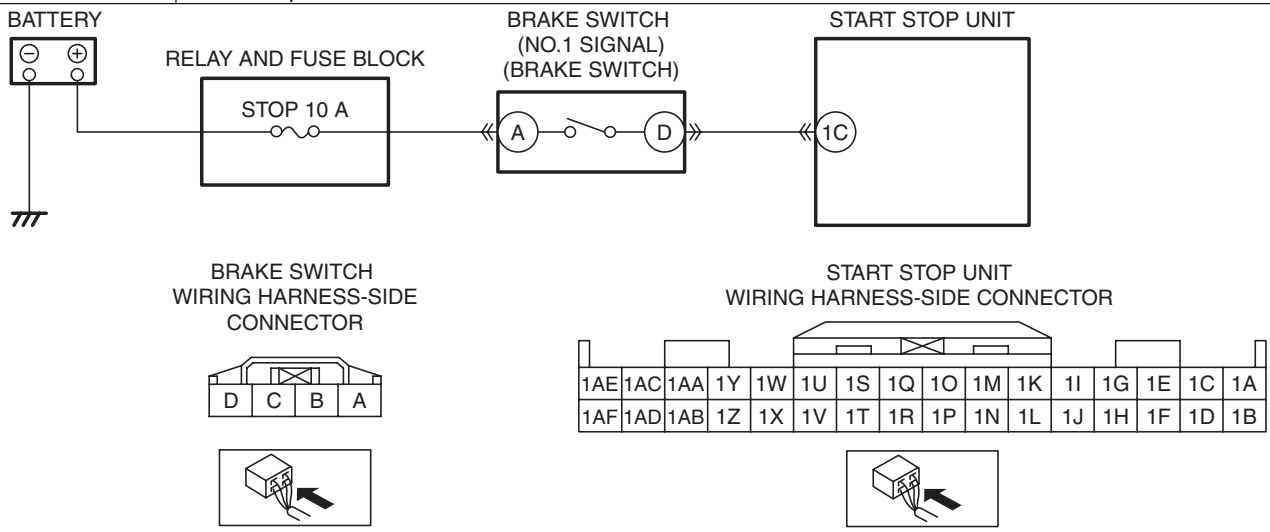
DTC C0040:23 [START STOP UNIT]

id0902p6021100

System malfunction location	**Brake switch (No.1 signal) circuit malfunction**
Detection condition	• With the ignition switched ON (engine off or on), the start stop unit detects that the brake switch No.1 signal is in the off condition for **3 s or more** continuously for a continuous **5 times** even though brake switch No.2 signal changes.
Fail-safe	• Determined by brake switch No.2 with the brake pedal depressed.
Possible cause	• Brake switch connector or terminal malfunction • Brake switch (No.1 signal) malfunction • Brake switch (No.1 signal) power supply circuit malfunction — Short to ground in wiring harness between STOP 10 A fuse and brake switch terminal A — STOP 10 A fuse malfunction — Open circuit in wiring harness between battery positive terminal and brake switch terminal A • Start stop unit connector or terminal malfunction • Short to ground in wiring harness between brake switch terminal D and start stop unit terminal 1C • Open circuit in wiring harness between brake switch terminal D and start stop unit terminal 1C • Start stop unit malfunction



Diagnostic Procedure

Step	Inspection		Action
1	**INSPECT BRAKE SWITCH 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 brake switch 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 7.

Step	Inspection		Action
2	**INSPECT BRAKE SWITCH (NO.1 SIGNAL)** • Inspect the brake switch (No.1 signal). (See BRAKE SWITCH INSPECTION.) • Is the brake switch (No.1 signal) normal?	Yes	Go to the next step.
		No	Replace the brake switch, then go to Step 7. (See BRAKE PEDAL REMOVAL/INSTALLATION [L.H.D.].) (See BRAKE PEDAL REMOVAL/INSTALLATION [R.H.D.].)
3	**INSPECT BRAKE SWITCH (NO.1 SIGNAL) POWER SUPPLY CIRCUIT FOR OPEN CIRCUIT OR SHORT TO GROUND** • Verify that the brake switch connector is 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 brake switch terminal A (vehicle wiring harness side). • Is the voltage **B+**?	Yes	Go to the next step.
		No	Inspect the STOP 10 A fuse. • If a fuse is burnt out: — Repair or replace the wiring harness which is shorted to ground. — Replace the burnt out fuse. • If a fuse is damaged: — Replace the damaged fuse. • If the fuse is normal: — Repair or replace the wiring harness which has an open circuit. Go to Step 7.
4	**INSPECT START STOP UNIT CONNECTOR CONDITION** • Disconnect the start stop unit 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].) (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].) • 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 7.
5	**INSPECT BRAKE SWITCH (NO.1 SIGNAL) CIRCUIT FOR SHORT TO GROUND** • Verify that the brake switch and start stop unit connectors are disconnected. • Inspect for continuity between brake switch terminal D (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 7.
		No	Go to the next step.
6	**INSPECT BRAKE SWITCH (NO.1 SIGNAL) CIRCUIT FOR OPEN CIRCUIT** • Verify that the brake switch and start stop unit connectors are disconnected. • Inspect the wiring harness for an open circuit between brake switch terminal D (vehicle wiring harness side) and start stop unit terminal 1C (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 the next step.

Step	Inspection		Action
7	**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 DTC for the start stop unit using the M-MDS. (See CLEARING DTC [START STOP UNIT].) • With the ignition switched ON (engine off or on), perform the work of depressing the brake pedal for **3 s or more** and then releasing it for **5 or more times**. • Perform the DTC inspection for the start stop unit using the M-MDS. (See DTC INSPECTION [START STOP UNIT].) • Is DTC C0040:23 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.
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 [START STOP UNIT].)
		No	DTC troubleshooting completed.