

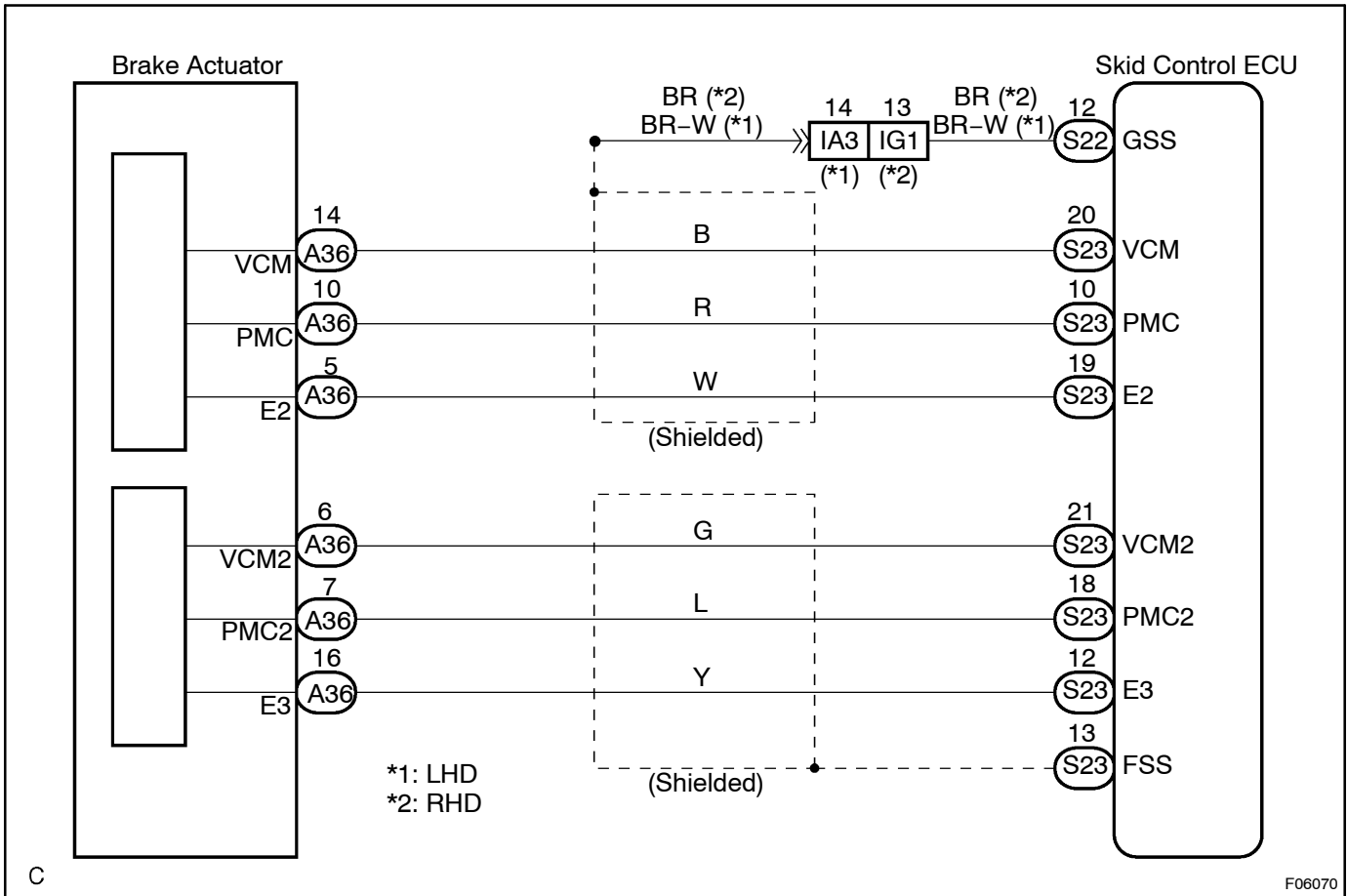
DTC	C1246 / 46	Master Cylinder Pressure Sensor Circuit
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DTC	C1360 / 61	Malfunction in comparative master cylinder pressure sensor
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CIRCUIT DESCRIPTION

DTC No.	DTC Detecting Condition	Trouble Area
C1246 / 46	<p>Detection of any of conditions 1. through 5.:</p> <ol style="list-style-type: none"> When the vehicle speed is 7 km/h (4 mph) or more and ECU PMC terminal voltage exceeds 0.86 V, the condition that the voltage does not change 0.005 V or more continues for 30 sec. Noise in ECU PMC terminal occurs 7 times or more in 5 sec. When the ECU STP terminal is OFF, the condition that ECU PMC terminal voltage is 0.86 V or more, or less than 0.3 V continues for 5 sec. or more. When IG1 terminal voltage is 9.5 to 17.2 V, the condition that ECU VCM terminal voltage is out of the range from 4.4 to 5.6 V continues for 1.2 sec. or more. When ECU VCM terminal voltage is 4.4 to 5.6 V, the condition that the ECU PMC terminal voltage is out of the range from 0.14 to 4.85 V continues for 1.2 sec. or more. 	<ul style="list-style-type: none"> • Master cylinder pressure sensor • Master cylinder pressure sensor circuit
C1360 / 61	<p>Condition that the vehicle is driving 5 km/h (3 mph) or more and that the difference between terminal PMC and PMC2 voltage becomes at least 0.37 V continues for 1.2 sec. or more.</p> <p>Condition that VCM terminal voltage is 4.4 – 5.6 V and that PMC terminal voltage is out of the range of 0.14 – 4.85 V continues for more than 1.2 sec.</p>	

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Start the inspection from step 1 in case of using the hand-held tester and start from step 2 in case of not using the hand-held tester.

1	Check output value of the master cylinder pressure sensor.
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PREPARATION:

- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON and turn the hand-held tester main switch ON.
- Select the DATALIST mode on the hand-held tester.

CHECK:

Check that the brake fluid pressure value of the master cylinder pressure sensor observed in the hand-held tester is changing when the brake pedal is being depressed.

OK:

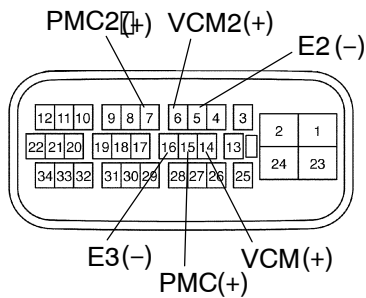
Brake fluid pressure value must be changing.

OK

Go to step 4.

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2 Check master cylinder pressure sensor.



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PREPARATION:

Install LSPV gauge to the front caliper bleeder plug portion, and bleed air from LSPV gauge.

SST 09709-29018

CHECK:

Start the engine and depress the brake pedal, then check how the fluid pressure affects voltage of PMC and E2, PMC2 and E3 terminals of the master cylinder pressure sensor with the connector still connected to it.

OK:

Front brake caliper fluid pressure	Voltage
0 kPa (0 kgf/cm ² , 0 psi)	0.37 - 0.63 V
5,883 kPa (60 kgf/cm ² , 853 psi)	1.57 - 1.83 V
11,768 kPa (120 kgf/cm ² , 1,706 psi)	2.77 - 3.03 V

HINT:

Voltage of between terminals VCM and E2, VCM2 and E3: 4.7 - 5.3 V

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Replace brake actuator.

OK

3 Check for open and short circuit in harness and connector between each master cylinder pressure sensor and skid control ECU (See page IN-34).

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Repair or replace harness or connector.

OK

4 Check whether or not the ECU terminal STP input voltage is changes when the stop light switch is turned on and off.

NO

Check stop light switch circuit.

YES

Check and replace skid control ECU.