

DTC P0101:00 [SKYACTIV-D 2.2]

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DTC P0101:00	MAF sensor circuit range/performance problem
DETECTION CONDITION	<ul style="list-style-type: none"> When the following conditions are met, the intake air amount is the specification or less (fluctuates with engine speed) for a continuous 7 s. MONITORING CONDITIONS <ul style="list-style-type: none"> Battery voltage: above 8 V Engine speed: 1,000—4,000 rpm When the following conditions are met, the intake air amount is the specification or more (fluctuates with engine speed) for a continuous 7 s. MONITORING CONDITIONS <ul style="list-style-type: none"> Intake air temperature: 60 °C {140 °F} or less Desired EGR valve position: below 1 % Desired intake shutter valve position: above 60 % <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 the first drive cycle. FREEZE FRAME DATA (Mode 2)/Snapshot data is available. DTC is stored in the PCM memory.
FAIL-SAFE FUNCTION	<ul style="list-style-type: none"> PCM restricts engine torque. Inhibits the EGR control. Inhibits the diesel particulate filter regeneration control. The fast idle up correction for the idle speed control is inhibited. Inhibits engine-stop by operating the i-stop function. PCM restricts engine-transaxle integration control.
POSSIBLE CAUSE	<ul style="list-style-type: none"> MAF sensor/IAT sensor No.1 connector or terminals malfunction MAF sensor malfunction PCM connector or terminals malfunction Air suction or restriction in intake-air system (between MAF sensor and intake manifold) Turbocharger malfunction (turbine wheel and/or compressor wheel damaged, stuck) Improper operation of EGR control system PCM malfunction
SYSTEM WIRING DIAGRAM	Not applicable

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 off, then ON (engine off). Perform the Pending Trouble Code Access Procedure and DTC Reading Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) Are any other PENDING CODEs and/or DTCs present? 	Yes Go to the applicable PENDING CODE or DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].)
		No Go to the next step.

STEP	INSPECTION		ACTION
4	INSPECT MAF SENSOR/IAT SENSOR NO.1 CONNECTOR CONDITION <ul style="list-style-type: none"> Switch the ignition off. Disconnect the MAF sensor/IAT sensor No.1 connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is there any malfunction? 	Yes	Repair or replace the connector and/or terminals, then go to Step 11.
		No	Go to the next step.
5	INSPECT MAF SENSOR <ul style="list-style-type: none"> Reconnect all disconnected connectors. Inspect the MAF sensor. (See MASS AIR FLOW (MAF) SENSOR INSPECTION [SKYACTIV-D 2.2].) Is there any malfunction? 	Yes	Replace the MAF sensor/IAT sensor No.1, then go to Step 11. (See MASS AIR FLOW (MAF) SENSOR/INTAKE AIR TEMPERATURE (IAT) SENSOR NO.1 REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
		No	Go to the next step.
6	INSPECT PCM CONNECTOR CONDITION <ul style="list-style-type: none"> Disconnect the PCM connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is there any malfunction? 	Yes	Repair or replace the connector and/or terminals, then go to Step 11.
		No	Go to the next step.
7	INSPECT INTAKE AIR SYSTEM FOR EXCESSIVE AIR SUCTION <ul style="list-style-type: none"> Visually inspect for loose, cracked or damaged hoses on intake air system. <p>Note</p> <ul style="list-style-type: none"> Engine speed may change when rust penetrating agent is sprayed on the air suction area. <ul style="list-style-type: none"> Is there any malfunction? 	Yes	Repair or replace the malfunctioning part according to the inspection results, then go to Step 11.
		No	Go to the next step.
8	INSPECT FOR RESTRICTION OR CLOGGED IN INTAKE AIR SYSTEM <ul style="list-style-type: none"> Verify if there is restriction or clogged into the intake air system (such as between MAF sensor and intake manifold). Is there any malfunction? 	Yes	Repair or replace the malfunctioning part according to the inspection results, then go to Step 11.
		No	Go to the next step.
9	INSPECT TURBOCHARGER <ul style="list-style-type: none"> Inspect the turbocharger. (See TURBOCHARGER INSPECTION [SKYACTIV-D 2.2].) Is there any malfunction? 	Yes	Replace the turbocharger, then go to Step 11. (See TURBOCHARGER REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
		No	Go to the next step.
10	INSPECT EGR VALVE CONTROL SYSTEM OPERATION <ul style="list-style-type: none"> Inspect the EGR valve operation. (See ENGINE CONTROL SYSTEM OPERATION INSPECTION [SKYACTIV-D 2.2].) Is there any malfunction? 	Yes	Repair or replace the malfunctioning part according to the inspection results, then go to the next step. (See EGR VALVE REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
		No	Go to the next step.
11	VERIFY DTC TROUBLESHOOTING COMPLETED <ul style="list-style-type: none"> Always reconnect all disconnected connectors. Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].) Start the engine. Repeat deceleration 10 times using engine braking after accelerating the vehicle speed to 60 km/h {37 mph}. Perform the Pending Trouble Code Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].) 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-D 2.2].) Go to the next step.
		No	Go to the next step.

STEP	INSPECTION		ACTION
12	VERIFY AFTER REPAIR PROCEDURE • Perform the “AFTER REPAIR PROCEDURE”. (See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].)
		No	DTC troubleshooting completed.