

ShockSims.com Scan Tool Full Diagnostic Software Guide with Driver Install

The scan tool and ShockSimsDiag software are used to diagnose the suspension control module (SCM) in 2015+ GM vehicles, other vehicles and brands will be added.

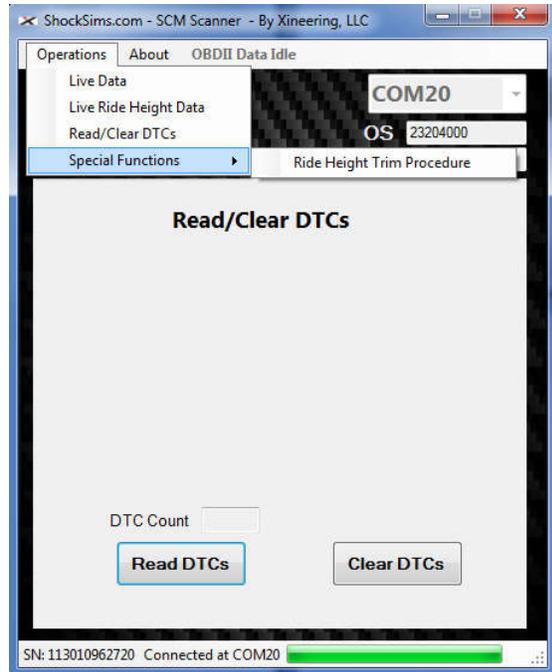
With the added ability to perform a ride height trim procedure it is a great tool for assisting in any magneride bypass kit install.

Operations:

- Live Data (system voltages, shock current, ride height sensors)
- Live Ride Height Data
- Read/Clear DTCs
- Perform Ride Height Trim procedure



Live Ride Height Data



Read/Clear DTCs

1. Install the SCMDiag software

- Go to www.shocksims.com/software or follow the emailed link.
- Download and extract the "ShockSimsDiag_vX.zip" to anywhere on your computer, remember where it was saved.

2. Connect the Scan Tool to the PC

- Connect the cable to a USB port, wait for drivers to install, could take up to 3 minutes. You will be prompted when your device is ready to use.
- The LED on the cable will turn **Yellow** when you connect the USB Port
- **Red LED? Drivers were not installed properly, See Drivers section in manual**

3. Locate the OBDII connector in your vehicle

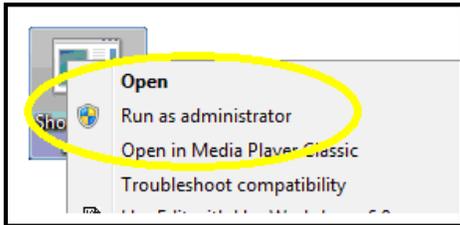
- Plug the OBDII side of the USB cable into the vehicles OBDII port (located under the dash right above the brake and throttle pedal)

4. Turn ignition ON, Engine OFF.

- The LED on the cable will turn **GREEN**.

NOTE: For push button ignition Hold the Start button down without pressing the brake

5. Start the SCMDiag.exe program



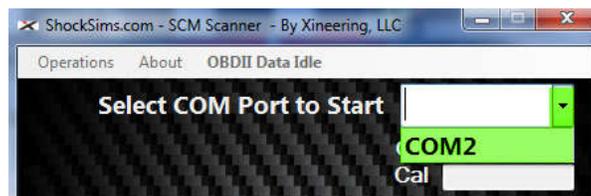
Run the program (Right Click "Run as Administrator").

You may also get a warning about unsafe windows software, click **More Info and Run Anyway**.

5. Select a COM Port to connect to the vehicle

If no COMs are listed in the drop down, **Drivers are not installed properly, See Drivers section below.**

- Select the COM Port (of the USB cable) from the drop down menu in the top right. The cable serial number will show in the bottom left when connected.
- Continue by selecting any Operation from the top menu strip.



Operations - Live Data

The first operation to verify everything is connected correctly is Live Data.

This will connect to the vehicles Suspension Control Module (SCM) and read it's OS/Calibration version and a snap shot of the live data.

Now that we know all connections are good and the vehicle is ON we can use the other Operations.

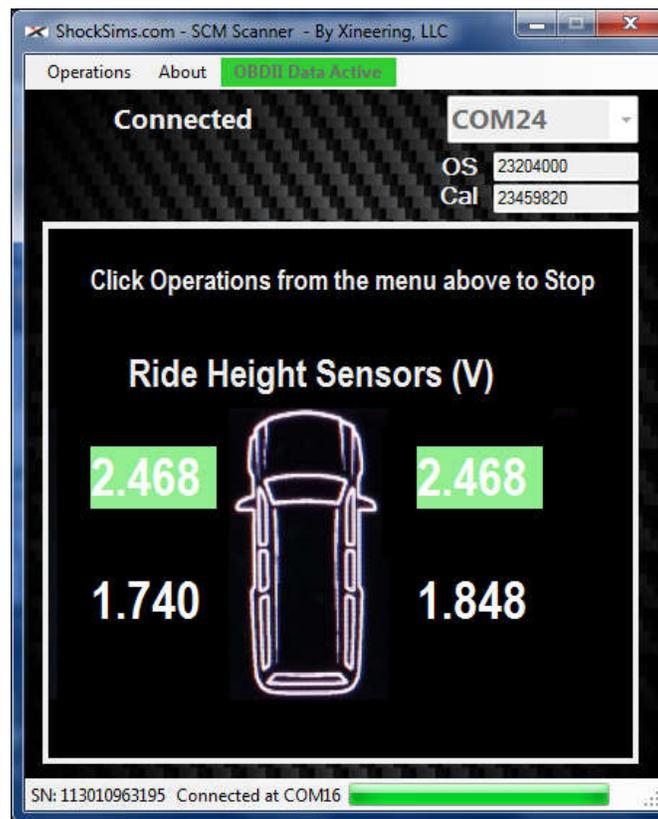
Operations - Live Ride Height Data

Live data will automatically start

Click Operations from the menu above to Stop data flow and select any other operation

This screen shows the live voltages from all the ride height sensors.

If the voltage value is between 2.3V and 2.6V the cell will turn Green
This indicates a **valid** value from one of our ride height sensor simulators.



Example of a half kit installed, front sensors are simulated

Operations - Read/Clear DTCs

Click the Read DTCs button to read the DTCs from the SCM.

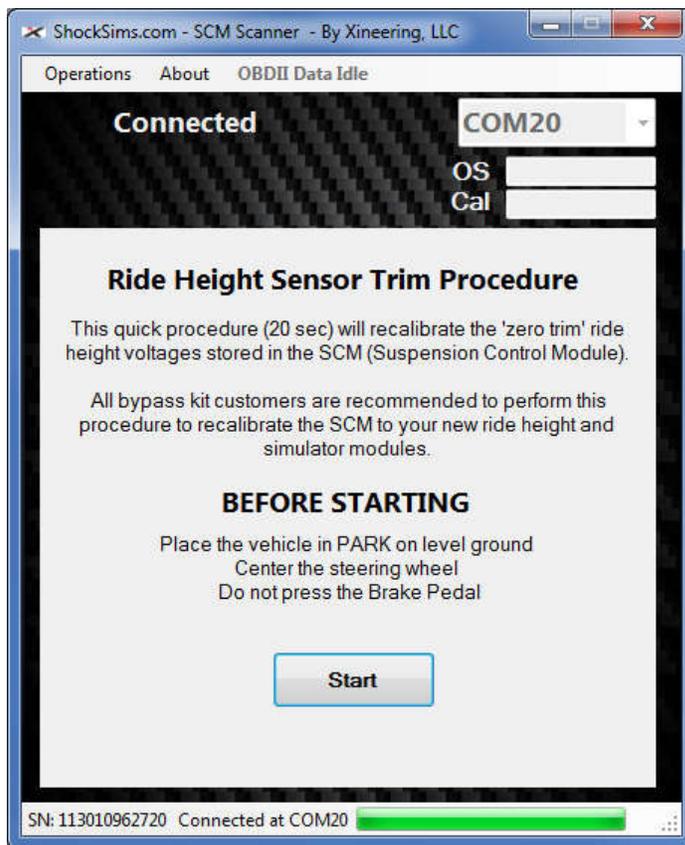
Be sure to take a screenshot OR copy/paste the codes into an email.

Click Clear DTCs button to clear the DTCs from the SCM.

Operations - Ride Height Trim Procedure

This quick procedure will recalibrate the 'zero trim' ride height voltages stored in your SCM.

For more detail read "**About the Ride Height Trim Procedure**" section below.



Click Start, it will ask about the simulated ride height sensors



**Verify the following.
Then Click OK to start**



It will take less than 10 seconds to complete the procedure and you will be notified if its successful completion.

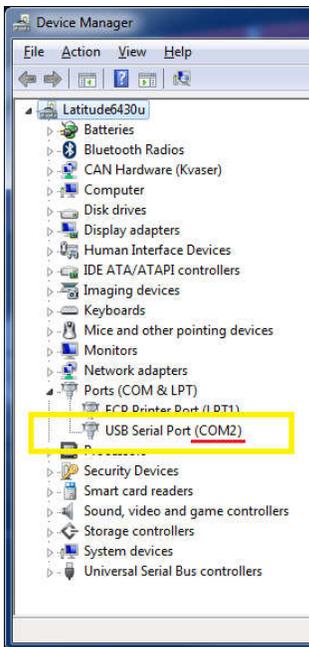
USB Serial Port Drivers

- Red LED? Drivers were not installed properly.

Note: If the drivers for do not install automatically, click on the link below to install the driver.

Windows Driver

Device manager -> Ports show: **USB Serial Port (COM#) ?**



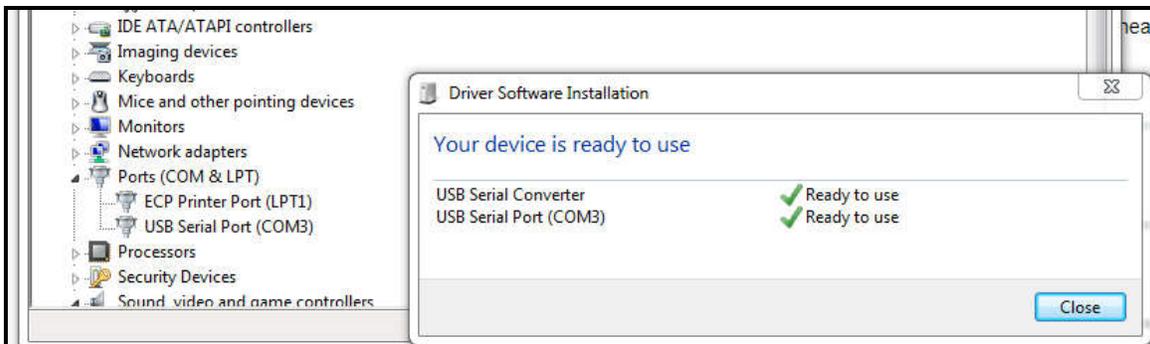
Drivers: (Make sure the cable can talk to your computer)
First verify the drivers are already loaded for the USB/OBDII Cable

- Open Device manager
- Connect the cable to any USB port on your computer.
- Wait for the Ports (COM & LPT) items refresh.
- There should be a COM# listed for the cable.

Example: COM2 shown to the left, yours will likely be different.

Remember this number it is what you will select from the ShockSimsDiag.exe program at startup.

IF THERE IS A YELLOW Exclamation mark shown next to the '**USB Serial Port**' device contact Xineering to get help with driver install.



About the Ride Height Trim Procedure

What is the ride height trim procedure:

It is used by the GM Dealerships to re-calibrate the suspension control module for any changes in ride height or ride height sensors to set the normal ride height position of the vehicle.

It reads the ride height sensor voltages and stores them in memory.

These voltages could be from our ride height *sensor simulators* OR any connected ride height *sensors* on the vehicle.

Our ride height sensor simulators send a constant voltage back to the SCM that is similar to a stock and stable ride height.

Why is it needed?

Setting the new normal ride height is needed to limit the amount of electrical current being sent to the shocks (OR shock simulators) during driving. It will also improve the response of any remaining magneride shocks on your vehicle.

How the ride height sensors work with Magneride.

The Suspension Control Module (SCM) is calibrated from the factory for its stock ride based on the ride height sensor voltages. This sets its 'zero' or normal suspension travel position for the magneride system.

As the vehicle drives (moves up/down, side to side) an algorithm determines how much electrical current (mA) to send to each magneride shock in order to maintain a smooth ride. The amount of current sent to a shock is proportional to how hard or soft the control module wants the shock to behave.

At any point during the vehicles life the ride height changes due to a shock or spring replacement

OR

If any ride height sensors have been replaced

A ride height trim calibration procedure is necessary, to re-zero the system.