

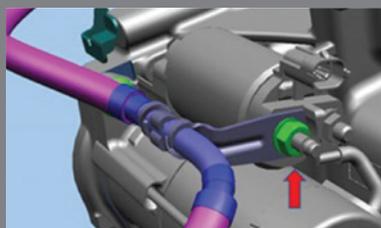
CORVETTE

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Corvette Brake Rotor Conditions

Some 2021-2022 Corvettes equipped with the Z51 Performance Package may have a brake pulsation or grinding sound when applying the brakes. There also may be a pitting condition seen on the brake rotor surface. These conditions are most commonly found after the vehicle sits for an extended period of time, especially in high humidity.

TIP: These brake rotor conditions are outlined in the Owner's Manual and should be reviewed with the customer.

Typically, the brake rotor conditions are caused by corrosion pad spotting and surface grooving on the rotor surface. Burnishing the brakes can help to restore optimal brake performance and reduce brake noise.



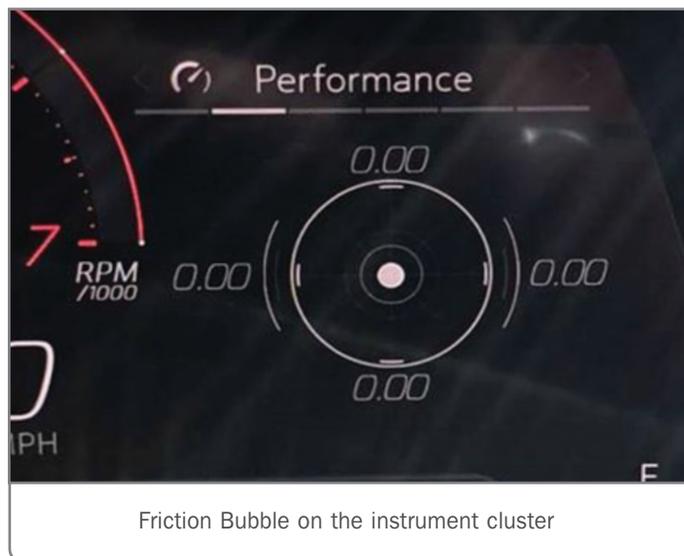
Corrosion pad spotting



Rotor surface grooving

BRAKE BURNISHING PROCEDURE FOR CORROSION CLEANUP

The brake burnishing procedure should only be performed on Z51 models with the J55 brake system. Performing the burnishing procedure on the JL9 base brake system may result in brake damage. In addition, the new vehicle break-in period should be completed before performing the brake burnishing procedure in order to help prevent damage to the engine.



Friction Bubble on the instrument cluster

Refer to Bulletin #22-NA-026 and the Owner's Manual for the complete brake burnishing procedure. The procedure includes applying the brakes 10 times starting at 60 mph (100 km/h) to 30 mph (50 k/h) while decelerating at 0.4g, which is a medium brake application. The Friction Circle (or Friction Bubble), found under the Performance menu on the instrument cluster, can be used to monitor the g-force. Use the Driver Information Center (DIC) steering wheel controls to view the menus on the instrument cluster. Between brake applications, the vehicle should be driven for at least 0.3 miles (0.5 km).

While performing the procedure, the brake pads may smoke and produce an odor. The braking force and pedal travel also may increase. After the procedure, the brake pads may appear white at the rotor contact.

BRAKE NOISE

As with all high-performance brake systems, some amount of brake squeal is normal. High-performance brake systems provide

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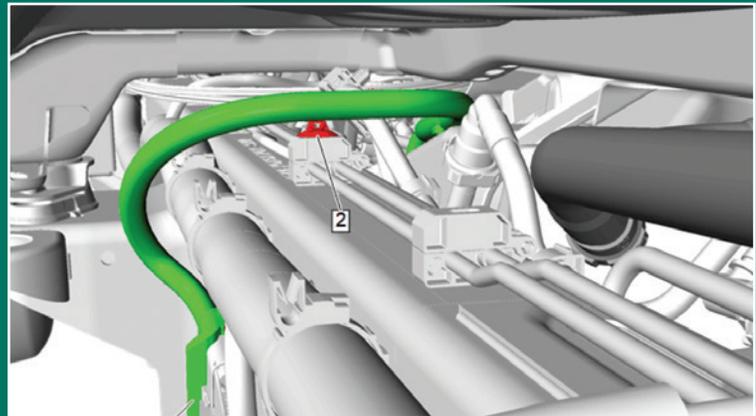
DEF Tank Wiring Harness Pinout Change

After replacing the wiring harness on the Diesel Exhaust Fluid (DEF) tank on some 2020-2022 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD trucks equipped with the 6.6L Duramax diesel engine (RPO L5P), several DTCs may set. DTCs P20B9 (Reductant Heater 1 Control Circuit) and P20C1 (Reductant Heater 3 Control Circuit) may be caused by a wiring change to the service DEF tanks.

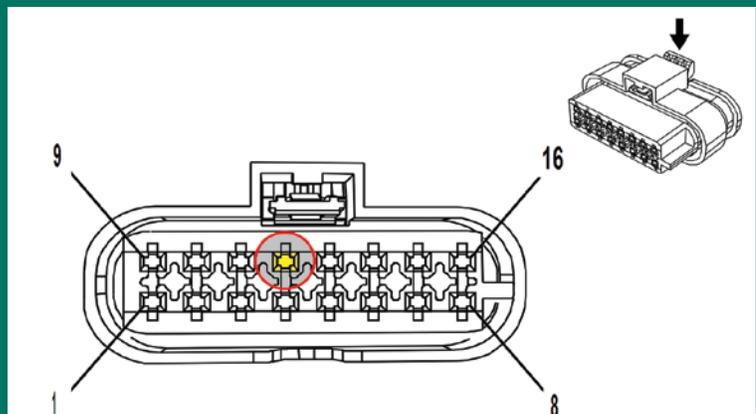
If these conditions are found, examine the 16-pin wiring harness connector to verify which wiring harness is installed on the vehicle prior to ordering any parts. On the first-design DEF tank harness, pin location 12 will be empty. The second-design DEF tank harness, pin location 12 has a wire in the connector.

For complete wiring pinout charts for the first-design harness and second-design harness, refer to #PIP5838.

► Thanks to John Stempnik



DEF tank wiring harness



Check for a wire in pin 12

superior fade resistance, but will produce increased brake squeal and brake dust on the wheels and calipers as compared to standard brake linings.

In addition, variations in driving conditions such as the weather, environment, driving patterns, differences in vehicle loading, and type or style of driving, can affect brake wear as well as cause brake noise. A brake squeal sound may occur after a period of

non-use, on cold brakes, and in high humidity conditions. A grinding sound also may be caused by light corrosion forming on the friction surfaces during non-use. These are normal conditions that usually disappear after the first few brake applications.

For additional information, refer to Bulletin #22-NA-026.

► Thanks to Jeff Strausser

Updated Super Cruise Driver Escalation and Lane Change Features

The Super Cruise hands-free driver-assistance technology (RPO UKL) is now available on 2021-2022 Escalade, CT4, CT5; 2022 XT6, Bolt EUV, Silverado 1500, Sierra 1500 and HUMMER EV Pickup. The advanced system continues to be updated with additional capabilities and expanded compatible roads, including lane change functionality and more than 200,000 miles (320,000 km) of mapped roads in the U.S. and Canada.

Super Cruise is available only on compatible roads that are separated from opposing traffic. The Global Positioning System (GPS) sensing uses real-time corrections and map data to determine the vehicle's location while the Lane Sensing Camera detects the marked lanes on the road to help the vehicle steer and maintain lane position.



Active Super Cruise

If Super Cruise is not available or disengages, drivers can press the Super Cruise button (within 10 seconds of disengagement) to view a message in the instrument cluster as to the reason why. There are several possible explanations, such as No Road Information, Driving in Exit Lane, or Looking Away from Road for Too Long. Refer to the appropriate Service Information for complete message descriptions.

Note: 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 Owner's Manual for important feature limitations and information.

SYSTEM OPERATION

As with all Advanced Driver Assistance System features, Super Cruise is dependent on maintaining the design specifications of each component of the safety system, including real-time cameras, sensors and GPS.



Here's the basics of operation of the system components used by Super Cruise:

- Super Cruise is a driver assistance technology that enhances Adaptive Cruise Control by allowing hands-free driving under compatible highway driving conditions. The Active Safety Control Module 1 is the primary control module for Super Cruise operation, while Active Safety Control Module 2 is a redundant control module for backup operation.
- Super Cruise uses GPS sensing, GPS-enhanced data, a high-precision map and network of cameras to maintain automatic control of vehicle steering on compatible highways.
- The GPS uses real-time corrections and map data to determine the vehicle's location while the Frontview Camera - Windshield detects the marked lanes on the road to help the vehicle automatically steer and maintain lane position. Map data is provided by the Digital Map Module.
- The system works with Adaptive Cruise Control to maintain a driver-selected following gap from a vehicle ahead, even in stop-and-go traffic conditions. The Long Range Radar Sensor Module is used to detect other vehicles.

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- When engaged, Super Cruise uses a Driver Attention System to provide feedback on system status while tracking the driver's head position and using alerts that prompt the driver to pay close attention to the road and steer manually when needed. The Driver Attention System uses the Driver Monitoring System Control Module and Driver Monitoring System Camera to monitor the driver.
- Some vehicles with Super Cruise use two Short Range Radar Sensor Modules in place of the Left Side Object Sensor Module and Right Side Object Sensor Module. These additional Short Range Radar Sensor Modules integrate the traditional Lane Change Alert with Side Blind Zone Alert into the Super Cruise system and allow Super Cruise to perform lane-change maneuvers.

Note: Drivers should always pay attention while driving and when using Super Cruise. A handheld device should not be used.

ESCALATION CANCELLATIONS

When engaged, Super Cruise provides feedback on system status using the steering wheel light bar and instrument cluster as well as voice prompts. Plus, the Driver Attention Camera helps track that the driver is paying sufficient attention to the road ahead.

There may be a number of conditions where the system may require the driver to take control of the vehicle. In order to notify the driver to do so, the system enters a "red escalation," which consists of the following actions:

- Super Cruise symbol on the instrument cluster illuminates in red
- Super Cruise message displays that states to take control of the vehicle
- The steering wheel light bar flashes red
- Non-visual alerts may include a chime or Safety Alert Seat vibration, based on the current vehicle settings

To take control of the system, drivers should place their hands on the sensing areas on the steering wheel. These locations include the two and ten o'clock positions as well as the five and seven o'clock positions on the front of the wheel and the entire back of the wheel. If the wheel is not grasped in these locations, the system may not cancel the escalation and the vehicle may continue to coast.



Red indicators notify the driver to take steering control.



Sensing locations on the steering wheel

When the system senses the driver's hands are on two of the sensing zones on the steering wheel, the escalation subsides immediately and the system recognizes that the driver has regained control of the vehicle.

There also are secondary override applications utilizing the steering wheel torque, accelerator pedal application, and brake pedal application. These system overrides are harder to achieve as they are designed to ensure true driver intent and control before the system will relinquish lateral control to the driver.

These override applications are designed to take into consideration inadvertent events, such as a steering wheel bump, a pedal hit, or the vehicle hits a pothole (inducing steering feedback), and that a driver in control indication is not inadvertently tripped.

LANE CHANGES

The available Lane Change on Demand and Automatic Lane Change features allow the vehicle to change lanes while Super Cruise is active.

When the driver activates Lane Change on Demand by using the turn signal, the system will look for an acceptable opening in the indicated lane and alert other vehicles that a lane change is imminent. If the indicated lane is determined to be open, the vehicle will merge into the desired lane. Upon initiation, the instrument cluster will inform the driver when the lane change maneuver has begun or, if the desired lane is unavailable, it will notify the driver that merging must be completed manually. The system will display messages such as "Looking for an Opening" or "Changing Lanes," to keep the driver informed.



Lane Change on Demand

Automatic Lane Change, if enabled in the Vehicle Settings menu, allows Super Cruise to initiate a lane change under certain

conditions. For example, it may initiate a lane change to pass a slower-moving vehicle ahead.

Super Cruise also can be overridden at any time by steering, braking or accelerating. To change lanes manually, the steering wheel should be moved with both hands on the sensing areas of the wheel. When the system detects the driver is steering, the steering wheel light bar pulses blue. To allow Super Cruise to resume steering, the vehicle should be centered in the lane until the light bar turns green.



Manually steering to change lanes turns the light bar blue.

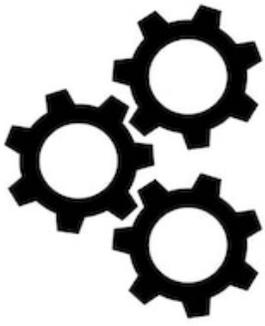
CONNECTED SERVICES

Super Cruise functionality is enabled by a data connection for real-time, precise positioning, periodic Super Cruise map updates, and access to an OnStar Emergency-Certified Advisor. In order to operate Super Cruise, an active and eligible Connected Services plan is required.

Owners receive three years of connectivity with the purchase of a new vehicle equipped with Super Cruise. After this period ends, an eligible Connected Services plan must be purchased. Owners should be directed to onstar.com (onstar.ca in Canada) to learn more about available Connected Services plans.

Note: Connected services vary by vehicle model and require active service plan, working electrical system, cell reception and GPS signal.

► Thanks to Kristin Clancy



Power Liftgate Actuator Removal Tips

The power liftgate actuators from some 2018-2022 Acadia, XT5 and 2020-2022 XT6 models that have been returned to the Warranty Parts Center show damage due to improper removal.



Power liftgate

Not following the proper procedure to remove a power liftgate actuator, such as prying the actuator off the ball socket, may damage the actuator.



Damaged power liftgate actuators

REMOVING THE ACTUATOR

To properly remove the actuator, with the liftgate fully open, push the actuator ball socket onto the ball toward the liftgate edge.



Push the actuator ball socket onto the ball in the direction of the arrow.socket off the ball.

Make sure that the spring clip is snapped into the closed position; otherwise, push the spring in by hand.

Insert a flat pocket screwdriver behind the clip. The clip does not need to be removed. Pull the ball socket off the ball completely to remove the actuator.



Insert a flat pocket screwdriver behind the clip to pull the ball socket off the ball.

For additional information, refer to #PIT5893.

► Thanks to David Goodrow

INTERMITTENT POWER UP

No Crank Condition



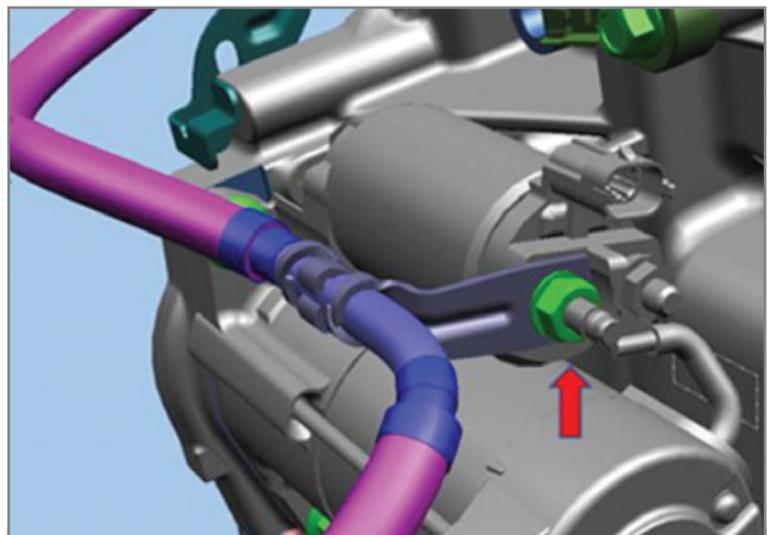
Some 2021-2022 Equinox and Terrain models equipped with the 1.5L engine (RPO LYX) may have an intermittent no crank condition, but the vehicle powers up normally.

If the intermittent power up, no crank condition is found, verify the BCM Power Mode Data shows Crank, the ECM Electrical Data shows an active Crank Request and Crank Relay command. If the data is correct, check for power at the B+ terminal at the starter. If there is power present, inspect the B+ stud on the starter for oxidation.

Replace the nut and clean the B+ stud terminals if oxidation is evident and then re-check starter function for proper operation. If the no crank condition is no longer present, repairs are complete. If not, continue with starter diagnosis following the appropriate Service Information.

For additional information, refer to #PIT5887.

► Thanks to Kenneth Cole



Replace the nut and clean the B+ stud terminals if oxidation is evident.

Envision Ambient Instrument Panel Lighting

The instrument panel on 2021-2022 Envision models features ambient LED lighting. The chrome edge of the instrument panel surrounding the left and center sections illuminate with a thin light strip. The lighting feature follows the bottom edge of the left side of the instrument panel near the driver's door to the right side of the infotainment display.

However, the far right chrome strip under the HVAC vent near the front-passenger door does not illuminate like the left and center sections of the instrument panel. This is the intended design of the instrument panel lighting and is a normal operating characteristic of the vehicle. Do not replace any parts or attempt any repairs to the far right chrome strip.

Customers should be notified of this normal lighting operating characteristic and that it does not impact the designed performance of the vehicle.

For additional information, refer to Bulletin #22-NA-035.

► Thanks to Bill Taylor



Instrument panel ambient lighting design.



Chrome strip under far right vent (1) does not illuminate like the far left (2) and center (3) sections of the instrument panel.

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