| DTC | C0226/21 | SFR SOLENOID CIRCUIT |
|---|---|---|

| DTC | C0236/22 | SFL SOLENOID CIRCUIT |
|---|---|---|

| DTC | C0246/23 | SRR SOLENOID CIRCUIT |
|---|---|---|

| DTC | C0256/24 | SRL SOLENOID CIRCUIT |
|---|---|---|

| DTC | C1225/25 | SM SOLENOID CIRCUIT |
|---|---|---|

| DTC | C1227/27 | SRM SOLENOID CIRCUIT |
|---|---|---|

## CIRCUIT DESCRIPTION

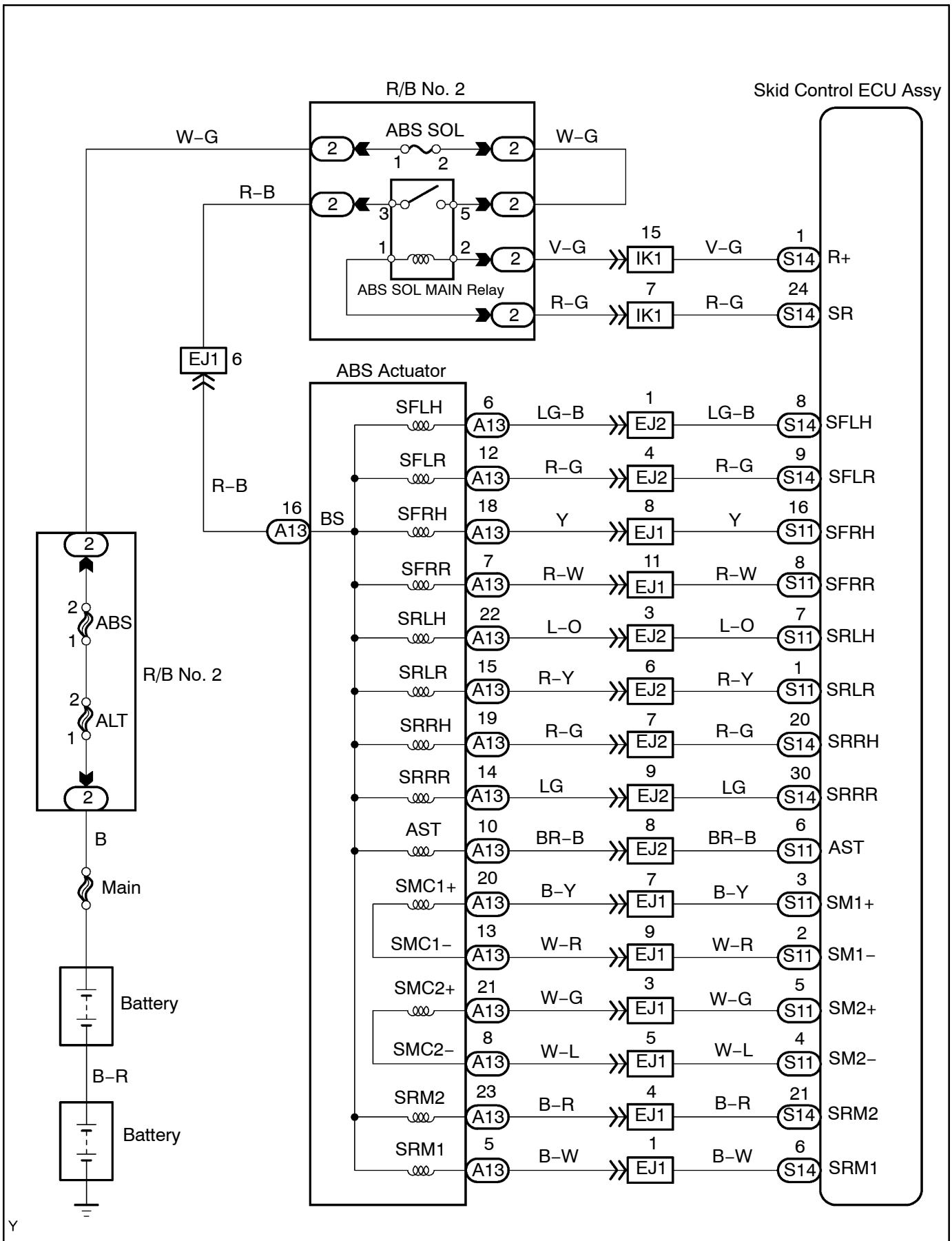
This solenoid turns on when signals are received from the ECU and controls brake force by the pressure acting on the wheel cylinders.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| C0226/21 | Open or short circuit for SFRH or SFRR circuit continues for 0.05 sec. or more at normal power voltage condition | • ABS actuator<br>• SFRH or SFRR circuit<br>• ABS fuse |
| C0236/22 | Open or short circuit for SFLH or SFLR circuit continues for 0.05 sec. or more at normal power voltage condition | • ABS actuator<br>• SFLH or SFLR circuit<br>• ABS fuse |
| C0246/23 | Open or short circuit for SRRH or SRRR circuit continues for 0.05 sec. or more at normal power voltage condition | • ABS actuator<br>• SRRH or SRRR circuit<br>• ABS fuse |
| C0256/24 | Open or short circuit for SRLH or SRLR circuit continues for 0.05 sec. or more at normal power voltage condition | • ABS actuator<br>• SRLH or SRLR circuit<br>• ABS fuse |
| C1225/25 | Open or short circuit for SMC1 or SMC2 circuit continues for 0.05 sec. or more at normal power voltage condition | • ABS actuator<br>• SMC1 or SMC2 circuit<br>• ABS fuse |
| C1227/27 | Open or short circuit for SRM1 or SRM2 circuit continues for 0.05 sec. or more at normal power voltage condition | • ABS actuator<br>• SRM1 or SRM2 circuit<br>• ABS fuse |

HINT:

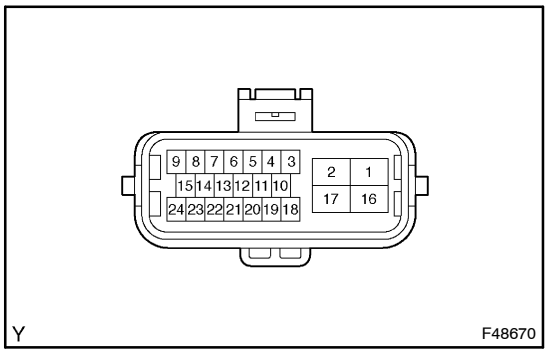
- If the brake pedal is depressed firmly, the brake force may be lowered.
- Fail–safe function:
  If any trouble occurs in the actuator solenoid circuit, the ECU will cut off current to the ABS SOL MAIN relay and prohibit ABS controls and BRAKE ASSIST.

# WIRING DIAGRAM



# INSPECTION PROCEDURE

## 1 INSPECT ABS ACTUATOR



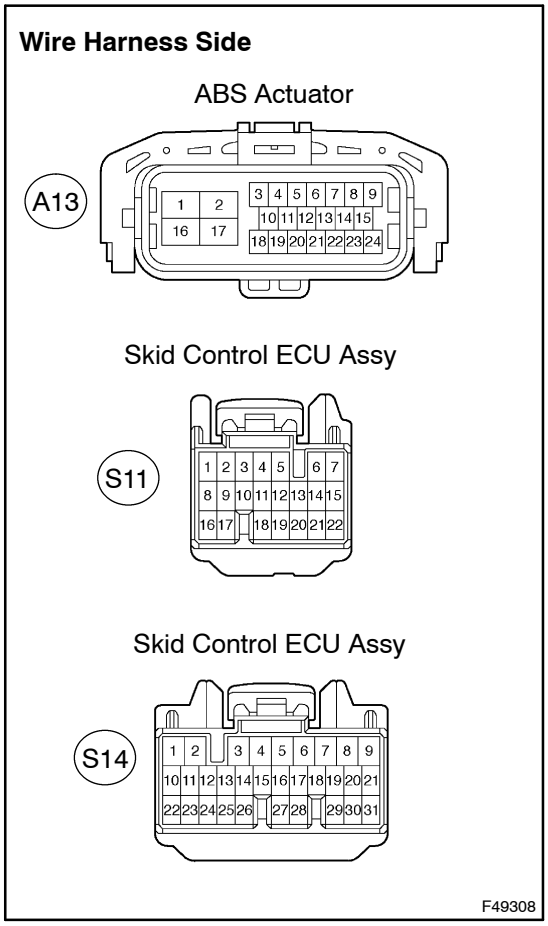

(a) Disconnect the actuator connector.
(b) Measure the resistance according to the table below.
**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| A13–16 (BS) – A13–6 (SFLH) | 31.7 to 35.7 Ω |
| A13–16 (BS) – A13–7 (SFRR) | 15.9 to 17.9 Ω |
| A13–16 (BS) – A13–10 (AST) | Below 1 Ω |
| A13–16 (BS) – A13–12 (SFLR) | 15.9 to 17.9 Ω |
| A13–16 (BS) – A13–14 (SRRR) | 15.9 to 17.9 Ω |
| A13–16 (BS) – A13–15 (SRLR) | 15.9 to 17.9 Ω |
| A13–16 (BS) – A13–18 (SFRH) | 31.7 to 35.7 Ω |
| A13–16 (BS) – A13–19 (SRRH) | 31.7 to 35.7 Ω |
| A13–16 (BS) – A13–22 (SRLH) | 31.7 to 35.7 Ω |
| A13–20 (SMC1+) – A13–13 (SMC1–) | 20.5 to 23.5 Ω |
| A13–21 (SMC2+) – A13–8 (SMC2–) | 20.5 to 23.5 Ω |

**NG** → **REPLACE ABS ACTUATOR**

**OK**

## 2 CHECK WIRE HARNESS (ABS ACTUATOR – SKID CONTROL ECU ASSY)




(a) Disconnect the A13 actuator connector.
(b) Disconnect the S11 and S14 ECU connectors.
(c) Measure the resistance according to the table below.
**Standard:**

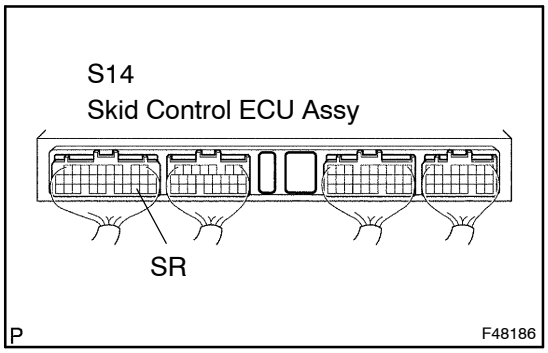
| Tester Connection | Specified Condition |
|---|---|
| S11–1 (SRLR) – A13–15 (SRLR) | Below 1 Ω |
| S11–2 (SM1–) – A13–13 (SMC1–) | Below 1 Ω |
| S11–3 (SM1+) – A13–20 (SMC1+) | Below 1 Ω |
| S11–4 (SM2–) – A13–8 (SMC2–) | Below 1 Ω |
| S11–5 (SM2+) – A13–21 (SMC2+) | Below 1 Ω |
| S11–6 (AST) – A13–10 (AST) | Below 1 Ω |
| S11–7 (SRLH) – A13–22 (SRLH) | Below 1 Ω |
| S11–8 (SFRR) – A13–7 (SFRR) | Below 1 Ω |
| S11–16 (SFRH) – A13–18 (SFRH) | Below 1 Ω |
| S14–6 (SRM1) – A13–5 (SRM1) | Below 1 Ω |
| S14–8 (SFLH) – A13–6 (SFLH) | Below 1 Ω |
| S14–9 (SFLR) – A13–12 (SFLR) | Below 1 Ω |
| S14–18 (MT) – A13–3 (MT) | Below 1 Ω |
| S14–20 (SRRH) – A13–19 (SRRH) | Below 1 Ω |
| S14–21 (SRM2) – A13–23 (SRM2) | Below 1 Ω |
| S14–30 (SRRR) – A13–14 (SRRR) | Below 1 Ω |
| S11–1 (SRLR) – Body ground | 10 kΩ or higher |
| S11–2 (SM1–) – Body ground | 10 kΩ or higher |
| S11–3 (SM1+) – Body ground | 10 kΩ or higher |
| S11–4 (SM2–) – Body ground | 10 kΩ or higher |
| S11–5 (SM2+) – Body ground | 10 kΩ or higher |

| Tester Connection | Specified Condition |
|---|---|
| S11–6 (AST) – Body ground | 10 kΩ or higher |
| S11–7 (SRLH) – Body ground | 10 kΩ or higher |
| S11–8 (SFRR) – Body ground | 10 kΩ or higher |
| S11–16 (SFRH) – Body ground | 10 kΩ or higher |
| S14–6 (SRM1) – Body ground | 10 kΩ or higher |
| S14–8 (SFLH) – Body ground | 10 kΩ or higher |
| S14–9 (SFLR) – Body ground | 10 kΩ or higher |
| S14–20 (SRRH) – Body ground | 10 kΩ or higher |
| S14–21 (SRM2) – Body ground | 10 kΩ or higher |
| S14–30 (SRRR) – Body ground | 10 kΩ or higher |

**NG** → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

**OK**

## 3 CHECK SKID CONTROL ECU ASSY (SR VOLTAGE)




(a) Remove the skid control ECU but do not disconnect the connectors.
(b) Turn the ignition switch ON.
(c) Measure the voltage according to the table below.

**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| S14–24 (SR) – Body ground | Below 1 V |

**NG** → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

**OK**

## 4 RECONFIRM DTC

(a) Check the DTC (see page 05–191).

HINT:

After erasing the DTC and driving the vehicle at more than 7 km/h (4 mph), check for DTCs.

| | |
|---|---|
| A | Malfunction Code |
| B | No DTC code output |

**B** → **NO PROBLEM**

**A**

## 5 CHECK CONTACT CONDITION (EACH CONNECTION)

**NG** → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

**OK**

**REPLACE SKID CONTROL ECU ASSY (See page 01–27)**