

## 2023 Battery Ratings Chart and Battery Maintenance FAQs Update



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# 2023 Battery Ratings Chart and Battery Maintenance FAQs Update

U.S. dealerships use the Battery Maintenance Report to identify vehicles in dealer inventory that require attention. The report, which is updated every day, indicates if a battery charge is required due to a low 12V battery state of charge or if the vehicle should be moved to help prevent tire flat spotting and brake corrosion.

GM recommends that dealerships monitor the report once per week. The report is available through the Maxis for Dealers app link on GlobalConnect. In the app, select the Battery Maintenance Report tile. Keep in mind that

the report updates every day; however, each vehicle sends updates only once every five days, so it may take up to five calendar days for the vehicle to be removed from the report after the dealership takes action on a vehicle.



The Battery Maintenance Report identifies vehicles in dealer inventory that require attention.

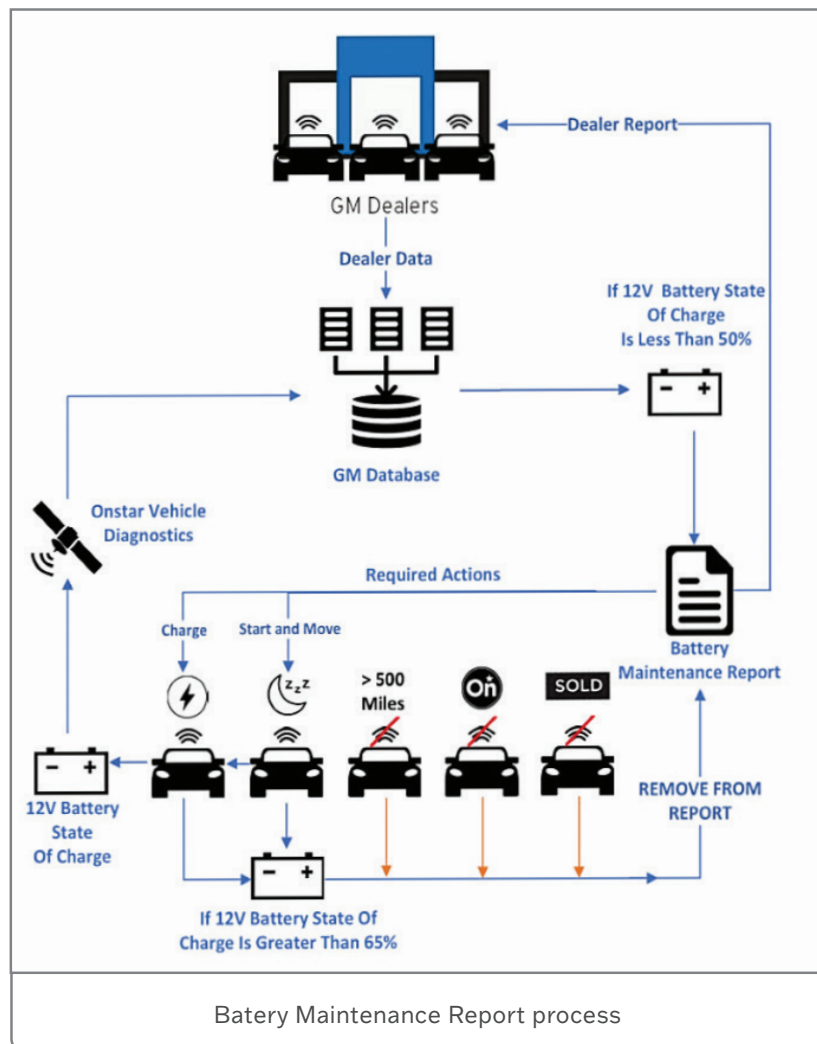
Vehicles on the report that require a battery charge should be charged using the EL-52800 Diagnostic Charge Battery Station (DCBS) or the EL-50313 Midtronics GR8 Battery Tester/Charger. For vehicles with two batteries, each battery should be individually charged.

Additional information about the Battery Maintenance Report can be found in updated Bulletin #22-NA-115. It provides an overview of the battery maintenance process as well as a variety of Frequently Asked Questions, ranging from criteria that qualifies a VIN to appear on a report to the actions a dealership needs to take and what to do if a battery fails testing.

## BATTERY TESTING

When testing a battery using the DCBS, select Diagnostic > Trolley to set up the test. Scan the VIN and verify the battery selection is correct, or manually select the correct Battery Type (Flooded or AGM) and rated CCA (both from the battery label).

If testing a battery using the EL-50313 Midtronics GR8 Battery Tester/Charger, select Charging > Diagnostic when setting up the test. Enter the correct Battery Type (Flooded, AGM, or Start/Stop AGM) and rated CCA (both from the battery label). Use the Out of Vehicle test (battery disconnected with test





**TIP:** Effective January 1, 2024, the DCBS will become Essential Equipment for all GM dealerships. GM will arrange to ship one DCBS to those dealerships that do not have a DCBS prior to 2024. Shipments began in May and will continue throughout the year for Tier 1 and Tier 2 dealerships. Remaining dealerships

The 2023 Battery Ratings chart is available under the Reference Charts menu.

► Thanks to Marco Salcedo, Ernie Haller and Brett Holsworth



# Interference Conditions Impact Forward Collision Warnings



The Forward Collision Alert system (RPO UEU) available on 2020-2023 XT6 models can detect and alert the driver that a front-end collision is imminent with a vehicle being followed as well as alert the driver when following a detected vehicle much too closely. The system uses the Frontview Camera – Windshield or, on models equipped with the Enhanced Automatic Emergency Braking system (RPO UGN), the Frontview Camera - Windshield, Long Range Radar Sensor Module and two Short Range Radar Sensor Modules, to monitor vehicles in the lane ahead.

When a vehicle is detected ahead and a front-end collision is imminent, the system can provide an audible warning to the driver or a tactile vibration of the Safety Alert Seat as well as a visual alert on the windshield or in the Head-Up Display (if equipped). The system also works with other Driver Assistance systems<sup>1</sup>, such as Adaptive Cruise Control.

In some instances, outside factors may influence a collision warning, which may occur when coming to a stop and there is not a vehicle or object in front of the vehicle. In these cases, no DTCs will be set. However, the condition usually can be easily duplicated when driving the vehicle.



Exterior interference, such as a bent license plate, may affect proper object detection.

If a false collision warning is present, perform a visual inspection of the vehicle to check for any conditions that may interfere with correct vehicle or object detection by the system. Refer to the diagnostic aids in the appropriate Service Information for more information.

A recent example from a dealership was a damaged front license plate with bent corners that was affecting system operation and resulting in a collision warning without anything in front of the vehicle. Exterior conditions or objects, even a small bend in a license plate or a dirty camera or sensor, can affect the Driver Assistance systems.

In this particular case, when the front license plate, not the bracket, was removed, the symptoms were no longer present and the Forward Collision Alert system operated properly.

Always check for any vehicle damage that could affect camera or sensor operation. For object detection and braking systems on the rear of the vehicle, common items such as a hitch receiver or bike rack also may result in unwanted object detection.

## FORWARD COLLISION ALERT SETTINGS

When the Forward Collision Alert system is active, the Vehicle Ahead Indicator will be green on the instrument cluster when a vehicle that is being following is detected ahead. The indicator will be amber when a vehicle is being followed much too closely (tailgating). When a vehicle ahead is approached too rapidly, a red alert flashes on the windshield and the Safety Alert Seat pulses or rapid beeps sound (if selected). The timing distance for the system can be set to Far, Medium or Near using the button on the steering wheel. This is also the Adaptive Cruise Control following gap setting. Depending on these settings, not every vehicle will react the same way.

In addition, to change the Automatic Emergency Braking and Forward Collision Alert system setting to Alert and Brake, Alert, or Off, go to Settings > Vehicle > Collision/Detection Systems > Forward Collision System.

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# Duramax Diesel Engine Oil Filter Update for 2023

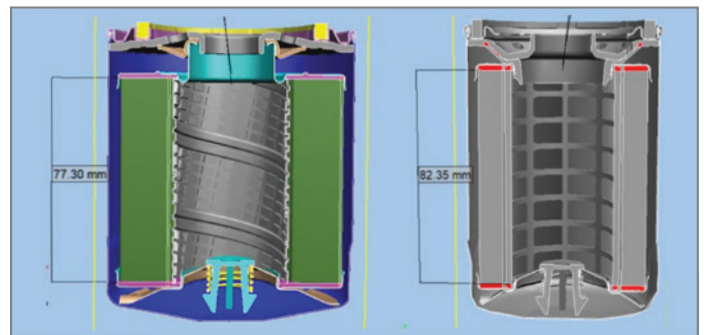
The PF63 engine oil filter is the new recommended filter specification for 2020-2023 Silverado 2500HD/3500HD, Sierra 2500HD/3500HD, Express, Savana; and 2019-2023 Silverado 4500/5500/6500 models equipped with the 6.6L Duramax diesel engine (RPO L5P, L5D).



PF63 filter

The PF63 engine oil filter will be the factory-installed filter for applicable 2023 models equipped with the 6.6L Duramax diesel engine (RPO L5P). The current PF26 engine oil filter also is compatible with these diesel engines.

The PF63 filter is 3/4 inches (19 mm) narrower than the PF26 filter, but it has a taller pleat height, which maximizes volume efficiency and cold flow performance.



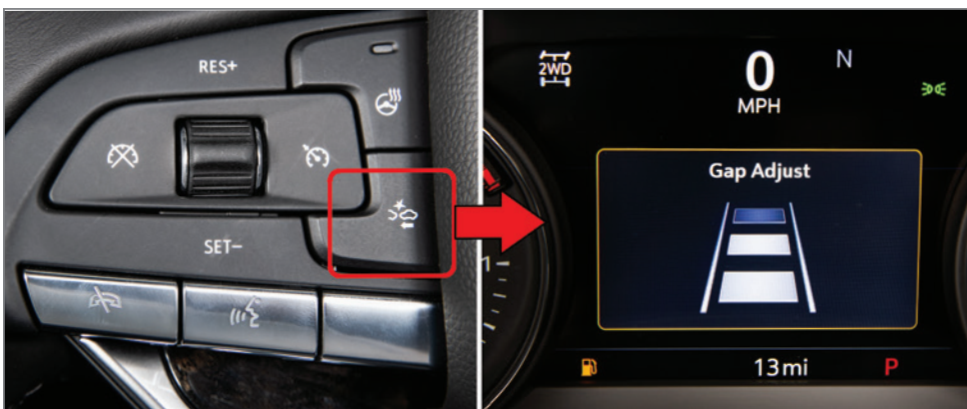
PF63 filter (right) is narrower, yet has a taller pleat height than the PF26 filter (left).

Vehicle	Model Year	Recommended Oil Filter
HD Silverado, Sierra, Savana, Express with L5P or L5D	2001 – 2019	PF2232
	2020 – 2023	PF63 (PF26 also compatible)
MD Silverado 4500/5500/6500 with L5P or L5D	2001 – 2009	PF2232
	2019 - 2023	PF63 (PF26 also compatible)

PF63 filter applications

Service Information and the Parts Catalog will be updated shortly. For more information and part numbers, refer to #PIP5870.

► Thanks to Steven Ulch



The Forward Collision Alert timing can be set using the steering wheel control.

<sup>1</sup>Safety or driver-assistance features are not a substitute for the driver's responsibility to operate the vehicle in a safe manner. The driver should remain attentive to traffic, surroundings and road conditions at all times. Visibility, weather and road conditions may affect feature performance. Refer to the vehicle Owner's Manual for important feature limitations and information.

► Thanks to Tom Burlingame and Russell Ringling

# Check the Date — Inspecting High Voltage Insulation Gloves

When working on any high voltage system on a GM vehicle, certified and tested high voltage insulation gloves must be worn. Certified and up-to-date Class "0" insulation gloves rated at 1000V with leather protectors provide an insulative barrier between an electrical point and the skin of an individual.



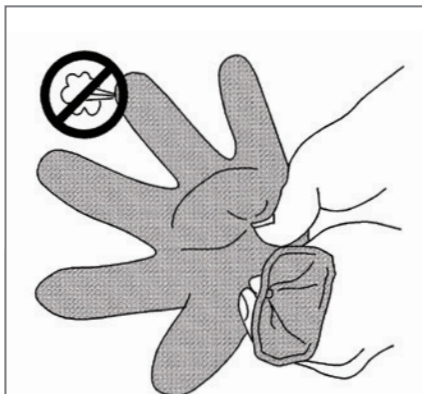
Leather protector glove and  
rubber insulation glove

Wear the insulation gloves at all times when working with the high voltage battery assembly, wires and components, whether the system is energized or not. It's recommended to use the "one-hand rule" whenever possible, which involves working with only one hand while the other hand is behind your back.

## GLOVE INSPECTION PROCEDURE

The leather protector gloves by themselves do not offer any protection against high or low voltage. Always wear the outer leather protector gloves over the inner rubber insulator gloves.

The rubber insulating gloves include a stamped date that indicates when the gloves were “originally or last tested electrically.” Rubber insulating gloves must be retested electrically by a certified lab 6 months after first use. The lab will restamp the gloves with the new “tested” date.



Inspect the gloves for any air leak or wear.

- New leather gloves and rubber insulating gloves are marked with the date of manufacture or last electrical test and may be opened for first-time use within 12 months of

that date. Gloves that are unopened 12 months after the test date must be recertified prior to use.

- Always record the date of the first time the gloves were opened or used.
- Once opened, recertification must occur 6 months from first use.
- If the first-use date is not known, the gloves must be retested 6 months from the electrical test date stamped on the gloves.

**TIP:** If the gloves' certification age range has expired, do not use the gloves. The gloves should be tested and recertified or replaced. For the North America region, visit [www.nail4pet.org](http://www.nail4pet.org) to find an accredited recertification laboratory.

Before each use, the rubber insulation gloves should be removed from their leather protector gloves and visually and functionally inspected. Refer to the High Voltage Insulation Glove Inspection Procedure in the appropriate Service Information.

Inspect the insulation gloves by trapping air in the glove and sealing the opening to prevent any air loss. While pressing the glove to increase pressure, check for any pin holes, air leaks, wear or abrasions as well as any swelling that could indicate exposure to chemicals.

If glove damage is observed, do not use the gloves and have them tested and recertified or replace them.

Properly store both the insulator gloves and leather protector gloves when not in use. Do not fold the gloves. The gloves should be kept out of sunlight, excessive heat and humidity.


**Dealer Equipped** Shop for Equipment Online: **GMDESolutions.com** 844-742-8471

## High Voltage Gloves should be worn whenever working near high voltage components.

### HV Glove and Leather Protector Set

Set of 96-302 High Voltage Protective  
Gait Skin/Lexar Leather Insulating  
Inner Gloves - Class O

#### ORDER NO.

Set of 96-302 HV Glove and Gaiter

or visit our page (3) 847-7421

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**INTER-GLOVE**  
(Leather protector)  
separating  
integrity of  
the glove  
insulated glove

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### Leather Protector Glove

- Leather protector gloves protect separating integrity of the leather insulation glove.
- Leather protector gloves have a leather HV component.
- Leather protector gloves have a leather HV component



## HV GLOVE AND LEATHER PROTECTOR SET

New HV Glove and Leather Protector Sets are available from GMDolutions.com. A 6-month insulating glove replacement program also is available that automatically orders and ships replacement insulating glove sets in 6-month intervals.

## EL-48900-A HEV SAFETY KIT

The EL-48900-A HEV Safety Kit is available from gmtoolsandequipment.com. The kit includes:

- 3 pair (S-M-L) - Class-0 rubber electrical insulation gloves.
- 3 pair (S-M-L) - leather protector gloves.
- 4 collapsible orange safety cones.



EL-48900-A HEV Safety Kit

Each glove set consists of a pair of rubber insulation gloves and a pair of leather protector gloves. The safety cones should be used to properly mark off the area around an HEV vehicle so others are aware that there is an HEV in the service bay.

## TRAINING COURSE

To learn more about high-voltage insulation glove use, review course 59500.04V, Class 0 High Voltage Insulation Glove Inspection, on the GM Center of Learning.

► Thanks to Zach Winters and Joe Ciagala

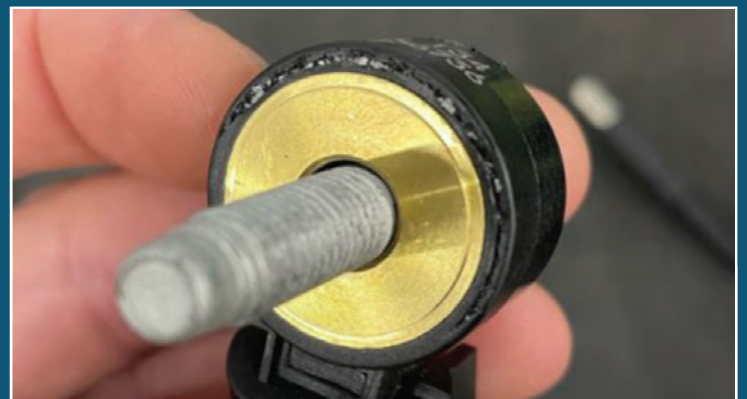
# Knock Sensor Performance Condition

Some 2022 Camaro, Colorado, Acadia, Canyon, XT5 and XT6 models equipped with the 3.6L V6 engine (RPO LGX, LGZ) may have an illuminated Check Engine MIL along with DTC P0331 (Knock Sensor 2 Performance) set in the Engine Control Module at low mileage. These conditions may be caused by metal around the knock sensor boss on the left side of the engine block that allows contact with the plastic covering the knock sensor.



Block flashing around the knock sensor boss

If these conditions are found, in addition to replacing the knock sensor, check for block flashing (excessive block material) around the knock sensor boss that may contact the knock sensor black plastic. If there is block flashing, use a flat or half-round hand file to remove the flashing so it will not contact the sensor plastic. Do not mar the knock sensor mating surface, which may affect the accuracy of the knock sensor readings.



Knock sensor black plastic

After removing the flashing and replacing the knock sensor, reevaluate engine performance and ensure the code runs and passes.

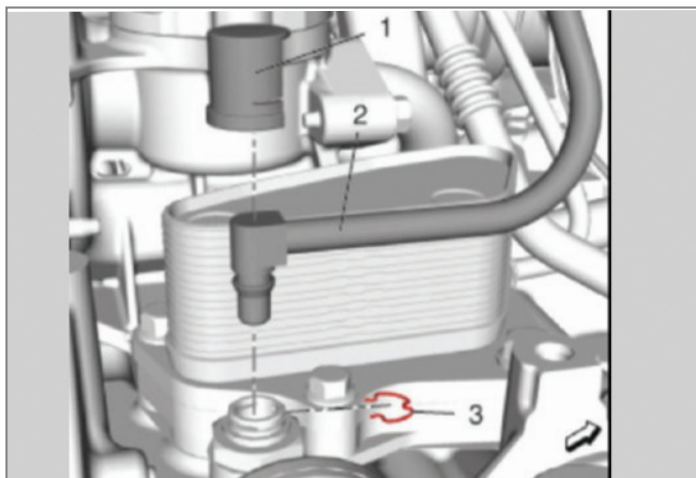
Refer to #PIP5836B for additional information.

► Thanks to Aron Wilson

# Engine Oil Leak from Above Oil Filter

An engine oil leak from above the oil filter may be found on some 2016-2019 Cruze; 2016-2022 Malibu; 2018-2022 Equinox, Terrain; 2019-2022 Encore and Trax models equipped with the 1.4L engine (RPO LE2) or 1.5L engine (RPO LYX, LfV).

The leak may appear to be related to the lower-crankcase extension to block-sealing surfaces or to block porosity. However, warranty analysis shows that this oil leak may be coming from the turbocharger oil feed pipe fitting at the engine block or from the engine oil cooler gasket.



Block-mounted turbocharger oil feed pipe fitting

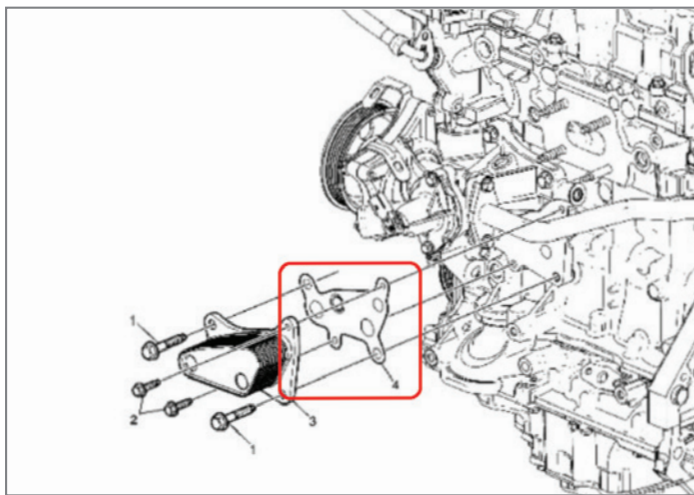
Prior to removing the lower crankcase extension or replacing the engine, determine if the turbocharger oil feed pipe fitting or the engine oil cooler gasket is the source of the leak.

Begin diagnosis by completely cleaning the entire engine and surrounding components. Add GE-28431-6 Black Light Oil Dye to the engine crankcase and run the engine. If necessary, operate the vehicle for several miles at normal operating temperature and at varying speeds to produce the leak. Use the GE-42220 Universal 12V Leak Detection Lamp with the Black Light Oil Dye to isolate the area of the leak.

Check the engine oil cooler gasket and the turbocharger oil feed pipe fitting in the block just below the engine oil cooler. If the engine oil cooler is removed for inspection, the gasket must be replaced.



GE-42220 Universal 12V Leak Detection Lamp



Engine oil cooler gasket (#4)

If the turbocharger oil feed pipe fitting is removed from the engine block for inspection, the fitting and gasket must be replaced.

Retest for engine oil leaks once these components have been replaced to verify the source of the oil leak.

► Thanks to Raymond Haglund



# Power Folding Mirror Speeds

The power folding mirrors on the driver's side and passenger's side of the vehicle may appear to operate at different speeds on some 2019-2023 Silverado 1500, Sierra 1500; 2020-2023 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD models.

If the power folding mirrors appear to not be in sync, it's important to note that even though the power folding mechanism for the outside mirrors runs at the same speed on both sides of the vehicle, the passenger-side mirror will complete the folding maneuver faster since it has a shorter folding distance.

The power folding mirrors, which are controlled by the Driver Front Side Door Window Control Switch, will fold or unfold depending on the current state. The Front Side Door Window Control Switch controls the fold/unfold motors through bi-directional control circuits.

Do not replace the mirrors for a power folding speed concern. This is a normal operating characteristic of the power folding mirrors and the system is functioning as designed. The operating speed of the power folding mirrors should be shared with customers.



Power folding mirror

► Thanks to Dave MacGillis and Kevin Minor

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