



## SiriusXM with 360L Connectivity

The optional SiriusXM with 360L service on some 2021 and later GM models equipped with an Infotainment 3.X system (RPO IOS, IOT, IOU, IOV) features over 200 internet channels (IP channels), which require internet connectivity for full functionality.

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The SiriusXM with 360L interface provides an enhanced in-vehicle listening experience for subscribers, including personalized streaming content and listening recommendations as well as On Demand shows.

## CONNECTION UNAVAILABLE

As part of the SiriusXM app software, the system uses the OnStar cellular connection to access the SiriusXM servers. If the internet connection is interrupted for any reason, some SiriusXM with 360L services may not operate properly or may be temporarily interrupted.

If the SiriusXM with 360L service is not performing properly due to the loss of the internet connection between the infotainment system and the SiriusXM servers, the "Connection

unavailable, please call OnStar agent." message will display on the infotainment screen. The message will be displayed when the vehicle is started or when SiriusXM is selected as the audio source. The "Connection unavailable" message should only be displayed when the vehicle does not have any connectivity and SiriusXM is selected as the audio source.

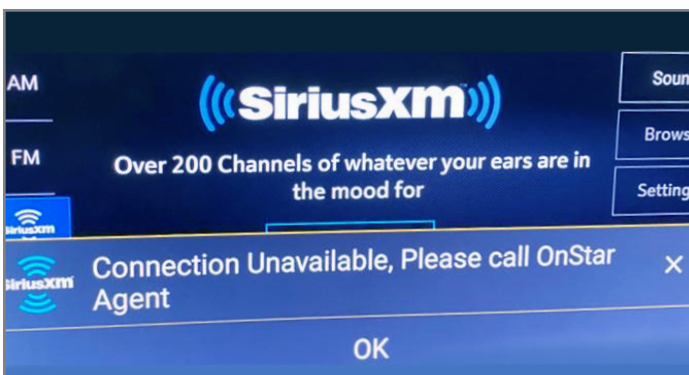
## SOFTWARE UPDATE

A software update released in early 2021 corrected an issue where the SiriusXM app caused the "Connection unavailable" message to be displayed when there wasn't any connectivity, regardless of the audio source selected. Refer to Bulletin #21-NA-053 for more information.

It's important to explain to customers that the software update does not eliminate the message, but corrects the issue so the message will be displayed only when SiriusXM is selected as the audio source. SiriusXM with 360L still requires internet connectivity so the "Connection unavailable" message will still be displayed if there is not any connectivity.

## ONSTAR TERMS AND CONDITIONS

Another reason why the "Connection unavailable" message may be displayed is because of the vehicle's OnStar connection status. Internet connectivity will not exist if customers decline the OnStar Terms and Conditions (T&Cs). If a customer declines the Terms



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# Next Generation dexos1 Gen 3 Engine Oil Now Available

dexos™1 Gen 3 is the latest generation of GM-certified engine oil. The recently introduced engine oil specification addresses the challenge of meeting the needs of new engine hardware — in particular, higher power density engines equipped with new technologies — with enhanced oxidation, turbocharger protection and engine cleanliness.

The dexos1 Gen 3 specification is the new requirement for factory fill and service fill for gasoline engines, replacing the previous dexos1 Gen 2 specification. It's backward compatible with all previous generations of dexos1.



dexos1 Gen 3 is currently available in 0W-20 and 5W-30 viscosity grades. Refer to the electronic parts catalog or

acdelco.com for the most up-to-date applications and a complete list of engine oils.

**TIP:** Viscosity recommendations vary according to temperature and engine manufacturer, so using the right viscosity grade oil is critical for proper engine performance. Always check the appropriate vehicle owner manual for the proper viscosity grade for the vehicle being serviced.

dexos1 Gen 3 features:

- High resistance to oxidation, keeping the oil from breaking down, to provide enhanced turbocharger protection and engine cleanliness
- Fuel savings and prolonged engine life by fighting wear and reducing friction
- Easier starts and better engine protection in cold weather, stop-and-go driving and when towing heavy loads
- Cleaner engine operation by resisting varnish and sludge that can affect performance along with upgraded performance limits for deposit and sludge tests

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and Conditions, a connection cannot be made with the vehicle in order to comply with the customer's wishes as well as state and federal privacy regulations. However, declining the Terms and Conditions will cause the loss of connectivity and prevent SiriusXM with 360L from operating properly.

To approve the OnStar Terms and Conditions, customers should press the OnStar button twice to initiate a call with an OnStar advisor to approve the OnStar Terms and Conditions for their vehicle. Approving the Terms and Conditions does not require or result in any subscription, but it does allow for connectivity to the SiriusXM servers and prevents the "Connection unavailable" message from being displayed.



Contact OnStar to approve the Terms and Conditions.

► Thanks to Jeremy Richardson

## DEXOS 1 GEN 3, FROM PAGE 3

### NEXT GENERATION

The dexos1 specification, introduced in 2010, was designed to further improve fuel economy and fuel economy retention, which allows the oil to maintain its fuel economy benefits throughout the life of the oil, while also providing a more robust formulation for added engine protection and aeration performance. The enhanced specification also supports GM's Engine Oil Life System (EOLS), minimizing the use of engine oil, and reduces the duplication of requirements for a large number of internal GM engine oil specifications.

In addition to the new dexos1 Gen 3 specification, the International Lubricants Standardization and Approval Committee (ILSAC) recently introduced the GF-6 engine oil performance standard, which aims at meeting changing industry demands of improved fuel economy and engine protection.

Most of the dexos1 Gen 3 tests have significantly higher limits than ILSAC GF-6. In addition, dexos1 Gen 3 has its own specified engine tests to evaluate low-speed pre-ignition mitigation, fuel efficiency, oxidation, and turbocharger deposit performance and wear protection.

Along with the GF-6 tests, many Gen 2 tests are carried over to Gen 3, including a test for turbocharger deposits at tighter limits. Gen 3 also includes an updated stochastic pre-ignition (SPI) test, compared to the limits for Gen 2, as well as a new fuel efficiency test. In addition, the specification has eliminated most European tests.



### DEXOS1 GEN 3 AVAILABILITY

The newly formulated dexos1 Gen 3 product is now available in bulk through the GM Oil Program. The transition from the current dexos1 Gen 2 to Gen 3 will be a running change and as the old product is sold down, new product will be supplied. Pricing for both formulations is the same.

For additional program details, U.S. dealerships should refer to GlobalConnect message GCUS-9-12087. Dealerships in Canada should refer to GM Parts Bulletin GMP2021-276.

► Thanks to Ashwin Medhekar and Kim Bennett



# Transmission Neutral Service Mode

2021-2022 CT4, CT5, Escalade, Tahoe, Suburban and Yukon models equipped with the 10L60 10-speed automatic transmission (RPO MQA) or 10L80 10-speed automatic transmission (RPO MHS, MQC) feature an internal Electronic Transmission Range Select (ETRS) system that requires hydraulic pressure to disengage the park mechanism. Here are some tips to follow to place the transmission in Neutral.



Electronic Transmission Range Select (ETRS) system requires hydraulic pressure to disengage the park mechanism.



DT-52910 Manual Park Release tool

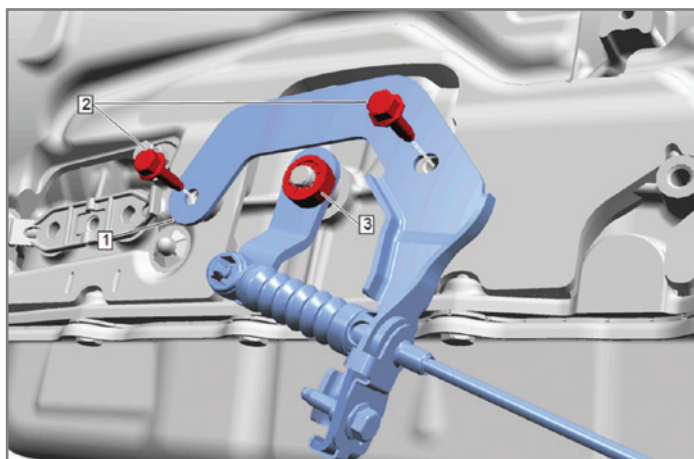
To install the tool, refer to Document ID 5620825. The transmission will be placed in N(Neutral) when the manual park release is pulled. Ensure the vehicle is on level ground, the parking brake applied, and the wheels are blocked prior to installing the manual park release tool.

## VEHICLES THAT CAN BE STARTED

In cases where the engine can be started, refer to the Neutral Service Mode document in the appropriate Service Information (for example, Document ID # 5286309). There are different procedures to follow to have the transmission remain in neutral with the engine on or engine off and with the driver remaining in the vehicle or exiting the vehicle.

## VEHICLES THAT CANNOT BE STARTED

In cases where there is an ETRS system fault or a no start condition and the vehicle needs to be moved, the DT-52910 Manual Park Release tool can be installed to temporarily shift the vehicle into Neutral when the engine is not running. The manual park release tool is now available through the GM Special Service Tools website at [gmtoolsandequipment.com](http://gmtoolsandequipment.com).



Install the DT-52910 Manual Park Release tool to temporarily shift the vehicle into Neutral.

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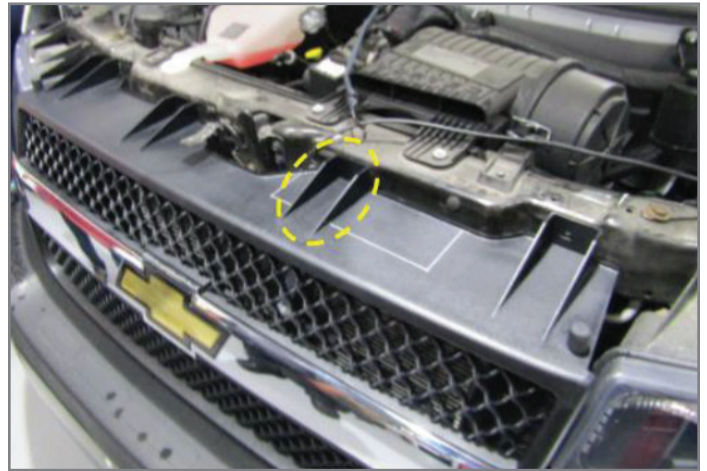


# Poor Performance During High Ambient Temperatures

Some 2016-2020 Express and Savana models equipped with the 6.0L V8 engine (RPO L96, LC8) may have a lack of power or poor performance when driving up grades or after the vehicle has been idling for long periods of time in high ambient temperatures (90°F, 32°C, or above). At lower temperatures, these conditions may be less noticeable or eliminated. The poor performance may be more noticeable when the vehicle is outfitted with heavy work equipment, such as work boxes or ambulance bodies, and is driven in stop-and-go traffic.

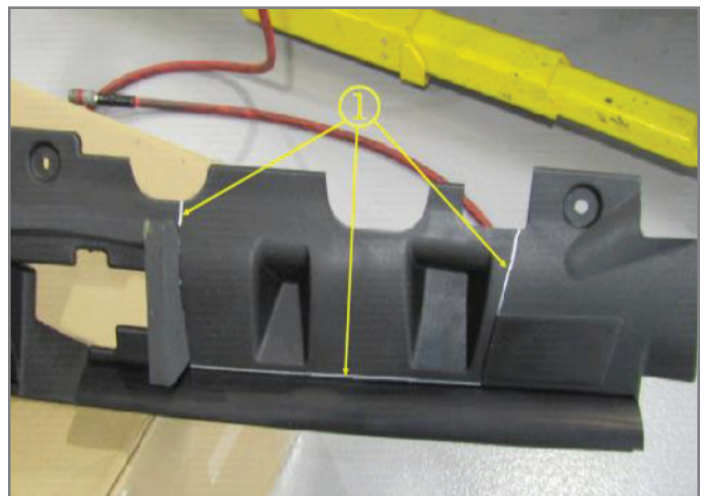
At high ambient temperatures of 90°F (32°C) or above, the intake airflow to the engine may be reduced. The GDS2 scan tool data may show an increase in total knock retard and the ignition timing may be backed out, which may occur while the vehicle is under a load or driving in a situation where more throttle input is required, including going up a grade. The Engine Control Module (ECM) is adjusting to protect the engine from damaging spark knock, which is normal under these conditions.

If these conditions are found, the grille and radiator air upper baffle should be modified and a new engine air inlet duct extension installed to increase airflow. The new duct will pull air from outside the hood seals.



Do not cut through the standing ribs.

Refer to Bulletin #21-NA-260 for a number of components to inspect before modifying the air inlet duct as well as the complete duct extension installation procedure.



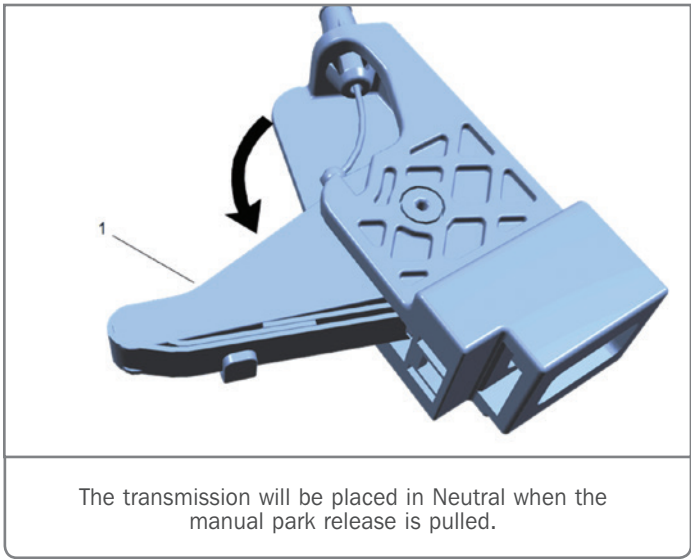
The radiator air upper baffle part must be modified.



The new engine air inlet duct requires removal of part of the grille material.

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## NEUTRAL SERVICE MODE, FROM PAGE 5



In addition to the DT-52910 Manual Park Release tool, wheel dollies or tire skates can be used to move the vehicle when there is an ETRS system fault or a no start condition.



For more information, refer to Bulletin #21-NA-281.

► Thanks to Mark Gordon

## INSTALLING THE AIR INLET DUCT

Installing the new engine air inlet duct requires removal of part of the grille material on the right side of the grille.

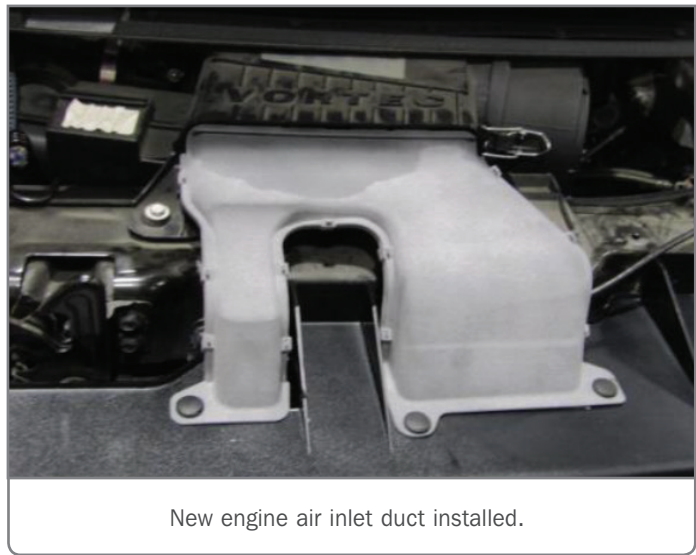
When cutting the grille, do not cut through either standing rib. The ribs must be kept intact.

The radiator air upper baffle part also must be modified to allow for clearance of the engine air inlet duct

The new engine air inlet duct should be sealed with RTV engine sealant around the complete perimeter of the upper opening at the interface to the intake duct. Three push retainers are used to secure the duct to the vehicle.

For additional information and part numbers, refer to Bulletin #21-NA-260.

► Thanks to Matt Singer





# Short Range Radar Conditions in Highly Reflective Environments

Some 2021 Tahoe, Suburban, Yukon and Escalade models equipped with the Reverse Automatic Braking system (RPO UVZ) may have a Service Driver Assist message displayed on the Driver Information Center (DIC) along with DTC U3000 49 (Control Module Internal Malfunction). These conditions may be caused by an issue with the Short Range Radar (SRR) due to highly reflective environments. Some temporary faults that trigger DTC U3000 49 may be detected while the radar is actively radiating.

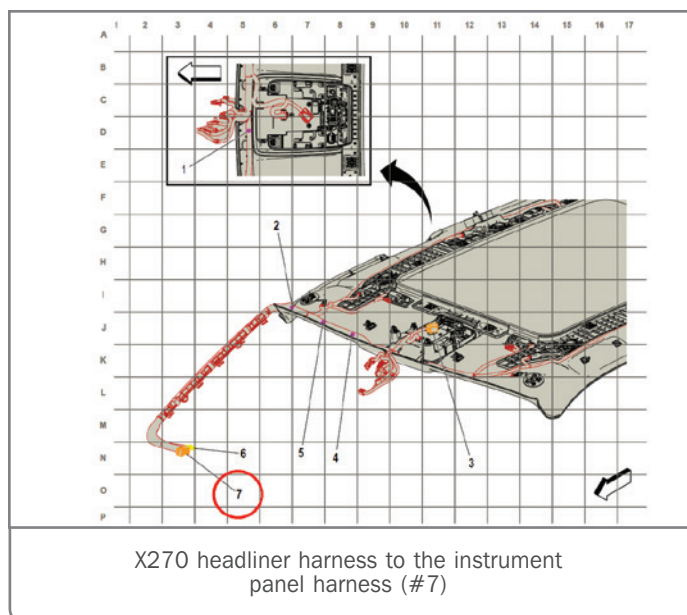


Reverse Automatic Braking uses one or two Short Range Radar Sensors and the ultrasonic Parking Assist Sensors to identify objects behind the vehicle.

Reverse Automatic Braking alerts the driver when a collision with a detected object directly behind the vehicle is imminent and, if necessary, automatically applies hard emergency braking. The system uses the Image Processing Module and one or two Short Range Radar Sensors, located behind the rear fascia, as well as the ultrasonic Parking Assist Sensors to identify objects behind the vehicle.

If DTC U3000 49 is set, reprogram the Short Range Radar with the latest calibrations and verify the condition is no longer present. Refer to Short Range Radar Sensor in the appropriate Service Information.

If the condition is still present after reprogramming, there may be an issue with the X270 headliner harness to the instrument panel harness.



X270 headliner harness to the instrument panel harness (#7)

Check for any loose terminals in the X270 harness. Repair as necessary.



Check for any loose terminals in the X270 harness.

For additional information, refer to Bulletin 21-NA-243.

► Thanks to Hassan Abdallah

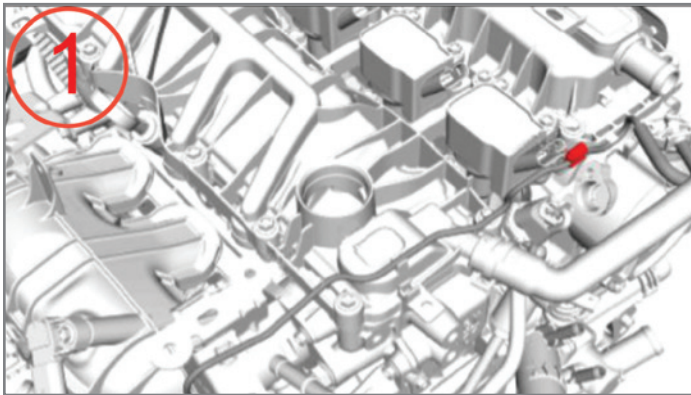


# Turbocharger

## WASTEGATE LINKAGE WEAR

Some 2019-2022 Encore GX and Trailblazer models equipped with the 1.2L engine (RPO LIH) may have an illuminated Check Engine MIL with DTC P0299 (Engine Underboost) set. These conditions may be caused by possible turbocharger wastegate linkage wear.

Use the EN-27738-A Vacuum Pump to perform several tests to determine if the turbocharger wastegate is the source of the concern. Refer to #PIP5829 for the complete diagnostic procedure.

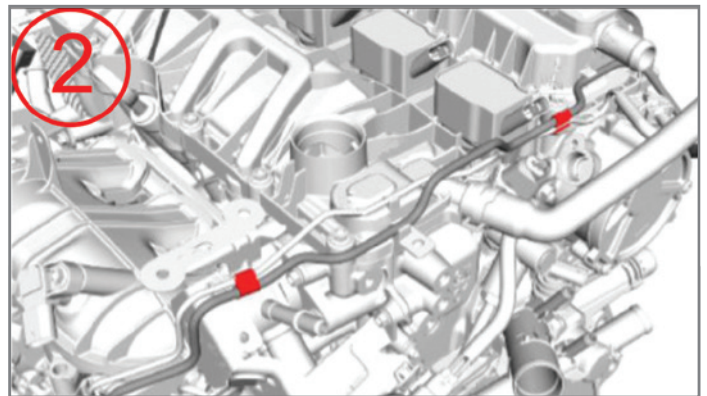


Turbocharger wastegate solenoid vacuum supply hose connection

Begin diagnosis by connecting the EN-27738-A Vacuum Pump to the turbocharger wastegate solenoid vacuum supply hose. With the engine idling, the tool should read  $-50\text{ kPa}$  ( $-0.5\text{ bar}$ ,  $15\text{ in Hg}$ ).

If the desired pressure/vacuum cannot be achieved or does not hold steady, test and replace the vacuum pump assembly and related hoses as needed.

If the desired pressure/vacuum can be achieved and holds steady, reconnect the turbocharger wastegate vacuum supply hose. Next, disconnect the turbocharger wastegate solenoid actuator supply hose and connect the EN-23738-A Vacuum Pump to the turbocharger wastegate solenoid valve actuator supply port.



Turbocharger wastegate solenoid actuator supply hose connection

With the engine idling, the tool should read Less than  $-17\text{ kPa}$  ( $-0.17\text{ bar}$ ,  $5\text{ in Hg}$ ). If the reading is greater, test and replace the Q42 turbocharger wastegate solenoid valve.

If the reading is less than  $-17\text{ kPa}$  ( $-0.17\text{ bar}$ ,  $5\text{ in Hg}$ ), hold engine speed at wide open throttle for two seconds and check for a tool reading of greater than  $-50\text{ kPa}$  ( $-0.5\text{ bar}$ ,  $15\text{ in Hg}$ ). If the reading is less, test and replace the Q42 turbocharger wastegate solenoid valve. If the tool reading is greater, remove the turbocharger and inspect the wastegate linkage for excessive wear or play.

Replace the turbocharger if necessary. Be sure to perform the Intake System Learned Values Reset after installing the turbocharger to reset the airflow adaptive learned values of the induction system. Refer to the Intake System Learning Values Reset procedure in the appropriate Service Information.

► Thanks to Raymond Haglund

# Fleet Vehicle Aftermarket Calibrations may Limit Vehicle Speed, Reduce Engine Power, and Cause Vibration at Idle

Vehicle speed may be limited to 70 mph (112 km/h) on some 2015-2021 Colorado and Canyon models equipped with the 2.5L engine (RPO LCV) that are fleet vehicles. Some vehicles also may have limited power or may have a vibration at idle without any DTCs set or the Check Engine MIL illuminated.

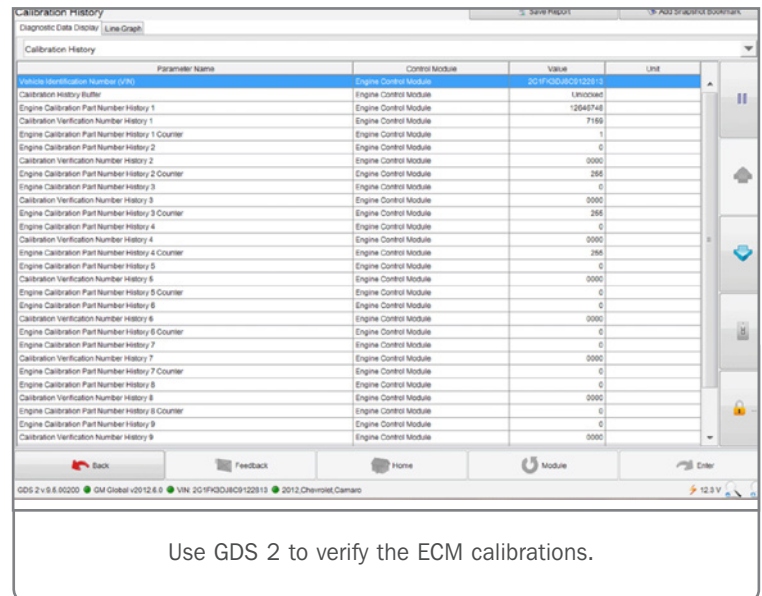
These fleet vehicles, which may be equipped with RPO VZ8, may have an aftermarket Engine Control Module (ECM) calibration installed that limits the speed and total power output as well as reduces vehicle idle speed. The reduced idle speed can create a vibration at idle.

If the vehicle is no longer owned by the original fleet customer, the aftermarket calibrations may still be installed in the ECM. Verify the current ECM calibrations are not the original factory calibrations following the calibration verification process using the Tech 2 or GDS 2 that are covered in Bulletin #09-06-04-026T.

If the vehicle is no longer owned by the fleet customer and the current customer wants the vehicle returned to the factory specifications, the customer will need to purchase an ECM and have it programmed with the factory calibrations.

If the vehicle is still owned by the fleet company, notify the driver or fleet management company of the vehicle that the limited speed and reduced power conditions are due to the aftermarket calibration installed in the ECM.

► Thanks to David Rutkowski



Parameter Name	Control Module	Value	Unit
Vehicle Identification Number (VIN)	Engine Control Module	2019KQJ0C9122813	
Calibration History Buffer	Engine Control Module	Unlocked	
Engine Calibration Part Number History 1	Engine Control Module	12049742	
Calibration Verification Number History 1	Engine Control Module	7169	
Engine Calibration Part Number History 1 Counter	Engine Control Module	1	
Engine Calibration Part Number History 2	Engine Control Module	0	
Calibration Verification Number History 2	Engine Control Module	0000	
Engine Calibration Part Number History 2 Counter	Engine Control Module	255	
Engine Calibration Part Number History 3	Engine Control Module	0	
Calibration Verification Number History 3	Engine Control Module	0000	
Engine Calibration Part Number History 3 Counter	Engine Control Module	255	
Engine Calibration Part Number History 4	Engine Control Module	0	
Calibration Verification Number History 4	Engine Control Module	0000	
Engine Calibration Part Number History 4 Counter	Engine Control Module	255	
Engine Calibration Part Number History 5	Engine Control Module	0	
Calibration Verification Number History 5	Engine Control Module	0000	
Engine Calibration Part Number History 5 Counter	Engine Control Module	0	
Engine Calibration Part Number History 6	Engine Control Module	0	
Calibration Verification Number History 6	Engine Control Module	0000	
Engine Calibration Part Number History 6 Counter	Engine Control Module	0	
Engine Calibration Part Number History 7	Engine Control Module	0	
Calibration Verification Number History 7	Engine Control Module	0000	
Engine Calibration Part Number History 7 Counter	Engine Control Module	0	
Engine Calibration Part Number History 8	Engine Control Module	0	
Calibration Verification Number History 8	Engine Control Module	0000	
Engine Calibration Part Number History 8 Counter	Engine Control Module	0	
Engine Calibration Part Number History 9	Engine Control Module	0	
Calibration Verification Number History 9	Engine Control Module	0000	

Use GDS 2 to verify the ECM calibrations.



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