

DTC P0507 [ZJ, Z6]

B3E010200500W04

DTC P0507	IAC system RPM higher than expected
DETECTION CONDITION	<ul style="list-style-type: none"> The PCM compares the actual idle speed with the target idle speed when the engine is running. If the actual idle speed is higher than the targeted by 200 rpm for 14 s, the PCM determines that the IAC system RPM is higher than expected. <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 in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle. FREEZE FRAME DATA is available. The DTC is stored in the PCM memory.
POSSIBLE CAUSE	<ul style="list-style-type: none"> Vacuum hoses improper connection IAC valve malfunction Accelerator cable misadjustment Throttle valve malfunction IAT sensor malfunction ECT sensor malfunction CKP sensor malfunction PCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED <ul style="list-style-type: none"> Has FREEZE FRAME DATA been recorded? 	Yes Go to the next step.
		No Record the FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY <ul style="list-style-type: none"> 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	VERIFY RELATED PENDING CODE OR STORED DTC <ul style="list-style-type: none"> Turn the ignition switch off, then to the ON position (Engine off). Verify the related PENDING CODE or stored DTCs. Are other DTCs present? 	Yes Go to the applicable DTC inspection. (See DTC TABLE [ZJ, Z6].)
		No Go to the next step.
4	INSPECT VACUUM HOSE FOR POOR CONNECTION <ul style="list-style-type: none"> Are the vacuum hoses connected completely? (See INTAKE-AIR SYSTEM HOSE ROUTING DIAGRAM [ZJ, Z6].)	Yes Go to the next step.
		No Connect the vacuum hose completely, then go to Step 11. (See INTAKE-AIR SYSTEM HOSE ROUTING DIAGRAM [ZJ, Z6].)
5	INSPECT IAC VALVE <ul style="list-style-type: none"> Inspect the IAC valve. (See IDLE AIR CONTROL (IAC) VALVE INSPECTION [ZJ, Z6].)	Yes Repair IAC valve, then go to Step 11. (See IDLE AIR CONTROL (IAC) VALVE REMOVAL/INSTALLATION [ZJ, Z6].)

	• Is there any malfunction?	No	Go to the next step.
6	INSPECT ACCELERATOR CABLE FREE PLAY • Inspect the accelerator cable free play. (See ACCELERATOR CABLE INSPECTION/ADJUSTMENT [ZJ, Z6].) • Is there any malfunction?	Yes	Adjust the accelerator cable free play, then go to Step 11. (See ACCELERATOR CABLE INSPECTION/ADJUSTMENT [ZJ, Z6].)
		No	Go to the next step.
7	INSPECT THROTTLE VALVE • Remove the throttle body. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [ZJ, Z6].) • Is there any malfunction?	Yes	Clean or repair the throttle body, then go to Step 11. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
8	INSPECT IAT SENSOR • Inspect the IAT sensor. (See INTAKE AIR TEMPERATURE (IAT) SENSOR INSPECTION [ZJ, Z6].) • Is there any malfunction?	Yes	Replace the MAF/IAT sensor, then go to Step 11. (See MASS AIR FLOW (MAF)/INTAKE AIR TEMPERATURE (IAT) SENSOR REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
9	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 11. (See ENGINE COOLANT TEMPERATURE (ECT) SENSOR REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
10	INSPECT CKP SENSOR • Inspect the CKP sensor. (See CRANKSHAFT POSITION (CKP) SENSOR INSPECTION [ZJ, Z6].) • Is there any malfunction?	Yes	Replace the CKP sensor, then go to the next step. (See CRANKSHAFT POSITION (CKP) SENSOR REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
11	VERIFY TROUBLESHOOTING OF DTC P0507 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 PENDING CODE for this DTC present?	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION [ZJ, Z6].)
		No	Go to the next step.
12	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.