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## 2016 MAZDA MX-5 / Miata OEM Service and Repair Workshop Manual

[Go to manual page](#)

Step	Inspection		Action
2	<b>INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (RH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Switch the ignition off.</li> <li>• Disconnect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li> <li>• Disconnect the rear door latch and lock actuator (RH) 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> </ul>	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 6.
3	<b>INSPECT REAR DOOR LATCH SWITCH (RH)</b> <ul style="list-style-type: none"> <li>• Inspect the rear door latch switch (RH). (See <b>REAR DOOR LATCH SWITCH INSPECTION.</b>)</li> <li>• Is the rear door latch switch (RH) normal?</li> </ul>	Yes	Go to the next step.
		No	Replace the rear door latch and lock actuator (RH), then go to Step 6. (See <b>REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION.</b> )
4	<b>INSPECT REAR BODY CONTROL MODULE (RBCM) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the rear body control module (RBCM) 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> </ul>	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 6.
5	<b>INSPECT REAR DOOR LATCH SWITCH (RH) CIRCUIT FOR SHORT TO GROUND</b> <ul style="list-style-type: none"> <li>• Verify that the rear body control module (RBCM) and rear door latch and lock actuator (RH) connectors are disconnected.</li> <li>• Inspect for continuity between rear door latch and lock actuator (RH) terminal B (wiring harness-side) and body ground.</li> <li>• Is there continuity?</li> </ul>	Yes	Refer to the wiring diagram and verify whether or not there is a common connector between rear body control module (RBCM) terminal 3Q and rear door latch and lock actuator (RH) terminal B. <b>If there is a common connector:</b> <ul style="list-style-type: none"> <li>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to ground.</li> <li>• Repair or replace the malfunctioning part.</li> </ul> <b>If there is no common connector:</b> <ul style="list-style-type: none"> <li>• Repair or replace the wiring harness which has a short to ground.</li> </ul> Go to the next step.
		No	Go to the next step.
6	<b>VERIFY THAT REPAIRS HAVE BEEN COMPLETED</b> <ul style="list-style-type: none"> <li>• Always reconnect all disconnected connectors.</li> <li>• Connect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li> <li>• Clear the DTC for the rear body control module (RBCM) using the M-MDS. (See <b>CLEARING DTC [REAR BODY CONTROL MODULE (RBCM)].</b>)</li> <li>• Retrieve the rear body control module (RBCM) DTCs using the M-MDS. (See <b>DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)].</b>)</li> <li>• Is the same DTC displayed?</li> </ul>	Yes	Repeat the inspection from Step 1. <ul style="list-style-type: none"> <li>• If the malfunction recurs, replace the rear body control module (RBCM). (See <b>REAR BODY CONTROL MODULE (RBCM) REMOVAL/INSTALLATION.</b>)</li> </ul> Go to the next step.
		No	Go to the next step.

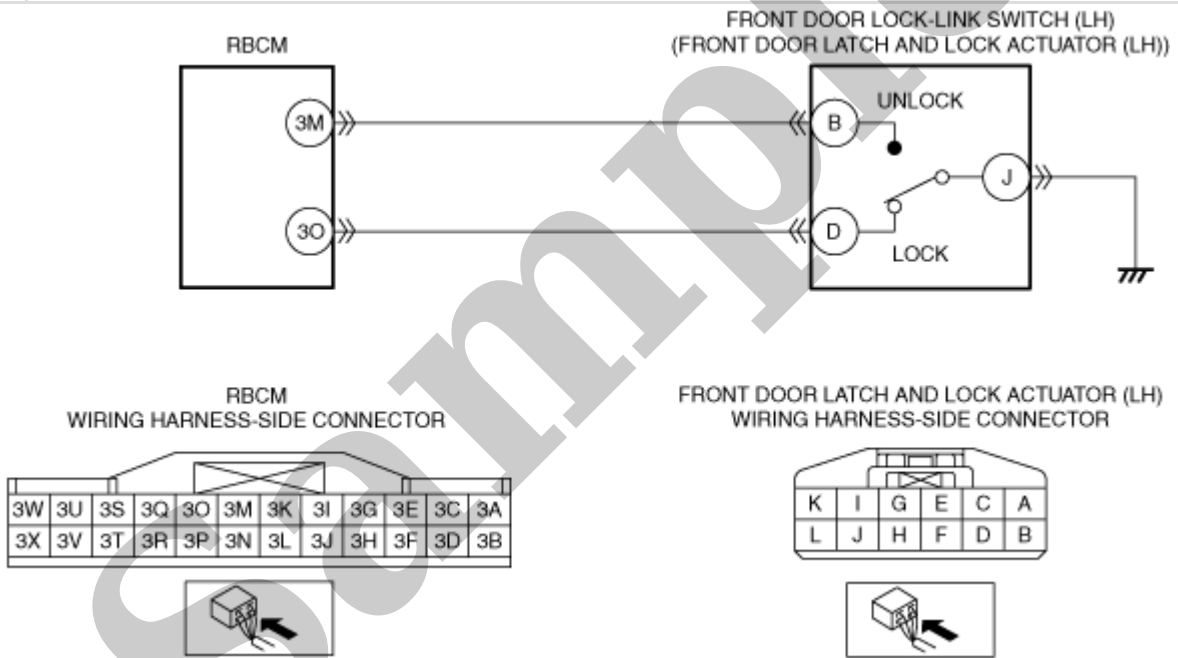
Step	Inspection		Action
1	<b>VERIFY REAR BODY CONTROL MODULE (RBCM) DTCs AGAIN</b> <ul style="list-style-type: none"> <li>• Clear the DTC for the rear body control module (RBCM) using the M-MDS. (See <b>CLEARING DTC [REAR BODY CONTROL MODULE (RBCM)]</b>.)</li> <li>• Retrieve the rear body control module (RBCM) DTCs using the M-MDS with the front door lock-link switch (LH) unlocked. (See <b>DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)]</b>.)</li> <li>• Is the same DTC displayed?</li> </ul>	Yes	Go to the next step.
		No	Go to Step 9.
2	<b>INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (LH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Switch the ignition off.</li> <li>• Disconnect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION</b>.)</li> <li>• Disconnect the front door latch and lock actuator (LH) 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> </ul>	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 8.
3	<b>INSPECT FRONT DOOR LOCK-LINK SWITCH (LH)</b> <ul style="list-style-type: none"> <li>• Inspect the front door lock-link switch (LH). (See <b>FRONT DOOR LOCK-LINK SWITCH INSPECTION</b>.)</li> <li>• Is the front door lock-link switch (LH) normal?</li> </ul>	Yes	Go to the next step.
		No	Replace the front door latch and lock actuator (LH), then go to Step 8. (See <b>FRONT DOOR LATCH AND LOCK ACTUATOR REMOVAL/INSTALLATION</b> .)
4	<b>INSPECT START STOP UNIT CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the start stop unit 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> </ul>	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 8.
5	<b>INSPECT REAR BODY CONTROL MODULE (RBCM) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the rear body control module (RBCM) 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> </ul>	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 8.

# DTC B126A:13 [REAR BODY CONTROL MODULE (RBCM)]

SM2899013

id0902p401490

Description	Front door lock-link switch (LH) lock circuit malfunction
Detection condition	<ul style="list-style-type: none"> <li>• Rear body control module (RBCM) detects an open circuit in the front door lock-link switch (LH) lock circuit with the front door lock-link switch (LH) locked.</li> </ul>
Fail-safe	Not applicable
Possible cause	<ul style="list-style-type: none"> <li>• Front door latch and lock actuator (LH) connector or terminal malfunction</li> <li>• Open circuit in wiring harness between front door latch and lock actuator (LH) terminal J and body ground</li> <li>• Front door lock-link switch (LH) malfunction</li> <li>• Rear body control module (RBCM) connector or terminal malfunction</li> <li>• Open circuit in wiring harness between rear body control module (RBCM) terminal 3O and front door latch and lock actuator (LH) terminal D</li> <li>• Rear body control module (RBCM) malfunction</li> </ul>



## Diagnostic Procedure

Step	Inspection		Action
1	<b>VERIFY REAR BODY CONTROL MODULE (RBCM) DTCs AGAIN</b> <ul style="list-style-type: none"> <li>• Clear the DTC for the rear body control module (RBCM) using the M-MDS. (See <b>CLEARING DTC [REAR BODY CONTROL MODULE (RBCM)]</b>.)</li> <li>• Retrieve the rear body control module (RBCM) DTCs using the M-MDS with the front door lock-link switch (LH) locked. (See <b>DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)]</b>.)</li> <li>• Is the same DTC displayed?</li> </ul>	Yes	Go to the next step.
		No	Go to Step 8.

# DTC C0023:14 [REAR BODY CONTROL MODULE (RBCM)]

SM2899014

id0902p401510

Description	Brake light circuit malfunction
Detection condition	<ul style="list-style-type: none"><li>• Rear body control module (RBCM) detects any of the following conditions:<ul style="list-style-type: none"><li>— Brake lights/high-mount brake light illuminated even though driver or system does not illuminate brake lights/high-mount brake lights.</li><li>— Brake lights/high-mount brake light not illuminated even though driver depresses brake pedal.</li><li>— Brake lights/high-mount brake light not illuminated even though system illuminates brake lights/high-mount brake light.</li></ul></li></ul>
Fail-safe function	Not applicable

Sample

Step	Inspection		Action
1	<b>VERIFY REAR BODY CONTROL MODULE (FBCM) DTCs AGAIN</b> <ul style="list-style-type: none"> <li>• Clear the DTC for the rear body control module (RBCM) using the M-MDS. (See <b>CLEARING DTC [REAR BODY CONTROL MODULE (RBCM)]</b>.)</li> <li>• Depress the brake pedal.</li> <li>• Retrieve the rear body control module (RBCM) DTCs using the M-MDS. (See <b>DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)]</b>.)</li> <li>• Is the same DTC displayed?</li> </ul>	Yes	Go to the next step.
		No	Go to Step 21.
2	<b>REAR COMBINATION LIGHT (LH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Switch the ignition off.</li> <li>• Disconnect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION</b>.)</li> <li>• Disconnect the rear combination light (LH) 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> </ul>	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 20.
3	<b>INSPECT FOR OPEN CIRCUIT IN BRAKE LIGHT (LH) (COMBINATION LIGHT (LH)) GROUND CIRCUIT</b> <ul style="list-style-type: none"> <li>• Verify that the rear combination light (LH) connector is disconnected.</li> <li>• Inspect for continuity between rear combination light (LH) terminal F (wiring harness-side) and body ground.</li> <li>• Is there continuity?</li> </ul>	Yes	Go to the next step.
		No	Refer to the wiring diagram and verify whether or not there is a common connector between rear combination light (LH) terminal F and body ground. <b>If there is a common connector:</b> <ul style="list-style-type: none"> <li>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for an open circuit.</li> <li>• Repair or replace the malfunctioning part.</li> </ul> <b>If there is no common connector:</b> <ul style="list-style-type: none"> <li>• Repair or replace the wiring harness which has an open circuit.</li> </ul> Go to Step 20.
4	<b>INSPECT REAR COMBINATION LIGHT (RH) CONNECTOR CONDITION</b> <ul style="list-style-type: none"> <li>• Disconnect the rear combination light (RH) 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> </ul>	Yes	Go to the next step.
		No	Repair or replace the connector, then go to Step 20.

Step	Inspection		Action
14	<p><b>INSPECT BRAKE LIGHT CIRCUIT FOR SHORT TO GROUND</b></p> <ul style="list-style-type: none"> <li>• Verify that the rear combination light (LH), rear combination light (RH), liftgate light (LH), liftgate light (RH) (with brake light (liftgate light)), brake light unit and rear body control module (RBCM) connectors are disconnected.</li> <li>• Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— Rear body control module (RBCM) terminal 4D</li> <li>— High-mount brake light terminal B</li> </ul> </li> <li>• Is there continuity?</li> </ul>	<p>Yes</p> <p>No</p> <p>Yes</p>	<p>Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals:</p> <ul style="list-style-type: none"> <li>• Rear body control module (RBCM) terminal 4D–Rear combination light (LH) terminal B</li> <li>• Rear body control module (RBCM) terminal 4D–Rear combination light (RH) terminal B</li> <li>• Rear body control module (RBCM) terminal 4D–Liftgate light (LH) terminal C (with brake light (liftgate light))</li> <li>• Rear body control module (RBCM) terminal 4D–Liftgate light (RH) terminal C (with brake light (liftgate light))</li> <li>• Rear body control module (RBCM) terminal 4D–Brake light unit terminal J</li> <li>• High-mount brake light terminal B–Brake light unit terminal G</li> </ul> <p><b>If there is a common connector:</b></p> <ul style="list-style-type: none"> <li>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to ground.</li> <li>• Repair or replace the malfunctioning part.</li> </ul> <p><b>If there is no common connector:</b></p> <ul style="list-style-type: none"> <li>• Repair or replace the wiring harness which has a short to ground.</li> </ul> <p>Go to Step 20.</p> <p>Go to the next step.</p> <p>Go to the next step.</p>
15	<p><b>INSPECT FOR SHORT TO POWER SUPPLY IN BRAKE LIGHT CIRCUIT</b></p> <ul style="list-style-type: none"> <li>• Verify that the rear combination light (LH), rear combination light (RH), liftgate light (LH) , liftgate light (RH) (with brake light (liftgate light)), brake light unit and rear body control module (RBCM) connectors are disconnected.</li> <li>• Connect the negative battery terminal. (See <b>NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.</b>)</li> <li>• Switch the ignition ON (engine off or on).</li> <li>• Inspect for continuity between the following terminals (wiring harness-side) and body ground: <ul style="list-style-type: none"> <li>— Rear body control module (RBCM) terminal 4D</li> <li>— High-mount brake light terminal B</li> </ul> </li> <li>• Is the voltage 0 V?</li> </ul>	<p>No</p>	<p>Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals:</p> <ul style="list-style-type: none"> <li>• Rear body control module (RBCM) terminal 4D–Rear combination light (LH) terminal B</li> <li>• Rear body control module (RBCM) terminal 4D–Rear combination light (RH) terminal B</li> <li>• Rear body control module (RBCM) terminal 4D–Liftgate light (LH) terminal C (with brake light (liftgate light))</li> <li>• Rear body control module (RBCM) terminal 4D–Liftgate light (RH) terminal C (with brake light (liftgate light))</li> <li>• Rear body control module (RBCM) terminal 4D–Brake light unit terminal J</li> <li>• High-mount brake light terminal B–Brake light unit terminal G</li> </ul> <p><b>If there is a common connector:</b></p> <ul style="list-style-type: none"> <li>• Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to power supply.</li> <li>• Repair or replace the malfunctioning part.</li> </ul> <p><b>If there is no common connector:</b></p> <ul style="list-style-type: none"> <li>• Repair or replace the wiring harness which has a short to power supply.</li> </ul> <p>Go to Step 20.</p>

# DTC U2100:00 [REAR BODY CONTROL MODULE (RBCM)]

SM2899016

id0902p401540

Description	Rear body control module (RBCM) configuration error
Detection condition	• Rear body control module (RBCM) configuration error (no configuration) detected.
Fail-safe	Not applicable
Possible cause	• Rear body control module (RBCM) configuration error • Rear body control module (RBCM) malfunction
System wiring diagram	Not applicable

## Diagnostic Procedure

Step	Inspection	Action
1	<b>VERIFY REAR BODY CONTROL MODULE (RBCM) DTCs AGAIN</b> • Clear the DTC for the rear body control module (RBCM) using the M-MDS. (See <b>CLEARING DTC [REAR BODY CONTROL MODULE (RBCM)]</b> .) • Retrieve the rear body control module (RBCM) DTCs using the M-MDS. (See <b>DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)]</b> .) • Is the same DTC displayed?	Yes Go to the next step.
		No Go to Step 4.
2	<b>PERFORM REAR BODY CONTROL MODULE (RBCM) CONFIGURATION (USING AS-BUILT DATA)</b> • Using the M-MDS, perform the rear body control module (RBCM) configuration (using As-Built data). (See <b>REAR BODY CONTROL MODULE (RBCM) CONFIGURATION (USING AS-BUILT DATA)</b> .) • Clear the DTC for the rear body control module (RBCM) using the M-MDS. (See <b>CLEARING DTC [REAR BODY CONTROL MODULE (RBCM)]</b> .) • Retrieve the rear body control module (RBCM) DTCs using the M-MDS. (See <b>DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)]</b> .) • Is the same DTC displayed?	Yes Using the M-MDS, perform the rear body control module (RBCM) configuration (using As-Built data) again, then go to the next step. (See <b>REAR BODY CONTROL MODULE (RBCM) CONFIGURATION (USING AS-BUILT DATA)</b> .)
		No Go to Step 4.
3	<b>VERIFY THAT REPAIRS HAVE BEEN COMPLETED</b> • Clear the DTC for the rear body control module (RBCM) using the M-MDS. (See <b>CLEARING DTC [REAR BODY CONTROL MODULE (RBCM)]</b> .) • Retrieve the rear body control module (RBCM) DTCs using the M-MDS. (See <b>DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)]</b> .) • Is the same DTC displayed?	Yes Replace the rear body control module (RBCM), then go to the next step. (See <b>REAR BODY CONTROL MODULE (RBCM) REMOVAL/INSTALLATION</b> .) Go to the next step.
		No Go to the next step.
4	<b>VERIFY IF OTHER DTCs DISPLAYED</b> • Are any other DTCs displayed?	Yes Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See <b>DTC TABLE [REAR BODY CONTROL MODULE (RBCM)]</b> .)
		No DTC troubleshooting completed.

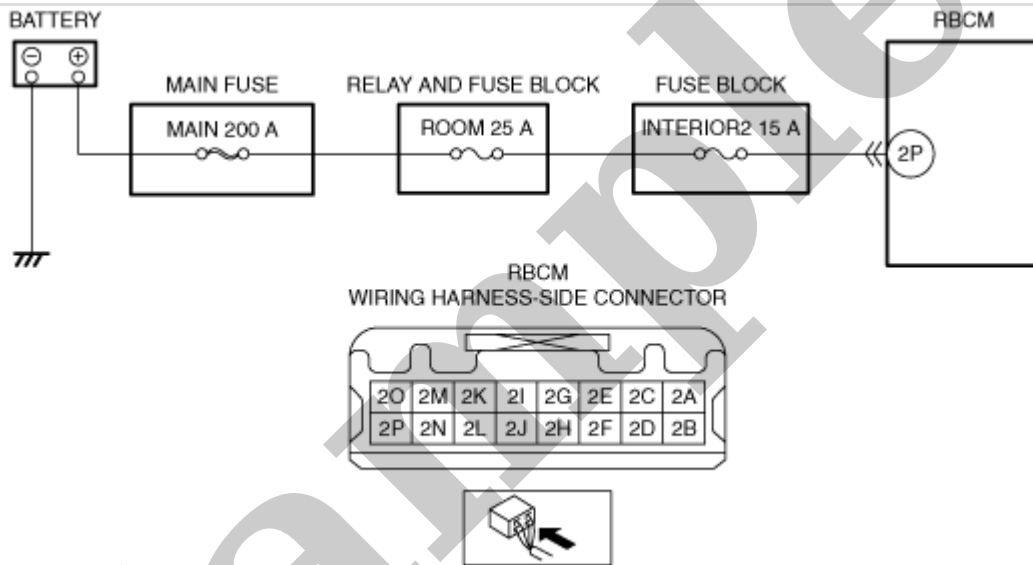


# DTC U3003:16 [REAR BODY CONTROL MODULE (RBCM)]

SM2899018

id0902p401560

Description	Rear body control module (RBCM) power supply voltage low input
Detection condition	• Rear body control module (RBCM) power supply circuit voltage of 5 V or more, less than 9 V is detected for 10 s or more.
Fail-safe	Not applicable
Possible cause	<ul style="list-style-type: none"> <li>• Battery malfunction</li> <li>• Generator malfunction</li> <li>• Rear body control module (RBCM) connector or terminal malfunction</li> <li>• Rear body control module (RBCM) power supply circuit malfunction</li> <li>• Rear body control module (RBCM) malfunction</li> </ul>



## Diagnostic Procedure

Step	Inspection		Action
1	<b>VERIFY REAR BODY CONTROL MODULE (RBCM) DTCs AGAIN</b> <ul style="list-style-type: none"> <li>• Clear the DTC for the rear body control module (RBCM) using the M-MDS. (See <b>CLEARING DTC [REAR BODY CONTROL MODULE (RBCM)]</b>.)</li> <li>• Switch the ignition ON (engine off or on) and wait for 10 s or more.</li> <li>• Retrieve the rear body control module (RBCM) DTCs using the M-MDS. (See <b>DTC INSPECTION [REAR BODY CONTROL MODULE (RBCM)]</b>.)</li> <li>• Is the same DTC displayed?</li> </ul>	Yes	Go to the next step.
		No	Go to Step 7.

# PID/DATA MONITOR TABLE [REAR BODY CONTROL MODULE (RBCM)]

SM2899020

id0902p401580

--: Not applicable

PID	Unit/Operation	Data contents	Data read/use method	Module control terminal
AT_DL_IG	Off/On	Auto door lock function (IG) <ul style="list-style-type: none"> <li>• Off: Door lock actuator does not operate to unlock in conjunction with ignition off.</li> <li>• On: Door lock actuator operates to unlock in conjunction with ignition off.</li> </ul>	If the personalization features setting for the auto door lock is set to auto door lock in conjunction with the ignition, displays if the auto door lock set in conjunction with the ignition being switched off is applicable. Operates when the ignition is switched from ON to OFF.	--
AT_DL_SHIFT	Off/On	Auto door lock function (shift) <ul style="list-style-type: none"> <li>• Off: Door lock actuator does not operate to lock or unlock in conjunction with shifting.</li> <li>• On: Door lock actuator operate to lock or unlock in conjunction with shifting.</li> </ul>	If the personalization features setting for the auto door lock is set to auto door lock in conjunction with the AT shifting, displays if the auto door lock set in conjunction with gear shifting is applicable. Operates when the gear is shifted.	--
AT_DL_VSPD	Off/On	Auto door lock function (vehicle speed) <ul style="list-style-type: none"> <li>• Off: Door lock actuator does not operate to lock in conjunction with vehicle speed.</li> <li>• On: Door lock actuator operates to lock in conjunction with vehicle speed.</li> </ul>	If the personalization features setting for the auto door lock is set in conjunction with the vehicle speed, displays if the auto door lock set in conjunction with the vehicle speed is applicable. Operates at a vehicle speed of 20 km/h {12 mph} or more.	--
BG_HORN_RLY *1	Off/On	Theft-deterrent horn relay operation output <ul style="list-style-type: none"> <li>• Off: Theft-deterrent horn relay is off.</li> <li>• On: Theft-deterrent horn relay is on.</li> </ul>	--	2F (Theft-deterrent horn relay control)
BRAKE_SW *2	Off/On	Brake switch input signal <ul style="list-style-type: none"> <li>• Off: Brake switch (No.1 signal) is off (brake pedal is not depressed).</li> <li>• On: Brake switch (No.1 signal) is on (brake pedal is depressed).</li> </ul>	--	2J (Brake switch signal)
C_DL_SW_LK	Off/On	Door lock switch (lock side) input signal <ul style="list-style-type: none"> <li>• Off: Door lock switch is not in lock.</li> <li>• On: Door lock switch is in lock.</li> </ul>	--	3F (Door lock switch signal)