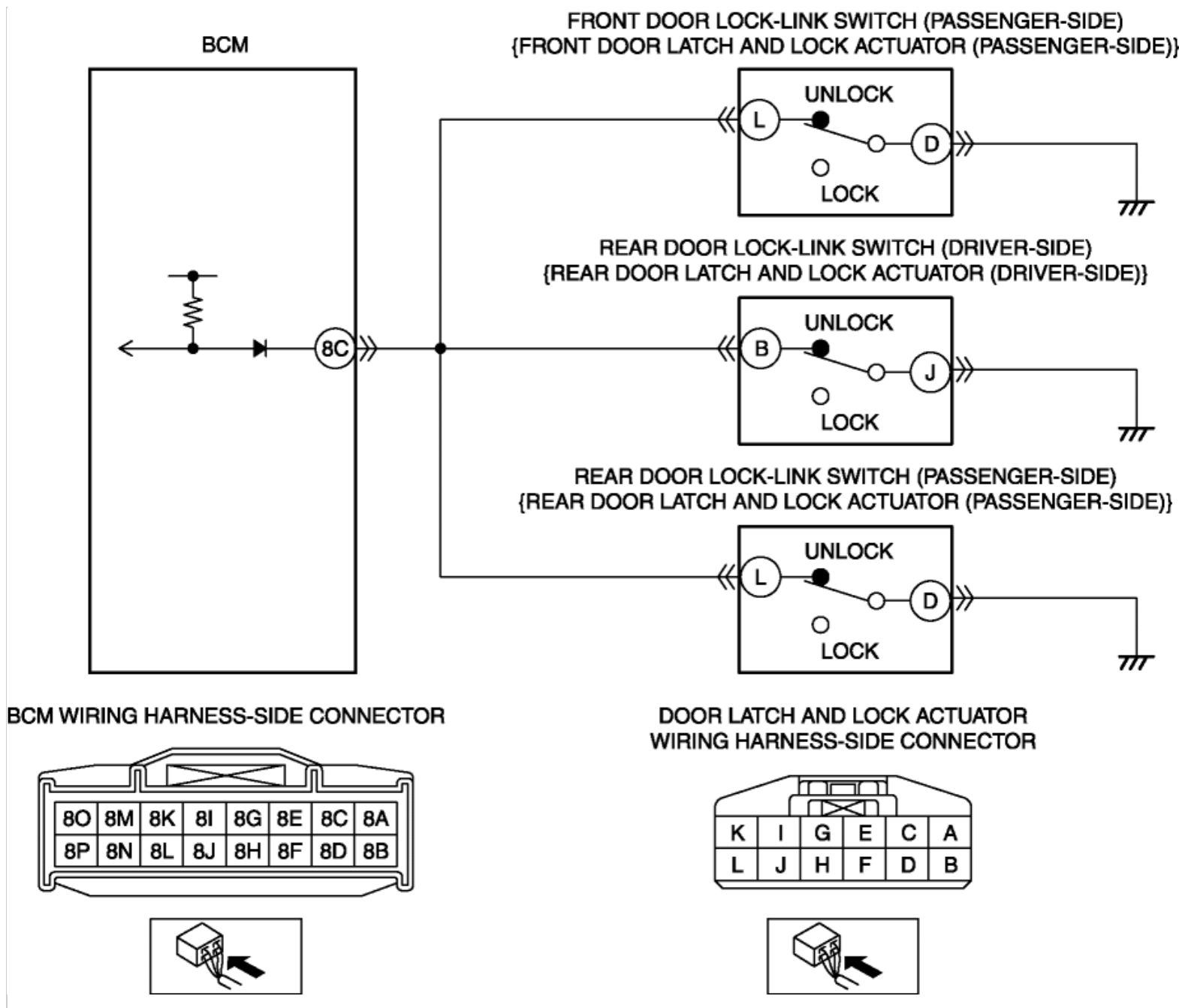


2012 - Mazda6 - Body and Accessories

DTC B1174:13 [BCM]

DESCRIPTION	Door lock-link switch circuit malfunction
DETECTION CONDITION	• Open circuit detected in door lock-link switch circuit with the door lock-link switch unlocked.
POSSIBLE CAUSE	• BCM connector or terminals malfunction • Open circuit in wiring harness between front door latch and lock actuator (passenger-side) terminal D and body ground • Front door latch and lock actuator (passenger-side) connector or terminals malfunction • Front door lock-link switch (passenger-side) malfunction • Open circuit in wiring harness between front door latch and lock actuator (passenger-side) terminal L and BCM terminal 8C • Open circuit in wiring harness between rear door latch and lock actuator (driver-side) terminal J and body ground • Rear door latch and lock actuator (driver-side) connector or terminals malfunction • Rear door lock-link switch (driver-side) malfunction • Open circuit in wiring harness between rear door latch and lock actuator (driver-side) terminal B and BCM terminal 8C • Open circuit in wiring harness between rear door latch and lock actuator (passenger-side) terminal D and body ground • Rear door latch and lock actuator (passenger-side) connector or terminals malfunction • Rear door lock-link switch (passenger-side) malfunction • Open circuit in wiring harness between rear door latch and lock actuator (passenger-side) terminal L and BCM terminal 8C • BCM malfunction



Diagnostic Procedure

Step	Inspection	Action
1	PERFORM DTC INSPECTION - Clear the DTC from the BCM memory using the M-MDS. (See CLEARING DTC [BCM].) - Perform the BCM DTC inspection using the M-MDS with the door lock-link switch unlocked. (See DTC INSPECTION [BCM].) - Is the same DTC present?	Yes Go to the next step. No Go to Step 24.
2	DETERMINE THE MALFUNCTIONING BASED ON THE MALFUNCTIONING LOCATION	Yes Only the front door lock-link switch (passenger-side) does not operate:

	• Operate the door lock-link switch LOCK and UNLOCK. • Is there a door lock-link switch that does not operate?	• Go to Step 5. Only the rear door lock-link switch (driver-side) does not operate: • Go to Step 11. Only the rear door lock-link switch (passenger-side) does not operate: • Go to Step 17. All door lock-link switches do not operate: • Go to the next step.	
		No	Go to Step 23.
3	INSPECT BCM CONNECTOR CONDITION • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the BCM connector. • Inspect for poor connection (damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
4	INSPECT DOOR LOCK-LINK SWITCH POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT • BCM connector is disconnected. • Disconnect the front door latch and lock actuator (passenger-side) connector. • Inspect for continuity between front door latch and lock actuator (passenger-side) terminal L (wiring harness-side) and BCM terminal 8C (wiring harness-side). • Is there continuity?	Yes	Go to Step 23.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
5	INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) CONNECTOR CONDITION • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the front door latch and lock actuator (passenger-side) connector. • Inspect for poor connection (damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
6	DETERMINE THE MALFUNCTION LOCATION • Front door latch and lock actuator (passenger-side) connector is disconnected. • Reconnect the negative battery cable. • Measure the voltage between front door latch and lock actuator	Yes	Go to the next step.
		No	Go to Step 9.

	(passenger-side) terminal L (wiring harness-side) and body ground. Is there any voltage?		
7	INSPECT FRONT DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) GROUND CIRCUIT FOR OPEN CIRCUIT - Front door latch and lock actuator (passenger-side) connector is disconnected. - Disconnect the negative battery cable. - Inspect for continuity between front door latch and lock actuator (passenger-side) terminal D (wiring harness-side) and body ground. - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
8	INSPECT FRONT DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) - Inspect the front door lock-link switch (passenger-side). (See DOOR LOCK-LINK SWITCH INSPECTION.) - Is there any malfunction?	Yes	Replace the front door latch and lock actuator (passenger-side), then go to Step 23.
		No	Go to Step 23.
9	INSPECT BCM CONNECTOR CONDITION - Disconnect the negative battery cable. - Disconnect the BCM connector. - Inspect for poor connection (damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
10	CONCLUDE THE MALFUNCTION LOCATION - Front door latch and lock actuator (passenger-side) and BCM connectors are disconnected. - Reconnect the BCM connector. - Reconnect the negative battery cable. - Measure the voltage between BCM terminal 8C (wiring harness-side) and body ground. - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
		No	Go to Step 23.
11	INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the rear door latch and lock actuator (driver-side) connector. - Inspect for poor connection (damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.

12	DETERMINE THE MALFUNCTION LOCATION - Rear door latch and lock actuator (driver-side) connector is disconnected. - Reconnect the negative battery cable. - Measure the voltage between rear door latch and lock actuator (driver-side) terminal B (wiring harness-side) and body ground. - Is there any voltage?	Yes	Go to the next step.
		No	Go to Step 15.
13	INSPECT REAR DOOR LOCK-LINK SWITCH (DRIVER-SIDE) GROUND CIRCUIT FOR OPEN CIRCUIT - Rear door latch and lock actuator (driver-side) connector is disconnected. - Disconnect the negative battery cable. - Inspect for continuity between rear door latch and lock actuator (driver-side) terminal J (wiring harness-side) and body ground. - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
14	INSPECT REAR DOOR LOCK-LINK SWITCH (DRIVER-SIDE) - Inspect the rear door lock-link switch (driver-side). (See DOOR LOCK-LINK SWITCH INSPECTION.) - Is there any malfunction?	Yes	Replace the rear door latch and lock actuator (driver-side), then go to Step 23. (See REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/ INSTALLATION.)
		No	Go to Step 23.
15	INSPECT BCM CONNECTOR CONDITION - Disconnect the negative battery cable. - Disconnect the BCM connector. - Inspect for poor connection (damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
16	CONCLUDE THE MALFUNCTION LOCATION - Rear door latch and lock actuator (driver-side) and BCM connectors are disconnected. - Reconnect the BCM connector. - Reconnect the negative battery cable. - Measure the voltage between BCM terminal 8C (wiring harness-side) and body ground. - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
		No	Go to Step 23.
17	INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable.	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.

	• Disconnect the rear door latch and lock actuator (passenger-side) connector. • Inspect for poor connection (damaged/pulled-out pins, corrosion). • Is there any malfunction?		
18	DETERMINE THE MALFUNCTION LOCATION • Rear door latch and lock actuator (passenger-side) connector is disconnected. • Reconnect the negative battery cable. • Measure the voltage between rear door latch and lock actuator (passenger-side) terminal L (wiring harness-side) and body ground. • Is there any voltage?	Yes	Go to the next step.
		No	Go to Step 21.
19	INSPECT REAR DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) GROUND CIRCUIT FOR OPEN CIRCUIT • Rear door latch and lock actuator (passenger-side) connector is disconnected. • Disconnect the negative battery cable. • Inspect for continuity between rear door latch and lock actuator (passenger-side) terminal D (wiring harness-side) and body ground. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
20	INSPECT REAR DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) • Inspect the rear door lock-link switch (passenger-side). (See DOOR LOCK-LINK SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the rear door latch and lock actuator (passenger-side), then go to Step 23. (See REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/ INSTALLATION.)
		No	Go to Step 23.
21	INSPECT BCM CONNECTOR CONDITION • Disconnect the negative battery cable. • Disconnect the BCM connector. • Inspect for poor connection (damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
22	CONCLUDE THE MALFUNCTION LOCATION • Rear door latch and lock actuator (passenger-side) and BCM connectors are disconnected. • Reconnect the BCM connector. • Reconnect the negative battery cable. • Measure the voltage between BCM terminal 8C (wiring harness-side) and body ground. • Is there any voltage?	Yes	Repair or replace the wiring harness for a possible open circuit, then go to the next step.
		No	Go to the next step.

23	VERIFY TROUBLESHOOTING COMPLETED • Make sure to reconnect all disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the BCM memory using the M-MDS. (See CLEARING DTC [BCM].) • Perform the BCM DTC inspection using the M-MDS with the door lock-link switch unlocked. (See DTC INSPECTION [BCM].) • Is the same DTC present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the BCM, then go to the next step. (See BODY CONTROL MODULE (BCM) REMOVAL/ INSTALLATION .)
		No	Go to the next step.
24	VERIFY THAT NO OTHER DTCs ARE PRESENT • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [BCM] .)
		No	DTC troubleshooting completed.

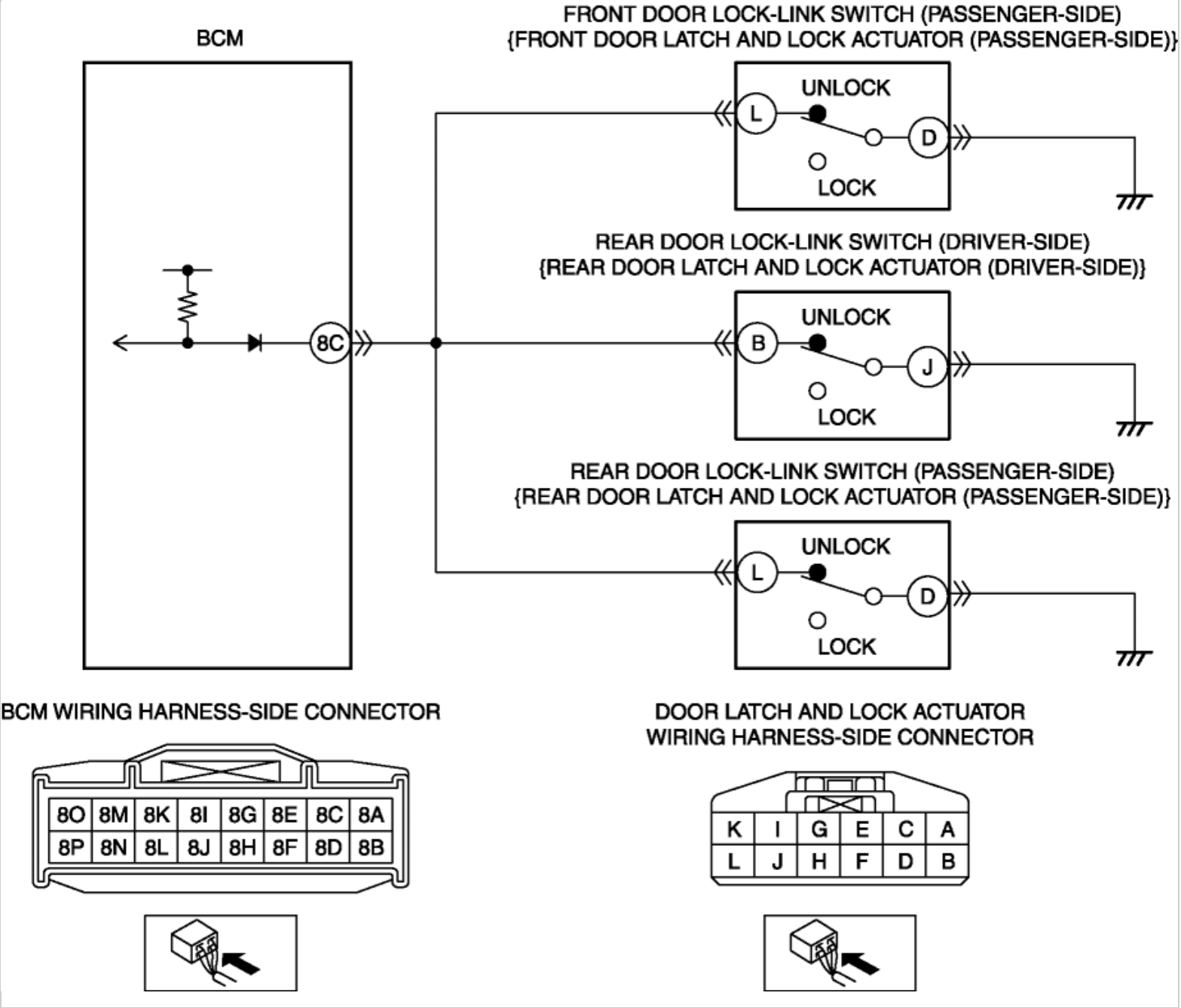
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2012 - Mazda6 - Body and Accessories

DTC B1174:13 [BCM]

DESCRIPTION	Door lock-link switch circuit malfunction
DETECTION CONDITION	• Open circuit detected in door lock-link switch circuit with the door lock-link switch unlocked.
POSSIBLE CAUSE	• BCM connector or terminals malfunction • Open circuit in wiring harness between front door latch and lock actuator (passenger-side) terminal D and body ground • Front door latch and lock actuator (passenger-side) connector or terminals malfunction • Front door lock-link switch (passenger-side) malfunction • Open circuit in wiring harness between front door latch and lock actuator (passenger-side) terminal L and BCM terminal 8C • Open circuit in wiring harness between rear door latch and lock actuator (driver-side) terminal J and body ground • Rear door latch and lock actuator (driver-side) connector or terminals malfunction • Rear door lock-link switch (driver-side) malfunction • Open circuit in wiring harness between rear door latch and lock actuator (driver-side) terminal B and BCM terminal 8C • Open circuit in wiring harness between rear door latch and lock actuator (passenger-side) terminal D and body ground • Rear door latch and lock actuator (passenger-side) connector or terminals malfunction • Rear door lock-link switch (passenger-side) malfunction • Open circuit in wiring harness between rear door latch and lock actuator (passenger-side) terminal L and BCM terminal 8C • BCM malfunction



Diagnostic Procedure

Step	Inspection	Action
1	PERFORM DTC INSPECTION - Clear the DTC from the BCM memory using the M-MDS. (See CLEARING DTC [BCM] .) - Perform the BCM DTC inspection using the M-MDS with the door lock-link switch unlocked. (See DTC INSPECTION [BCM] .) - Is the same DTC present?	YesGo to the next step.
		NoGo to Step 24.
2	DETERMINE THE MALFUNCTIONING BASED ON THE MALFUNCTIONING LOCATION	YesOnly the front door lock-link switch (passenger-side) does not operate:

	• Operate the door lock-link switch LOCK and UNLOCK. • Is there a door lock-link switch that does not operate?	• Go to Step 5. Only the rear door lock-link switch (driver-side) does not operate: • Go to Step 11. Only the rear door lock-link switch (passenger-side) does not operate: • Go to Step 17. All door lock-link switches do not operate: • Go to the next step.	
		No	Go to Step 23.
3	INSPECT BCM CONNECTOR CONDITION • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the BCM connector. • Inspect for poor connection (damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
4	INSPECT DOOR LOCK-LINK SWITCH POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT • BCM connector is disconnected. • Disconnect the front door latch and lock actuator (passenger-side) connector. • Inspect for continuity between front door latch and lock actuator (passenger-side) terminal L (wiring harness-side) and BCM terminal 8C (wiring harness-side). • Is there continuity?	Yes	Go to Step 23.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
5	INSPECT FRONT DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) CONNECTOR CONDITION • Switch the ignition to off. • Disconnect the negative battery cable. • Disconnect the front door latch and lock actuator (passenger-side) connector. • Inspect for poor connection (damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
6	DETERMINE THE MALFUNCTION LOCATION • Front door latch and lock actuator (passenger-side) connector is disconnected. • Reconnect the negative battery cable. • Measure the voltage between front door latch and lock actuator	Yes	Go to the next step.
		No	Go to Step 9.

	(passenger-side) terminal L (wiring harness-side) and body ground. Is there any voltage?		
7	INSPECT FRONT DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) GROUND CIRCUIT FOR OPEN CIRCUIT - Front door latch and lock actuator (passenger-side) connector is disconnected. - Disconnect the negative battery cable. - Inspect for continuity between front door latch and lock actuator (passenger-side) terminal D (wiring harness-side) and body ground. - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
8	INSPECT FRONT DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) - Inspect the front door lock-link switch (passenger-side). (See DOOR LOCK-LINK SWITCH INSPECTION.) - Is there any malfunction?	Yes	Replace the front door latch and lock actuator (passenger-side), then go to Step 23.
		No	Go to Step 23.
9	INSPECT BCM CONNECTOR CONDITION - Disconnect the negative battery cable. - Disconnect the BCM connector. - Inspect for poor connection (damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
10	CONCLUDE THE MALFUNCTION LOCATION - Front door latch and lock actuator (passenger-side) and BCM connectors are disconnected. - Reconnect the BCM connector. - Reconnect the negative battery cable. - Measure the voltage between BCM terminal 8C (wiring harness-side) and body ground. - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
		No	Go to Step 23.
11	INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (DRIVER-SIDE) CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the rear door latch and lock actuator (driver-side) connector. - Inspect for poor connection (damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.

12	DETERMINE THE MALFUNCTION LOCATION - Rear door latch and lock actuator (driver-side) connector is disconnected. - Reconnect the negative battery cable. - Measure the voltage between rear door latch and lock actuator (driver-side) terminal B (wiring harness-side) and body ground. - Is there any voltage?	Yes	Go to the next step.
		No	Go to Step 15.
13	INSPECT REAR DOOR LOCK-LINK SWITCH (DRIVER-SIDE) GROUND CIRCUIT FOR OPEN CIRCUIT - Rear door latch and lock actuator (driver-side) connector is disconnected. - Disconnect the negative battery cable. - Inspect for continuity between rear door latch and lock actuator (driver-side) terminal J (wiring harness-side) and body ground. - Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
14	INSPECT REAR DOOR LOCK-LINK SWITCH (DRIVER-SIDE) - Inspect the rear door lock-link switch (driver-side). (See DOOR LOCK-LINK SWITCH INSPECTION.) - Is there any malfunction?	Yes	Replace the rear door latch and lock actuator (driver-side), then go to Step 23. (See REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/ INSTALLATION.)
		No	Go to Step 23.
15	INSPECT BCM CONNECTOR CONDITION - Disconnect the negative battery cable. - Disconnect the BCM connector. - Inspect for poor connection (damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
16	CONCLUDE THE MALFUNCTION LOCATION - Rear door latch and lock actuator (driver-side) and BCM connectors are disconnected. - Reconnect the BCM connector. - Reconnect the negative battery cable. - Measure the voltage between BCM terminal 8C (wiring harness-side) and body ground. - Is there any voltage?	Yes	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
		No	Go to Step 23.
17	INSPECT REAR DOOR LATCH AND LOCK ACTUATOR (PASSENGER-SIDE) CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the negative battery cable.	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.

	• Disconnect the rear door latch and lock actuator (passenger-side) connector. • Inspect for poor connection (damaged/pulled-out pins, corrosion). • Is there any malfunction?		
18	DETERMINE THE MALFUNCTION LOCATION • Rear door latch and lock actuator (passenger-side) connector is disconnected. • Reconnect the negative battery cable. • Measure the voltage between rear door latch and lock actuator (passenger-side) terminal L (wiring harness-side) and body ground. • Is there any voltage?	Yes	Go to the next step.
		No	Go to Step 21.
19	INSPECT REAR DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) GROUND CIRCUIT FOR OPEN CIRCUIT • Rear door latch and lock actuator (passenger-side) connector is disconnected. • Disconnect the negative battery cable. • Inspect for continuity between rear door latch and lock actuator (passenger-side) terminal D (wiring harness-side) and body ground. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 23.
20	INSPECT REAR DOOR LOCK-LINK SWITCH (PASSENGER-SIDE) • Inspect the rear door lock-link switch (passenger-side). (See DOOR LOCK-LINK SWITCH INSPECTION.) • Is there any malfunction?	Yes	Replace the rear door latch and lock actuator (passenger-side), then go to Step 23. (See REAR DOOR LATCH AND LOCK ACTUATOR REMOVAL/ INSTALLATION.)
		No	Go to Step 23.
21	INSPECT BCM CONNECTOR CONDITION • Disconnect the negative battery cable. • Disconnect the BCM connector. • Inspect for poor connection (damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the connector or terminals, then go to Step 23.
		No	Go to the next step.
22	CONCLUDE THE MALFUNCTION LOCATION • Rear door latch and lock actuator (passenger-side) and BCM connectors are disconnected. • Reconnect the BCM connector. • Reconnect the negative battery cable. • Measure the voltage between BCM terminal 8C (wiring harness-side) and body ground. • Is there any voltage?	Yes	Repair or replace the wiring harness for a possible open circuit, then go to the next step.
		No	Go to the next step.

23	VERIFY TROUBLESHOOTING COMPLETED • Make sure to reconnect all disconnected connectors. • Reconnect the negative battery cable. • Clear the DTC from the BCM memory using the M-MDS. (See CLEARING DTC [BCM].) • Perform the BCM DTC inspection using the M-MDS with the door lock-link switch unlocked. (See DTC INSPECTION [BCM].) • Is the same DTC present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the BCM, then go to the next step. (See BODY CONTROL MODULE (BCM) REMOVAL/ INSTALLATION .)
		No	Go to the next step.
24	VERIFY THAT NO OTHER DTCs ARE PRESENT • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [BCM] .)
		No	DTC troubleshooting completed.

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