## DTC B1142:13 [FRONT BODY CONTROL MODULE (FBCM)]

id0902p2007700

System malfunction location	Front body control module (FBCM) power supply voltage (+IG1 power supply) input circuit malfunction				
Detection condition	• The front body control module (FBCM) detects an open circuit in the IG1 relay circuit for <b>2</b> s or more with the ignition switched ON (engine off or on).				
Fail-safe	<del>-</del>				
Possible cause	IG1 relay malfunction     Front body control module (FBCM) connector or terminal malfunction     C/U IG1 15 A fuse malfunction     Open circuit in the wiring harness between IG1 relay terminal C and front body control module (FBCM) terminal 2M     Front body control module (FBCM) malfunction				
BATTE	RY RELAY AND FUSE BLOCK FBCM				
711	MAIN FUSE  MAIN 200 A  D  C/U IG1 15 A  2M				
	IG1 RELAY FBCM (RELAY AND FUSE BLOCK) WIRING HARNESS-SIDE CONNECTOR				
	E				

**Diagnostic Procedure** 

Step	Inspection		Action	
1	VERIFY FRONT BODY CONTROL MODULE	Yes	Go to the next step.	
	(FBCM) DTCs AGAIN	No	Go to Step 7.	
	• Clear front body control module (FBCM) DTCs using the M-MDS.			
	(See CLEARING DTC [FRONT BODY			
	CONTROL MODULE (FBCM)].)			
	<ul> <li>Switch the ignition ON (engine off or on) and wait for 2 s or more.</li> </ul>			
	Perform the front body control module (FBCM)			
	DTC inspection using the M-MDS.			
	(See DTC INSPECTION [FRONT BODY			
	CONTROL MODULE (FBCM)].)			
	<ul><li>Is DTC B1142:13 displayed?</li></ul>			

Step	Inspection		Action
2	INSPECT IG1 RELAY FOR MALFUNCTION	Yes	Go to the next step.
	Switch the ignition to off. 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].) Remove the IG1 relay. Inspect the IG1 relay. (See RELAY INSPECTION.)	No	Replace the IG1 relay, then go to Step 6.
3	• Is the IG1 relay normal?  INSPECT FRONT BODY CONTROL MODULE	1/1	
4	<ul> <li>(FBCM) CONNECTOR CONDITION</li> <li>Disconnect the front body control module (FBCM) connector.</li> <li>Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection.</li> <li>Is the connector normal?</li> <li>INSPECT C/U IG1 15 A FUSE FOR</li> </ul>	Yes No	Go to the next step.  Repair or replace the connector, then go to Step 6.  Install the C/U IG1 15 A fuse, then go to the next step.
·	<ul> <li>MALFUNCTION</li> <li>Remove the C/U IG1 15 A fuse.</li> <li>Inspect the C/U IG1 15 A fuse.</li> <li>Is the C/U IG1 15 A fuse normal?</li> </ul>	No	If a fuse is burnt out:  Repair or replace the wiring harness which is shorted to ground.  Replace the fuse. If a fuse is damaged:  Replace the fuse. Go to Step 6.
5	INSPECT FRONT BODY CONTROL MODULE (FBCM) POWER SUPPLY VOLTAGE (+IG1 POWER SUPPLY) INPUT CIRCUIT FOR OPEN CIRCUIT  • Verify that the IG1 relay is removed.  • Verify that the front body control module (FBCM) connector is disconnected.  • Inspect the wiring harness for continuity between IG1 relay terminal C (vehicle wiring harness side) and front body control module (FBCM) terminal 2M (vehicle wiring harness side).  • Is there continuity?	Yes No	Go to the next step.  Repair or replace the wiring harness and go to the next step.

Step	Inspection		Action
6	Inspection  VERIFY THAT REPAIRS HAVE BEEN COMPLETED  Reconnect all the disconnected connectors.  Reconnect the disconnected 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].)  Clear front body control module (FBCM) DTCs using the M-MDS. (See CLEARING DTC [FRONT BODY	Yes	Repeat the inspection from Step 1.  • If the malfunction recurs, replace the front body control module (FBCM), then go to the next step. (See FRONT BODY CONTROL MODULE (FBCM) REMOVAL/INSTALLATION.)  Go to the next step.
7	<ul> <li>(See CLEARING DTC [FRONT BODY CONTROL MODULE (FBCM)].)</li> <li>Switch the ignition ON (engine off or on) and wait for 2 s or more.</li> <li>Perform the front body control module (FBCM) DTC inspection using the M-MDS. (See DTC INSPECTION [FRONT BODY CONTROL MODULE (FBCM)].)</li> <li>Is DTC B1142:13 displayed?</li> <li>VERIFY IF OTHER DTCs DISPLAYED</li> <li>Are any other DTCs displayed?</li> </ul>	Yes	Repair the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [FRONT BODY CONTROL MODULE (FBCM)].) DTC troubleshooting completed.