

DTC P0138:00 [SKYACTIV-G 2.0]

id0102h1702600

DTC P0138:00	HO2S circuit high input
DETECTION CONDITION	<ul style="list-style-type: none"> The PCM monitors input voltage from HO2S. If the input voltage from the HO2S is above 1.2 V or HO2S bias voltage is above 1.8 V for 5 s, the PCM determines that the HO2S circuit input is high. <p>Diagnostic support note</p> <ul style="list-style-type: none"> This is a continuous monitor (A/F sensor, HO2S). 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"> HO2S connector or terminals malfunction PCM connector or terminals malfunction Short to power supply in wiring harness between the following terminals: <ul style="list-style-type: none"> HO2S terminal A—PCM terminal 2AI HO2S terminal B—PCM terminal 2AG HO2S malfunction PCM malfunction

Diagnostic Procedure

Diagnostic Procedure		
STEP	INSPECTION	ACTION
1	IDENTIFY TRIGGER DTC FOR FREEZE FRAME DATA (MODE 2) <ul style="list-style-type: none">Perform the Freeze Frame PID Data Access Procedure. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].)Is the DTC P0138:00 on FREEZE FRAME DATA (Mode 2)?	Yes Go to the next step.
		No Go to the troubleshooting procedure for DTC on FREEZE FRAME DATA (Mode 2). (See DTC TABLE [SKYACTIV-G 2.0].)

STEP	INSPECTION		ACTION
2	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA AND DIAGNOSTIC MONITORING TEST RESULTS HAVE BEEN RECORDED <ul style="list-style-type: none"> Have the FREEZE FRAME DATA (Mode 2)/ snapshot data and DIAGNOSTIC MONITORING TEST RESULTS (A/F sensor, HO2S related) been recorded? 	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA (Mode 2)/snapshot data and DIAGNOSTIC MONITORING TEST RESULTS on the repair order, then go to the next step.
3	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.
4	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.
5	INSPECT HO2S CONNECTOR CONDITION <ul style="list-style-type: none"> Switch the ignition to off. Disconnect the HO2S 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 9.
		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 9.
		No	Go to the next step.
7	INSPECT HO2S CIRCUIT FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> Verify that the HO2S and PCM connectors are disconnected. Switch the ignition ON (engine off or on). Measure the voltage at the following terminals (wiring harness-side): <ul style="list-style-type: none"> HO2S terminal A HO2S terminal B Is the voltage 0 V? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible short to power supply, then go to Step 9.
8	INSPECT HO2S <ul style="list-style-type: none"> Switch the ignition to off. Reconnect all disconnected connectors. Inspect the HO2S. (See HEATED OXYGEN SENSOR (HO2S) INSPECTION [SKYACTIV-G 2.0].) Is there any malfunction? 	Yes	Replace the HO2S, then go to the next step. (See HEATED OXYGEN SENSOR (HO2S) REMOVAL/ INSTALLATION [SKYACTIV-G 2.0].)
		No	Go to the next step.
9	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].) Perform the KOEO or KOER self test. (See KOEO/KOER SELF 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.

STEP	INSPECTION		ACTION
10	VERIFY AFTER REPAIR PROCEDURE • 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.