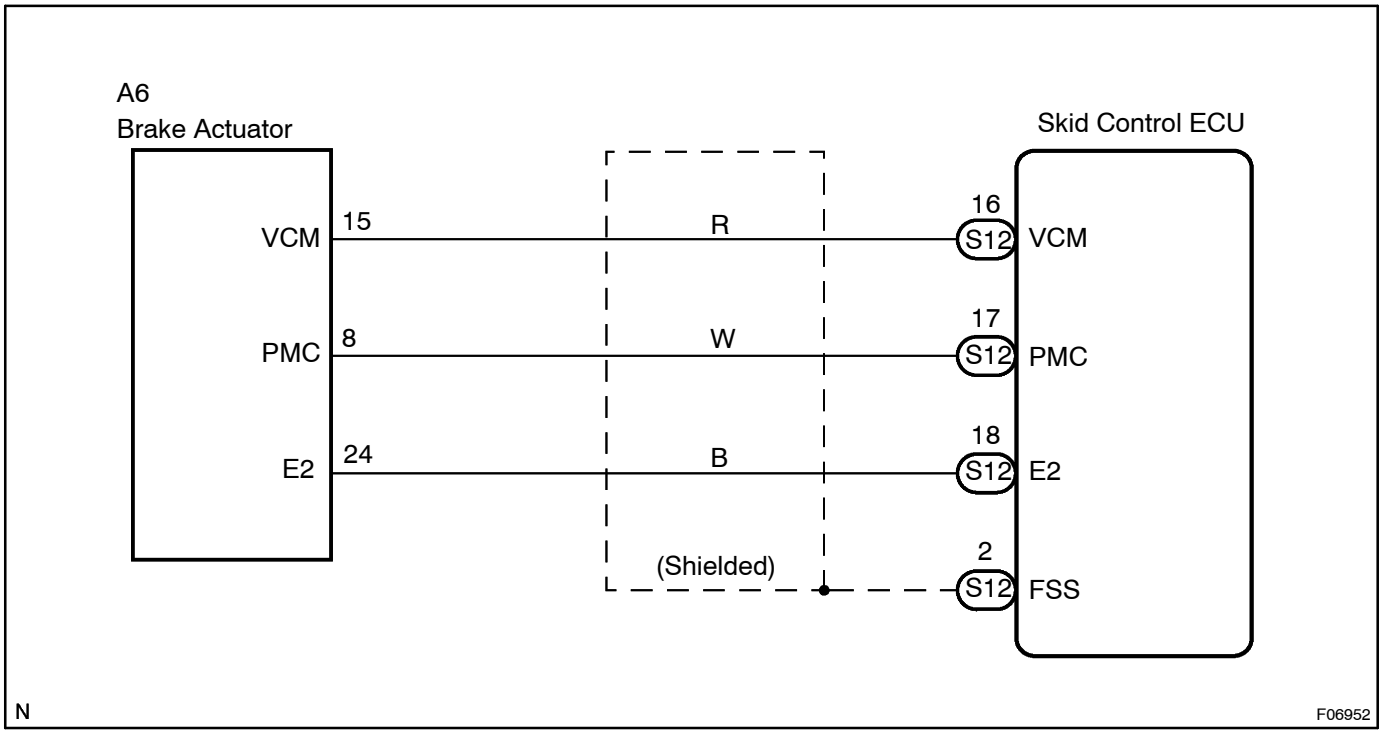
DTC	C1246/46	MALFUNCTION IN MASTER CYLINDER PRESSURE SENSOR

CIRCUIT DESCRIPTION

DTC No.	DTC Detecting Condition	Trouble Area
C1246 / 46	Either of the following 1., 2., 3., 4. or 5. is detected: 1. When the vehicle speed is 7 km/h (4.3 mph) and ECU terminal PMC voltage is 0.86 V or more, the condition that the terminal voltage does not change by more than 0.005 V continues for 30 sec. 2. The noise to ECU terminal PMC occurs 7 times for 5 secs. 3. When ECU terminal STP is OFF, the condition that ECU terminal PMC voltage is 0.86 or more or 0.3 V or less continues for more than 5 sec. 4. When the ECU terminal IG1 is 9.5 V to 18.5 V the condition that ECU terminal VCM voltage is out of range of 4.4 V to 5.6 V continues for 1.2 sec. 5. When ECU terminal VCM voltage is 4.4 V to 5.6 V the condition that ECU terminal PMC voltage is out of range of 0.14 V to 4.85 V continues for more than 1.2 sec.	• Master cylinder pressure sensor • Master cylinder pressure sensor circuit

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.

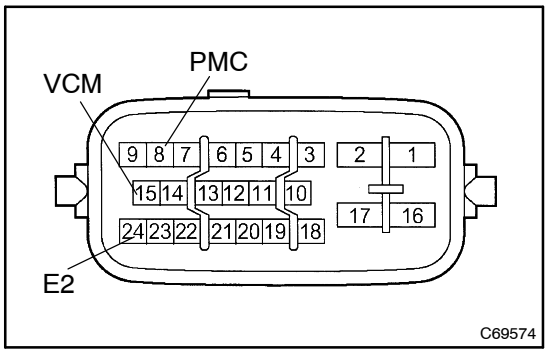
1	READ VALUE OF HAND–HELD TESTER(MASTER CYLINDER PRESSURE SENSOR OUTPUT VALUE)

(a) Select the item "MAS CYL PRESS 1, MAS CYL PRESS 2" in the DATA LIST and read its value displayed on the hand–held tester.
(b) Check that the brake fluid pressure value of the master cylinder pressure sensor displayed on the hand–held tester is changing when depressing the brake pedal.
OK: Brake fluid pressure value must be changing.

OK	Go to step 4

NG

2	INSPECT BRAKE ACTUATOR ASSY



(a) Install LSPV gauge to the front brake caliper bleeder plug portion, and bleed air from LSPV gauge.
(b) Start the engine and depress the brake pedal, then check the relation between the fluid pressure and voltage of PMC(8) and E2(24) terminals of the master cylinder pressure sensor with connector still connected.
OK:

Front brake caliper fluid pressure	Voltage
0 kPa (0 Kgf/cm², 0 psi)	0.37 – 0.63 V
5,883 kPa (60 kgf/cm², 853 psi)	1.57 – 1.83 V
11,768 kPa (120 kgf/cm², 1,706 psi)	2.77 – 3.03 V

HINT:
Voltage between terminals VCM and E2: 4.7 – 5.3 V

NG	REPLACE BRAKE ACTUATOR ASSY

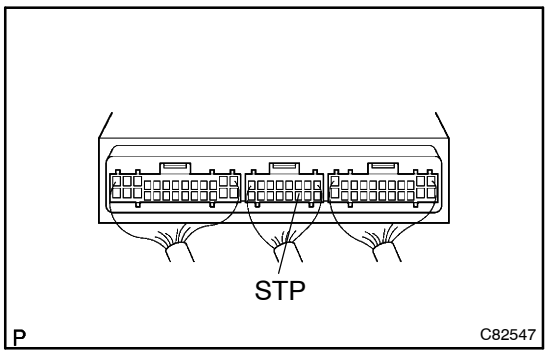
OK

3	CHECK HARNESS AND CONNECTOR(BRAKE ACTUATOR ASSY – SKID CONTROL ECU ASSY)(See page 01–31)

NG	REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4	CHECK SKID CONTROL ECU TERMINAL VOLTAGE(STP TERMINAL)



(a) Remove the skid control ECU with connectors still connected.

(b) Measure voltage between terminal STP of skid control ECU and body ground when brake pedal is depressed.
OK: 8 – 14 V

(c) Measure voltage between terminal STP of skid control ECU and body ground when brake pedal is released.
OK: Below 1.5 V

NG → **CHECK STOP LIGHT SWITCH CIRCUIT**

OK

CHECK AND REPLACE SKID CONTROL ECU ASSY