

DTC P0507:00 [SKYACTIV-G 2.0]

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DTC P0507:00	IAC system RPM higher than expected
DETECTION CONDITION	<ul style="list-style-type: none"> The actual idle speed is higher than expected by 200 rpm for 14 s, when the brake pedal is depressed (brake switch is on). <p>Note</p> <ul style="list-style-type: none"> If the atmospheric pressure is less than 72.3 kPa {0.737 kgf/cm², 10.5 psi} or the intake air temperature is below -10 °C {14 °F}, the PCM cancels the diagnosis of DTC P0507:00. <p>Diagnostic support note</p> <ul style="list-style-type: none"> This is a continuous monitor (CCM). The check engine light 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 first drive cycle. FREEZE FRAME DATA (Mode 2)/Snapshot data is available. The DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	—
POSSIBLE CAUSE	<ul style="list-style-type: none"> Vacuum hose not installed correctly Drive-by-wire control system related sensor malfunction <ul style="list-style-type: none"> TP sensor malfunction Air mass measurement system malfunction Throttle valve malfunction (stuck open) PCM malfunction
SYSTEM WIRING DIAGRAM	—

Diagnostic Procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED <ul style="list-style-type: none"> 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 SERVICE INFORMATION AVAILABILITY <ul style="list-style-type: none"> Verify related Service Information availability. Is any related Service Information available? 	Yes Perform repair or diagnosis according to the available Service Information. • If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	VERIFY RELATED PENDING CODE AND/OR DTC <ul style="list-style-type: none"> Switch the ignition to off, then to ON (engine off). Perform the Pending Trouble Code Access Procedure and DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) Are any other PENDING CODEs and/or DTCs present? 	Yes Go to the applicable PENDING CODE or DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
		No Go to the next step.
4	INSPECT VACUUM HOSE CONNECTION <ul style="list-style-type: none"> Visually inspect the vacuum hoses connection. (See INTAKE-AIR SYSTEM VACUUM HOSE ROUTING DIAGRAM [SKYACTIV-G 2.0].) Is there any malfunction? 	Yes Reconnect the vacuum hoses correctly, then go to Step 7.
		No Go to the next step.
5	INSPECT DRIVE-BY-WIRE CONTROL SYSTEM MALFUNCTION <ul style="list-style-type: none"> Inspect the TP sensor. (See THROTTLE POSITION (TP) SENSOR INSPECTION [SKYACTIV-G 2.0].) Is there any malfunction? 	Yes Replace the throttle body, then go to Step 7. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No Go to the next step.
6	INSPECT THROTTLE BODY <ul style="list-style-type: none"> Inspect the throttle body. (See THROTTLE BODY INSPECTION [SKYACTIV-G 2.0].) Is there any malfunction? 	Yes Replace the throttle body, then go to the next step. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].)
		No Go to the next step.

STEP	INSPECTION	ACTION
7	VERIFY DTC TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> • Make sure to reconnect all disconnected connectors. • Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) • Depress the brake pedal for 14 s or more. • Perform the Pending Trouble Code Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) • Is the PENDING CODE for this DTC present? 	Yes Repeat the inspection from Step 1. • If the malfunction recurs, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Go to the next step.
		No Go to the next step.
8	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none"> • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) • Are any DTCs present? 	Yes Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
		No DTC troubleshooting completed.