DTC B13D2:12 [FRONT BODY CONTROL MODULE (FBCM)]

id0902p2008700

System malfunction location	Front fog light relay circuit malfunction					
Detection	• The front body control module (FBCM) detects a short to power supply in the front fog light relay circuit					
condition	with the ignition switched ON (engine off or on).					
Fail-safe	-					
Possible cause	 Front fog light relay malfunction Front body control module (FBCM) connector or terminal malfunction Short to power supply in wiring harness between front fog light relay terminal E and front body control module (FBCM) terminal 2AB Front body control module (FBCM) malfunction 					
BATTERY	FRONT FOG LIGHT RELAY					
(D) (D)	MAIN 200 A FOG 15 A A A W E					
	FRONT FOG LIGHT RELAY FBCM (RELAY AND FUSE BLOCK) WIRING HARNESS-SIDE CONNECTOR					
	E A FRONT 2AA 2Y 2W 2U 2S 2Q 2O 2M 2K 2I 2G 2E 2C 2A 2AB 2Z 2X 2V 2T 2R 2P 2N 2L 2J 2H 2F 2D 2B					

Diagnostic Procedure

Step	Inspection		Action	
1	VERIFY FRONT BODY CONTROL MODULE	Yes	Go to the next step.	
	(FBCM) DTCs AGAIN	No	Go to Step 6.	
	Clear front body control module (FBCM) DTCs			
	using the M-MDS.			
	(See CLEARING DTC [FRONT BODY			
	CONTROL MODULE (FBCM)].)			
	Switch the ignition ON (engine off or on).			
	• Perform the front body control module (FBCM)			
	DTC inspection using the M-MDS.			
	(See DTC INSPECTION [FRONT BODY			
	CONTROL MODULE (FBCM)].)			
	• Is DTC B13D2:12 displayed?			

Step	Inspection		Action		
2	INSPECT FRONT FOG LIGHT RELAY FOR	Yes	Go to the next step.		
	MALFUNCTION • Switch the ignition to off.	No	Replace the front fog light relay, then go to Step 5.		
	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 front fog light relay. Inspect the front fog light relay.				
	(See RELAY INSPECTION.)				
	• Is the front fog light relay normal?	V	On the three months than		
3	INSPECT FRONT BODY CONTROL MODULE (FBCM) CONNECTOR CONDITION	Yes No	Go to the next step. Repair or replace the connector, then go to Step 5.		
	Disconnect the front body control module		repair of replace and sommers, along go to etop of		
	(FBCM) connector.				
	Inspect the connector engagement and connection condition and inspect the terminals				
	for damage, deformation, corrosion, or				
	disconnection. • Is the connector normal?				
4	INSPECT FRONT FOG LIGHT RELAY	Yes	Go to the next step.		
	CONTROL CIRCUIT FOR SHORT TO POWER	No	Repair or replace the wiring harness and go to the next		
	SUPPLY Norify that the front feet light relay is removed		step.		
	Verify that the front fog light relay is removed.Verify that the front body control module				
	(FBCM) connector is disconnected.				
	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 at front body control				
	module (FBCM) terminal 2AB (vehicle wiring				
	harness side). • Is the voltage 0 V ?				
	13 the Voltage V V:				

Step	Inspection		Action
5 5	VERIFY THAT REPAIRS HAVE BEEN		Repeat the inspection from Step 1.
	COMPLETED	Yes	If the malfunction recurs, replace the front body control
	Reconnect all the disconnected connectors.		module (FBCM), then go to the next step.
	Reconnect the disconnected negative battery		(See FRONT BODY CONTROL MODULE (FBCM)
	cable.		REMOVAL/INSTALLATION.)
	(See NEGATIVE BATTERY CABLE	No	Go to the next step.
	DISCONNECTION/CONNECTION	INO	Go to the flext step.
	[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		
	CONTROL MODULE (FBCM)].)		
	• Switch the ignition ON (engine off or on).		
	Operate the light switch in HEAD position and		
	fog light switch in F.FOG position.		
	Perform the front body control module (FBCM)		
	DTC inspection using the M-MDS.		
	(See DTC INSPECTION [FRONT BODY		
	CONTROL MODULE (FBCM)].)		
	• Is DTC B13D2:12 displayed?		
6	VERIFY IF OTHER DTCs DISPLAYED	Yes	Repair the malfunctioning part according to the applicable
	Are any other DTCs displayed?		DTC troubleshooting.
			(See DTC TABLE [FRONT BODY CONTROL MODULE
			(FBCM)].)
		No	DTC troubleshooting completed.