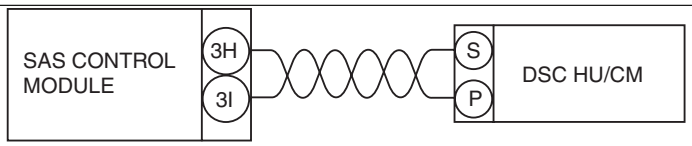
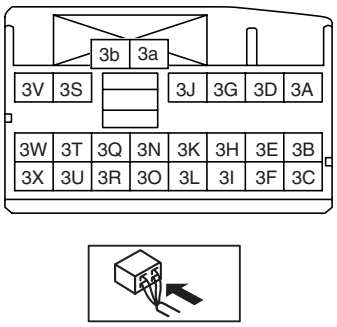
DTC U0028:88

id080200847600

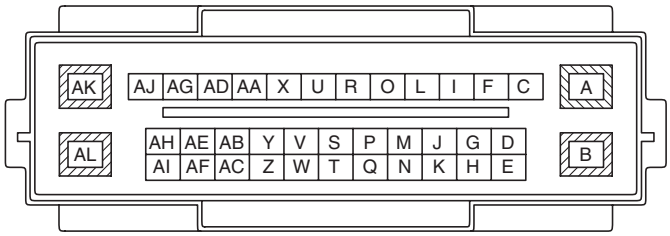
System malfunction location	• DSC HU/CM communication fault
Detection condition	**Warning** **• Detection conditions are for understanding the DTC outline before performing an inspection. Performing an inspection according to only the detection conditions may cause injury due to an operating error, or damage the system. When performing an inspection, always follow the inspection procedure.** • Communication error between SAS control module and DSC HU/CM
Fail-safe	—
Possible cause	• DSC HU/CM connector malfunction • SAS control module connector malfunction • Short circuit to power supply or body ground in wiring harness between SAS control module and DSC HU/CM • Open circuit in wiring harness between SAS control module and DSC HU/CM • DSC HU/CM connector malfunction • SAS control module malfunction

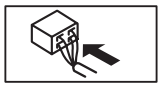


SAS CONTROL MODULE WIRING HARNESS-SIDE CONNECTOR



DSC HU/CM WIRING HARNESS-SIDE CONNECTOR





Diagnostic Procedure

STEP	INSPECTION		ACTION
1	**INSPECT DSC HU/CM CONNECTOR** • Switch the ignition to off. • Disconnect the negative battery cable and wait for **1 min or more**. (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 DSC HU/CM connector. (See DSC HU/CM REMOVAL/INSTALLATION.) • Inspect the DSC HU/CM connector terminals for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Replace the terminal, then go to next step.
		No	Go to the next step.

STEP	INSPECTION		ACTION
2	**INSPECT SAS CONTROL MODULE CONNECTOR** **Warning** **• Handling the component parts improperly can accidentally operate (deploy) the air bag module, which may seriously injure you. Read the service warnings/cautions and the workshop manual before handling the air bag system components. (See AIR BAG SYSTEM SERVICE WARNINGS.) (See AIR BAG SYSTEM SERVICE CAUTIONS.)** • Disconnect the clock spring connector. (See CLOCK SPRING REMOVAL/INSTALLATION.) • Remove the glove compartment. (See GLOVE COMPARTMENT REMOVAL/INSTALLATION.) • Disconnect the passenger-side air bag module connector. (See PASSENGER-SIDE AIR BAG MODULE REMOVAL/INSTALLATION.) • Disconnect the driver and passenger-side front seat connector. (See FRONT SEAT REMOVAL/INSTALLATION.) • Remove the headliner. (See HEADLINER REMOVAL/INSTALLATION.) • Disconnect the driver and passenger-side curtain air bag module connectors. (See CURTAIN AIR BAG MODULE REMOVAL/INSTALLATION.) • Remove the B-pillar lower trim. (See B-PILLAR LOWER TRIM REMOVAL/INSTALLATION.) • Disconnect the driver and passenger-side pre-tensioner seat belt connectors. (See FRONT SEAT BELT REMOVAL/INSTALLATION.) • Remove the rear console. (See REAR CONSOLE REMOVAL/INSTALLATION.) • Disconnect the all SAS control module connectors. (See SAS CONTROL MODULE REMOVAL/INSTALLATION.) • Inspect the SAS control module connector terminal for poor connection (such as damaged/pulled-out pins, and corrosion). • Is there any malfunction?	Yes	Replace the terminal, then go to next step.
		No	Go to the next step.
3	**INSPECT DSC HU/CM CIRCUIT FOR SHORT TO GROUND** • DSC HU/CM and SAS control module connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: — SAS control module terminal 3H — SAS control module terminal 3I **Note** • Inspect for continuity while shaking the wiring harness between the SAS control module and DSC HU/CM. • Is there continuity?	Yes	Replace the wiring harness for a possible short to ground, then go to Step 6.
		No	Go to the next step.

STEP	INSPECTION		ACTION
4	**INSPECT DSC HU/CM CIRCUIT FOR OPEN CIRCUIT** • DSC HU/CM and SAS control module connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side): — DSC HU/CM terminal S—SAS control module terminal 3H — DSC HU/CM terminal P—SAS control module terminal 3I **Note** • Inspect for continuity while shaking the wiring harness between the SAS control module and DSC HU/CM. • Is there continuity?	Yes	Go to the next step.
		No	Replace the wiring harness for a possible open circuit, then go to Step 6.
5	**INSPECT DSC HU/CM CIRCUIT FOR SHORT TO POWER SUPPLY** • DSC HU/CM and SAS control module 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 the following terminals (wiring harness-side): — SAS control module terminal 3H — SAS control module terminal 3I **Note** • Measure the voltage while shaking the wiring harness between the SAS control module and DSC HU/CM. • Is the voltage **0V**?	Yes	Replace the DSC HU/CM, then go to the next step. (See DSC HU/CM REMOVAL/INSTALLATION.)
		No	Replace the wiring harness for a possible short to power supply, then go to the next step.

STEP	INSPECTION		ACTION
6	**PERFORM SAS CONTROL MODULE DTC INSPECTION** • Switch the ignition to off. • Disconnect the negative battery cable and wait for **1min or more**. (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].) • Connect the SAS control module connectors. • Reconnect all disconnected connectors. • 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). • Clear the DTC for the SAS control module using the M-MDS. (See CLEARING DTC.) • Perform the DTC inspection for the SAS control module using the M-MDS. (See DTC INSPECTION.) • Are the same DTCs present?	Yes	Replace the SAS control module. (See SAS CONTROL MODULE REMOVAL/INSTALLATION.)
		No	DTC troubleshooting completed.