Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

2001 CHEVROLET Matiz / Spark (M150) OEM Service and Repair Workshop Manual

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- Terminal 4
  - **If less than infinite resistance on either circuit**

    Replace the S70B Steering Wheel Controls Switch – Right Lower.
  - **If infinite resistance**

3. Test for less than 10 Ω between the following signal terminals and the ground terminal 1 with the appropriate switch in the Up position or Down position.
   - Terminal 3
   - Terminal 4
     - **If 10 Ω or greater**

       Replace the S70B Steering Wheel Controls Switch – Right Lower.
     - **If less than 10 Ω**
4. All OK

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.

Control Module References for instrument cluster replacement, programming, and setup

Circuit/System Description

For an overview of the component/system, refer to: Drive Mode Description and Operation

Circuit	Description
5 V Reference	Regulated voltage supplied by the control module.
Signal	The control module input circuit has an internal resistance connected to ground.
Low Reference	Grounded through the control module.

Component	Description
K20 Engine Control Module	The control module contains a microprocessor used to process input data to control outputs.
S48E Multifunction Switch - Center Console	The switch S48E has an internal resistor ladder network. A specific resistance is generated dependent on the position of the switch.

Conditions for Running the DTC

Ignition » On / Vehicle » In Service Mode

Conditions for Setting the DTC

Signal circuit—Voltage=Out Of Range

Actions Taken When the DTC Sets

DTCs listed in the DTC Descriptor category=Type B

Conditions for Clearing the DTC

DTCs listed in the DTC Descriptor category=Type B

Reference Information

Ignition/Vehicle & All vehicle systems » Off

2. Disconnect the electrical connector:S48E Multifunction Switch - Center Console
3. Test for less than 10 Ω between the test points:Low Reference circuit terminal 5&Ground
    - **If 10 Ω or greater**
        1. Disconnect the electrical connector:K20 Engine Control Module
        2. Test for less than 2 Ω between the test points:Low Reference circuit terminal 5@Component harness&The other end of the circuit@Control module harness
            - If 2 Ω or greater » Repair the open/high resistance in the circuit.
            - If less than 2 Ω » Replace the component:K20 Engine Control Module
    - **If less than 10 Ω**
4. Ignition » On / Vehicle » In Service Mode
5. Test for 4.8 to 5.2 V between the test points:5 V Reference circuit terminal 1&Ground
    - **If less than 4.8 V**
        1. Ignition/Vehicle » Off
        2. Disconnect the electrical connector:K20 Engine Control Module
        3. Test for infinite resistance between the test points:5 V Reference circuit terminal@Component harness&Ground
            - If less than infinite resistance » Repair the short to ground on the circuit.
            - If infinite resistance
        4. Test for less than 2 Ω between the test points:5 V Reference circuit terminal@Component harness&The other end of the circuit@Control module harness
            - If 2 Ω or greater » Repair the open/high resistance in the circuit.
            - If less than 2 Ω » Replace the component:K20 Engine Control Module
    - **If greater than 5.2 V**
        1. Ignition/Vehicle » Off
        2. Disconnect the electrical connector:K20 Engine Control Module
        3. Ignition » On / Vehicle » In Service Mode

Verify the DTC does not set.

- **If the DTC sets**

  Replace the component:K20 Engine Control Module

- **If the DTC is not set**

13. All OK.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair: Diagnostic Repair Verification

- Ride Control Switch Replacement
- For control module replacement, programming, and setup refer to: Control Module References