

## 4. Failure Reproduction

Connect the shift solenoid "B" 2P (Brown) connector.

Turn the ignition switch ON.

Test-ride the vehicle for several minutes under the same conditions as those indicated by the freeze data.

*Is DTC 16-1 indicated ?*

**NO** – Intermittent failure

**YES** – Replace the PCM with a new one and recheck.

## DTC 16-2 (SHIFT SOLENOID "B" OPEN)

- Before starting the troubleshooting, check for loose or poor contact on the shift solenoid "B" 2P (Brown) connector and PCM 33P (Black) connector and then recheck the DTC.

### 1. Recheck DTC

Turn the ignition switch ON and test-ride the vehicle, then recheck the DTC.

*Is DTC 16-2 indicated ?*

**YES** – GO TO STEP 2.

**NO** – Intermittent failure

### 2. Shift Solenoid Valve "B" Inspection

Turn the ignition switch OFF.

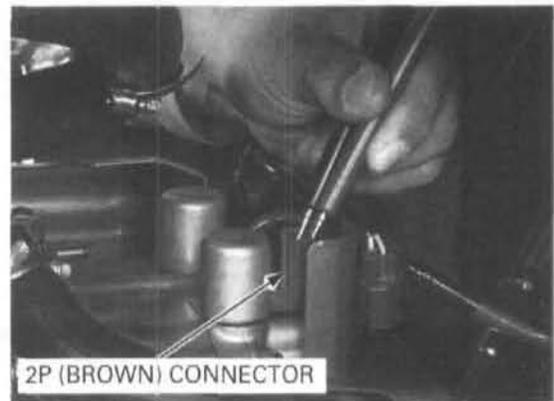
Disconnect the shift solenoid "B" 2P (Brown) connector.

Measure the resistance between the shift solenoid valve "B" 2P (Brown) connector terminals of the solenoid side.

*Is the resistance within 14.6 – 16.2  $\Omega$  (20°C/ 68°F)?*

**YES** – GO TO STEP 3.

**NO** – Faulty shift solenoid valve B.



2P (BROWN) CONNECTOR

### 3. Shift Solenoid Valve "B" Line Open Circuit Inspection

*Be careful not to bend the connector terminals.*

Connect the shift solenoid "B" 2P (Brown) connector.

Disconnect the PCM 33P (Black) connector and 5P (Black) connector.

Measure the resistance at the PCM connectors terminals.

**TOOL:**

Test probe

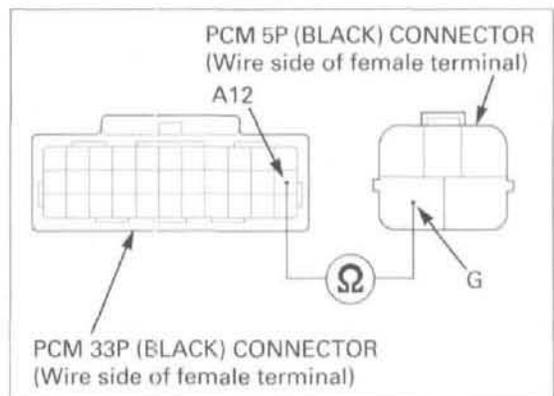
07ZAJ-RDJA110

**Connection: A12 – Green**

*Is the resistance within 14.6 – 16.2  $\Omega$  (20°C/ 68°F)?*

- NO** –
- Open circuit in the Yellow/green wire.
  - Open circuit in the Green wire.

**YES** – GO TO STEP 4.



**4. Shift Solenoid "B" Line Short Circuit Inspection**

Turn the ignition switch OFF.

Disconnect the shift solenoid "B" 2P (Brown) connector.

Check for continuity between the shift solenoid "B" 2P (Brown) connector terminals of the wire harness side and ground.

**Connection: Yellow/green - Ground  
Green - Ground**

**Is there continuity?**

**YES** - • Short circuit in the Yellow/green wire.  
• Short circuit in the Green wire.

**NO** - GO TO STEP 5.

**5. Failure Reproduction**

Connect the shift solenoid "B" 2P (Brown) connector, PCM 33P (Black) and 5P (Black) connector.

Turn the ignition switch ON.

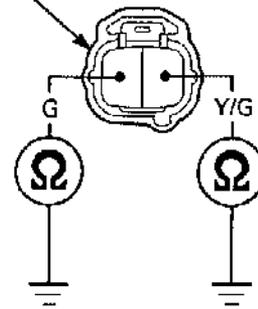
Test-ride the vehicle for several minutes under the same conditions as those indicated by the freeze data.

**Is DTC 16-2 indicated?**

**NO** - Intermittent failure

**YES** - Replace the PCM with a new one and recheck.

SHIFT SOLENOID "B" 2P (BROWN) CONNECTOR (Wire side of male terminal)



**DTC 31-1 (SYSTEM VOLTAGE LOW)**

- Before starting the troubleshooting, check the combination meter function or starter motor function. If these have malfunction, inspect the battery, fuses or ignition switch.
- Before starting the troubleshooting, check for loose or poor contact on the PCM 33P connectors and then recheck the DTC.

**1. PCM System Voltage Inspection**

Turn the ignition switch ON.

Check the battery voltage in the Data List menu of HDS pocket tester.

**Is the voltage less than 9.3 V?**

**YES** - GO TO STEP 2.

**NO** - Intermittent failure.

## DRIVETRAIN SYSTEM

### 2. PCM Power Input Line Inspection

*Be careful not to bend the connector terminals.*

Turn the ignition switch OFF.

Disconnect the PCM 33P (Gray) connector.

Turn the ignition switch ON.

Measure the voltage between the wire harness side connector terminal and ground.

**TOOL:**

**Test probe** 07ZAJ-RDJA110

**Connection:** B1 (+) - Ground (-)

**Is there battery voltage?**

- NO** -
- Inspect the battery/charging system (page 20-7).
  - Open or short circuit in the Black/blue wire.
  - Blown IGN fuse.

**YES** - GO TO STEP 3.

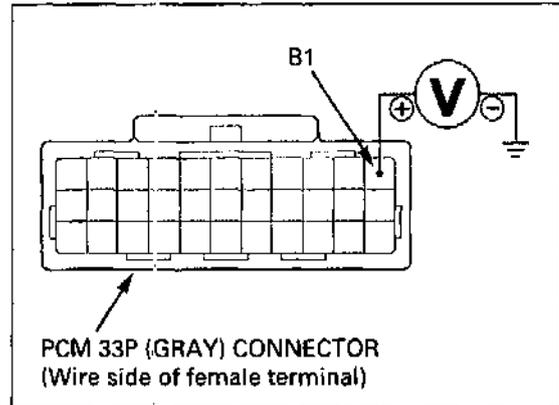
### 3. Failure Reproduction

Clear the DTC, test-ride or check the vehicle under the conditions indicated as the freeze data and recheck the DTC.

**Is the DTC 31-1 indicated?**

**NO** - Intermittent failure

**YES** - Replace the PCM with a new one and recheck.



## DTC 32-1 (FAIL SAFE RELAY CIRCUIT)

### 1. Recheck DTC

Clear the DTC, turn the ignition switch ON and recheck the current DTC.

**Is the DTC 32-1 indicated?**

**NO** - Intermittent failure.

**YES** - Replace the PCM with a new one and recheck.

**DTC 41-1 (GEAR POSITION SWITCH CIRCUIT)**

- Before starting the troubleshooting, check for loose or poor contact on the gear position switch 3P (Natural) connector and PCM 33P (Black) connector and then recheck the DTC.

**1. Gear Position Switch Line Inspection at PCM Connector**

Turn the ignition switch OFF.

Disconnect the PCM 33P (Black) connector.

Perform the gear position switch inspection (page 14-44).

Also check for the short circuit between each gear position switch terminals.

**Is there normal continuity?**

**NO** - GO TO STEP 2.

**YES** - GO TO STEP 3.

**2. Gear Position Switch Line Inspection at the Connector**

Disconnect the gear position switch connector. Check for continuity between the gear position switch 3P (Natural) connector of the switch side and ground (page 14-44).

Also check for the short circuit between each gear position switch terminals.

**Connection: Light green/red - Ground**  
**Gray - Ground**  
**Light blue/white - Ground**

**Is there normal continuity?**

**NO** - Faulty gear position switch.

- YES** -
- Open or short circuit in the Light green/red wire.
  - Open or short circuit in the Light blue/white wire.
  - Open or short circuit in the Gray wire.

**3. Failure Reproduction**

Connect the PCM and gear position switch connectors.

Clear the DTC, turn the ignition switch ON, select the gear position "D", "R" and check the current DTC.

**Is the DTC 41-1 Indicated?**

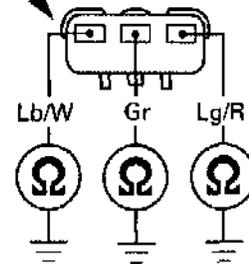
**NO** - Intermittent failure.

**YES** - Replace the PCM with a new one and recheck.

*Be careful not to bend the connector terminals.*

*When connecting the PCM 33P connectors, check that there is no dirt and oil in the connector.*

GEAR POSITION SWITCH 3P (NATURAL) CONNECTOR (Switch side of female terminal)



**DTC 42-1 (SHIFT UP/DOWN SWITCH CIRCUIT)**

- Before starting the troubleshooting, check for loose or poor contact on the handlebar switch 10P (Green) connector and PCM 33P (Black) connector and then recheck the DTC.

**1. Shift Switch Status Inspection**

Turn the ignition switch ON.

Check the shift switch status and voltage in the Data List Menu of HDS as follows:

|           | UP            | DOWN          |
|-----------|---------------|---------------|
| "Up" ON   | 3.64 – 4.08 V | 1.76 – 2.09 V |
| "Down" ON | 1.76 – 2.09 V | 3.64 – 4.08 V |
| Both ON   | 4.0 – 4.99 V  | 4.0 – 4.99 V  |
| Both OFF  | 0 – 0.99 V    | 0 – 0.99 V    |

*Is the shift switch status normal?*

- YES** – Intermittent failure  
**NO** – GO TO STEP 2.

**2. Shift Switch Line Inspection (PCM side)**

Turn the ignition switch OFF.

Disconnect the PCM 33P (Black) connector. Check for continuity between the PCM 33P (Black) connector terminals in each switch position (page 14-45).

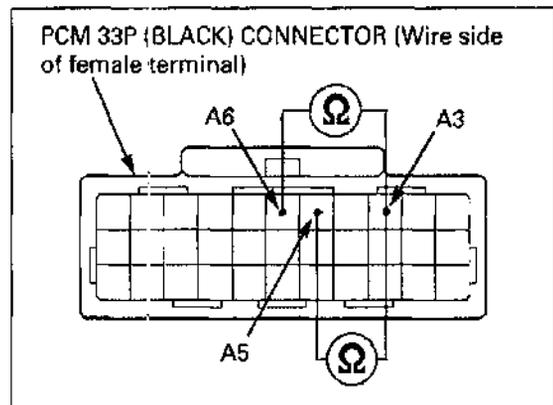
**TOOL:**

**Test probe** 07ZAJ-RDJA110

**Connection:** A3 – A6  
 A3 – A5

*Is there normal continuity?*

- NO** – GO TO STEP 3.  
**YES** – GO TO STEP 4.



**3. Gearshift Switch Inspection (Handlebar Switch Side)**

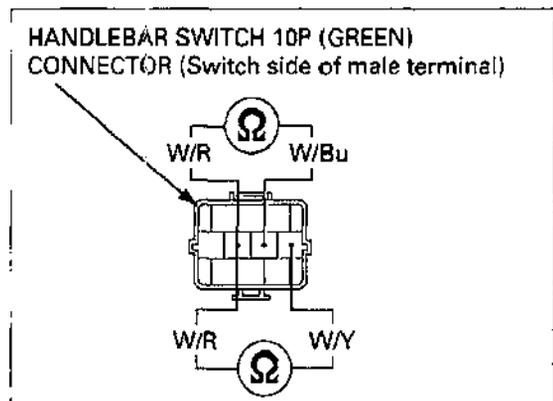
Remove the left handlebar switch 10P (Green) connector from the frame and disconnect it.

Check for continuity at the switch side 10P (Green) connector terminals in each switch position (page 14-45).

**Connection:** White/red – White/blue  
 White/red – White/yellow

*Is there normal continuity?*

- NO** – Check the shift switch condition or replace the shift switch with a new one and recheck.
- YES** – • Open or short circuit in the wires between the PCM 33P (Black) and handlebar switch 10P (Green) connector.  
 – White/red wire.  
 – White/yellow wire.  
 – White/blue wire.



**4. Failure Reproduction**

Connect the PCM and gearshift switch connectors.  
Clear the DTC, turn the ignition switch ON and recheck the current DTC.

*Is the DTC 42-1 indicated?*

- NO** – Intermittent failure.
- YES** – Replace the PCM with a new one and recheck.

**DTC 44-1 (EOT SENSOR LOW VOLTAGE)**

**1. EOT Sensor System Inspection**

Turn the ignition switch ON and engine stop switch "O".

Check the EOT sensor with the HDS.

*Is about 0 V indicated?*

- NO** – • Intermittent failure.  
• Loose or poor connection on the ECT sensor 2P (Black) connector.
- YES** – GO TO STEP 2.

**2. EOT Sensor Inspection**

Turn the ignition switch OFF.  
Disconnect the EOT sensor 2P (Black) connector.

Turn the ignition switch ON and engine stop switch "O".

Check the EOT sensor with the DTC pocket tester.

*Is about 0 V indicated?*

- NO** – GO TO STEP 3.
- YES** – GO TO STEP 4.

**3. EOT Sensor Resistance Inspection**

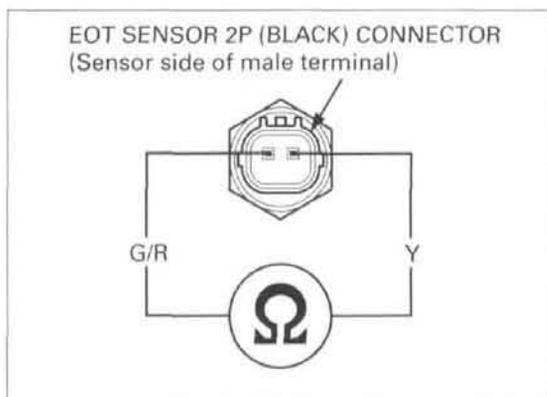
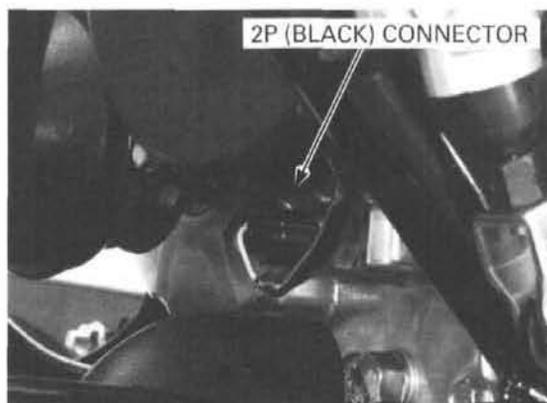
Turn the ignition switch OFF.

Measure the resistance at the EOT sensor terminals.

**Connection: Yellow – Green/red**  
**Standard: 2.3 – 2.6 kΩ (20°C/68°F)**

*Is the resistance within 2.3 – 2.6 kΩ?*

- YES** – Replace the PCM with a new one, and recheck.
- No** – Faulty EOT sensor.



## DRIVETRAIN SYSTEM

### 4. EOT Sensor Short Circuit Inspection

Disconnect the PCM 33P (Gray) connector from the PCM (page 6-54).

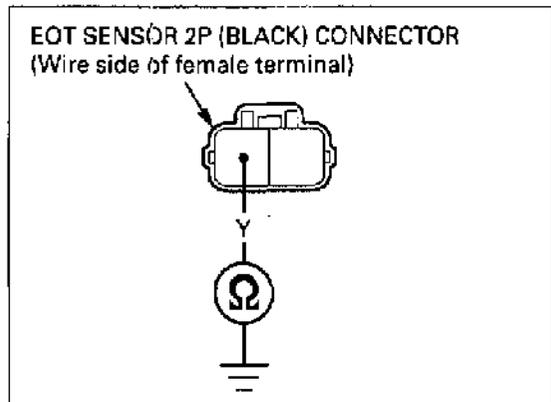
Check for continuity between the EOT sensor 2P (Black) connector terminal of the wire harness side and ground.

**Connection: Yellow – Ground**

*Is there continuity?*

**YES** – Short circuit in Yellow wire.

**NO** – Replace the PCM with a new one, and recheck.



### DTC 44-2 (EOT SENSOR HIGH VOLTAGE)

- Before starting the inspection, check for loose or poor contact on the EOT sensor 2P (Black) connector and recheck the HDS.

#### 1. EOT Sensor System Inspection

Turn the ignition switch ON and engine stop switch "O".

Check the EOT sensor with the HDS pocket tester.

*Is about 5 V indicated?*

**NO** – • Intermittent failure.  
• Loose or poor contact on the EOT sensor 2P (Black) connector.

**YES** – GO TO STEP 2.

#### 2. EOT Sensor Inspection

Turn the ignition switch OFF.

Disconnect the EOT sensor 2P (Black) connector. Jump the EOT sensor terminals with a jumper wire.

**Connection: Yellow – Green/red**

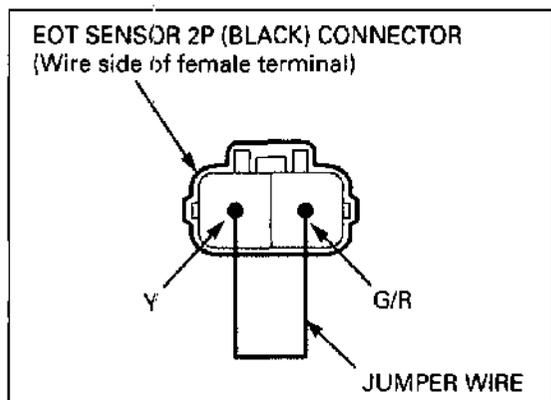
Turn the ignition switch ON and engine stop switch "O".

Check the EOT sensor with the HDS pocket tester.

*Is about 0 V indicated?*

**YES** – Faulty EOT sensor.

**NO** – GO TO STEP 3.



**3. EOT Sensor Open Circuit Inspection**

Turn the ignition switch OFF.  
Remove the jumper wire.

Disconnect the PCM 33P (Gray) connector (page 6-54).

Check for continuity between the PCM 33P (Gray) connector terminals and ECT sensor 2P (Black) connector terminals of the wire harness side.

**TOOL:**

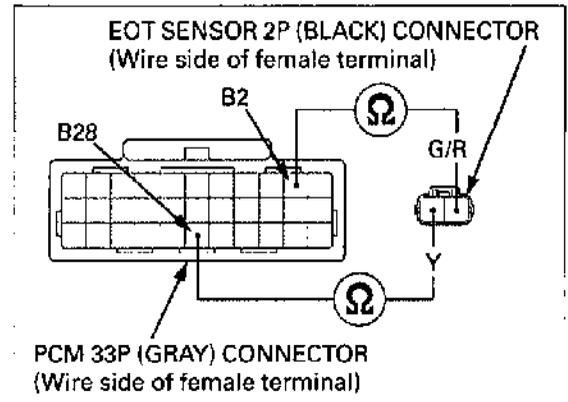
Test probe **07ZAJ-RDJA110**

**Connection: B28 – Yellow**  
**B2 – Green/red**

***Is there continuity?***

**YES** – Replace the PCM with a new one, and recheck.

**NO** – • Open circuit in Yellow wire.  
• Open circuit in Green/red wire.



## GEAR POSITION SWITCH

### INSPECTION

Turn the ignition switch OFF.

Disconnect the PCM 33P (Black) connector (page 21-6).

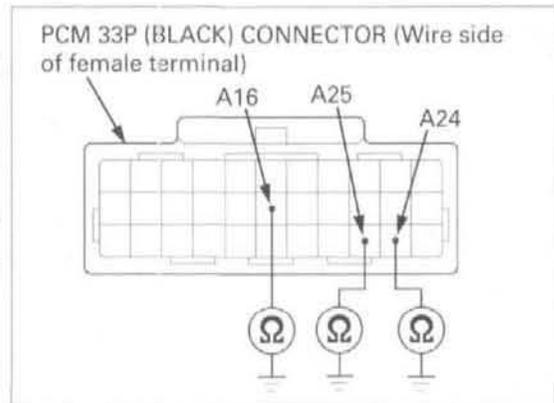
Check for continuity between each gear position switch wire terminal of the PCM connector and ground.

There should be continuity only at the terminals that correspond to the gearshift lever positions shown below, and there should be no continuity at the other terminals.

You must test each of the three wires in each gearshift lever position. Therefore, you need to make 9 tests, between each gear position switch wire terminal and ground.

If the test result is abnormal, disconnect the gear position switch 3P (Natural) connector.

Perform the continuity test at the 3P (Natural) connector in the same manner (page 14-44).



| Color   | Light blue/white | Light green | Gray | GND |
|---------|------------------|-------------|------|-----|
| DRIVE   | 1 ○              | 2           | 3    | ○   |
| NEUTRAL | 4                | 5 ○         | 6    | ○   |
| REVERSE | 7                | 8           | 9 ○  | ○   |

- If the test result at the PCM is abnormal and the one at the 3P connector is normal, check for open or short circuit, or loose or poor connector contact.
- If the both test results are abnormal, replace the gear position switch.



### REPLACEMENT

Remove the following:

- seat (page 3-4)
- right side cover (page 3-5)
- left fuel tank side cover (page 3-7)

Disconnect the gear position switch 3P (Natural) connector.

Release the gear position switch wire from the clamps.

