DI296–05

DTC	C1246 / 46	Master Cylinder Pressure Sensor Circuit

CIRCUIT DESCRIPTION

DTC No.	DTC Detecting Condition	Trouble Area
C1246 / 46	Either of the following 1. , 2. , 3. , 4. or 5. is detected: 1. IG1 terminal voltage is 19 to 36 V and VCM terminal voltage is other than the range of 4.7 to 5.3 V continues for 1.2 sec. or more. 2. The condition that PMC terminal voltage is other than the range of 0.14 to 4.75 V continues for 1.2 sec. or more. 3. The condition that the stop light switch is OFF and PMC terminal voltage is more than 0.86 V or less than 0.3 V continues for 5 sec. or more. 4. Vehicle speed is 7 km/h or more and the condition that PMC terminal voltage is more than 0.86 V and the voltage fluctuation is with in 0.01 V continues for 30 sec. 5. Vehicle speed is 10 km/h (6.2 mph) or more and the condition that PMC terminal receives noise 7 times or more within 5 sec.	• Master cylinder pressure sensor • Master cylinder pressure sensor circuit

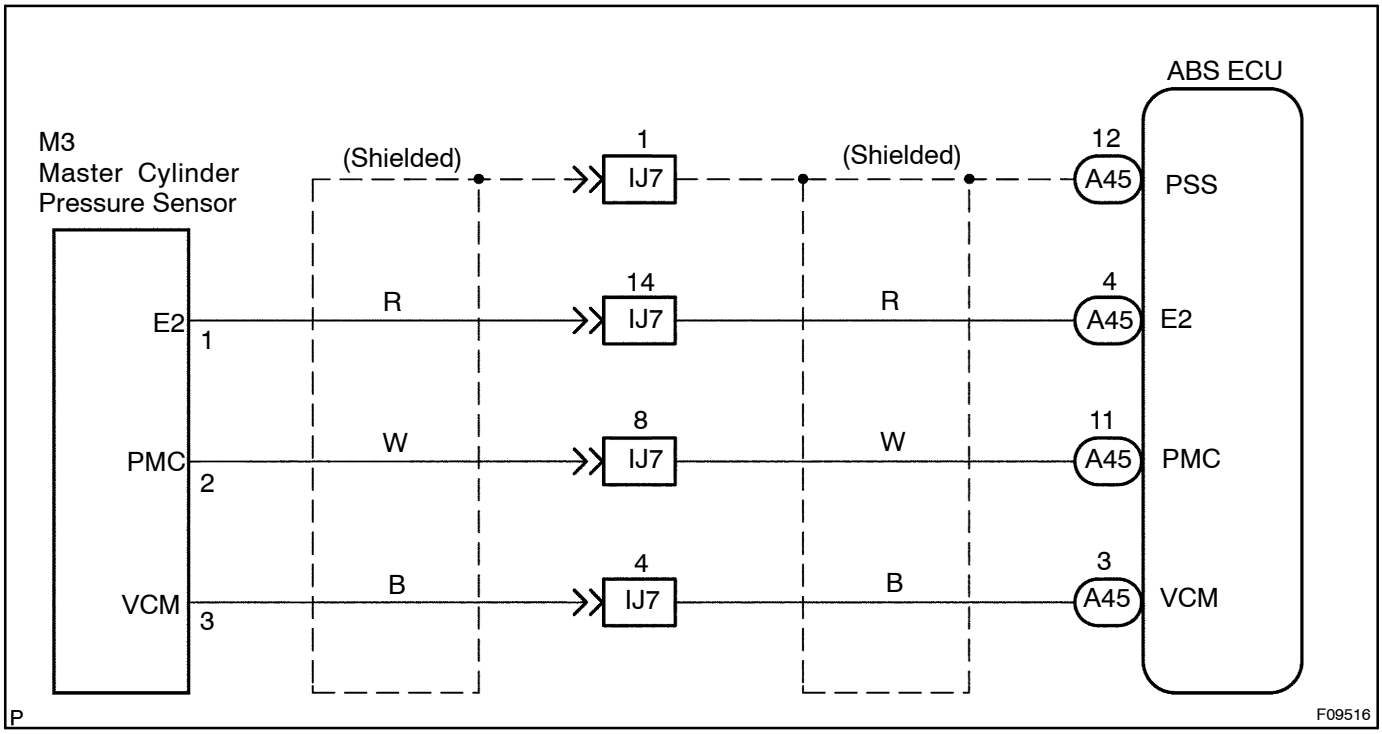
Fail safe function:

If any trouble occurs in the master cylinder pressure sensor circuit, the ECU prohibits BRAKE PRESSURE INCREASE FUNCTION.

HINT:

When the brake pedal is depressed firmly, the brake force may be lowered.

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.**

PREPARATION:
(a) Connect the hand–held tester to the DLC3.
(b) Turn the ignition switch ON and push the hand–held tester main switch ON.
(c) Select the DATALIST mode on the hand–held tester.

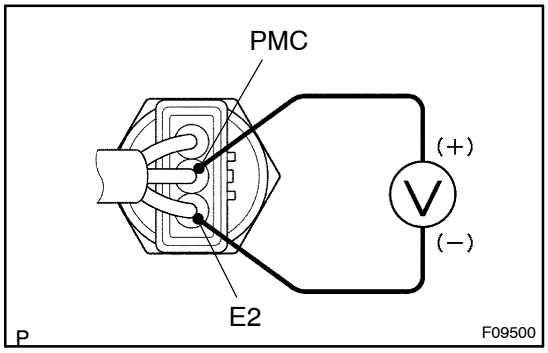
CHECK:
Check that the brake fluid pressure value of the master cylinder pressure sensor displayed on the hand–held tester is changing when depressing the brake pedal.

OK:
Brake fluid pressure value must be changing.

OK → **Go to step 4.**

NG

2	**Check master cylinder pressure sensor.**



PREPARATION:
(a) Install LSPV gauge to the front caliper bleeder plug portion, and bleed LSPV gauge.
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(b) Remove air cleaner inlet and battery clamp cover.

CHECK:
Start the engine and depress the brake pedal, then check the relation between the fluid pressure and voltage of PMC and E2 terminals of the master cylinder pressure sensor with connector still connected.

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: 4.85 – 5.15 V

NG → **Replace master cylinder pressure sensor.**

OK

3	Check for open and short circuit in harness and connector between master cylinder pressure sensor and ABS ECU (See page IN–21).

NG → Repair or replace harness or connector.

OK ↓

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

NO → Check the stop light switch circuit (See Pub. No. RM339E on page BE–28).

YES ↓

Check and replace ABS ECU.