

DTC P0117 [ZJ, Z6]

B3E010200100W06

DTC P0117	ECT sensor circuit low input
DETECTION CONDITION	<ul style="list-style-type: none"> The PCM monitors the ECT sensor signal at PCM terminal 2J. If the PCM detects that the ECT sensor voltage is less than 0.20 V, the PCM determines that the ECT sensor circuit has a malfunction. <p>Diagnostic support note</p> <ul style="list-style-type: none"> This is a continuous monitor (CCM). The MIL illuminates if the PCM detects the above malfunction condition during the first drive cycle. PENDING CODE is available if the PCM detects the above malfunction condition. FREEZE FRAME DATA is available. The DTC is stored in the PCM memory.
POSSIBLE CAUSE	<ul style="list-style-type: none"> ECT sensor malfunction Connect or terminal malfunction Short to ground in wiring harness between ECT sensor terminal A and PCM connector terminal 2J PCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED	Yes Go to the next step.
		Record the FREEZE FRAME DATA on the repair

	• Has FREEZE FRAME DATA been recorded?	No	order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY • Verify related service repair information availability. • Is any related repair information available?	Yes	Perform repair or diagnosis according to the available repair information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	INSPECT ECT SENSOR CONNECTOR FOR POOR CONNECTION • Turn the ignition switch off. • Disconnect the ECT sensor connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 7.
		No	Go to the next step.
4	INSPECT ECT SENSOR SIGNAL CIRCUIT FOR SHORT TO GND • Turn the ignition switch off. • Inspect for continuity between ECT sensor terminal A (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 7.
		No	Go to the next step.
5	INSPECT ECT SENSOR • Inspect the ECT sensor. (See ENGINE COOLANT TEMPERATURE (ECT) SENSOR INSPECTION [ZJ, Z6].) • Is there any malfunction?	Yes	Replace the ECT sensor, then go to Step 7. (See ENGINE COOLANT TEMPERATURE (ECT) SENSOR REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
6	INSPECT PCM CONNECTOR FOR POOR CONNECTION • Turn the ignition switch off. • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminal, then go to the next step.
		No	Go to the next step.
7	VERIFY TROUBLESHOOTING OF DTC P0117 COMPLETED • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the WDS or equivalent. • Start the engine. • Is the same DTC present?	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
8	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [ZJ, Z6].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [ZJ, Z6].)
		No	DTC troubleshooting completed.