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2009 Chevrolet Malibu Service and Repair Manual

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3. If there is movement between the metal plate of the transmission mount and its attaching points, lower the transmission on the transmission mount. Tighten the bolts or nuts attaching the transmission mount to the frame or transmission. Refer to [Transmission Mount Replacement](#) .

Sample

Component	Description
S147R Manual Transmission Shift Anticipate Switch - Right	The switch S2R has three terminals. The switch has a resistor between the input terminal and the internal switch. When pressed or released the switch changes between two output terminals.

Reference Information

Schematic Reference

[Manual Transmission Schematics](#)

Connector End View Reference

[Master Electrical Component List](#)

Electrical Information Reference

- [Circuit Testing](#)
- [Connector Repairs](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)

DTC Type Reference

[Powertrain Diagnostic Trouble Code \(DTC\) Type Definitions](#)

Scan Tool Reference

[Control Module References](#)

Circuit/System Verification

1. Ignition » On / Vehicle » In Service Mode
2. Press and release the switch:S147L Manual Transmission Shift Anticipate Switch - Left

Verify the display at the component:Gear Indicator@P16 Instrument Cluster=Yellow

- **If not the specified state**

Refer to: Circuit/System Testing

- **If the specified state**

5. Disconnect the electrical connector:X2@X85 Steering Wheel Air Bag Coil

6. Test for 7.0 to 8.4 V between the test points:Signal circuit terminal 3&Ground

- **If less than 7.0 V**

Replace the component:X85 Steering Wheel Air Bag Coil

- **If greater than 8.4 V**

Repair the short to voltage on the circuit.

- **If between 7.0 and 8.4 V**

7. Connect the electrical connector:X2@X85 Steering Wheel Air Bag Coil

8. Disconnect the electrical connector:S147R Manual Transmission Shift Anticipate Switch - Right

9. Test for 7.0 to 8.4 V between the test points:Signal circuit terminal 1&Ground

- **If less than 7.0 V**

10. Test for infinite resistance between the test points:Signal circuit terminal 1(component side)&Ground

- If less than infinite resistance » Repair the short to ground on the circuit. »

- If infinite resistance

11. Test for less than 2 Ω between the test points:If 2 Ω or greaterSignal circuit terminal 1(component side)&The other end of the circuit(harness side)

- If 2 Ω or greater » Repair the open/high resistance in the circuit.

- If less than 2 Ω » Replace the component:K9 Body Control Module

- **If greater than 8.4 V**

Repair the short to voltage on the circuit.

- **If between 7.0 and 8.4 V**

12. Disconnect the electrical connector:S147L Manual Transmission Shift Anticipate Switch - Left

13. Test for less than 2 Ω between the test points:Ground circuit terminal 1&Ground

- **If 2 Ω or greater**

1. Disconnect the ground connection:Ground terminal

2. Test for less than 2 Ω between the test points:Ground circuit terminal 1&The other end of the circuit

- 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 infinite resistance**

5. Press and hold the switch:S147R Manual Transmission Shift Anticipate Switch - Right—Rev Match

6. Test for 604 to 664 Ω between the test points:Signal terminal 1&Signal terminal 2—The switch is in the closed position.

- **If not between 604 and 664 Ω**

Replace the component:S147R Manual Transmission Shift Anticipate Switch - Right

- **If between 604 and 664 Ω**

7. Disconnect the electrical connector:S147L Manual Transmission Shift Anticipate Switch - Left

8. Test for 5,180 to 5,980 Ω between the test points:Signal terminal 1&Signal terminal 3—The switch is in the open position.

- **If not between 5,180 and 5,980 Ω**

Replace the component:S147L Manual Transmission Shift Anticipate Switch - Left

- **If between 5,180 and 5,980 Ω**

9. Press and hold the switch:S147L Manual Transmission Shift Anticipate Switch - Left—Rev Match

10. Test for 1,070 to 1,670 Ω between the test points:Signal terminal 1&Signal terminal 2—The switch is in the closed position.

- **If not between 1,070 and 1,670 Ω**

Replace the component:S147L Manual Transmission Shift Anticipate Switch - Left

- **If between 1,070 and 1,670 Ω**

11. All OK.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair: [Diagnostic Repair Verification](#)

- [Automatic Transmission Manual Shift Auxiliary Position Switch Replacement](#)—S147 Manual Transmission Shift Anticipate Switch
- For control module replacement, programming, and setup refer to: [Control Module References](#)