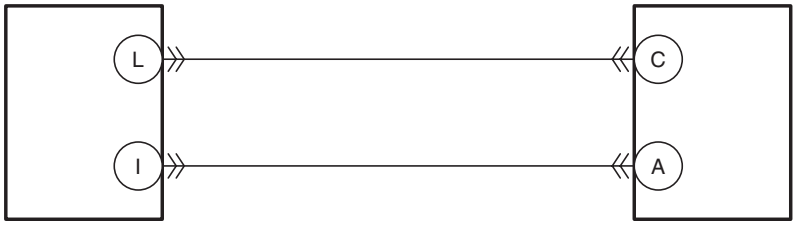
DTC U0028:87 [REAR VEHICLE MONITORING SYSTEM]

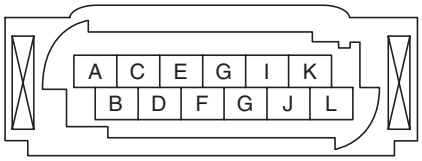
id0902z2886700

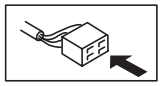
System malfunction location	**Rear vehicle monitoring control module (LH) and (RH) communication error**
Detection condition	• No communication between rear vehicle monitoring control modules (LH) and (RH) for **1 s or more**.
Fail-safe	• Inhibits the rear vehicle monitoring system.
Possible cause	• Rear vehicle monitoring control module (LH) connector or terminal malfunction • Rear vehicle monitoring control module (RH) connector or terminal malfunction • Short to ground in wiring harness between the following terminals: — Rear vehicle monitoring control module (LH) terminal L to rear vehicle monitoring control module (RH) terminal C — Rear vehicle monitoring control module (LH) terminal I to rear vehicle monitoring control module (RH) terminal A • Short to power supply in wiring harness between the following terminals: — Rear vehicle monitoring control module (LH) terminal L to rear vehicle monitoring control module (RH) terminal C — Rear vehicle monitoring control module (LH) terminal I to rear vehicle monitoring control module (RH) terminal A • Open circuit in wiring harness between the following terminals: — Rear vehicle monitoring control module (LH) terminal L to rear vehicle monitoring control module (RH) terminal C — Rear vehicle monitoring control module (LH) terminal I to rear vehicle monitoring control module (RH) terminal A • Rear vehicle monitoring control module (LH) malfunction • Rear vehicle monitoring control module (RH) malfunction

REAR VEHICLE MONITORING CONTROL MODULE (LH) REAR VEHICLE MONITORING CONTROL MODULE (RH)



REAR VEHICLE MONITORING CONTROL MODULE (LH)/(RH)
WIRING HARNESS-SIDE CONNECTOR





Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT REAR VEHICLE MONITORING CONTROL MODULE (LH) CONNECTOR** • Switch the ignition to off. • Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].) • Disconnect the rear vehicle monitoring control module (LH) 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 6.
2	**INSPECT REAR VEHICLE MONITORING CONTROL MODULE (RH) CONNECTOR** • Disconnect the rear vehicle monitoring control modules (RH) 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 6.
3	**INSPECT FOR SHORT TO GROUND IN CAN COMMUNICATION CIRCUIT BETWEEN REAR VEHICLE MONITORING CONTROL MODULES (LH) AND (RH)** • Verify that the rear vehicle monitoring control module (LH) and (RH) connectors are disconnected. • Inspect for continuity between the following terminals (vehicle wiring harness side) and body ground. — Rear vehicle monitoring control module (LH) terminal L — Rear vehicle monitoring control module (LH) terminal I • Is there continuity?	Yes	Repair or replace the wiring harness which is shorted to ground, then go to Step 6.
		No	Go to the next step.

Step	Inspection		Action
4	**INSPECT FOR SHORT TO POWER SUPPLY IN CAN COMMUNICATION CIRCUIT BETWEEN REAR VEHICLE MONITORING CONTROL MODULES (LH) AND (RH)** • Verify that the rear vehicle monitoring control module (LH) and (RH) connectors are disconnected. • Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].) • Switch the ignition ON (engine off or on). • Measure the voltage at the following terminals (vehicle wiring harness side). — Rear vehicle monitoring control module (LH) terminal L — Rear vehicle monitoring control module (LH) terminal I • 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 6.
5	**INSPECT FOR OPEN CIRCUIT IN CAN COMMUNICATION CIRCUIT BETWEEN REAR VEHICLE MONITORING CONTROL MODULES (LH) AND (RH)** • Verify that the rear vehicle monitoring control module (LH) and (RH) 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 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].) • Inspect the wiring harness between the following terminals (vehicle wiring harness side) for continuity. — Rear vehicle monitoring control module (LH) terminal L to rear vehicle monitoring control module (RH) terminal C — Rear vehicle monitoring control module (LH) terminal I to rear vehicle monitoring control module (RH) terminal A • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to the next step.

Step	Inspection		Action
6	**PERFORM DTC INSPECTION AND VERIFY REAR VEHICLE MONITORING CONTROL MODULE (LH) MALFUNCTION** • 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 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].) • Clear the DTC for the rear vehicle monitoring control module using the M-MDS. (See CLEARING DTC [REAR VEHICLE MONITORING SYSTEM].) • Switch the ignition ON (engine off or on) and wait for **1.5 s or more**. • Perform the DTC inspection for the rear vehicle monitoring control module using the M-MDS. (See DTC INSPECTION [REAR VEHICLE MONITORING SYSTEM].) • Is DTC U0028:87 displayed?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the rear vehicle monitoring control module (LH), then go to the next step. (See REAR VEHICLE MONITORING CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Go to Step 8.
7	**PERFORM DTC INSPECTION AND VERIFY REAR VEHICLE MONITORING CONTROL MODULE (RH) MALFUNCTION** • Clear the DTC for the rear vehicle monitoring control module using the M-MDS. (See CLEARING DTC [REAR VEHICLE MONITORING SYSTEM].) • Switch the ignition ON (engine off or on) and wait for **1.5 s or more**. • Perform the DTC inspection for the rear vehicle monitoring control module using the M-MDS. (See DTC INSPECTION [REAR VEHICLE MONITORING SYSTEM].) • Is DTC U0028:87 displayed?	Yes	Replace the rear vehicle monitoring control module (RH), then go to the next step. (See REAR VEHICLE MONITORING CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Go to the next step.
8	**VERIFY IF OTHER DTCs DISPLAYED** • Are any other DTCs displayed?	Yes	Repair the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [REAR VEHICLE MONITORING SYSTEM].)
		No	DTC troubleshooting completed.