TRAIL FORTRESS

BUILT FOR THE TRAIL. CHECKED FOR YOUR TRUCK.

Rough Country 90050 Installation Instructions

Speedometer Calibrator for Silverado 1500 & Sierra 1500 (2022-2025)

Part number: 90050

trailfortress.com/rough-country-speedometer-calibrator-90050

Scan for fitment, price and install help

ROUGH COUNTRY
SUSPENSION SYSTEMS®

GM 2022-24 New Body Silverado / Sierra 1500 Speed Calibrator

(All Engines With 10-Speed Transmission)



These installation instructions show an installation on a 2024 GM Silverado 1500. The installation may vary for your vehicle, so it may be necessary to consult a GM service manual for specific instructions for your year model.

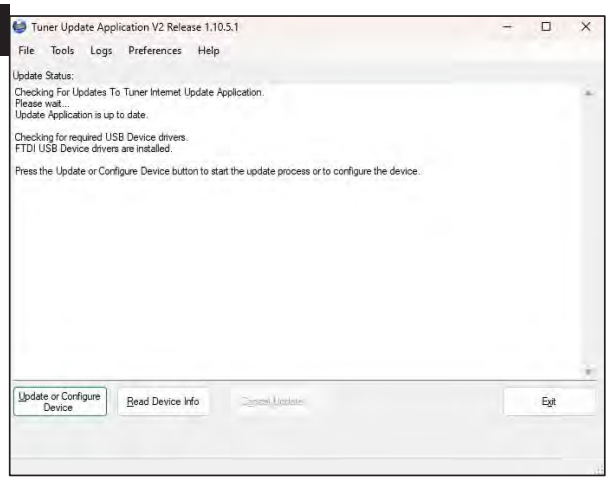
Tools needed: Flat head screwdriver or push-pin removal tool, T-15 Torq bit (socket version), 10mm deepwell socket, 8mm socket, socket wrench, drill bit (any size from 3/32” - 1/8”), and drill

In-Line Speedometer Calibrator Module Software Setup Instructions

1. **UPDATE**

Before installing and using your In-Line Speedometer Calibrator Module, you will have to configure it to your vehicle. To configure your In-Line Speedometer Calibrator Module, go to www.roughcountry.com and go to the product page for the calibrator purchased and click the “Download the latest Software” link under features. Click to “Download Software” and follow the prompts to setup the dashboard.

1





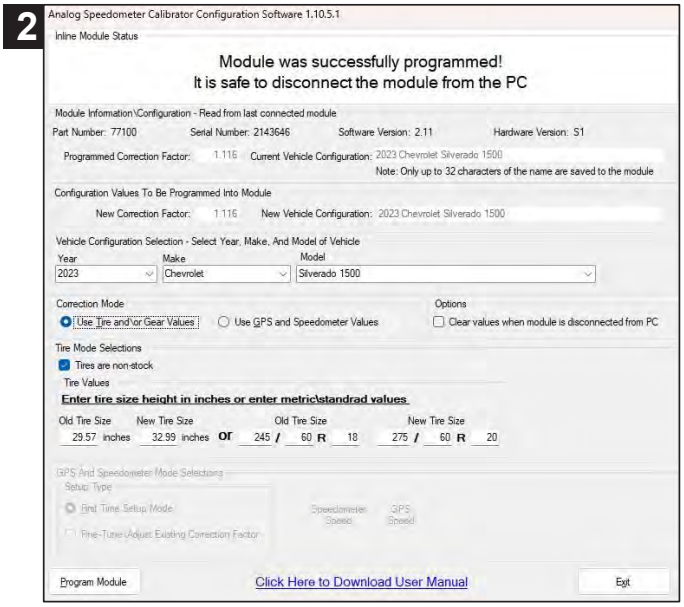
2. CONFIGURE

For accurate readings, measure the stock and new tire height from the ground to the top of the tire. Enter these measurements (in inches) into the configuration software, and click program to commit these settings. Once configuration is complete, re-install the USB port cover and take the In-Line Speedometer Calibrator Module and harness to the vehicle.

USB PORT ACCESS

To access the USB port on the module for configuring, remove the USB port cover by firmly pressing on the release notch as shown and pulling.

2



trailfortress.com/rough-country-speedometer-calibrator-90050

In-Line Speedometer Calibrator Module Vehicle Installation Instructions

ATTENTION!

READ BEFORE INSTALLING THE IN-LINE SPEEDOMETER CALIBRATOR MODULE

When installed correctly this product meets the IP67 standard for being water resistant and waterproof under normal under-hood environments, such as rain, sleet, and snow.

For the product to be waterproof, ALL connectors MUST be connected and the USB port cover MUST be installed on the module. The USB port cover should ALWAYS be installed and ONLY removed when configuring the module.

DO NOT power wash the module or its harnesses or submerge the module in water.

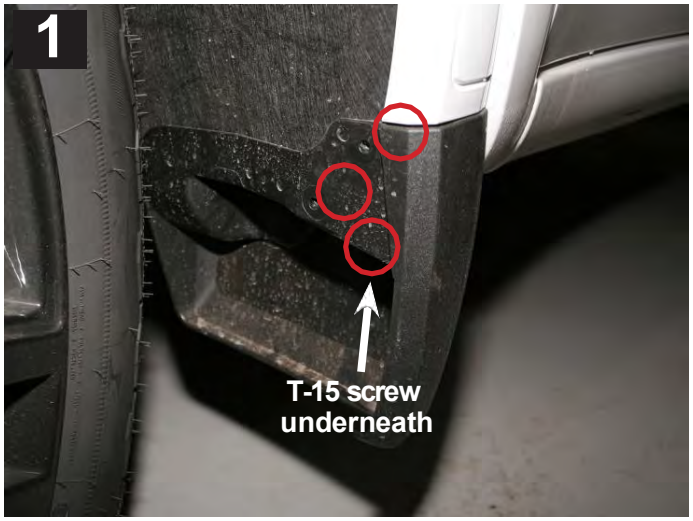
ALWAYS disconnect the negative (-) battery terminal(s) and wait at least 15 minutes to allow the modules to power down when connecting or disconnecting the module and/or harness connections. Otherwise, DTC(s) will be set, and the vehicle may have to be taken to a GM service center or automotive repair shop to have the codes cleared.

IMPORTANT NOTE

For additional room for installing the In-Line Speedometer Calibrator Module harness, it is recommended to remove the driver's side wheel & tire. For our installation, we removed the wheel & tire to better show the installation process. If you choose to remove the wheel & tire, make sure you secure the vehicle with jack stands after jacking up the vehicle.

1. **LOOSEN DRIVER'S SIDE MUD FLAP**

Turn the steering wheel left to the full lock position. Using the T-15 Torq bit, remove the three (3) T-15 screws (Step 1). Then using the 10mm socket, remove the one (1) bolt under the mudflap (Step 1A).

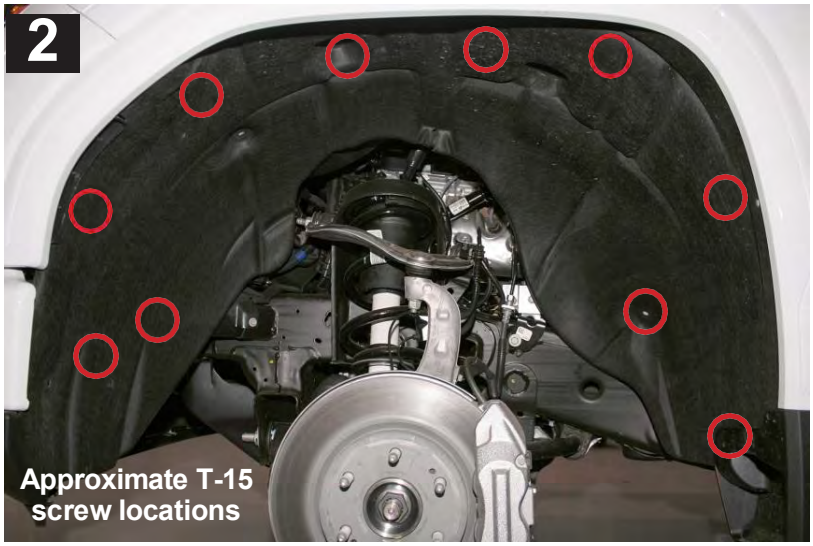




2. **REMOVE DRIVER'S SIDE WHEEL LINER**

Using the T-15 Torq bit, remove the ten (10) T-15 screws (Step 2). After removing the T-15 screws, remove the one (1) pushpin at the top of the wheel liner (Step 2A). Use the flathead or push-pin removal tool, lift the middle of the push-pin up, then pull the push-pin out of the wheel liner. Then pull down firmly to remove the wheel liner from the vehicle.

NOTE: You will have to pull down the driver's side mud flap slightly to access one (1) of the T-15 screws holding the wheel liner in place.





trailfortress.com/rough-country-speedometer-calibrator-90050

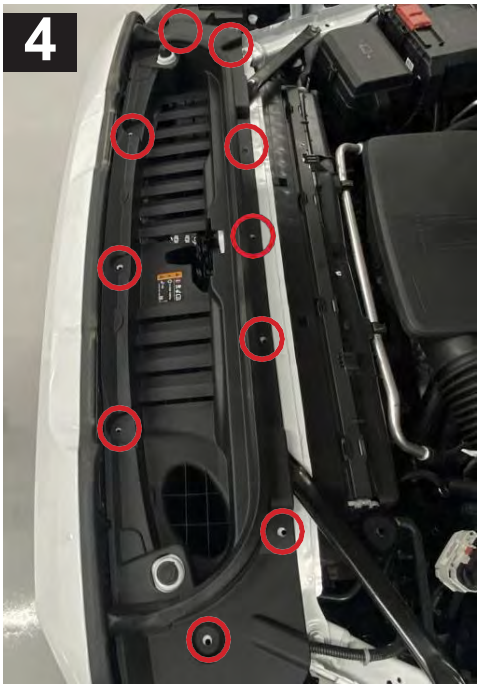
3. **REMOVE HOOD LATCH RELEASE HANDLE**

Using the T-15 Torq bit, remove the two (2) T-15 screws holding the hood latch release handle in place. After removing the two (2) screws, slide the hood latch release handle off.



4. **REMOVE CORE SUPPORT COVER BEHIND FRONT GRILL**

Using the flat head screwdriver or push-pin removal tool, remove the ten (10) push-pins holding the core support cover in place. Lift the middle of the push-pin up, then pull the push-pin out. After removing the push-pins, remove the core support cover from the vehicle.



5. **DISCONNECT NEGATIVE (-) BATTERY TERMINAL**

WARNING: Failing to disconnect the negative (-) battery terminal and not allowing the factory modules to power down will result in Diagnostic Trouble Codes (DTCs) to be set. Normally the modules will be powered down within 15 minutes after disconnecting the negative battery cable. DO NOT reconnect the negative (-) battery terminal until all harness connections have been made or until all stock connectors have been connected to their respective modules if returning to stock.

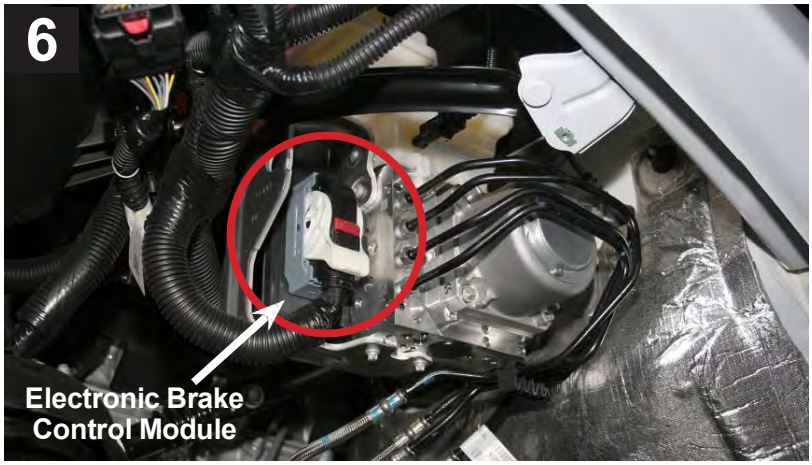
Using the 10mm socket, disconnect the negative (-) battery terminal. Move it safely out of the way and cover it with a rag to prevent any electrical arcing If your vehicle is equipped with a secondary battery, disconnect the secondary battery's negative (-) battery terminal as well and move it safely out of the way and cover it with a rag to prevent any electrical arcing.



6. **UNPLUG ELECTRONIC BRAKE CONTROL MODULE CONNECTOR**

Unplug the electronic brake control module connecter. The electronic control brake module is located in the upper rear area of the wheel well. To unplug the connector, first slide the red locking tab up. Next, firmly push the black notch near the red locking tab while at the same time pulling up on the release lever. This will release the connector from the electronic brake control module.

NOTE: Use caution when removing the connector from the electronic brake control module to prevent damage to any connectors or other components.

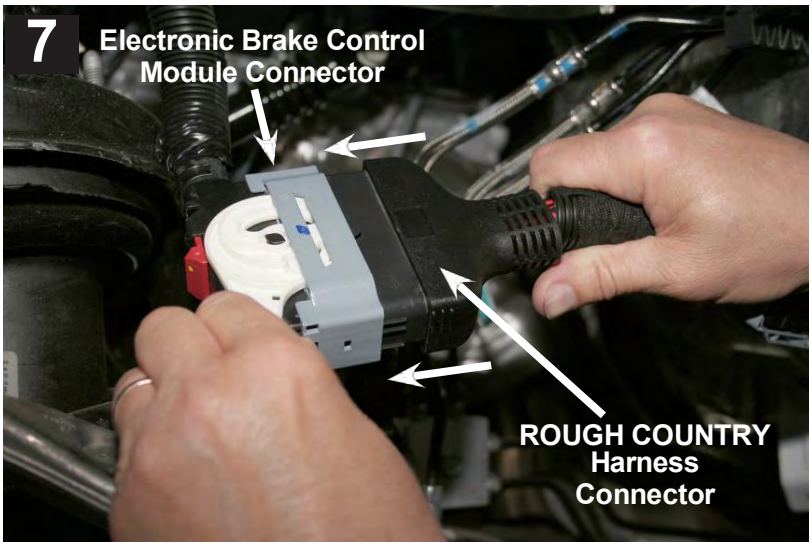


trailfortress.com/rough-country-speedometer-calibrator-90050

7. **PLUG THE ROUGH COUNTRY HARNESS CONNECTOR INTO TO THE ELECTRONIC BRAKE CONTROL MODULE CONNECTOR**

Plug the ROUGH COUNTRY harness connector shown into the electronic brake control module connector. The ROUGH COUNTRY connector is keyed and ONLY goes in one (1) way. Press the connectors together firmly until the release lever moves slightly, then fully push the release lever closed. Lastly, slide the red locking tab to fully secure the connectors together.

NOTE: If the release lever doesn't move slightly when connecting, you may need to press the black notch next to the red locking tab, then with your other hand fully secure the release lever. THEN slide the red locking tab to fully secure.

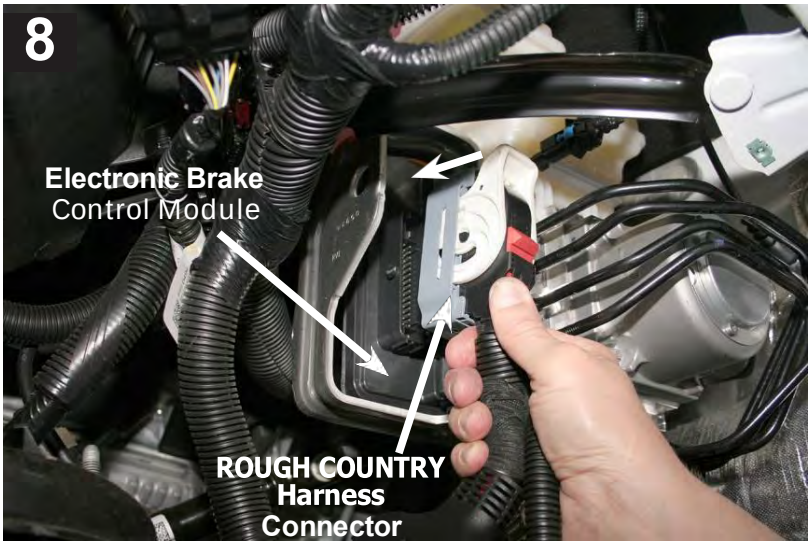


trailfortress.com/rough-country-speedometer-calibrator-90050

8. PLUG THE ROUGH COUNTRY HARNESS CONNECTOR INTO TO THE ELECTRONIC BRAKE **CONTROL MODULE**

Plug the ROUGH COUNTRY harness connector into the electronic brake control module. The ROUGH COUNTRY connector is keyed and ONLY goes in one (1) way. Press the connectors together firmly until the release lever moves slightly, then fully push the release lever closed. Lastly, slide the red locking tab to fully secure the connectors together. Using a provided zip-tie, secure the factory wiring harness to itself. This will ensure no sagging and additional protection for the wiring harness.

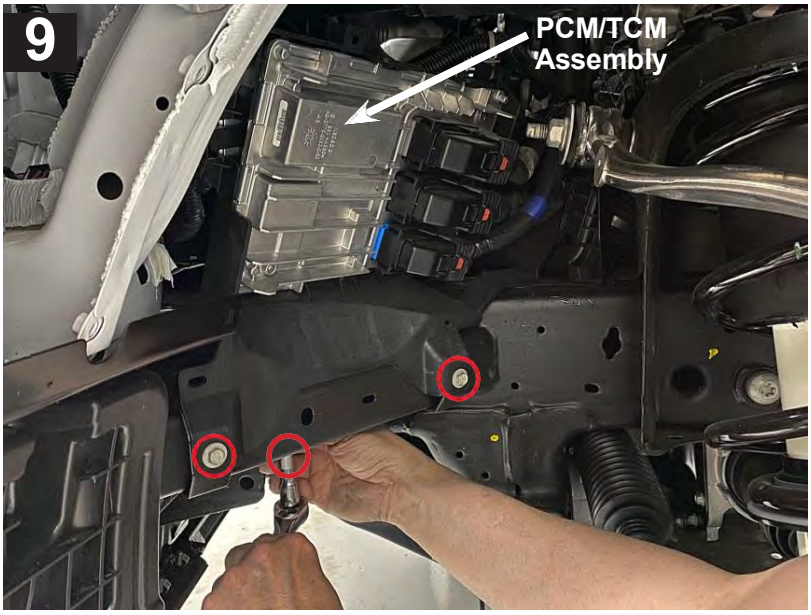
NOTE: If the release lever **doesn't** move slightly when connecting, you may need to press the black notch next to the red locking tab, then with your other hand fully secure the release lever. THEN slide the red locking tab to fully secure.

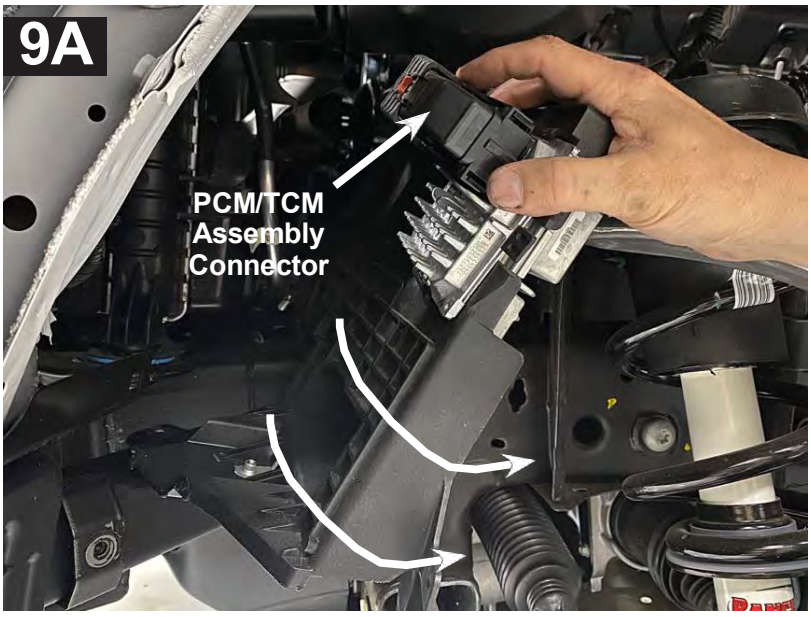


trailfortress.com/rough-country-speedometer-calibrator-90050

9. **ACCESS TCM ASSEMBLY**

Using the 10mm socket, remove the three (3) bolts that hold the TCM Assembly in place (Step 9). The TCM Assembly is located in the front area of the wheel well. After removing the bolts, swing the TCM Assembly outward to access the TCM Assembly connector (Step 9A).





trailfortress.com/rough-country-speedometer-calibrator-90050

10. **UNPLUG TCM ASSEMBLY CONNECTOR**

Unplug the TCM Assembly connecter. To unplug the connector, first slide the red locking tab toward you to unlock. Next, firmly push the black notch near the red locking tab while at the same time pulling up on the release lever. This will release the connector.

NOTE: Use caution when removing the connector from the TCM Assembly to prevent damage to any connectors or other components.

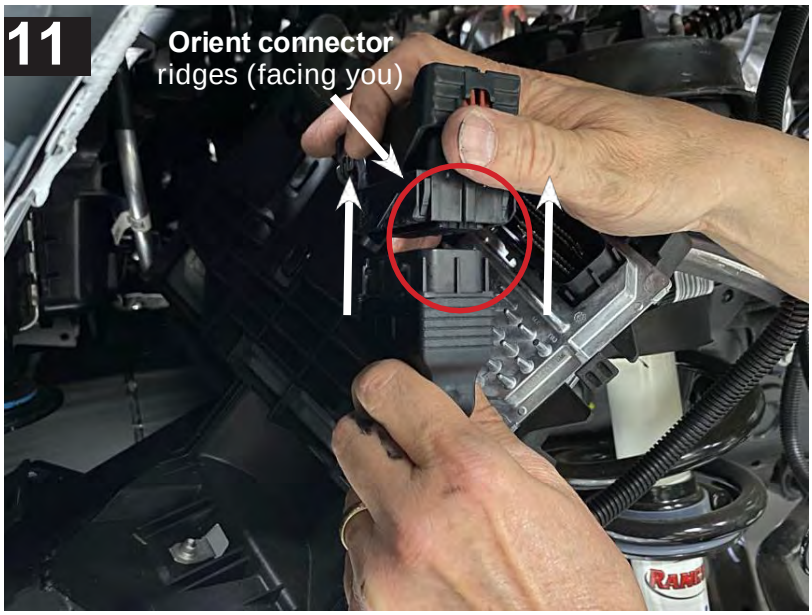


trailfortress.com/rough-country-speedometer-calibrator-90050

11. PLUG THE ROUGH COUNTRY HARNESS CONNECTOR INTO TO THE TCM ASSEMBLY CONNECTOR

Plug the ROUGH COUNTRY harness connector shown into the TCM Assembly connector. The ROUGH COUNTRY connector is keyed and ONLY goes in one (1) way. Using the ridges (facing you) in the connectors shown in the photo below for orientation, Press the connectors together firmly until the release lever moves slightly, then fully push the release lever closed. Lastly, slide the red locking tab to fully secure the connectors together.

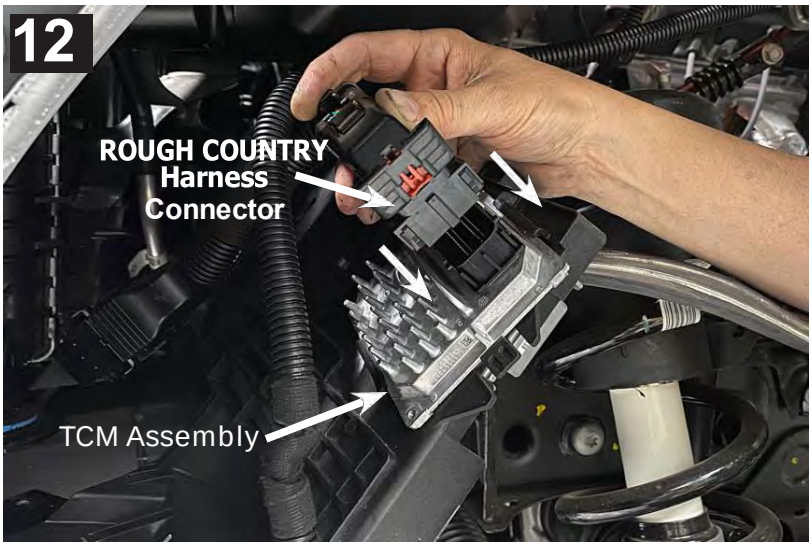
NOTE: If the release lever **doesn't** move slightly when connecting, you may need to press the black notch next to the red locking tab, then with your other hand fully secure the release lever. THEN slide the red locking tab to fully secure.



12. PLUG THE ROUGH COUNTRY HARNESS CONNECTOR INTO TO THE TCM ASSEMBLY

Plug the ROUGH COUNTRY harness connector into the TCM Assembly (Step 12). The ROUGH COUNTRY connector is keyed and ONLY goes in one (1) way. Press the connectors together firmly until the release lever moves slightly, then fully push the release lever closed. Lastly, slide the red locking tab to fully secure the connectors together.

NOTE: If the release lever **doesn't** move slightly when connecting, you may need to press the black notch next to the red locking tab, then with your other hand fully secure the release lever. THEN slide the red locking tab to fully secure.



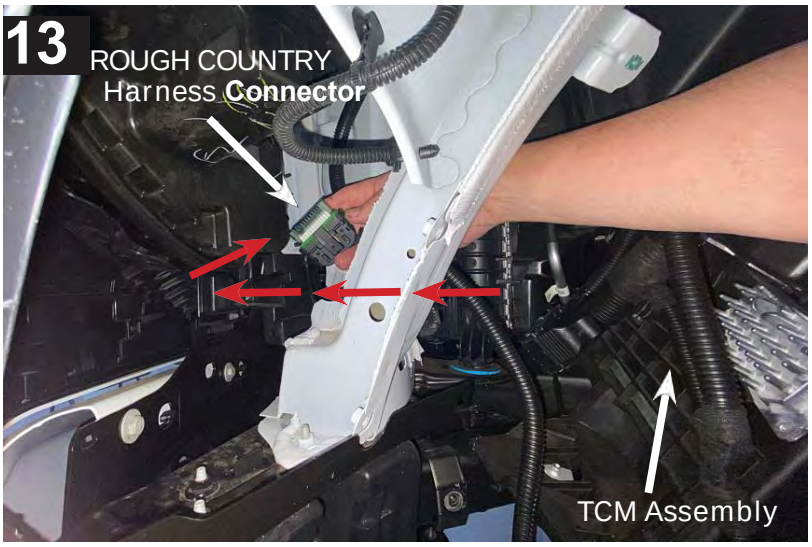
trailfortress.com/rough-country-speedometer-calibrator-90050

ATTENTION!

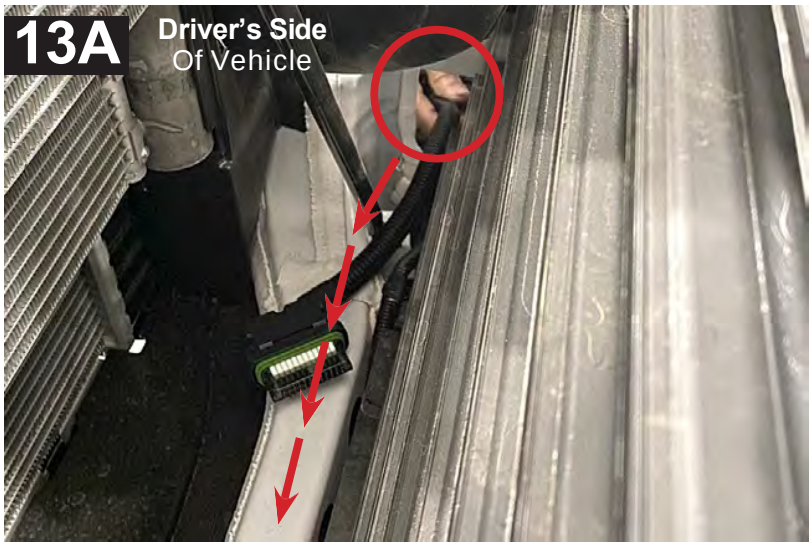
READ AND EXAMINE PHOTOS CAREFULLY BEFORE ROUTING
REMAINING ROUGH COUNTRY HARNESS CONNECTOR

13. ROUTE ROUGH COUNTRY HARNESS CONNECTOR TO PASSENGER SIDE

Read and examine all copy and photos in this step on this and the next four (4) pages for the correct routing of the ROUGH COUNTRY harness connector to the passenger side of the vehicle.

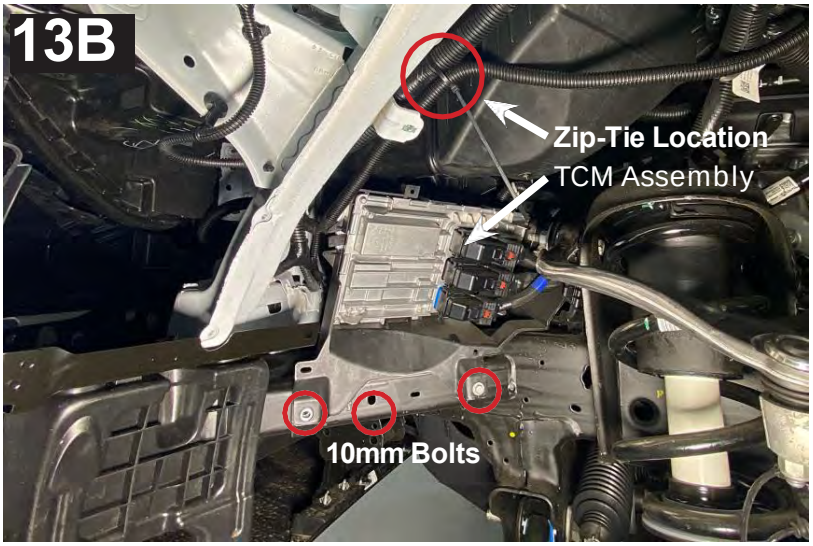


First route the connector for the ROUGH COUNTRY module and remaining harness toward the front of the truck, through the open area behind the TCM assembly.



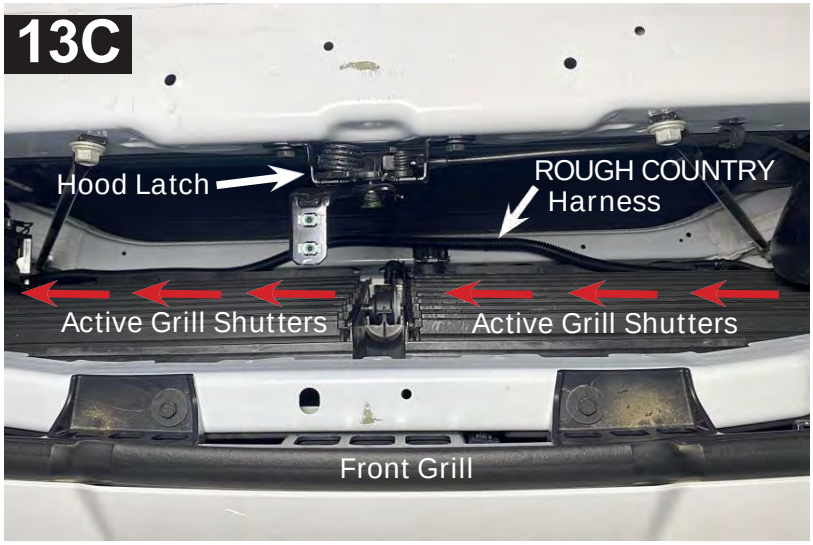
Second, Feed the harness into the opening leading to the open area behind and below the front grill. Pull all of the slack into this area.

13. ROUTE **ROUGH COUNTRY** HARNESS CONNECTOR TO PASSENGER SIDE **(CONT'D)**



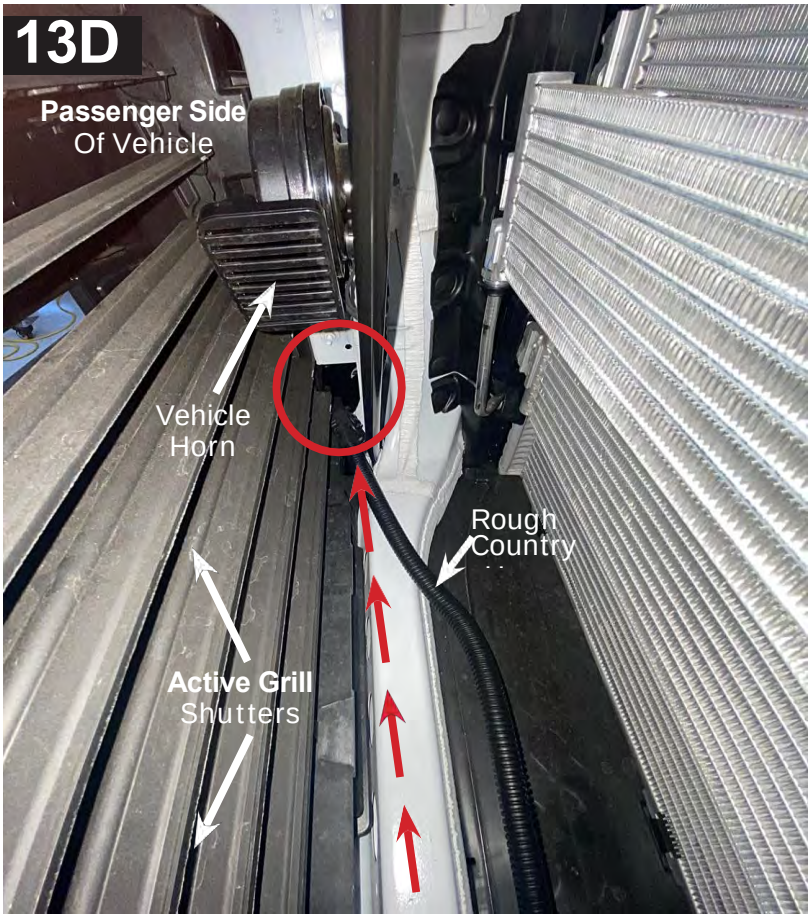
Place the TCM Assembly back into position verifying there is sufficient slack between on the electronic brake control module and TCM cables. Insert and tighten the three (3) 10mm bolts.

Now, using a provided zip-tie, secure the factory wiring harness to the ROUGH COUNTRY harness that goes to the electronic brake control module (as shown in Step 13B). This will ensure no sagging and additional protection for the wiring harness.



Now, route the ROUGH COUNTRY harness connector across the lower area behind the front grill toward the passenger side of the vehicle. **Be** careful NOT to interfere with the active grill shutters.

13. ROUTE ROUGH COUNTRY HARNESS CONNECTOR TO PASSENGER SIDE **(CONT'D)**

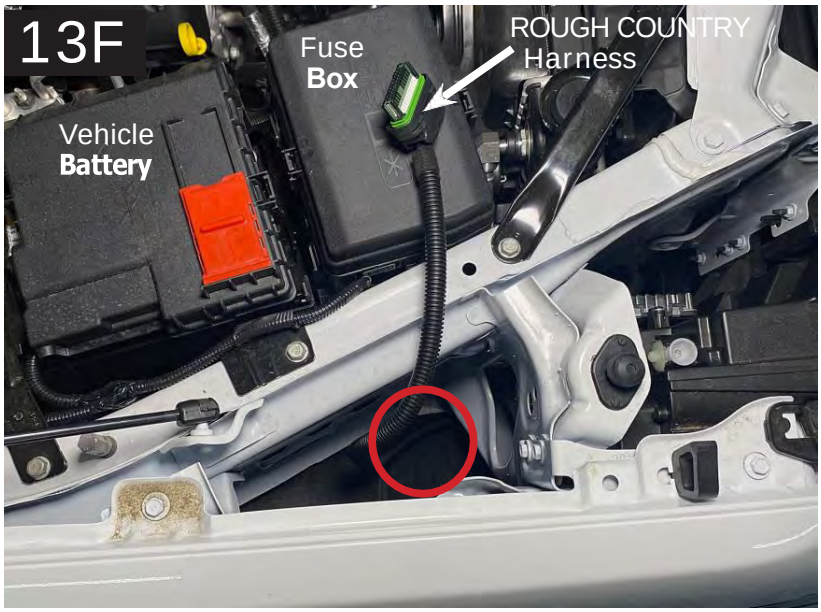


Route the ROUGH COUNTRY harness connector through the opening circled in red. You will pull the slack from the ROUGH COUNTRY harness from this area in the next step. Be careful NOT to interfere with the active grill shutters.



Circled in red is the opening from Step 13D. Pull the ROUGH COUNTRY harness connector and the slack carefully through this opening and up TOWARD the passenger headlight housing.

13. ROUTE ROUGH COUNTRY HARNESS CONNECTOR TO PASSENGER SIDE **(CONT'D)**

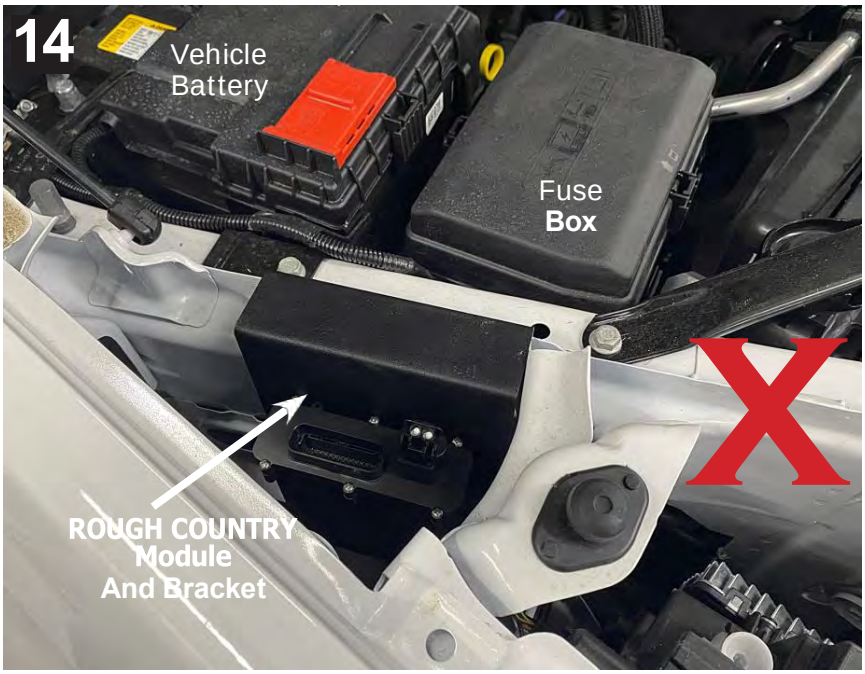


Finally, Route the ROUGH COUNTRY harness connector between the passenger wheel liner and the vehicle body structure (circled in red) up to this location on the passenger side of the vehicle. Pull all the slack CAREFULLY as not to damage the harness or harness sheathing.

14. MOUNT ROUGH COUNTRY MODULE AND BRACKET TO PASSENGER SIDE OF VEHICLE

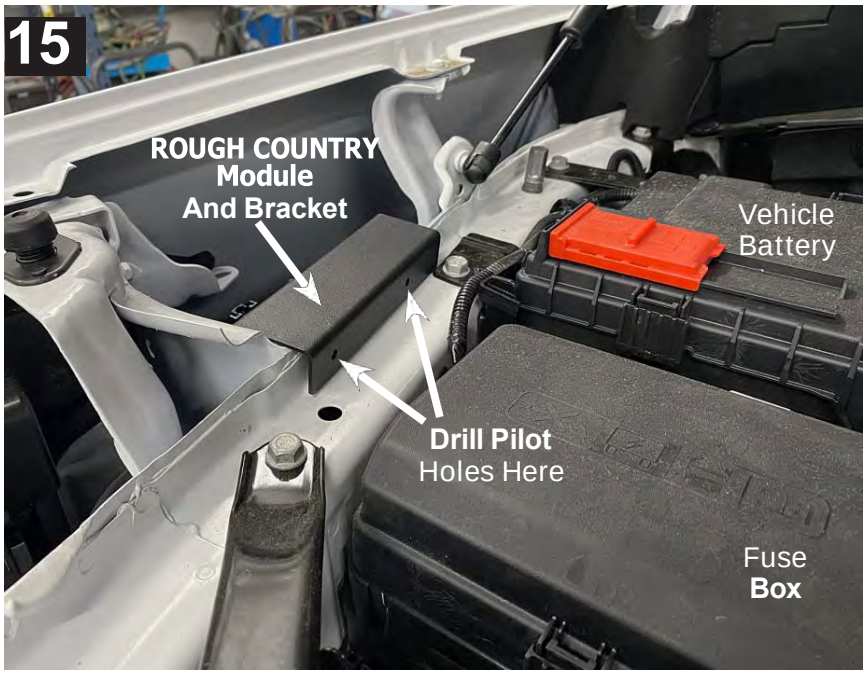
Mount the ROUGH COUNTRY module and bracket to the passenger side of the vehicle as shown in Step 14. Position the module and bracket as far as possible FORWARD in the area nearest the vehicle battery & fuse box.

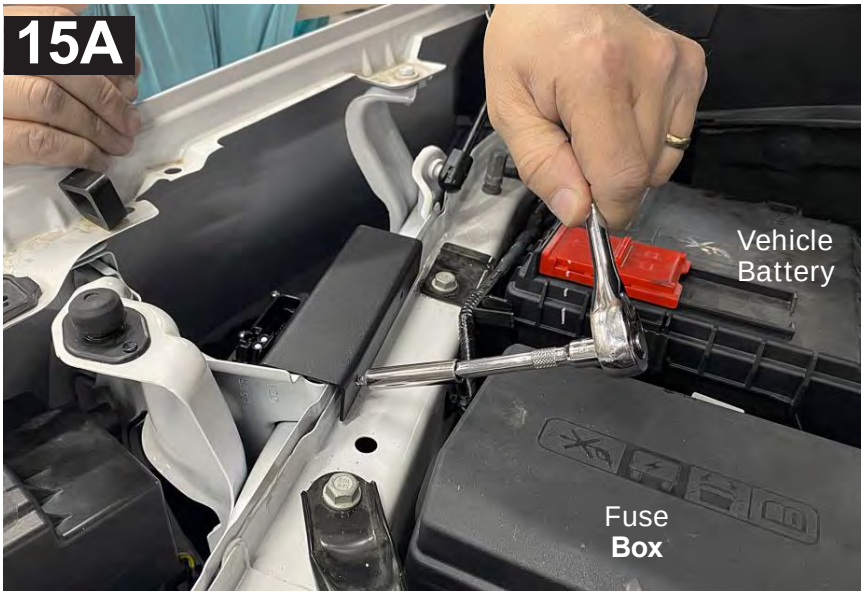
NOTE: Do NOT mount the module and bracket in the area directly behind the passenger headlight housing.



15. MOUNT ROUGH COUNTRY MODULE AND BRACKET TO PASSENGER SIDE OF VEHICLE **(CONT'D)**

Using the bracket holes as a template, mark for pilot holes. Use a drill bit (any size between 3/32" - 1/8") and drill pilot holes (Step 15). Then, using the provided self-tapping screws, mount the ROUGH COUNTRY module and bracket to the vehicle with a 8mm socket (Step 15A).





16. PLUG ROUGH COUNTRY HARNESS CONNECTOR TO THE MODULE

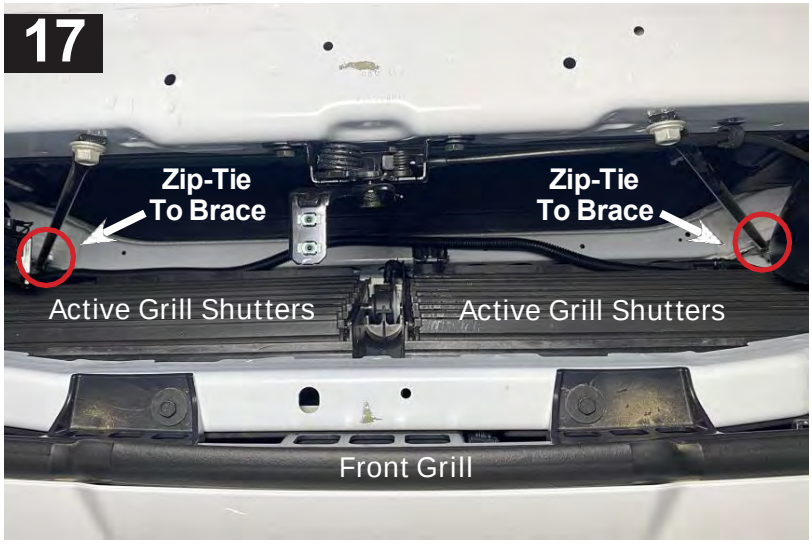
Plug the ROUGH COUNTRY harness connector to the module. Press firmly to secure the connector. You should hear a “soft click” when the connector is secure.



17. ZIP-TIE ROUGH COUNTRY HARNESS BEHIND FRONT GRILL

Using the provided zip-ties, secure the ROUGH COUNTRY harness to the support braces behind the front grill area as shown below.

Note: DO NOT zip-tie the harness to the front active grill shutters.



In-Line Speedometer Calibrator Module Vehicle Installation Instructions

18. VERIFY SPEED READING FOR ACCURACY

Re-install the wheel and tire (if removed), re-connect the negative (-) battery terminal(s), and drive the vehicle to verify the accuracy of the vehicle's speed reading. Use GPS or a similar method to compare your vehicle's speed to the speedometer cluster reading.

If the speed reading is accurate, you can now re-install the wheel liner and driver's side mudflap. At this point your installation is complete.

If for some reason your speed reading is inaccurate, you will need to re-configure (as done in the beginning of these instructions) your ROUGH COUNTRY module and re-verify the **vehicle's** speed reading accuracy (See below).

ATTENTION!

DO NOT DRIVE THE VEHICLE WITH THE ROUGH COUNTRY MODULE UNPLUGGED **AT ANY TIME! DOING SO CAN POTENTIALLY DAMAGE COMPONENTS AND/OR** CAUSE A CHECK ENGINE LIGHT CODE.

You can re-configure the Rough Country module at this point two (2) ways:

PC (NOT A LAPTOP)
1. Unplug the Rough Country module and remove it with the bracket from the vehicle and re-configure (i.e. inside your home on your PC). Note: If you re-configure the Rough Country module, you MUST disconnect the vehicle's negative (-) battery terminal(s) BEFORE unplugging the Rough Country module. Failing to do this may result in Diagnostic Trouble Codes (DTCs) being set.

PORTABLE PC (LAPTOP)
2. If you downloaded Rough Country's configuring software to a laptop, you can re-configure the Rough Country module while its mounted to the vehicle. To do this, disconnect the negative (-) battery terminal (s), then unplug the USB port cover that is on the Rough Country module (DO NOT unplug the Rough Country harness from the module) and plug in the provided USB cable into the Rough Country module USB port and your laptop's USB port. Re-configure the module.

Reconnect the negative battery cable and verify the speed reading is accurate, After confirming the speed reading is accurate, re-install the wheel liner and driver's side mud flap. At this point your installation is complete.

Installation of the Rough Country In-Line Speedometer Calibrator Module
is now complete. Factory Direct Limited 1 Year Warranty

(Effective January 1, 2020 replaces and supersedes previous product warranty policy.)

Rough Country products are warranted against defects in materials or workmanship for one (1) year from the date of purchase. Rough Country's liability under this warranty shall be limited to the prompt correction or replacement of any defective part of the product which Rough Country determines to be necessary. This limited one (1) year warranty is to the original purchaser providing all the information requested is furnished. You must retain a copy of your original sales invoice or receipt. Without proper documentation, a service fee will be applied. Third party resellers and resold units are NOT covered under this warranty.

trailfortress.com/rough-country-speedometer-calibrator-90050