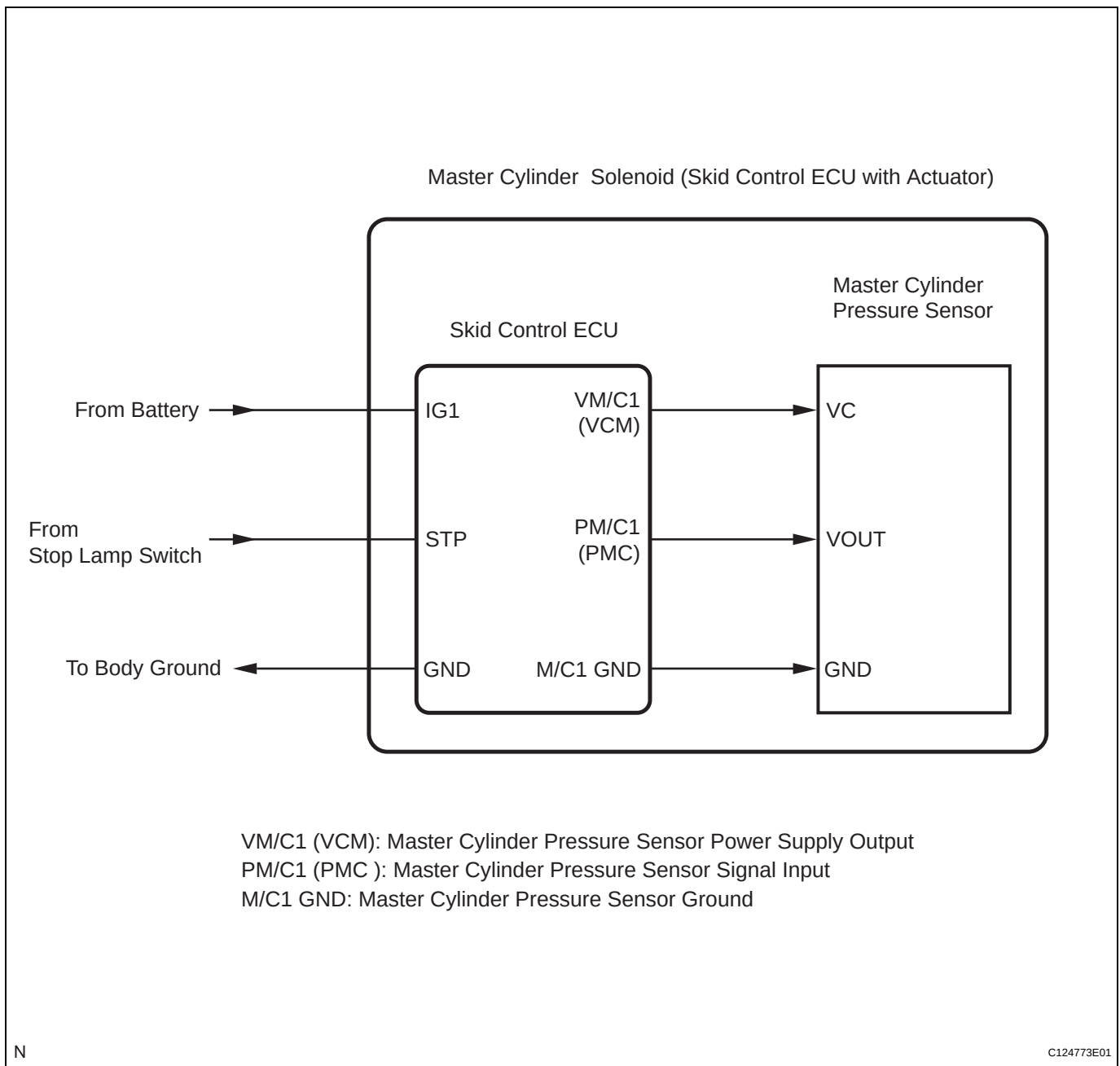


**DTC****C1246/46****Master Cylinder Pressure Sensor Malfunction****DESCRIPTION**

The master cylinder pressure sensor is connected to the skid control ECU in the master cylinder solenoid.



VM/C1 (VCM): Master Cylinder Pressure Sensor Power Supply Output  
 PM/C1 (PMC): Master Cylinder Pressure Sensor Signal Input

## M/C1 GND: Master Cylinder Pressure Sensor Ground

| DTC No.  | DTC Detecting Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Trouble Areas                                                                                                                                                                                                       |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C1246/46 | <p>When either of following conditions detected:</p> <ol style="list-style-type: none"> <li>All of the following conditions continue for at least 30 seconds. <ul style="list-style-type: none"> <li>Vehicle speed more than 4 mph (7 km/h).</li> <li>PM/C1 terminal voltage does not change by more than 0.005 V once it exceeds 0.86 V.</li> </ul> </li> <li>PM/C1 terminal receives noise at least 7 times within 5 seconds.</li> <li>All of following conditions continue for at least 5 seconds. <ul style="list-style-type: none"> <li>Stop switch OFF.</li> <li>PM/C1 terminal voltage more than 0.86 V or less than 0.3 V.</li> </ul> </li> <li>All of following conditions continue for at least 1.2 seconds. <ul style="list-style-type: none"> <li>IG1 terminal voltage between 9.5 V and 17.0 V.</li> <li>VM/C1 terminal voltage not within 4.4 V and 5.6 V.</li> </ul> </li> <li>All of following conditions continue for at least 1.2 seconds. <ul style="list-style-type: none"> <li>VM/C1 terminal voltage between 4.4 V and 5.6 V.</li> <li>PM/C1 terminal voltage not within 0.14 V and 4.85 V.</li> </ul> </li> </ol> | <ul style="list-style-type: none"> <li>Master cylinder pressure sensor</li> <li>Master cylinder pressure sensor circuit</li> <li>Master cylinder solenoid (skid control ECU)</li> <li>Stop light circuit</li> </ul> |

## HINT:

Start the inspection from step 1 when using a intelligent tester and start from step 3 when not using a intelligent tester.

**1****READ VALUE OF DATA LIST (MASTER CYLINDER PRESSURE SENSOR)**

- (a) Connect the intelligent tester to the DLC3.  
(b) Start the engine.  
(c) Turn the intelligent tester ON.  
(d) Select the DATA LIST mode on the intelligent tester.

| Item          | Measurement Item / Range (Display)                                  | Normal Condition                                                                                                                           | Diagnostic Note                              |
|---------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| MAS CYL PRS 1 | Master cylinder pressure sensor<br>1 reading / min.: 0 V, max.: 5 V | <ul style="list-style-type: none"> <li>When brake pedal released: 0.3 to 0.9 V</li> <li>When stop lamps turned on: 0.3 to 0.9 V</li> </ul> | Reading increases when brake pedal depressed |

- (e) Check that the master pressure value of the master cylinder pressure sensor displayed on the intelligent tester changes when the brake pedal is depressed.

| Result                                                       | Proceed to |
|--------------------------------------------------------------|------------|
| Master cylinder pressure sensor value becomes normal         | A          |
| Master cylinder pressure sensor value changes but not normal | B          |
| Master cylinder pressure sensor value does not change        | C          |

**B****Go to step 3****C****REPLACE MASTER CYLINDER SOLENOID****A**

**2 RECONFIRM DTC**

- (a) Clear the DTCs (See page [BC-118](#)).  
(b) Check if the same DTCs are detected.

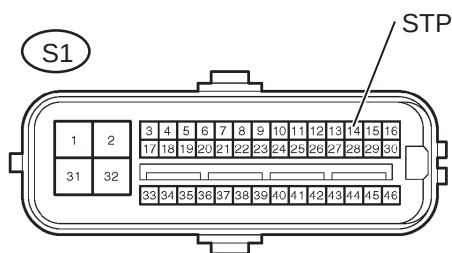
| Result         | Proceed to |
|----------------|------------|
| DTC output     | A          |
| DTC not output | B          |

**B****END****A****REPLACE MASTER CYLINDER SOLENOID****3 CHECK BRAKE PEDAL HEIGHT**

- (a) Check the brake pedal height.  
(b) Check the stop lamp switch installation.

**OK:****The brake pedal and stop lamp switch are normal.****NG****ADJUST BRAKE PEDAL HEIGHT****OK****4 INSPECT SKID CONTROL ECU TERMINAL VOLTAGE (STP TERMINAL)**

Skid Control ECU  
(harness side connector):



C121700E07

- (a) Disconnect the skid control ECU connector.  
(b) Measure the voltage.

**Standard Voltage**

| Tester Connection        | Condition             | Specified Condition |
|--------------------------|-----------------------|---------------------|
| S1-7 (STP) - Body ground | Brake pedal depressed | 8 to 16 V           |
| S1-7 (STP) - Body ground | Brake pedal released  | Below 1.5 V         |

- (c) Reconnect the skid control ECU connector.

**NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****5 RECONFIRM DTC**

- (a) Clear the DTCs (See page [BC-118](#)).

(b) Check if the same DTCs are detected.

| Result         | Proceed to |
|----------------|------------|
| DTC output     | A          |
| DTC not output | B          |

