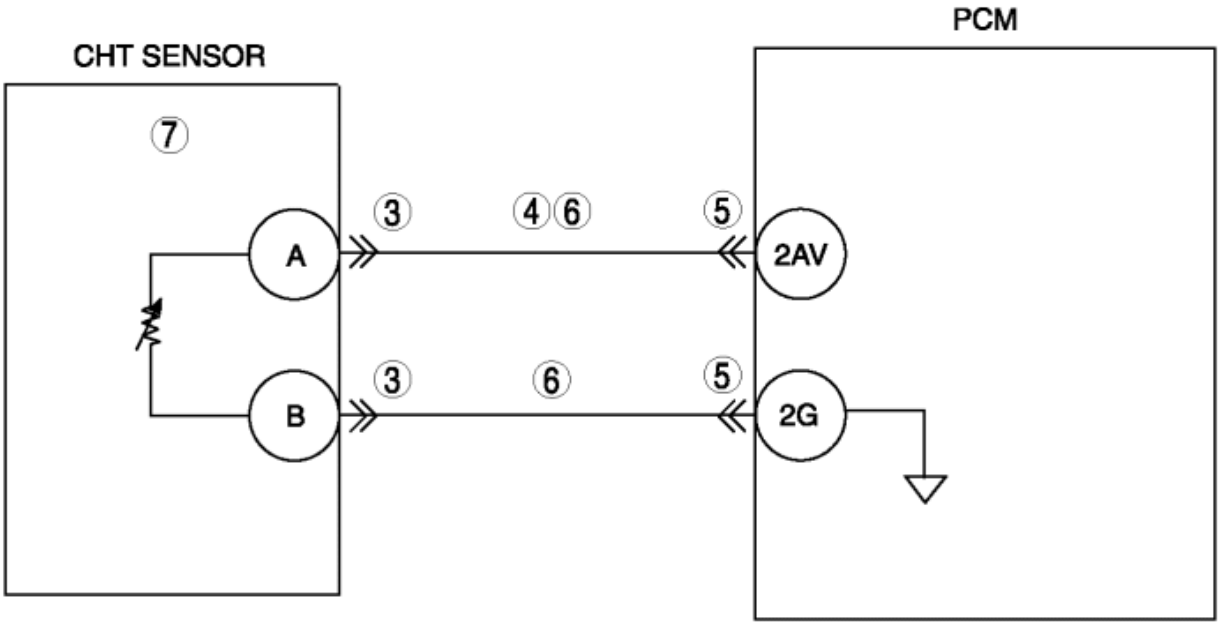
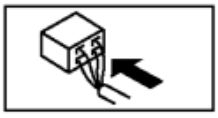
# 2012 - Mazda6 - Engine

## DTC P1289:00 [MZI 3.7 V6]

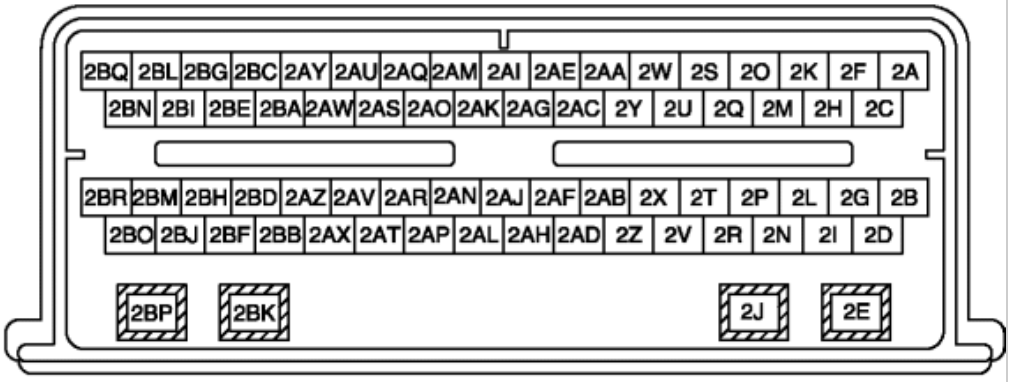
| | |
|---|---|
| DTC P1289:00 | CHT sensor circuit high input |
| **DETECTION CONDITION** | • Indicates a CHT sensor circuit open. |
| **POSSIBLE CAUSE** | • Short to power supply in wiring harness between CHT sensor terminal A and PCM terminal 2AV<br>• Connector or terminal malfunction<br>• Open circuit in wiring harness between CHT sensor terminal A and PCM terminal 2AV<br>• Open circuit in wiring harness between CHT sensor terminal B and PCM terminal 2G<br>• CHT sensor malfunction |

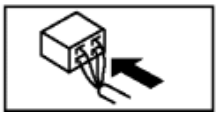



CHT SENSOR
WIRING HARNESS-SIDE CONNECTOR

PCM
WIRING HARNESS-SIDE CONNECTOR



**Diagnostic procedure**

| STEP | INSPECTION | | ACTION |
|---|---|---|---|
| 1 | **VERIFY FREEZE FRAME DATA HAS BEEN RECORDED**<br>• 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**<br>• Verify related Service Bulletins and/or on-line repair information availability.<br>• Is any related Service Bulletins available? | Yes | Perform repair or diagnosis according to the available Service Bulletins.<br>• If the vehicle is not repaired, go to the next step. |

| | | | |
|---|---|---|---|
| | | No | Go to the next step. |
| 3 | **INSPECT POOR CONNECTION OF CHT SENSOR CONNECTOR**<br>• Switch the ignition off.<br>• Disconnect CHT sensor connector.<br>• Inspect for poor connection (such as damaged/pulled-out pins, corrosion).<br>• Are there any malfunction? | Yes | Repair or replace suspected part, then go to Step 8. |
| | | No | Go to the next step. |
| 4 | **INSPECT CHT SENSOR SIGNAL CIRCUIT FOR SHORT TO POWER SUPPLY**<br>• Switch the ignition ON (Engine off).<br>• Measure the voltage between CHT sensor terminal A (wiring harness-side) and body ground.<br>• Is the voltage **B+** ? | Yes | Repair or replace suspected part, then go to Step 8. |
| | | No | Go to the next step. |
| 5 | **INSPECT PCM CONNECTOR FOR POOR CONNECTION**<br>• Disconnect the PCM connector.<br>• Inspect for poor connection (such as damaged/ pulled-out pins, corrosion).<br>• Are there any malfunction? | Yes | Repair or replace suspected part, then go to Step 8. |
| | | No | Go to the next step. |
| 6 | **INSPECT CHT SENSOR CIRCUIT FOR OPEN CIRCUIT**<br>• Inspect the continuity between the following circuit:<br>▪ CHT sensor terminal A (wiring harness-side) and PCM terminal 2AV (wiring harness-side).<br>▪ CHT sensor terminal B (wiring harness-side) and PCM terminal 2G (wiring harness-side).<br>• Are there continuity? | Yes | Go to the next step. |
| | | No | Repair or replace suspected part, then go to Step 8. |
| 7 | **INSPECT CHT SENSOR**<br>• Inspect the CHT sensor.<br>(See **CYLINDER HEAD TEMPERATURE (CHT) SENSOR INSPECTION [MZI 3.7 V6]**.)<br>• Is there any malfunction? | Yes | Replace the CHT sensor, then go to the next step. |
| | | No | Go to the next step. |
| 8 | **VERIFY TROUBLESHOOTING OF DTC P1289:00 HAS BEEN COMPLETED**<br>• Verify that all disconnected connectors reconnected.<br>• Clear the DTC from the PCM memory using the M-MDS. | Yes | Repeat the inspection from Step 1.<br>• If the malfunction recurs, replace the PCM.<br>(See **PCM REMOVAL/ INSTALLATION [MZI 3.7 V6]** |

| | | | |
|---|---|---|---|
| | • Perform the KOEO or KOER self-test.<br>(See **KOEO/ KOER SELF TEST [MZI 3.7 V6]**.)<br>• Is the PENDING CODE for the DTC present? | | .)<br>Go to the next step. |
| | | No | Go to the next step. |
| 9 | **VERIFY AFTER REPAIR PROCEDURE**<br>• Perform the "AFTER REPAIR PROCEDURE".<br>(See **AFTER REPAIR PROCEDURE [MZI 3.7 V6]**.)<br>• Are any DTCs present? | Yes | Go to the applicable DTC inspection.<br>(See **DTC TABLE [MZI 3.7 V6]**.) |
| | | No | Troubleshooting completed. |

**< Previous** **Next >**

**Back to Top**

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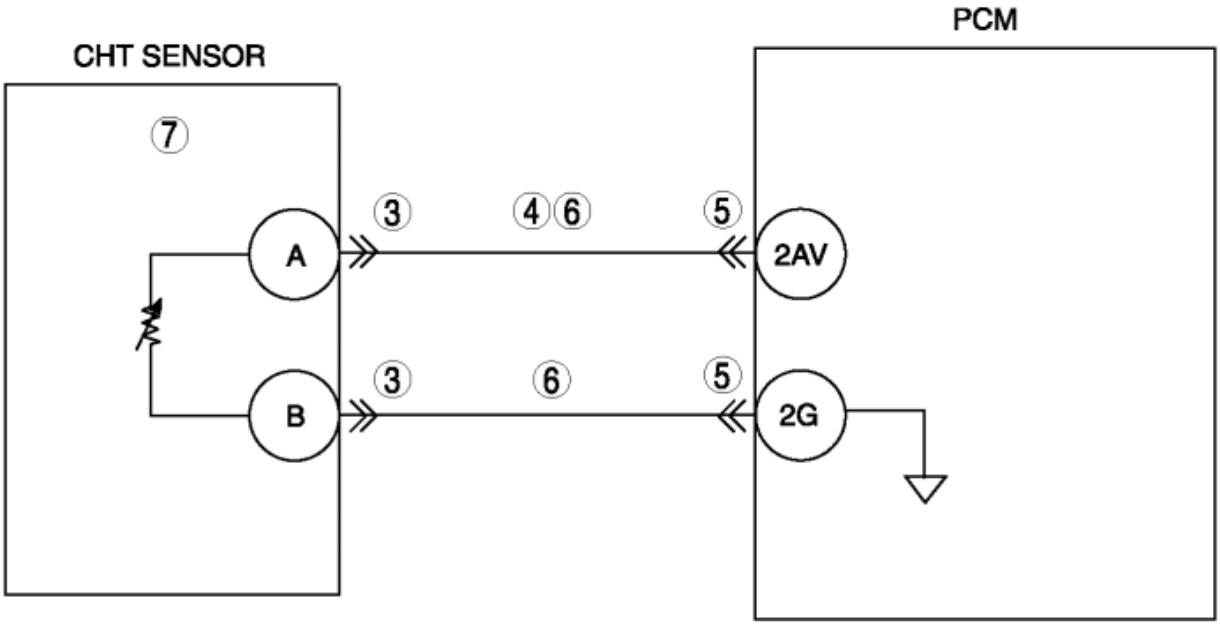


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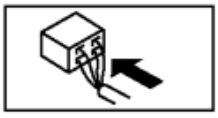

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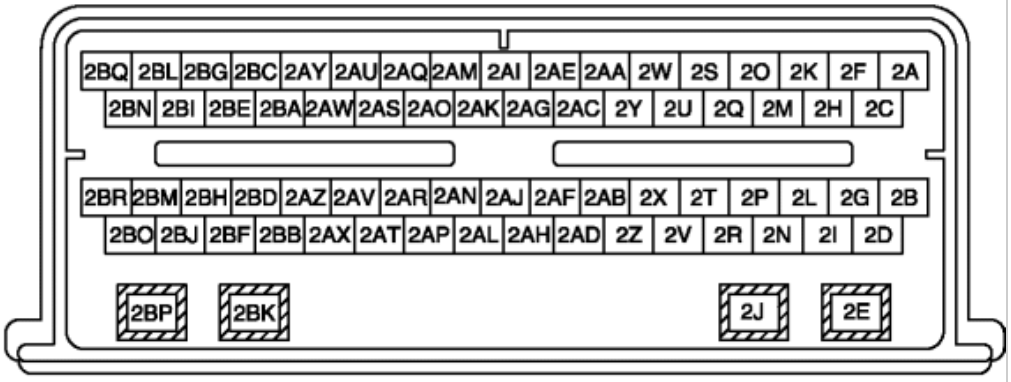


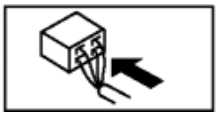

**Diagnostic procedure**

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| | | | |
|---|---|---|---|
| | | No | Go to the next step. |
| 3 | **INSPECT POOR CONNECTION OF CHT SENSOR CONNECTOR**<br>• Switch the ignition off.<br>• Disconnect CHT sensor connector.<br>• Inspect for poor connection (such as damaged/pulled-out pins, corrosion).<br>• Are there any malfunction? | Yes | Repair or replace suspected part, then go to Step 8. |
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| | • Perform the KOEO or KOER self-test.<br>(See **KOEO/ KOER SELF TEST [MZI 3.7 V6]**.)<br>• Is the PENDING CODE for the DTC present? | | .)<br>Go to the next step. |
| | | No | Go to the next step. |
| 9 | **VERIFY AFTER REPAIR PROCEDURE**<br>• Perform the "AFTER REPAIR PROCEDURE".<br>(See **AFTER REPAIR PROCEDURE [MZI 3.7 V6]**.)<br>• Are any DTCs present? | Yes | Go to the applicable DTC inspection.<br>(See **DTC TABLE [MZI 3.7 V6]**.) |
| | | No | Troubleshooting completed. |

**< Previous** **Next >**

**Back to Top**

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