

NO.9 FAST IDLE/RUNS ON [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

id0103g3801500

9	FAST IDLE/RUNS ON
DESCRIPTION	<ul style="list-style-type: none"> Engine speed continues at fast idle after warm-up. Engine runs after ignition is switched off.
POSSIBLE CAUSE	<ul style="list-style-type: none"> Cooling system malfunction PCM DTC is stored Accelerator pedal stuck depressed Erratic signal to PCM <ul style="list-style-type: none"> APP sensor or related circuit malfunction CPP switch or related circuit malfunction (MTX) Neutral switch No.1 or related circuit malfunction (MTX) Communication error between TCM and PCM (ATX) A/F sensor or related circuit malfunction HO2S or related circuit malfunction Improper air/fuel mixture ratio control operation Improper load signal input <ul style="list-style-type: none"> Improper A/C request signal Improper operation of drive-by-wire control system Throttle body malfunction Fuel injector malfunction Spill valve control solenoid valve (built-into high pressure fuel pump) malfunction Improper operation of cruise control system Air leakage from intake-air system Injector driver (built-into PCM) malfunction <p>Warning The following troubleshooting flow chart contains the fuel system diagnosis and repair procedures. Read the following warnings before performing the fuel system services:</p> <ul style="list-style-type: none"> Fuel vapor is hazardous. It can easily ignite, causing serious injury and damage. Always keep sparks and flames away from fuel. Fuel line spills and leakage are dangerous. Fuel can ignite and cause serious injury or death and damage. Fuel can also irritate skin and eyes. To prevent this, always complete "BEFORE SERVICE PRECAUTION" and "AFTER SERVICE PRECAUTION" described in this manual. (See BEFORE SERVICE PRECAUTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See AFTER SERVICE PRECAUTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) <p>Caution</p> <ul style="list-style-type: none"> Disconnecting/connecting the quick release connector without cleaning it may possibly cause damage to the fuel pipe and quick release connector. Always clean the quick release connector joint area before disconnecting/connecting, and make sure that it is free of foreign matter.

Diagnostic Procedure

STEP	INSPECTION	RESULTS	ACTION
1	INSPECT COOLING SYSTEM FOR MALFUNCTION <ul style="list-style-type: none"> Access the ECT PID using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) Start the engine and warm it up completely. Is the ECT PID value between 82—112 °C {180—234 °F}? 	Yes	Go to the next step.
		No	ECT PID value is higher than 112 °C {234 °F} : <ul style="list-style-type: none"> Perform the symptom troubleshooting "NO.17 COOLING SYSTEM CONCERNS-OVERHEATING". (See NO.17 COOLING SYSTEM CONCERNS-OVERHEATING [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) ECT PID value is less than 82 °C {180 °F} : <ul style="list-style-type: none"> Perform the symptom troubleshooting "NO.18 COOLING SYSTEM CONCERNS-RUNS COLD". (See NO.18 COOLING SYSTEM CONCERNS-RUNS COLD [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
2	VERIFY PCM DTC <ul style="list-style-type: none"> Retrieve any DTCs using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) Are any DTCs present? 	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.

STEP	INSPECTION	RESULTS	ACTION
3	VERIFY CURRENT INPUT SIGNAL STATUS Caution <ul style="list-style-type: none"> • While performing this step, always operate the vehicle in a safe and lawful manner. • When the M-MDS is used to observe monitor system status while driving, be sure to have another technician with you, or record the data in the M-MDS using the PID/DATA MONITOR AND RECORD capturing function and inspect later. <ul style="list-style-type: none"> • Access the following PIDs using the M-MDS: (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) <ul style="list-style-type: none"> — APP1 — APP2 — CPP (MTX) — CPP/PNP (MTX) — O2S11 — O2S12 — SHRTFT1 — LONGFT1 • Do the PIDs indicate the correct values under the malfunction condition? (See PCM INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) 	Yes	Go to the next step.
		No	APP1, APP2 PIDs are not as specified: <ul style="list-style-type: none"> • Inspect the APP sensor. (See ACCELERATOR PEDAL POSITION (APP) SENSOR INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) CPP PID is not as specified: (MTX) <ul style="list-style-type: none"> • Inspect the CPP switch. (See CLUTCH PEDAL POSITION (CPP) SWITCH INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) CPP/PNP PID is not as specified: (MTX) <ul style="list-style-type: none"> • Inspect the neutral switch No.1. (See NEUTRAL SWITCH INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) O2S11, SHRTFT1, LONGFT1 PIDs are not as specified: <ul style="list-style-type: none"> • Inspect the A/F sensor. (See AIR FUEL RATIO (A/F) SENSOR INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) O2S12 PID is not as specified: <ul style="list-style-type: none"> • Inspect the HO2S. (See HEATED OXYGEN SENSOR (HO2S) INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) Repair or replace the malfunctioning part according to the inspection results. <ul style="list-style-type: none"> • If the malfunction remains: <ul style="list-style-type: none"> — Inspect communication error between TCM and PCM. (ATX) <ul style="list-style-type: none"> • Repair or replace the malfunctioning part according to the inspection results if necessary. — Perform the “INTERMITTENT CONCERN TROUBLESHOOTING” procedure. (See INTERMITTENT CONCERN TROUBLESHOOTING [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
4	DETERMINE IF MALFUNCTION CAUSE IS A/C REQUEST SIGNAL OR OTHER <ul style="list-style-type: none"> • Access the AC_REQ PID using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Monitor the AC_REQ PID while turning on and off the air conditioner using the switch on the control panel. • Does the AC_REQ PID value change from on to off according to switch control panel? 	Yes	Go to the next step.
		No	If the AC_REQ PID is always ON: <ul style="list-style-type: none"> • Perform the symptom troubleshooting “NO.24 A/C IS ALWAYS ON OR A/C COMPRESSOR RUNS CONTINUOUSLY”. (See NO.24 A/C IS ALWAYS ON OR A/C COMPRESSOR RUNS CONTINUOUSLY [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) If the AC_REQ PID is always OFF: <ul style="list-style-type: none"> • Perform the symptom troubleshooting “NO.23 A/C DOES NOT WORK SUFFICIENTLY”. (See NO.23 A/C DOES NOT WORK SUFFICIENTLY [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
5	INSPECT DRIVE-BY-WIRE CONTROL SYSTEM OPERATION <ul style="list-style-type: none"> • Perform the TP sweep inspection. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Does the drive-by-wire control system work properly? 	Yes	Visually inspect the throttle body (damage/scratching). <ul style="list-style-type: none"> • If there is any malfunction: <ul style="list-style-type: none"> — Repair or replace the malfunctioning part according to the inspection results. • If there is no malfunction: <ul style="list-style-type: none"> — Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.
6	INSPECT FUEL INJECTOR OPERATION <ul style="list-style-type: none"> • Perform the Fuel Injector Operation Inspection. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) • Do the fuel injectors operate properly? 	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.

STEP	INSPECTION	RESULTS	ACTION
7	INSPECT HIGH PRESSURE FUEL PUMP <ul style="list-style-type: none"> Inspect the high pressure fuel pump. (See HIGH PRESSURE FUEL PUMP INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) Is there any malfunction? 	Yes	Replace the high pressure fuel pump. (See HIGH PRESSURE FUEL PUMP REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
		No	Go to the next step.
8	INSPECT CRUISE CONTROL SYSTEM <ul style="list-style-type: none"> Inspect the operation of cruise control system. Does the cruise control system work properly? 	Yes	Go to the next step.
		No	Repair or replace the malfunctioning part according to the inspection results.
9	INSPECT INTAKE-AIR SYSTEM FOR AIR LEAKAGE <ul style="list-style-type: none"> Inspect for leakage in intake-air system. Is there any leakage? 	Yes	Repair or replace the malfunctioning part according to the inspection results.
		No	Injector driver malfunction. <ul style="list-style-type: none"> Replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) If the problem remains, overhaul the engine.
10	Verify the test results. <ul style="list-style-type: none"> If normal, return to the diagnostic index to service any additional symptoms. (See SYMPTOM DIAGNOSTIC INDEX [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) If a malfunction remains, inspect the related Service Information and perform the repair or diagnosis. <ul style="list-style-type: none"> If the vehicle is repaired, troubleshooting is completed. If the vehicle is not repaired or additional diagnostic information is not available, replace the PCM. (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) 		