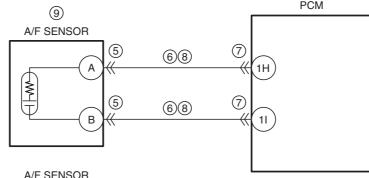
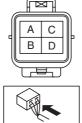
DTC P0131:00	A/F sensor circuit low input				
	• The PCM monitors the input voltage from the A/F sensor when the engine is running. If the following PCM				
	terminal voltage is below specified for 3 s , the PCM determines that the A/F sensor circuit voltage is low.				
	— PCM terminal 1H: 0.40 V				
	— PCM terminal 1I: 0.40 V				
DETECTION	MONITORING CONDITIONS				
DETECTION — Battery voltage: 11—16 V					
CONDITION	Diagnostic support note				
	• This is an intermittent monitor (A/F sensor).				
The check engine light illuminates if the PCM detects the above malfunction condition during a succession.					
	cycle.				
	FREEZE FRAME DATA (Mode 2)/Snapshot data is available. DTC is stored in the PCM memory.				
	PCM restricts engine torque.				
FAIL-SAFE	• Inhibits the EGR control.				
FUNCTION • Inhibits the diesel particulate filter regeneration control.					
TONOTION	Inhibits engine-stop by operating the i-stop function.				
	A/F sensor connector or terminals malfunction				
	Short to ground in wiring harness between the following terminals:				
	A/F sensor terminal A—PCM terminal 1H				
POSSIBLE	A/F sensor terminal B—PCM terminal 1I				
CAUSE	PCM connector or terminals malfunction				
A/F sensor signal circuit and ground circuit are shorted to each other					
	A/F sensor malfunction				
	PCM malfunction				
	PCM				



A/F SENSOR WIRING HARNESS-SIDE CONNECTOR



PCM WIRING HARNESS-SIDE CONNECTOR

TEE TEA DWIDS TOO TOK TOO TO TOO TO TOO TO TOO TO TOO TO	1BR 1BM 1BH 1BC 1AX 1AS 1AN 1AI 1AD 1Y 1T 1O 1J 1E 1A
	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 1EG 1EC 1DY 1DU 1DQ 1DM 1DI 1DE 1DC 1CY 1CU 1CQ 1CM 1CI 1CE 1CA 1BW	1BU 1BP 1BK 1BF 1BA 1AV 1AQ 1AL 1AG 1AB 1W 1R 1M 1H 1D
[1EJ 1EH 1ED 1DZ 1DV 1DR 1DN 1DJ [1DF 1DD 1CZ 1CV 1CR 1CN 1CJ 1CF 1CB 1BX	1BV 1BQ 1BL 1BG 1BB 1AW 1AR 1AM 1AH 1AC 1X 1S 1N 1I
	1EE 1EA 1DW 1DS 1DO 1DK 1DG 1DA 1CW 1CS 1CC 1CK 1CG 1CC 1BY 1DB 1CX 1CT 1CP 1CL 1CH 1CD 1BZ 1DE 1EG 1EC 1DY 1DU 1DQ 1DM 1DE 1DC 1CY 1CU 1CQ 1CM 1CI 1CE 1CA 1BW 1DE 1DC 1CY 1CU 1CQ 1CM 1CI 1CE 1CA 1BW 1CB 1CB



Diagnostic Procedure

STEP	STEP INSPECTION ACTION				
1	IDENTIFY TRIGGER DTC FOR FREEZE FRAME	Yes	Go to the next step.		
'	DATA (MODE 2)	No	Go to the froubleshooting procedure for DTC on FREEZE		
	Perform the Freeze Frame PID Data Access	INO	FRAME DATA (Mode 2).		
	Procedure.		(See DTC TABLE [SKYACTIV-D 2.2].)		
	(See ON-BOARD DIAGNOSTIC TEST		(See DTC TABLE [SKTACTIV-D 2.2].)		
	[SKYACTIV-D 2.2].)				
	• 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	No	Record the FREEZE FRAME DATA (Mode 2)/snapshot data		
	MONITORING TEST RESULTS HAVE BEEN	INO	and DIAGNOSTIC MONITORING TEST RESULTS on the		
	RECORDED		repair order, then go to the next step.		
	Have the FREEZE FRAME DATA (Mode 2)/		repair order, their go to the next step.		
	snapshot data and DIAGNOSTIC MONITORING				
	TEST RESULTS (A/F sensor related) been				
	recorded?				
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.		
	Is any related Service Information available?	No	Go to the next step.		
4	VERIFY RELATED PENDING CODE AND/OR	Yes	Go to the applicable PENDING CODE or DTC inspection.		
	DTC		(See DTC TABLE [SKYACTIV-D 2.2].)		
	Switch the ignition off, then ON (engine off).	No	Go to the next step.		
	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?	V	Danis annual and the annual action of the first of the fi		
5	INSPECT A/F SENSOR CONNECTOR CONDITION	Yes	Repair or replace the connector and/or terminals, then go to		
	Switch the ignition off.	No	Step 10. Go to the next step.		
	Disconnect the A/F sensor connector.	INU	OU to the heat step.		
	Inspect for poor connection (such as damaged/				
	pulled-out pins, corrosion).				
	• Is there any malfunction?				
6	INSPECT A/F SENSOR CIRCUIT FOR SHORT TO	Yes	If the short to ground circuit could be detected in the wiring		
	GROUND		harness:		
	Verify that the A/F sensor connector is		Repair or replace the wiring harness for a possible short to		
	disconnected.		ground.		
	Inspect for continuity between the following		If the short to ground circuit could not be detected in the		
	terminals (wiring harness-side) and body ground:		wiring harness:		
	A/F sensor terminal A		Replace the PCM (short to ground in the PCM internal		
	— A/F sensor terminal B		circuit).		
	Is there continuity?		(See PCM REMOVAL/INSTALLATION [SKYACTIV-D		
			2.2].)		
		NIC	Go to Step 10.		
7	INSPECT PCM CONNECTOR CONDITION	No Yes	Go to the next step. Repair or replace the connector and/or terminals, then go to		
'	Disconnect the PCM connector.	162	Step 10.		
	Inspect for poor connection (such as damaged/	No	Go to the next step.		
	pulled-out pins, corrosion).	110	CO to the flext step.		
	• Is there any malfunction?				
8	INSPECT A/F SENSOR SIGNAL CIRCUIT AND	Yes	Repair or replace the wiring harness for a possible short to		
	GROUND CIRCUIT FOR SHORT TO EACH		each other, then go to Step 10.		
	OTHER	No	Go to the next step.		
	Verify that the A/F sensor and PCM connectors				
	are disconnected.				
	Inspect for continuity between A/F sensor				
	terminals A and B (wiring harness-side).				
	• Is there continuity?				
			,		

STEP	INSPECTION		ACTION			
9	INSPECT A/F SENSORReconnect 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-D 2.2].)			
	(See AIR FUEL RATIO (A/F) SENSOR INSPECTION [SKYACTIV-D 2.2].) • Is there any malfunction?	No	Intermittent concern exists. • Perform the "INTERMITTENT CONCERN TROUBLESHOOTING" procedure. (See INTERMITTENT CONCERN TROUBLESHOOTING [SKYACTIV-D 2.2].)			
10	VERIFY DTC TROUBLESHOOTING COMPLETED Always reconnect all disconnected connectors. Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE	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.			
	[SKYACTIV-D 2.2].) • Perform the KOEO or KOER self test. (See KOEO/KOER SELF TEST [SKYACTIV-D 2.2].) • Is the same DTC present?	NO	Go to the next step.			
11	VERIFY AFTER REPAIR PROCEDURE • Perform the "AFTER REPAIR PROCEDURE".	Yes	Go to the applicable DTC inspection. (See DTC TABLE [SKYACTIV-D 2.2].)			
	(See AFTER REPAIR PROCEDURE [SKYACTIV-D 2.2].) • Are any DTCs present?	No	DTC troubleshooting completed.			