

<- Back

Forward ->

Document ID# 1217237
1999 GMC Truck GMC C Sierra - 2WD

Print

Mode Actuator Inoperative

Step	Action	Value(s)	Yes	No
1	Did you review the description and operation and perform the necessary inspections?	--	Go to Step 2	Go to HVAC Air Delivery/Temperature Control Schematics
2	Verify that the fault is present. Does the system operate normally?	--	Go to Intermittents and Poor Connections Diagnosis	Go to Step 3
3	<ol style="list-style-type: none"> 1. Disconnect the mode door motor connector. 2. Turn ON the ignition, with the engine OFF. 3. Probe the ignition positive voltage of the mode door motor with a test lamp that is connected to a good ground. Does the test lamp illuminate?	--	Go to Step 4	Go to Step 18
4	Connect a test lamp between the ground circuit and the ignition positive voltage circuit of the mode door motor. Does the test lamp illuminate?	--	Go to Step 5	Go to Step 19
5	<ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Reconnect the mode door motor connector. 3. Turn ON the ignition, with the engine OFF. 4. Place the blower motor switch in the LOW position. 5. Measure the voltage from the control circuit of the mode door motor to a good ground. 6. Operate the mode control to full Defrost and then to full Floor. Does the voltage measure near the specified values when in each position?	0 V: Defrost 4.9 V Floor	Go to Step 15	Go to Step 6

6	<p>Measure the voltage from the door position signal circuit at the HVAC control module to a good ground.</p> <p>Does the voltage measure within the specified range?</p>	0.09-4.95 V	Go to Step 7	Go to Step 8
7	<ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Disconnect the HVAC control module. 3. Turn ON the ignition with the engine OFF. 4. Connect a 3-amp fused jumper wire between the control circuit of the mode door motor and the 5 volt reference circuit. <p>Does the drive shaft of the mode door motor rotate?</p>	--	Go to Step 17	Go to Step 14
8	<ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Disconnect the mode door motor connector. 3. Turn ON the ignition with the engine OFF. 4. Measure the voltage from the 5-volt reference circuit of the mode door motor and a good ground. <p>Does the voltage measure near the specified value?</p>	5 V	Go to Step 9	Go to Step 11
9	<p>Measure the voltage from the door position signal circuit of the mode door motor to a good ground.</p> <p>Does the voltage measure near the specified value?</p>	0 V	Go to Step 10	Go to Step 12
10	<ol style="list-style-type: none"> 1. Connect a 3-amp fused jumper wire between the 5-volt reference circuit and the door position signal circuit of the mode door motor. 2. Measure the voltage from the door position signal circuit at the HVAC control module to a good ground. <p>Does the voltage measure near the specified value?</p>	5 V	Go to Step 15	Go to Step 13

11	Test the 5-volt reference circuit of the mode door motor for a short to ground, a short to voltage, or an open. Did you find and correct the condition?	--	Go to Step 22	Go to Step 17
12	Test the door position signal circuit of the mode door motor for a short to voltage. Did you find and correct the condition?	--	Go to Step 22	Go to Step 17
13	Test the door position signal circuit of the mode door motor for an open, a high resistance, or a short to ground. Did you find and correct the condition?	--	Go to Step 22	Go to Step 17
14	Test the control circuit of the mode door motor for an open, a short to ground, or a short to voltage. Did you find and correct the condition?	--	Go to Step 22	Go to Step 15
15	Inspect the mode door for the following conditions: <ol style="list-style-type: none"> 1. Binding 2. Obstruction 3. Broken linkage 4. Excessive travel Did you find and correct the condition	--	Go to Step 22	Go to Step 16
16	Inspect for poor connections at the harness of the mode door motor. Refer to Intermittents and Poor Connections Diagnosis and Connector Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 22	Go to Step 20
17	Inspect for poor connections at the harness of the HVAC control module. Refer to Intermittents and Poor Connections Diagnosis and Connector Repairs in Wiring Systems. Did you find and correct the condition?	--	Go to Step 22	Go to Step 21
18	Repair the ignition positive voltage circuit of the mode door motor. Refer to Wiring Repairs in Wiring Systems. Did you complete the repair?	--	Go to Step 22	--

19	Repair the ground circuit of the mode door motor. Refer to Wiring Repairs in Wiring Systems. Did you complete the repair?	--	Go to Step 22	--
20	Replace the mode door motor. Refer to Temperature Actuator Replacement . Did you complete the replacement?	--	Go to Step 22	--
21	Replace the HVAC control module. Refer to Control Assembly Replacement . Did you complete the replacement?	--	Go to Step 22	--
22	Operate the system in order to verify the repair. Did you correct the condition?	--	System OK	Go to Step 3

<- Back

Forward ->

Document ID# 1217237
1999 GMC Truck GMC C Sierra - 2WD

Print