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1972 CHEVROLET Corvette C3 OEM Service and Repair Workshop Manual

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- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Scan Tool Reference

Control Module References for scan tool information

Circuit/System Verification

1. Ignition ON.
2. Verify the scan tool Hood Ajar Switch parameter is Open when the hood is open and Closed when the hood is closed.
    - **If the parameter does not change**

      Refer to Circuit/System Testing.
    - **If the parameter changes**
3. All OK.

Circuit/System Testing

1. Ignition OFF and all vehicle systems OFF, disconnect the harness connector at the B55 Hood Ajar Switch for the right hand hood latch. It may take up to 2 min for all vehicle systems to power down.
2. Test for less than 10 Ω between the ground circuit terminal C and ground.
    - **If 10 Ω or greater**

      1. Ignition OFF
      2. Test for less than 2 Ω in the ground circuit end to end.
          - If 2 Ω or greater, repair the open/high resistance in the circuit.
          - If less than 2 Ω, repair the open/high resistance in the ground connection.
    - **If less than 10 Ω**
3. Ignition ON.
4. Test for greater than 10.5 V between the signal circuit terminal B and ground.

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4. Test for 2080–2545 Ω between the signal terminal B and the ground terminal C with the hood latch in the closed position.
    - **If not between 2080–2545** Ω

      Replace the B55 Hood Ajar Switch.
    - **If between 2080–2545** Ω
5. Test for 2738–3350 Ω between the signal terminal A and the signal terminal B with the hood latch in the open position.
    - **If not between 2738–3350** Ω

      Replace the B55 Hood Ajar Switch.
    - **If between 2738–3350** Ω
6. Test for 2080–2545 Ω between the signal terminal A and the ground terminal C with the hood latch in the open position.
    - **If not between 2080–2545** Ω

      Replace the B55 Hood Ajar Switch.
    - **If between 2080–2545** Ω
7. Test for 658–806 Ω between the signal terminal B and the ground terminal C with the hood latch in the open position.
    - **If not between 658–806** Ω

      Replace the B55 Hood Ajar Switch.
    - **If between 658–806** Ω
8. All OK.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.

- Hood Primary Latch Replacement
- Control Module References for body control module replacement, programming, and setup.

Sample

Circuit/System Description

The engine control module applies 12 V to the hood ajar signal circuit and monitors the voltage to determine the position of the hood. The hood ajar switch contains a multiplexed resistor. This resistor will vary the voltage seen by the engine control module by pulling down the applied voltage based on the position of the switch. The terminals at the switch can be identified by letters or numbers. Letter A is number 1, letter B is number 2, and letter C is number 3.

Conditions for Running the DTC

Ignition ON.

Conditions for Setting the DTC

P257D

The engine control module detects a plausibility error between the observed hood ajar position and the reported hood ajar position.

P257E

The engine control module detects a short to ground in the hood ajar signal input to the engine control module.

P257F

The engine control module detects a short to voltage or an open/high resistance in the hood ajar signal input to the engine control module.

Action Taken When the DTC Sets

Engine start/stop function will be disabled.

Conditions for Clearing the DTC

DTCs P257D, P257E, and P257F are Type B DTCs.

Reference Information

Schematic Reference

Hood Latch Schematics

Connector End View Reference

Sample

- **If less than 10 Ω**

3. Ignition ON.

4. Verify DTC P257F is set as current

   - **If DTC P257F is not set as current**

   1. Ignition OFF, disconnect the harness connector at the K20 Engine Control Module.

   2. Test for infinite resistance between the signal circuit and ground.

      - If less than infinite resistance, repair the short to ground on the circuit.

      - If infinite resistance, replace the K20 Engine Control Module.

   - **If DTC P257F is set as current**

5. Install a 5 A fused jumper wire between the signal circuit terminal A (or 1) and ground, ignition ON

6. Verify DTC P257E is set as current.

   - **If DTC P257E is not set as current**

   1. Ignition OFF, disconnect the harness connector at the K20 Engine Control Module.

   2. Test for less than 1 V between the signal circuit and ground.

      - If 1 V or greater, repair the short to voltage on the circuit.

      - If less than 1 V

   3. Test for less than 2 Ω in the signal circuit end to end.

      - If 2 Ω or greater, repair the open/high resistance in the circuit.

      - If less than 2 Ω, replace the K20 Engine Control Module.

   - **If DTC P257E is set as current**

7. Test or replace the B55 Hood Ajar Switch.

Component Testing

1. Ignition OFF, disconnect the harness connector at the B55 Hood Ajar Switch.

2. Test for 2738–3350 Ω between the signal terminal A (or 1) and the signal terminal B (or 2) with the hood latch in the CLOSED position.

   - **If not between 2738–3350 Ω**

     Replace the B55 Hood Ajar Switch.

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