

DTC P0506 [LF]

B3E010201087W03

DTC P0506	Idle control system RPM lower than expected
DETECTION CONDITION	<ul style="list-style-type: none"> Actual idle speed is lower than expected by 100 rpm for 14 s, when brake pedal is depressed (brake switch is on) and steering wheel is held straight ahead (power steering pressure switch is off). <p>Note</p> <ul style="list-style-type: none"> If atmospheric pressure is less than 72.3 kPa {542 mmHg, 21.3 inHg} or intake air temperature is below -10 °C {14 °F}, the PCM cancels diagnosis of P0506. <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 conditions 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 first drive cycle. FREEZE FRAME DATA is available. DTC is stored in the PCM memory.
POSSIBLE CAUSE	<ul style="list-style-type: none"> IAC valve malfunction Air cleaner element clogged Air intake passage clogged A/C relay control circuit malfunction Generator malfunction Purge solenoid valve malfunction Low engine compression (Over capacity of blow-by gas) PCM malfunction

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 the FREEZE FRAME DATA on repair 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	VERIFY RELATED PENDING OR STORED DTC • Turn the ignition switch to off then to the ON position (Engine off). • Verify pending code or stored DTCs using the WDS or equivalent. • Is other DTC present?	Yes Repair the applicable DTCs. (See DTC TABLE [LF] .)
		No Go to the next step.
4	INSPECT IAC VALVE MALFUNCTION • Perform IAC valve inspection. (See IDLE AIR CONTROL (IAC))	Yes Go to the next step.

	VALVE INSPECTION [LF]. • Is IAC valve normal?	No	Replace the IAC valve, then go to Step 11.
5	INSPECT A/C MAGNET CLUTCH OPERATION • Turn the fan switch off. • Is the magnet clutch still on?	Yes	Refer to "A/C is always on or A/C compressor runs continuously." of ENGINE SYMPTOM TROUBLESHOOTING, then go to Step 11. (See ENGINE SYMPTOM TROUBLESHOOTING [LF].)
		No	Go to the next step.
6	INSPECT PURGE SOLENOID VALVE MALFUNCTION • Perform the purge solenoid valve inspection. (See PURGE SOLENOID VALVE INSPECTION [ZJ, Z6, LF].) • Is the purge solenoid valve normal?	Yes	Go to the next step.
		No	Replace the purge solenoid valve, then go to Step 11.
7	INSPECT AIR CLEANER ELEMENT • Remove the air cleaner element with the engine running. • Is the engine speed increased?	Yes	Replace air cleaner the element, then go to Step 11.
		No	Go to the next step.
8	INSPECT THROTTLE BODY PASSAGE • Is the throttle body clogged?	Yes	Clean or replace the throttle body passage, then go to Step 11.
		No	Go to the next step.
9	INSPECT ENGINE COMPRESSION • Inspect engine compression. (See COMPRESSION INSPECTION [LF].) • Is engine compression normal?	Yes	Go to the next step.
		No	Overhaul the engine, then go to Step 11.
10	INSPECT GENERATOR • Perform generator inspection. (See GENERATOR INSPECTION [LF].) • Is generator normal?	Yes	Go to the next step.
		No	Repair or replace the related part, then go to the next step.
11	VERIFY TROUBLESHOOTING OF DTC P0506 COMPLETED • Make sure to reconnect all disconnected connectors. • Start engine. • Clear the DTC from the PCM memory using the WDS or equivalent. • Depress the brake pedal for 14 s or more . • Is the PENDING CODE for this DTC present?	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION [LF].)
		No	Go to the next step.
12	VERIFY AFTER REPAIR PROCEDURE • Perform the "After Repair Procedure". (See AFTER REPAIR PROCEDURE [LF].) • Are any DTC present?	Yes	Go to the applicable DTC troubleshooting. (See DTC TABLE [LF].)
		No	Troubleshooting completed.