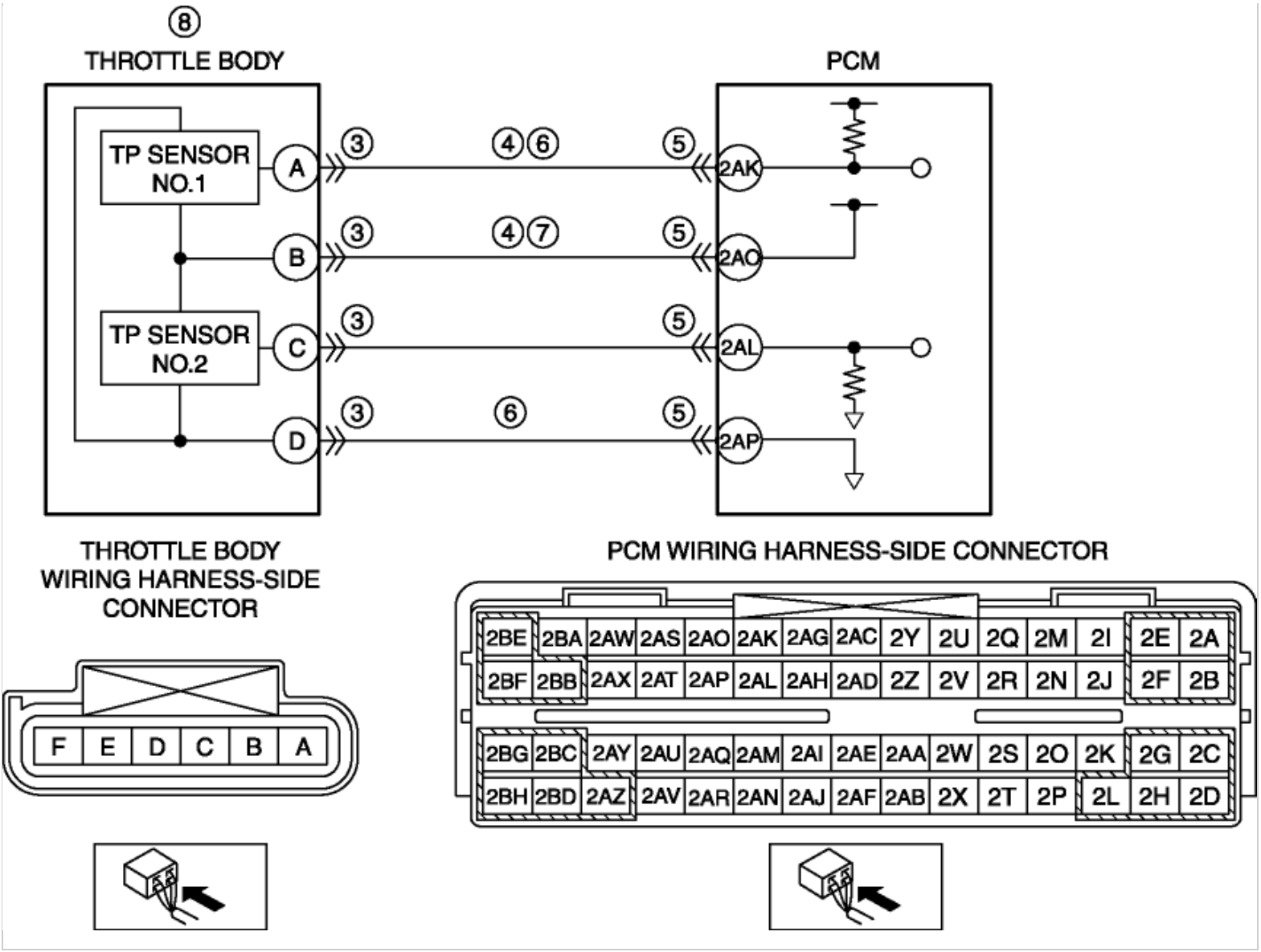
|---|---|
| DTC P0122:00 | TP sensor No.1 circuit low input |
| **DETECTION CONDITION** | • If the PCM detects that the TP sensor No.1 voltage is **below 0.2 V** while the engine is running, the PCM determines that the TP circuit has a malfunction.<br>**Diagnostic support note**<br>• This is a continuous monitor (CCM).<br>• The MIL illuminates if the PCM detects the above malfunction conditions in first drive cycle.<br>• FREEZE FRAME DATA (Mode 2)/Snapshot data is available.<br>• The DTC is stored in the PCM memory. |
| **POSSIBLE CAUSE** | • Throttle body connector or terminal malfunction<br>• Short to ground in wiring harness between throttle body terminal A and PCM terminal 2AK<br>• Short to ground in wiring harness between throttle body terminal B and PCM terminal 2AO<br>• PCM connector or terminal malfunction<br>• Short circuit in TP sensor No.1 signal circuit and ground circuit each other<br>• Open circuit in wiring harness between throttle body terminal B and PCM terminal 2AO<br>• TP sensor No.1 malfunction<br>• PCM malfunction |




**Diagnostic procedure**

| STEP | INSPECTION | | ACTION |
|---|---|---|---|
| 1 | **VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED**<br>• Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded? | Yes | Go to the next step. |
| | | No | Record the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step. |
| 2 | **VERIFY RELATED REPAIR INFORMATION AVAILABILITY**<br>• Verify related Service Bulletins and/or on-line repair information availability.<br>• Is any related repair information available? | Yes | Perform repair or diagnosis according to the available repair information.<br>• If the vehicle is not repaired, go to the next step. |
| | | No | Go to the next step. |
| 3 | **INSPECT THROTTLE BODY CONNECTOR CONDITION**<br>• Switch the ignition to off. | Yes | Repair or replace the terminal and/or connector, then go to Step 9. |

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| | • Disconnect the throttle body connector.<br>• Inspect for poor connection (such as damaged/pulled-out pins, corrosion).<br>• Is there any malfunction? | No | Go to the next step. |
| 4 | **INSPECT TP SENSOR NO.1 CIRCUIT FOR SHORT TO GROUND**<br>• Throttle body connector is disconnected.<br>• Inspect for continuity between the following terminals and body ground:<br>▪ Throttle body terminal A (wiring harness-side)<br>▪ Throttle body terminal B (wiring harness-side)<br>• Is there continuity? | Yes | If the short to ground circuit could be detected:<br>• Repair or replace the wiring harness for a possible short to ground.<br>If the short to ground circuit could not be detected:<br>• Replace the PCM (short to ground in PCM internal circuit).<br>(See **PCM REMOVAL/INSTALLATION [MZR 2.5]**.)<br>Go to Step 9. |
| | | No | Go to the next step. |
| 5 | **INSPECT PCM CONNECTOR CONDITION**<br>• Disconnect the PCM connector.<br>• Inspect for poor connection (such as damaged/pulled-out pins, corrosion).<br>• Is there any malfunction? | Yes | Repair or replace the terminal and/or connector, then go to Step 9. |
| | | No | Go to the next step. |
| 6 | **INSPECT TP SENSOR NO.1 SIGNAL AND GROUND CIRCUITS FOR SHORT EACH OTHER**<br>• Throttle body and PCM connectors are disconnected.<br>• Inspect for continuity between throttle body terminals A and D (wiring harness-side).<br>• Is there continuity? | Yes | Repair or replace the malfunctioning wiring harness, then go to Step 9. |
| | | No | Go to the next step. |
| 7 | **INSPECT TP SENSOR NO.1 POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT**<br>• Throttle body and PCM connectors are disconnected.<br>• Inspect for continuity between throttle body terminal B (wiring harness-side) and PCM terminal 2AO (wiring harness-side).<br>• Is there continuity? | Yes | Go to the next step. |
| | | No | Repair or replace the wiring harness for a possible open circuit, then go to Step 9. |
| 8 | **INSPECT TP SENSOR NO.1**<br>• Reconnect all disconnected connectors.<br>• Inspect the TP sensor No.1. | Yes | Replace the throttle body, then go to the next step.<br>(See **INTAKE-AIR SYSTEM** |

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| | (See **THROTTLE POSITION (TP) SENSOR INSPECTION [MZR 2.5]**.)<br>• Is there any malfunction? | | **REMOVAL/ INSTALLATION [MZR 2.5]**.) |
| | | No | Go to the next step. |
| 9 | **VERIFY DTC TROUBLESHOOTING COMPLETED**<br>• Make sure to reconnect all disconnected connectors.<br>• Clear the DTC from the PCM memory using the M-MDS.<br>(See **AFTER REPAIR PROCEDURE [MZR 2.5]**.)<br>• Perform the KOEO or KOER self test.<br>(See **KOEO/ KOER SELF TEST [MZR 2.5]**.)<br>• Is the same DTC present? | Yes | Repeat the inspection from Step 1.<br>• If the malfunction recurs, replace the PCM.<br>(See **PCM REMOVAL/ INSTALLATION [MZR 2.5]**.)<br>Go to the next step. |
| | | No | Go to the next step. |
| 10 | **VERIFY AFTER REPAIR PROCEDURE**<br>• Perform the "AFTER REPAIR PROCEDURE".<br>(See **AFTER REPAIR PROCEDURE [MZR 2.5]**.)<br>• Are any DTCs present? | Yes | Go to the applicable DTC inspection.<br>(See **DTC TABLE [MZR 2.5]**.) |
| | | No | DTC troubleshooting completed. |

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