DTC B13C3:09 [ADVANCED KEYLESS ENTRY SYSTEM]

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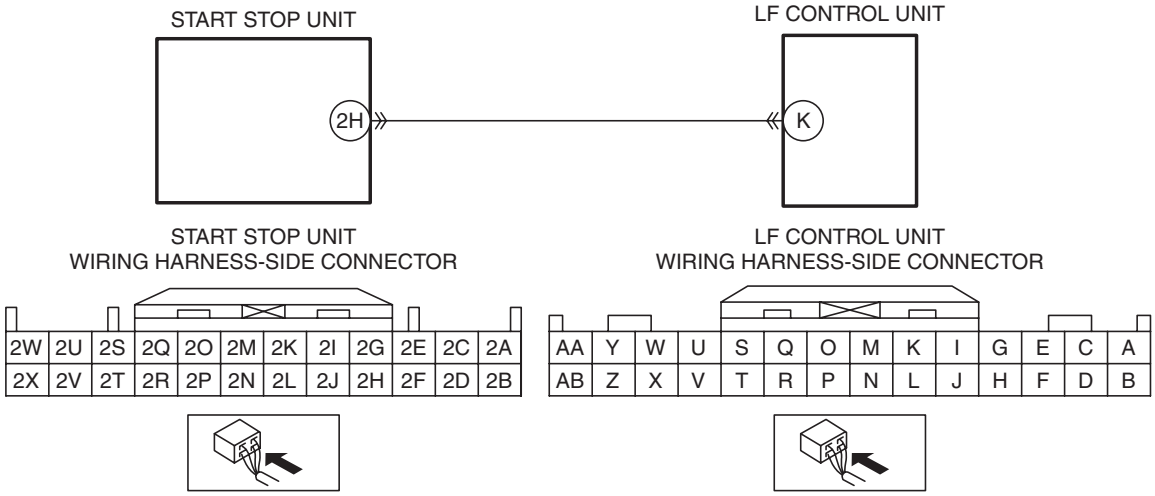
System malfunction location	**LF control unit malfunction**
Detection condition	• The start stop unit detects that the LF State signal of the LF control unit is low for **5 s or more**. • With the communication between the start stop unit and LF control unit being performed normally, there is no response from the LF control unit even though there is a signal transmission request from the start stop unit to the LF control unit, and the LF state signal becomes low.
Fail-safe	• Inhibits the door lock/unlock control using the advanced keyless entry system.
Possible cause	• LF control unit connector or terminal malfunction • Start stop unit connector or terminal malfunction • Short to ground in wiring harness between start stop unit terminal 2H and LF control unit terminal K • Open circuit in wiring harness between start stop unit terminal 2H and LF control unit terminal K • LF control unit malfunction • Start stop unit malfunction



Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT LF CONTROL UNIT CONNECTOR CONDITION** • 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 LF control unit 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 START STOP UNIT CONNECTOR CONDITION** • Disconnect the start stop unit 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.

Step	Inspection		Action
3	**INSPECT LF CONTROL UNIT CIRCUIT FOR SHORT TO GROUND** • Verify that the start stop unit and LF control unit connectors are disconnected. • Inspect for continuity between LF control unit terminal K (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 6.
		No	Go to the next step.
4	**INSPECT LF CONTROL UNIT CIRCUIT FOR OPEN CIRCUIT** • Verify that the start stop unit and LF control unit connectors are disconnected. • Inspect the wiring harness for continuity between start stop unit terminal 2H (vehicle wiring harness side) and LF control unit terminal K (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 6.
5	**INSPECT LF CONTROL UNIT** • Inspect the LF control unit. (See LF CONTROL UNIT INSPECTION.) • Is the LF control unit normal?	Yes	Go to the next step.
		No	Replace the LF control unit, then go to the next step. (See LF CONTROL UNIT REMOVAL/INSTALLATION.)
6	**VERIFY THAT REPAIRS HAVE BEEN COMPLETED** • 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 DTCs for the advanced keyless entry system using the M-MDS. (See CLEARING DTC [ADVANCED KEYLESS ENTRY SYSTEM].) • Switch the ignition ON (engine off or on) and wait for **5 s or more**. • Perform the advanced keyless entry system DTC inspection using the M-MDS. (See DTC INSPECTION [ADVANCED KEYLESS ENTRY SYSTEM].) • Is DTC B13C3:09 displayed?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the start stop unit, then go to the next step. (See START STOP UNIT REMOVAL/INSTALLATION.)
		No	Go to the next step.
7	**VERIFY IF OTHER DTCs DISPLAYED** • Are any other DTCs displayed?	Yes	Repair the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [ADVANCED KEYLESS ENTRY SYSTEM].)
		No	DTC troubleshooting completed.