DTC: U0197:00/26:Er81 [Bluetooth SYSTEM (HANDS-FREE TELEPHONE (HF/TEL) SYSTEM)]

id0902g8408200

	U0197:00: Communication error with audio unit							
Description	• 26:Er81: CAN system communication error							
Data atiana anditiana	·							
Detection condition	CAN signal is not sent from Bluetooth unit							
Fail-safe function	Not applicable							
	• Short in wiring harness between Bluetooth unit and audio unit, short to power supply, short or open							
D	circuit to ground							
Possible cause	Audio unit malfunction							
	Bluetooth unit malfunction							
	1S 1 S							
	Bluetooth UNIT							
	(_{1T})							
	AUDIO UNIT							
	Bluetooth UNIT WIRING HARNESS-SIDE CONNECTOR							
WIRING HA	RNESS-SIDE CONNECTOR							
1AA 1Y 1W 1U 1S -	1Q 10 1M 1K 1I 1G 1E 1C 1A 2AC 2AA 2Y 2W 2W 2I 2G 2E 2C 2A							
1AB 1Z 1X 1V 1T	1R 1P 1N 1L 1J 1H 1F 1D 1B 2AD2AB 2Z 2X 2V 2T 2R 2P 2N 2L 2J 2H 2F 2D 2B 3							

Diagnostic Procedure

Step	Inspection		Action	
1	INSPECT FOR SHORT BETWEEN CAN	Yes	Go to the next step.	
	CIRCUITS	No	Go to Step 4.	
	Remove the glove compartment.			
	(See GLOVE COMPARTMENT REMOVAL/			
	INSTALLATION.)			
	Switch the ignition ON (engine off or on).			
	Measure the voltage between the following			
	terminals:			
	Between Bluetooth unit terminal S and			
	body ground			
	Between Bluetooth unit terminal T and body			
	ground			
	Are the measured voltage values between the			
	2 terminals the same?			

Step	Inspection		Action
2	DETERMINE IF SHORT OCCURRING	Yes	Go to the next step.
	BETWEEN LINES IS IN AUDIO UNIT	No	Replace the audio unit because there is a short between
	Switch the ignition off (LOCK).		circuits in the audio unit.
	Disconnect the negative battery cable.		(See AUDIO UNIT REMOVAL/INSTALLATION.)
	(See NEGATIVE BATTERY CABLE		After replacement, go to Step 13.
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	• Remove the audio unit.		
	(See AUDIO UNIT REMOVAL/		
	INSTALLATION.)		
	Disconnect the audio unit connector.		
	Connect the negative battery cable. (See NEGATIVE BATTERY CABLE)		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	Switch the ignition ON (engine off or on).		
	Measure the voltage between the following		
	terminals:		
	 Audio unit connector (vehicle wiring 		
	harness) terminal 2I and body ground		
	 Audio unit connector (vehicle wiring 		
	harness) terminal 2J and body ground		
	Are the measured voltage values between the		
	2 terminals the same?		

Step	Inspection		Action
3	DETERMINE IF SHORT OCCURRING	Yes	Repair or replace the wiring harness between the audio
	BETWEEN LINES IS IN BLUETOOTH UNIT		unit and the Bluetooth unit because the wiring harness is
	Switch the ignition off (LOCK).		shorted between circuits, then go to Step 13.
	Disconnect the negative battery cable.	No	Replace the Bluetooth unit because there is a short
	(See NEGATIVE BATTERY CABLE	110	between circuits in the Bluetooth unit.
	DISCONNECTION/CONNECTION		(See Bluetooth UNIT REMOVAL/INSTALLATION.)
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		After replacement, go to Step 13.
	(See NEGATIVE BATTERY CABLE		Titles replacement, go to otop 10.
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	• Remove the Bluetooth unit.		
	(See Bluetooth UNIT REMOVAL/		
	INSTALLATION.)		
	Disconnect the Bluetooth unit connector.		
	Connect the negative battery cable.		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	• Switch the ignition ON (engine off or on).		
	Measure the voltage between the following		
	terminals:		
	Audio unit connector (vehicle wiring)		
	harness) terminal 2I and body ground		
	Audio unit connector (vehicle wiring)		
	harness) terminal 2J and body ground		
	Are the measured voltage values between the		
	2 terminals the same?		
4	INSPECT FOR SHORT TO POWER SUPPLY IN	Yes	Go to the next step.
	CAN CIRCUIT	No	Go to Step 7.
	Measure the voltage between the following		
	terminals:		
	Between Bluetooth unit terminal S and		
	body ground		
	Between Bluetooth unit terminal T and body		
	ground		
	Can B+ voltage be measured?		
	Note		
	If a short to power supply other than the B+		
	power supply has occurred, a constant		
	voltage other than B+ can be measured.		

Step	Inspection		Action
5	DETERMINE IF SHORT TO POWER SUPPLY	Yes	Go to the next step.
	IS OCCURRING IN AUDIO UNIT	No	Replace the audio unit because there is a short to the
	Switch the ignition off (LOCK).		power supply in the audio unit.
	Disconnect the negative battery cable.		(See AUDIO UNIT REMOVAL/INSTALLATION.)
	(See NEGATIVE BATTERY CABLE		After replacement, go to Step 13.
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	Remove the audio unit.		
	(See AUDIO UNIT REMOVAL/		
	INSTALLATION.)		
	Disconnect the audio unit connector.		
	Connect the negative battery cable.		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	Switch the ignition ON (engine off or on).		
	Measure the voltage between the following		
	terminals:		
	 Audio unit connector (vehicle wiring 		
	harness) terminal 2I and body ground		
	 Audio unit connector (vehicle wiring 		
	harness) terminal 2J and body ground		
	Can B+ voltage be measured?		
	Note		
	If a short to power supply other than the B+		
	power supply has occurred, a constant		
	voltage other than B+ can be measured.		
	voltage office than by can be incasticu.		

Step	Inspection		Action
6	DETERMINE IF SHORT TO POWER IS	Yes	Repair or replace the wiring harness between the audio
	OCCURRING IN BLUETOOTH UNIT	. 55	unit and the Bluetooth unit because the wiring harness is
	Switch the ignition off (LOCK).		shorted to the power supply, then go to Step 13.
	Disconnect the negative battery cable.	No	Replace the Bluetooth unit because there is a short to the
	(See NEGATIVE BATTERY CABLE	. 10	power supply in the Bluetooth unit.
	DISCONNECTION/CONNECTION		(See Bluetooth UNIT REMOVAL/INSTALLATION.)
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		After replacement, go to Step 13.
	(See NEGATIVE BATTERY CABLE		Titler replacement, go to etep re.
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	• Remove the Bluetooth unit.		
	(See Bluetooth UNIT REMOVAL/		
	INSTALLATION.)		
	Disconnect the Bluetooth unit connector.		
	Connect the bidetour unit connector. Connect the negative battery cable.		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	• Switch the ignition ON (engine off or on).		
	Measure the voltage between the following		
	terminals:		
	— Audio unit connector (vehicle wiring		
	harness) terminal 2I and body ground		
	Audio unit connector (vehicle wiring)		
	harness) terminal 2J and body ground		
	Can B+ voltage be measured?		
	Voltage be measured:		
	Note		
	If a short to power supply other than the B+		
	power supply has occurred, a constant		
	voltage other than B+ can be measured.		
7	INSPECT FOR SHORT TO GROUND IN CAN	Yes	Go to the next step.
	CIRCUIT	No	Go to Step 10.
	Switch the ignition off (LOCK).		·
	Disconnect the negative battery cable.		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-G 2.0, SKYACTIV-G 2.5		
	(WITHOUT i-stop)].)		
	(See NEGATIVE BATTERY CABLE		
	DISCONNECTION/CONNECTION		
	[SKYACTIV-D 2.2].)		
	Inspect for continuity between the following		
	terminals:		
	Between Bluetooth unit terminal S and		
	body ground		
	Between Bluetooth unit terminal T and body		
	ground		
	Is there continuity?		
	,		

Step	Inspection		Action
8	DETERMINE IF SHORT TO GROUND IS	Yes	Go to the next step.
	• Remove the audio unit. (See AUDIO UNIT REMOVAL/	No	Replace the audio unit because there is a short to ground inside the unit. (See AUDIO UNIT REMOVAL/INSTALLATION.)
	 INSTALLATION.) Disconnect the audio unit connector. Inspect for continuity between the following terminals: 		After replacement, go to Step 13.
	 Audio unit connector (vehicle wiring harness) terminal 2I and body ground Audio unit connector (vehicle wiring harness) terminal 2J and body ground 		
	• Is there continuity?		
9	DETERMINE IF SHORT TO GROUND IS OCCURRING IN BLUETOOTH UNIT Remove the Bluetooth unit.	Yes	Repair or replace the wiring harness between the audio unit and the Bluetooth unit because the wiring harness is shorted to ground, then go to Step 13.
	(See Bluetooth UNIT REMOVAL/ INSTALLATION.)	No	Replace the Bluetooth unit because there is a short to ground inside the unit.
	 Disconnect the Bluetooth unit connector. Inspect for continuity between the following terminals: 		(See Bluetooth UNIT REMOVAL/INSTALLATION.) After replacement, go to Step 13.
	 Audio unit connector (vehicle wiring harness) terminal 2I and body ground Audio unit connector (vehicle wiring 		
	harness) terminal 2J and body ground • Is there continuity?		
10	INSPECT CAN CIRCUIT FOR OPEN CIRCUIT	Yes	Go to the next step.
	Remove the audio unit. (See AUDIO UNIT REMOVAL/ INSTALLATION.) The state of the st	No	Go to Step 13.
	Disconnect the audio unit connector. Remove the Bluetooth unit. (See Bluetooth UNIT REMOVAL/ INSTALLATION.)		
	Disconnect the Bluetooth unit connector.Inspect for continuity between the following		
	terminals: — Inspect the wiring harness for continuity between Bluetooth unit connector (vehicle wiring harness side) terminal S and audio		
	unit connector (vehicle wiring harness side) terminal 2I. Inspect the wiring harness for continuity		
	between Bluetooth unit connector (vehicle wiring harness side) terminal T and audio unit connector (vehicle wiring harness side)		
	terminal 2J. • Is there continuity?		
11	INSPECT AUDIO UNIT RESISTANCE	Yes	Go to the next step.
''	Inspect the resistance between the audio unit	No	Replace the audio unit.
	terminal 2I and terminal 2J (part side). • Is the resistance 118—130 Ω ?		(See AUDIO UNIT REMOVAL/INSTALLATION.) After replacement, go to Step 13.
12	INSPECT BLUETOOTH UNIT RESISTANCE	Yes	Go to the next step.
	 Inspect the resistance between Bluetooth unit terminals S and T (part side). Is the resistance 118—130 Ω? 	No	Replace the Bluetooth unit. (See Bluetooth UNIT REMOVAL/INSTALLATION.)
	· 13 the resistance 110—130 M!		After replacement, go to the next step.

Step	Inspection		Action	
13	VERIFY THAT REPAIRS HAVE BEEN COMPLETED	Yes	Return to Step 1 and inspect for other possible causes. If the malfunction recurs, replace the Bluetooth unit, then go	
	Connect all the connectors.		to the next step.	
	 Perform an inspection of the Bluetooth unit 		(See Bluetooth UNIT REMOVAL/INSTALLATION.)	
	DTCs. (See DTC INSPECTION [Bluetooth SYSTEM (HANDS-FREE TELEPHONE (HF/TEL) SYSTEM)].) • Is the same DTC displayed?	No	Go to the next step.	
14	• Are any other DTCs displayed?	Yes	Repair the malfunctioning part according to the applicable DTC troubleshooting.	
		No	DTC troubleshooting completed.	