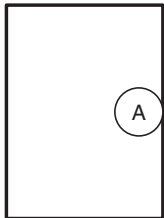
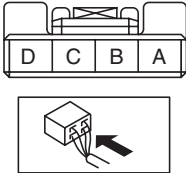
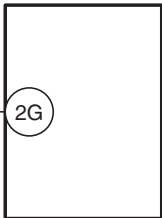
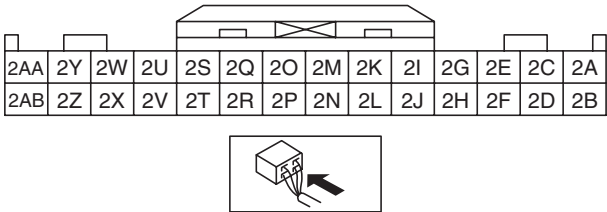


DTC U0231:68 [FRONT BODY CONTROL MODULE (FBCM)]

id0902p2010300

System malfunction location	Communication error with auto-light sensor/rain sensor
Detection condition	• The front body control module (FBCM) receives error signals from the auto-light sensor/rain sensor for 5 s or more with the ignition switched ON (engine off or on).
Fail-safe	—
Possible cause	<ul style="list-style-type: none"> • Auto-light sensor/rain sensor connector or terminal malfunction • Front body control module (FBCM) connector or terminal malfunction • Short to ground in wiring harness between auto-light sensor/rain sensor terminal A and front body control module (FBCM) terminal 2G • Short to power supply in wiring harness between auto-light sensor/rain sensor terminal A and front body control module (FBCM) terminal 2G • Open circuit in wiring harness between auto-light sensor/rain sensor terminal A and front body control module (FBCM) terminal 2G • Auto-light sensor/rain sensor malfunction • Front body control module (FBCM) malfunction
<div> <div> <p>AUTO LIGHT SENSOR / RAIN SENSOR</p>  </div> <div> <p>AUTO LIGHT SENSOR / RAIN SENSOR WIRING HARNESS-SIDE CONNECTOR</p>  </div> </div> <div> <div> <p>FBCM</p>  </div> <div> <p>FBCM WIRING HARNESS-SIDE CONNECTOR</p>  </div> </div>	

Diagnostic Procedure

Step	Inspection	Action
1	<p>VERIFY FRONT BODY CONTROL MODULE (FBCM) DTCs AGAIN</p> <ul style="list-style-type: none"> • 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) and wait for 5 s or more. • Perform the front body control module (FBCM) DTC inspection using the M-MDS. (See DTC INSPECTION [FRONT BODY CONTROL MODULE (FBCM)].) • Is the DTC U0231:68 displayed? 	<p>Yes Go to the next step.</p> <p>No Go to Step 9.</p>

Step	Inspection	Action	
2	INSPECT AUTO-LIGHT SENSOR/RAIN SENSOR CONNECTOR CONDITION <ul style="list-style-type: none"> • 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].) • Disconnect the auto-light sensor/rain sensor connector. • Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection. • Is the connector normal? 	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 8.
3	INSPECT FRONT BODY CONTROL MODULE (FBCM) CONNECTOR CONDITION <ul style="list-style-type: none"> • Disconnect the front body control module (FBCM) connector. • Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection. • Is the connector normal? 	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 8.
4	INSPECT AUTO-LIGHT SENSOR/RAIN SENSOR CIRCUIT FOR SHORT TO GROUND <ul style="list-style-type: none"> • Verify that the auto-light sensor/rain sensor and front body control module (FBCM) connectors are disconnected. • Inspect for continuity between front body control module (FBCM) terminal 2G (vehicle wiring harness side) and body ground. • Is there continuity? 	Yes	Repair or replace the wiring harness which is shorted to ground, then go to Step 8.
		No	Go to the next step.
5	INSPECT AUTO-LIGHT SENSOR/RAIN SENSOR CIRCUIT FOR SHORT TO POWER SUPPLY <ul style="list-style-type: none"> • Verify that the auto-light sensor/rain sensor and front body control module (FBCM) connectors are 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 2G (vehicle wiring harness side). • Is the voltage 0 V? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness which is shorted to power supply, then go to Step 8.

Step	Inspection	Action	
6	INSPECT AUTO-LIGHT SENSOR/RAIN SENSOR CIRCUIT FOR OPEN CIRCUIT <ul style="list-style-type: none"> Verify that the auto-light sensor/rain sensor and front body control module (FBCM) connectors are disconnected. 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].) Inspect the wiring harness for continuity between auto-light sensor/rain sensor terminal A (vehicle wiring harness side) and front body control module (FBCM) terminal 2G (vehicle wiring harness side). Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness which has an open circuit, then go to Step 8.
7	PERFORM DTC INSPECTION AND VERIFY IF MALFUNCTIONING PART IS AUTO-LIGHT SENSOR/RAIN SENSOR <ul style="list-style-type: none"> 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 CONTROL MODULE (FBCM)].) Switch the ignition ON (engine off or on) and wait for 5 s or more. Perform the front body control module (FBCM) DTC inspection using the M-MDS. (See DTC INSPECTION [FRONT BODY CONTROL MODULE (FBCM)].) Is the DTC U0231:68 displayed? 	Yes	Replace the auto-light sensor/rain sensor, then go to the next step. (See RAIN SENSOR REMOVAL/INSTALLATION.)
		No	Go to Step 9.

Step	Inspection	Action	
8	VERIFY THAT REPAIRS HAVE BEEN COMPLETED <ul style="list-style-type: none"> • 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 CONTROL MODULE (FBCM)].) • Switch the ignition ON (engine off or on) and wait for 5 s or more. • Perform the front body control module (FBCM) DTC inspection using the M-MDS. (See DTC INSPECTION [FRONT BODY CONTROL MODULE (FBCM)].) • Is the DTC U0231:68 displayed? 	Yes	replace the front body control module (FBCM), then go to the next step. (See FRONT BODY CONTROL MODULE (FBCM) REMOVAL/INSTALLATION.)
		No	Go to the next step.
9	VERIFY IF OTHER DTCs DISPLAYED <ul style="list-style-type: none"> • Are any other DTCs displayed? 	Yes	Repair the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [FRONT BODY CONTROL MODULE (FBCM)].)
		No	DTC troubleshooting completed.