Tech Tool Returns Error Code 140 Failed To Run On-Vehicle Test; Programming, Calibration, Or Test Operations Fail In Premium Tech Tool (PTT), PTT Displays Control Unit Information Correctly - US10+OBD13 And Newer Emissions, Common Model Year 2014 And

Internal Content

There are several items to consider for this issue:

• Note: Failure to turn the key on before running a test will cause this error to appear.

• A compromised power supply or ground for the Transmission Electronic Control Unit (TECU) can be the source of customer complaints and is not readily identified as the issue.

- Example: A customer report of shifting issues, no shifting, won't go into gear or will not move after putting in gear.

• The TECU may respond to parameter change requests and be seen in the product history in PTT but may not respond correctly when performing tests or calibrations.

• A module may respond to all requests for information but when a test or calibration is requested the TECU shuts down:

- Many tests and calibration operations cause a higher power demand.

- This drop in voltage and subsequent return to good voltage levels after the test fails is too fast for the fault detection to trigger a fault for low voltage.

• The information displayed with the error in PTT may be misleading.

- In the example shown below, the flash screen in PTT looks like the ECU software is sending the error code because it is processing a Routine—R1ALH—that is being run when the failure is detected.

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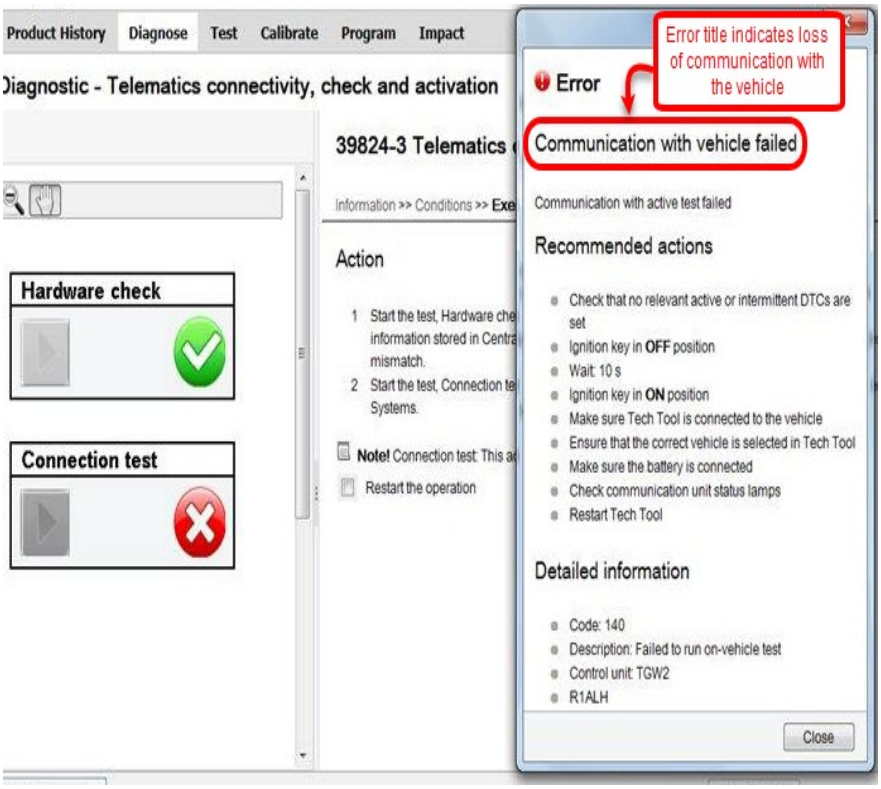
○ **Note:** This error may appear in a separate window or in the right pane of the PTT screen itself. The location of the error message will depend on the operation being performed.



- **The actual message is indicating loss of communication with the vehicle.**

- The recommended actions give a high level list of general items that could be tried to correct the issue.

- **If the recommended actions do not correct the problem** then the individual circuits to the specific ECU that is being tested should be investigated as outlined below.

When erratic behavior such as this occurs:

Checking and cleaning the battery connections and the main ground stud on the frame can help correct general voltage and performance issues with the chassis.

The power and ground circuits can be monitored for voltage drops during the tests

1. Using the correct breakout box for the ECU being tested, check ps in voltage while performing tests that could take the module offline.

1.1. Using the MIN/MAX function on a Fluke meter will allow observation of the lowest value voltage reaches while running operations and can catch fluctuations that may be missed.

2. The ECU that causes test failures can be supplied with a straight power and ground source routed through a breakout box connected directly to the ECU connector.

2.1. Do not disconnect the normal power and ground supplies to the module.

2.2. Connect jumpers to the appropriate battery posts.

2.3. Run the jumpers directly to the corresponding points on the breakout box.

2.4. Rerun the test that failed previously.

3. If the test that had been failing completes, there is likely an issue in the wiring harness or connections.

3.1. Remove **only** the direct power supply from the breakout box. The negative jumper should stay connected.

3.2. Rerun the test that had failed prior to Step 2.

3.3. If the test fails after passing in Step 2: The issue is in the power supply circuit. Troubleshooting will need to be performed to determine the problem with the circuit.

3.4. If the test passes after passing in Step 2: Reconnect the power circuit jumper to the breakout box. Repeat steps 3.1 to 3.4 with the direct ground jumper to determine if it is the source of the issue as mentioned above.

VISIBILITY: Dealer distribution

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