TECH LINK



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Active Grille Shutters Front-End Noise

Some 2021-2023 Escalade, Silverado, Tahoe, Suburban, Sierra and Yukon models may be producing a thump, clunk, pop or click noise at the front end of the vehicle due to contact with the active grille shutters.



Infotainment Settings Menu not Accessible on LCF Models

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Active Grille Shutters Front-End Noise



Some 2021-2023 Escalade, Silverado, Tahoe, Suburban, Sierra and Yukon models may be producing a thump, clunk, pop or click noise at the front end of the vehicle. The sound also may be felt in the brake pedal or on the floor in the front of the cabin. The condition typically occurs after the vehicle has been driven at least 45 mph (72 km/h) and then comes to a stop, or after the brake pedal is released after a stop.

The front-end noise condition may stem from road debris or a component coming in contact with the active grille shutters as they open and close.

The active grille air shutter system closes shutters in the front grille to enhance vehicle aerodynamics in driving situations where cooling and A/C loads are relatively low and high levels of front-end airflow are not required. If high levels of airflow are required, the active grille air shutter system will open one or both shutters, if equipped. If the conditions for opening the shutters are reached, the control module commands the active grille air shutter actuators to open one or both shutters.

To help determine the cause of the noise, with the shutters open, remove the fuse that powers the active grille shutters actuator. With the fuse removed, test the vehicle to see if the noise still occurs.

If the noise is not present, remove the intake air splash shield and inspect the active grille shutters for any items that may be making contact.

Possible items, such as road debris, stones, ice, or a mispositioned horn bracket or unsecured intake air duct, may be contacting the shutters and causing the noise.

For additional information, refer to #PIT5986.

Thanks to Jim Will



Intake air splash shield (#2)



Open Fuses Set Glow Plug DTCs

The Check Engine MIL and several glow plug-related DTCs may be set on some 2024 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD models equipped with the 6.6L Duramax diesel engine (RPO L5P). DTCs that may be set in the Engine Control Module (ECM) may include:

- P066A (Cylinder 1 Glow Plug Control Circuit Low)
- P066C (Cylinder 2 Glow Plug Control Circuit Low)
- P066E (Cylinder 3 Glow Plug Control Circuit Low)
- P067A (Cylinder 4 Glow Plug Control Circuit Low)
- P067C (Cylinder 5 Glow Plug Control Circuit Low)
- P067E (Cylinder 6 Glow Plug Control Circuit Low)
- P068C (Cylinder 7 Glow Plug Control Circuit Low)
- P068E (Cylinder 8 Glow Plug Control Circuit Low)



Inspect the BDU for a blown fuse.

An open fuse F5 (F5BA) will result in cylinders 1, 4, 6 and 7 all setting DTCs P066A, P067A, P067E and P068C simultaneously. And an open fuse F6 (F6BA) will result in cylinders 2, 3, 5 and 8 all setting DTCs P066C, P066E, P067C and P068E simultaneously. In addition, terminal damage in the X950D 55-way connector may result in Glow Plug Control Circuit DTC P0671, P0672, P0673, P0674, P0675, P0676, P0677 or P0678 setting.

Before replacing or disturbing any glow plugs, check the Battery Distribution Unit (BDU) Fuse Assembly for any blown fuses. Be sure to check for 12V on the BDU ring terminal while wiggling the cable. Some blown fuse conditions will intermittently make contact.

If a fuse is intermittent or open, replace the BDU assembly. Be sure to torque all fasteners to specification. Do not over torque. The 10 mm nut should be torqued to 6 Nm; 13 mm nuts should be torqued to 15 Nm.



Check for a bent terminal.

Also check for any bent terminals in the X950D 55-way connector. The X950D connector can be separated by disengaging the red CPA and squeezing the corners of the connector.

For more information, refer to #PIP5911.

Thanks to Steven Ulch

V8 Engine Crankshaft Bearing Conditions

A no crank condition may be found on some 2019-2023 Silverado, Sierra; 2021-2023 Tahoe, Suburban, Yukon and Escalade models equipped with the 6.2L V8 engine (RPO L87). The no crank condition may be due to a seized engine with an open starter fuse. Various engine sounds, such as a thumping, knocking or rattling, may be present. These conditions may be the result of crankshaft bearing failure.



Inspect the crankshaft for damage.



Look for visible metal particles in the oil filter pleats.

In cases involving suspected bearing failure, first check the engine oil and filter for excessive metal debris and bearing material. Inspecting the oil filter for excessive debris and damaged pleats can be a helpful indicator of the amount of material that has been displaced through the engine and lubrication circuits.

If bearing material is identified, remove the engine oil pan and inspect the crankshaft rod and main bearings for any damage. Component replacement or, depending on the extent of damage, engine replacement may be necessary.

ENGINE COMPONENT REPLACEMENT GUIDELINES

The amount of bearing damage determines if the engine should be replaced. Bulletin #18-NA-073: Repair Guidelines for Engine Component Wear provides details about wear characteristics of engine components and replacing worn components, including the crankshaft main bearings and journals. Engine assembly replacement should be based on the extent of the damage to individual components.



Some components can be replaced without the need for engine replacement.

OIL COOLER COMPONENTS

If there is crankshaft main bearing failure, it may be necessary to also replace the oil cooler, oil cooler lines and oil tank, if

Servicing Diesel Engines with Ceramic Glow Plugs

When replacing ceramic glow plugs 2017-2019 Cruze; 2018-2019 Equinox, Terrain; 2020-2023 Silverado 1500, Silverado 2500HD/3500HD, Silverado 4500HD/5500HD/6500HD, Tahoe, Suburban, Sierra 1500, Sierra 2500HD/3500HD and Yukon models equipped with the 1.6L diesel engine (RPO LH7), 3.0L diesel engine (RPO LM2, LZ0) or 6.6L diesel engine (RPO L5P, L5D), it is required to use a glow plug hole bore cleaning tool to remove the soot built up on the inside of the glow plug hole. The only exception to the glow plug hole cleaning is when servicing a glow plug on the 2.0 L and 2.8 L diesel engines.



As the engine runs during normal operation, soot builds up between the outside of the glow plug and the inside of the glow plug hole. Once a glow plug is removed, this soot that collected in the bore must be removed. If the soot is not removed before installing a new glow plug, the soot could "side load" the new glow plug and induce a premature failure.

The recommended tool for cleaning the glow plug holes on the 1.6L, 3.0L and 6.6L diesel engines is the EN-52074 Glow Plug Bore Reamer.

With grease applied to the Glow Plug Bore Reamer to catch any carbon removed, it pilots into the glow plug bore and the reamer end passes into the combustion chamber of the head. The hex on Glow Plug Bore Reamer is turned with a ratchet to remove any carbon build up, which remains in the grease on the end of the tool.



Before cleaning the glow plug bore, inspect each removed glow plug to ensure it is fully intact and not broken. If a broken glow plug tip is found, inspect the combustion chamber for the tip or any debris.



The Glow Plug Bore Reamer must be used to clean the bore hole before installing a new glow plug.

After replacing the glow plugs on the 6.6L diesel engine, the glow plug learn procedure should be performed to enable the Glow Plug Control Module to relearn the values of the plugs.

Refer to Bulletin #23-NA-032 for additional information.

Thanks to Larry Yaw

CRANKSHAFT BEARING CONT.

equipped, along with the damaged engine components. Refer to Bulletin #22-NA-074 for more information about engine repairs after crankshaft main bearing damage.

If the main bearing debris is sent through the oil galleries and other components that are in the lubrication circuit, which are very difficult to completely clean, it could lead to additional damage when installed on a new engine. When there is extensive damage, oil cooler, oil cooler line and oil tank replacement ensures all debris is completely removed and that any bearing failure debris is not transferred into the new service engine.

For additional information, refer to #PIP5900.

Thanks to Bryan Salisbury

Charge Air Cooler Icing

Reduced engine power and an illuminated Check Engine MIL may be found on some 2019-2023 Silverado and Sierra models equipped with the 2.7L 4-cylinder turbo engine (RPO L3B). DTCs P0299 (Engine Underboost), P2227 (Barometric Pressure Sensor Performance) or P0300 (Engine Misfire Detected) may be set in the Engine Control Module (ECM).

These conditions may result from ambient or PCV moisture freezing where ice or sludge can accumulate in the Charge Air Cooler (CAC). An updated ECM calibration is available to address operating conditions in colder weather. In addition, a lower air baffle should be installed to help reduce CAC icing.



Install a lower air baffle to help reduce CAC icing.

To install the air baffle, begin by removing the front bumper impact bar and then the Throttle Inlet Absolute Pressure (TIAP) sensor. Use a fluid extractor or suction tool to drain any remaining moisture from the CAC end tank and reinstall the TIAP sensor and bolt.



Throttle Inlet Absolute Pressure (TIAP) sensor



Remove the four push pins from the front bumper lower air baffle.

Next, remove the four push pins that secure the top of the front bumper lower air baffle.

Install the new radiator air front lower baffle by slipping the tabs behind the outermost tabs of the front bumper lower air baffle. Snap the top of the radiator air front lower baffle in place on top of the CAC.

Reinstall the four push pins to secure the front bumper lower air baffle.



Install the new radiator air front lower baffle behind the outermost tabs of the front bumper lower air baffle.

Once repairs are complete, reprogram the ECM with the updated calibration.

Refer to Bulletin #23-NA-002 for more information, including part numbers.

Thanks to Matt Gager

Infotainment Settings Menu not Accessible on LCF Models

The Settings menu on the infotainment screen may not be accessible on some 2021-2023 LCF 3500HD, 4500/4500HD, 5500/5500XD, 6500XD and 7500XD models equipped with the optional Alpine radio (RPO UIZ). When trying to select the Settings menu on the touchscreen, it may be greyed out and cannot be accessed.



As one of the safety features on the LCF models, the Park brake must be set in order to access the Settings menu. Customers should be instructed to set the Park brake in order to access all of the menu items on vehicles with the Alpine radio. Once the Park brake is set, the Settings icon will illuminate, indicating it is selectable.

For more information, refer to #PIT5972.



Set the Park Brake to access the Settings menu.

Thanks to Steve Morris



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