

Scan Tool Does Not Communicate with Class 2 Device

[Circuit Description](#)

Modules connected to the class 2 serial data circuit monitor for serial data communications during normal vehicle operation when operating information and commands are exchanged among the modules. Connecting a scan tool to the DLC allows communication with the modules for diagnostic purposes. Multiple diagnostic trouble codes (DTCs) may be set due to this malfunction and during this diagnostic procedure. Complete the diagnostic procedure in order to be sure all the DTCs are diagnosed and cleared from memory.

[Diagnostic Aids](#)

- When the class 2 serial data circuit is shorted to ground, U1300 will be set. Refer to [DTC U1300, U1301, or U1305](#).
- When the class 2 serial data circuit is shorted to B+, U1301 will be set. Refer to [DTC U1300, U1301, or U1305](#).
- Disconnecting modules and turning the ignition switch to RUN may cause DTCs in the vehicle modules. Check for DTCs in each module upon completion of the required repair.

[Test Description](#)

The numbers below refer to the step numbers on the diagnostic table.

2. A partial malfunction in the class 2 serial data circuit uses a different procedure from a total malfunction of the class 2 serial data circuit. The following modules communicate on the class 2 serial data circuit:
 - Body Control Module (BCM)
 - Electronic Brake Control Module (EBCM)
 - Electronic Suspension Control (ESC)
 - HVAC with CJ2
 - Sensing and Diagnostic Module (SDM)
 - Instrument Panel Cluster (IPC)
 - Driver Door Module (DDM)
 - Passenger Door Module (PDM)
 - Seat Control Module (SCM) with AAB
 - Powertrain Control Module (PCM)
 - Radio
 - Remote Control Door Lock Receiver (RCDLR)
6. A DTC indicating loss of communications with a particular module with a history status may be present along with a U1000 or U1255 having a current status. This indicates that the malfunction occurred when the ignition was ON.
7. Data link connector terminals 2 and 5 provide the connection to the class 2 serial data circuit and the signal ground circuit respectively.

9. A poor connection at the star connectors will cause multiple communication DTCs to set.
10. An open in the class 2 serial data circuit between the DLC and one of the star connectors will prevent the scan tool from communicating with some modules. This condition will cause multiple communication DTCs to set.
11. This test isolates the BCM by using the [J 42236](#) Serial Data Link Tester and a scan tool. The BCM monitors the ignition switch position and sends the appropriate power mode message to other modules. The BCM must be communicating before attempting to diagnose communication DTCs.
12. This test isolates each module on star connector #1 by communicating with each module separately using the [J 42236](#) Serial Data Link Tester and a scan tool.
13. This test isolates each module on star connector #2 by communicating with each module separately using the [J 42236](#) Serial Data Link Tester and a scan tool.
17. If there are no current DTC's that begin with a "U", the communication malfunction has been repaired.
18. The communication malfunction may have prevented diagnosis of the customer complaint.

Step	Action	Yes	No
1	Does the scan tool power up?	Go to Step 2	Go to Scan Tool Does Not Power Up
2	<p>1. Turn ON the ignition with the engine OFF.</p> <p>2. Attempt to communicate with each module on the class 2 serial data circuit. If using a Tech 2, obtain this information using the Class 2 Message Monitor feature.</p> <p>Does the scan tool communicate with any module on the class 2 serial data circuit?</p>	Go to Step 3	Go to Step 9
3	<p>1. Select the Display DTCs function for each module. If using a Tech 2, use the Class 2 DTC Check feature in order to determine which modules do have DTCs set.</p> <p>2. Record all of the displayed DTCs, the DTC status and the module which set the DTC.</p> <p>Did you record any DTCs in the range of U1000 to U1305?</p>	Go to Step 4	Go to Diagnostic Aids
4	Are the DTCs U1300, U1301 or U1305 retrieved from any module?	Go to Step 5	Go to Step 6
5	<p>Important</p> <p>Turn on the ignition, with the engine OFF, when testing for a short to voltage. Use the DMM MIN/MAX function to capture intermittent conditions.</p> <p>Test the class 2 serial data circuit for an intermittent short to ground or an intermittent short to voltage. Refer to the following in Wiring Systems:</p> <ul style="list-style-type: none"> • Testing for Intermittent and Poor Connections • Circuit Testing 	Go to Step 15	Go to Step 6

	<ul style="list-style-type: none"> • Connector Repairs • Wiring Repairs <p>Did you find and correct the condition?</p>		
6	<p>Is U1000 or U1255 the only DTC displayed in the previously specified range?</p>	Go to DTC U1000 and U1255	Go to DTC U1001-U1254
7	<ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Disconnect the scan tool from the data link connector (DLC). 3. Inspect for poor connections at the DLC terminals 2 and 5. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. <p>Did you find and correct the condition?</p>	Go to Control Module References in Body Control System for the applicable Diagnostic System Check	Go to Step 8
8	<p>Test the ground circuit of the DLC terminal 5 for an open. Refer to Circuit Testing and Wiring Repairs in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	Go to Control Module References in Body Control System for the applicable Diagnostic System Check	Go to Step 9
9	<ol style="list-style-type: none"> 1. Disconnect the bus bars from star connector #1 and star connector #2. 2. Inspect for poor connections at the star connectors. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems. <p>Did you find and correct the condition?</p>	Go to Control Module References in Body Control System for the applicable Diagnostic System Check	Go to Step 10
10	<p>Test the class 2 serial data circuit for an open or a short between the DLC connector and the star connectors. Refer to Circuit Testing and Wiring Repairs in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	Go to Control Module References in Body Control System for the applicable Diagnostic System Check	Go to Step 11
11	<ol style="list-style-type: none"> 1. Turn OFF the ignition. 2. Install a scan tool. 3. Disconnect the bus bars from star connector #1 and star connector #2. 4. Connect J 42236 Serial Data Link Tester to both star connectors. <p>Important</p> <p>Ensure the vehicle star connector #1 and star connector #2 correctly correspond with the Serial Data Link Tester connector #1 and connector #2. Refer to Data Link Connector (DLC) Schematics .</p> <ol style="list-style-type: none"> 5. Place the switch located on the Serial Data Link Tester in the STAR CONNECTOR #1 position. 6. Rotate the rotary switch to the (M) position. 7. Turn ON the ignition with the engine OFF. 8. Attempt to communicate with the BCM. 	Go to Step 12	Go to Step 14

	Does the scan tool communicate with the BCM?		
12	<ol style="list-style-type: none"> Place the switch located on the Serial Data Link Tester to the STAR CONNECTOR #1 position. Use a scan tool and attempt to communicate with each of the following systems by rotating the rotary switch on the Serial Data Link Tester in the following positions. The Tech 2 Diagnostic Circuit Check/Class 2 Message Monitor may be used to display communication status with all systems: <ul style="list-style-type: none"> (L) = HVAC with CJ2 (J) = RCDLR (H) = ESC (G) = IPC (F) = SDM (E) = EBCM (D) = RADIO (B) = PCM <p>Does the scan tool communicate with all of the systems?</p>	Go to Step 13	Go to Step 14
13	<ol style="list-style-type: none"> Place the switch located on the Serial Data Link Tester to the STAR CONNECTOR #2 position. Use a scan tool and attempt to communicate with each of the following systems by rotating the rotary switch on the Serial Data Link Tester in the following positions. The Tech 2 Diagnostic Circuit Check/Class 2 Message Monitor may be used to display communication status with all systems: <ul style="list-style-type: none"> (C) = DDM (D) = PDM (K) = SCM (with AAB) <p>Does the scan tool communicate with all of the systems?</p>	Go to Step 17	Go to Step 14
14	<ol style="list-style-type: none"> Turn OFF the ignition. Disconnect the module that is not communicating. Test the class 2 serial data circuit between the star connector and the module that is not communicating for a short to ground or a short to voltage. Turn ON the ignition with the engine OFF when testing for a short to voltage. Refer to Circuit Testing and Wiring Repairs in Wiring Systems. <p>Did you find and correct the condition?</p>	Go to Step 17	Go to Step 15
15	<p>Inspect for poor connections at the class 2 serial data circuit of the module that is not communicating. Refer to Testing for Intermittent and Poor Connections and Connector Repairs in Wiring Systems.</p> <p>Did you find and correct the condition?</p>	Go to Step 17	Go to Step 16
16	<p>Important</p> <p>Perform the set up procedure for module if required.</p> <p>Replace the module which is not communicating. Refer to Control Module References in Body Control System.</p> <p>Did you complete the replacement?</p>	Go to Step 17	--
17			

	<ol style="list-style-type: none"> 1. Reconnect all of the disconnected modules. 2. Reconnect any other disconnected connectors. 3. Install a scan tool. 4. Turn ON the ignition with the engine OFF. 5. Wait for 10 seconds. The scan tool may require a power up reset before communication will occur due to a short on the class 2 serial data circuit. Turn OFF or disconnect the scan tool prior to performing this test. 6. Select the Display DTCs function for each module. If using a Tech 2, use the Class 2 DTC Check feature in order to determine which modules do have DTCs set. 7. Record all of the displayed DTCs and the DTC status. <p>Did you record any DTCs which begin with a "U" and with a current status?</p>	Go to Step 19	Go to Step 18
18	Did you record any DTCs which do not begin with a "U"?	Go to Step 19	Go to Step 21
19	<p>Diagnose the DTCs as directed by the diagnostic procedures for the particular module or malfunction. Refer to Control Module References in Body Control System for the applicable Diagnostic System Check.</p> <p>Did you complete the action?</p>	Go to Step 20	--
20	Did you diagnose all of the DTCs?	Go to Step 21	Go to Step 19
21	<p>Use the scan tool in order to clear the DTCs.</p> <p>Did you complete the action?</p>	System OK	--