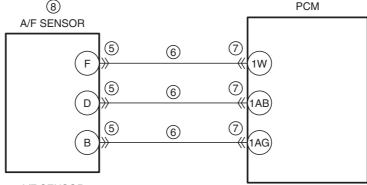
DTC P0131:00	A/F sensor circuit low input			
DETECTION CONDITION	James, remager 11			
FAIL-SAFE	• Fixes the duty value of the A/F sensor heater.			
FUNCTION				
POSSIBLE CAUSE	A/F sensor connector or terminals malfunction Short to ground in wiring harness between the following terminals: A/F sensor terminal F—PCM terminal 1W A/F sensor terminal D—PCM terminal 1AB A/F sensor terminal B—PCM terminal 1AG PCM connector or terminals malfunction A/F sensor malfunction PCM malfunction			
	(8) PCM			



A/F SENSOR WIRING HARNESS-SIDE CONNECTOR





PCM WIRING HARNESS-SIDE CONNECTOR

/	TEETEATDWIDSTDOTDKIDGE TDATCHICGICCHECTERY	1BR 1BM 1BH 1BC 1AX 1AS 1AN 1A 1AD 1Y 1T 1O 1J 1E 1A					
	1EF 1EB 1DX 1DT 1DP 1DL 1DH 1DB 1CX 1CT 1CP 1CL 1CH 1CD 1BZ	1BS 1BN 1BI 1BD 1AY 1AT 1AO 1AJ 1AE 1Z 1U 1P 1K 1F 1B					
		1BT 1BO 1BJ 1BE 1AZ 1AU 1AP 1AK 1AF 1AA 1V 1Q 1L 1G 1C					
	1EI 1EG1EC1DY1DU1DQ1DM1DI 1DE1DC1CY1CU1CQ1CM1CI 1CE1CA1BW	1BU 1BP 1BK 1BF 1BA 1AV 1AQ 1AL 1AG 1AB 1W 1R 1M 1H 1D					
		1BV 1BQ 1BL 1BG 1BB 1AW 1AR 1AM 1AH 1AC 1X 1S 1N 1I					



Diagnostic Procedure

STEP	INSPECTION		ACTION
1	IDENTIFY TRIGGER DTC FOR FREEZE FRAME	Yes	Go to the next step.
1	DATA (MODE 2) Perform the Freeze Frame PID Data Access Procedure.	No	Go to the flext step. Go to the troubleshooting procedure for DTC on FREEZE FRAME DATA (Mode 2). (See DTC TABLE [SKYACTIV-G 2.0].)
	(See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0].) • Is the DTC P0131:00 on FREEZE FRAME DATA (Mode 2)?		
2	VERIFY FREEZE FRAME DATA (MODE 2)/	Yes	Go to the next step.
	SNAPSHOT DATA AND DIAGNOSTIC MONITORING TEST RESULTS HAVE BEEN RECORDED • Have the FREEZE FRAME DATA (Mode 2)/ snapshot data and DIAGNOSTIC MONITORING TEST RESULTS (A/F sensor, HO2S related) been recorded?	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	Yes	Perform repair or diagnosis according to the available
	AVAILABILITY		Service Information.
	Verify related Service Information availability.		If the vehicle is not repaired, go to the next step.
4	• Is any related Service Information available? VERIFY RELATED PENDING CODE AND/OR DTC	No Yes	Go to the next step. Go to the applicable PENDING CODE or DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
	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?	No	Go to the next step.
5	INSPECT A/F SENSOR CONNECTOR CONDITION	Yes	Repair or replace the connector and/or terminals, then go to Step 9.
	 Switch the ignition to off. Disconnect the A/F sensor connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is there any malfunction? 	No	Go to the next step.
6	INSPECT A/F SENSOR CIRCUIT FOR SHORT TO GROUND • Verify that the A/F sensor connector is disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: — A/F sensor terminal F — A/F sensor terminal D — A/F sensor terminal B • Is there continuity?	Yes	If the short to ground circuit could be detected in the wiring harness: • Repair or replace the wiring harness for a possible short to ground. If the short to ground circuit could not be detected in the wiring harness: • Replace the PCM (short to ground in the PCM internal circuit). (See PCM REMOVAL/INSTALLATION [SKYACTIV-G 2.0].) Go to Step 9.
		No	Go to the next step.
7	INSPECT PCM CONNECTOR CONDITION Disconnect the PCM connector. Inspect for poor connection (such as demaged).	Yes	Repair or replace the connector and/or terminals, then go to Step 9.
8	 Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is there any malfunction? INSPECT A/F SENSOR Reconnect all disconnected connectors. Inspect the A/F sensor. 	Yes	Replace the A/F sensor, then go to the next step. (See AIR FUEL RATIO (A/F) SENSOR REMOVAL/ INSTALLATION [SKYACTIV-G 2.0].)
	(See AIR FUEL RATIO (A/F) SENSOR INSPECTION [SKYACTIV-G 2.0].) • Is there any malfunction?	No	Intermittent concern exists. • Perform the "INTERMITTENT CONCERN TROUBLESHOOTING" procedure. (See INTERMITTENT CONCERN TROUBLESHOOTING [SKYACTIV-G 2.0].)

STEP	INSPECTION		ACTION
9	VERIFY DTC TROUBLESHOOTING COMPLETED • 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 KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-G	Yes	11211911
	2.0].) • Is the PENDING CODE for this DTC present?		
10	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE".	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-G 2.0].)
	(See AFTER REPAIR PROCEDURE [SKYACTIV-G 2.0].) • Are any DTCs present?	No	DTC troubleshooting completed.