



Preliminary Information

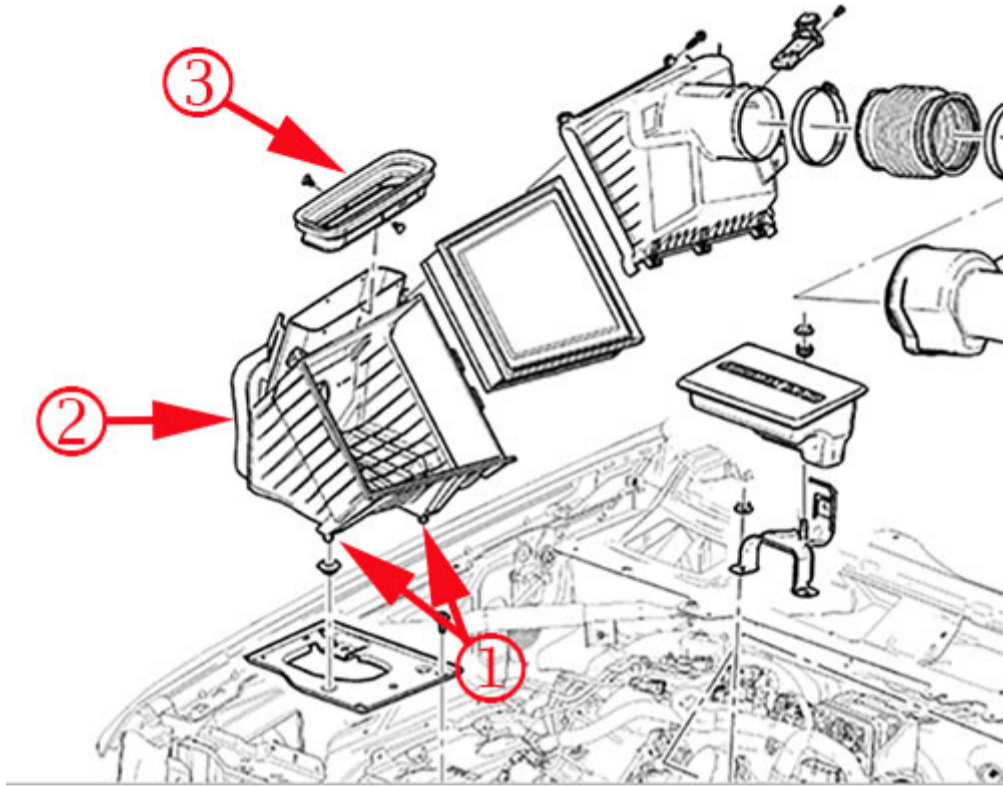
PIP5489C Concerns Caused By Restricted Air Filter Element

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Chevrolet	Silverado	2017 - 2019	All	All	6.6 L5P	All
GMC	Sierra	2017 - 2019	All	All	6.6 L5P	All

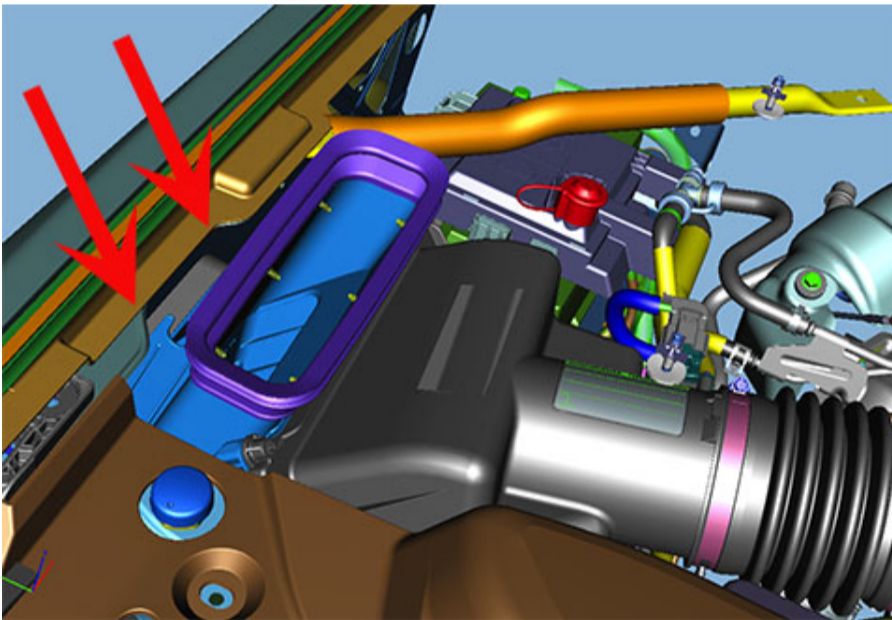
Involved Region or Country	North America
Condition	<p>A customer may comment on a Service Engine Soon Light along with other drivability concerns such as a vehicle surge, transmission slipping or jerking, a vibration or shudder, low power, smoke from the exhaust under load, a DIC messages of Clean Exhaust Filter See Owners Manual Now, Cleaning Exhaust Filter Keep Driving Until Message is Cleared or Diesel Partic Filter is Full Continue Driving Displayed.</p> <p>The dealer technician may find DTCs related to mass air flow (MAF), engine underboost, Exhaust Gas Recirculation (EGR) and Diesel Particulate Filter concerns. Some of the DTCs found may be:</p> <ul style="list-style-type: none"> P0101 - Mass Air Flow (MAF) Sensor Performance P0106 - Manifold Absolute Pressure (MAP) Sensor Performance P0171 - Fuel System Lean P0172 - Fuel System Rich P0299 - Engine Underboost P0401 - Exhaust Gas Recirculation (EGR) Flow Insufficient P0402 - Exhaust Gas Recirculation (EGR) Flow Excessive P140B - Exhaust Gas Recirculation (EGR) Slow Response - Increasing Flow P140C - Exhaust Gas Recirculation (EGR) Slow Response - Decreasing Flow P2459 - Diesel Particulate Filter (DPF) Regeneration Frequency P2463 - Diesel Particulate Filter (DPF) Soot Accumulation <p>The air filter element may be found restricted with snow, ice, water, dirt or mud. Water getting into the air cleaner assembly under wet/rainy conditions may saturate the air filter and reduce flow to the point that the air filter is damaged/distorted.</p> <p>Restriction of the air filter element might cause the air filter to come apart. If this happens, there may be pieces of the filter blocking the air flow in the induction system and affect the MAF readings.</p>
Cause	<p>Air induction filter box may be out of position causing loss of sealing to the hood and/or the owner may not be using front end grille cover at below zero temperature conditions.</p> <p>Vehicle modifications may also allow water to enter the air cleaner assembly.</p>

Correction:

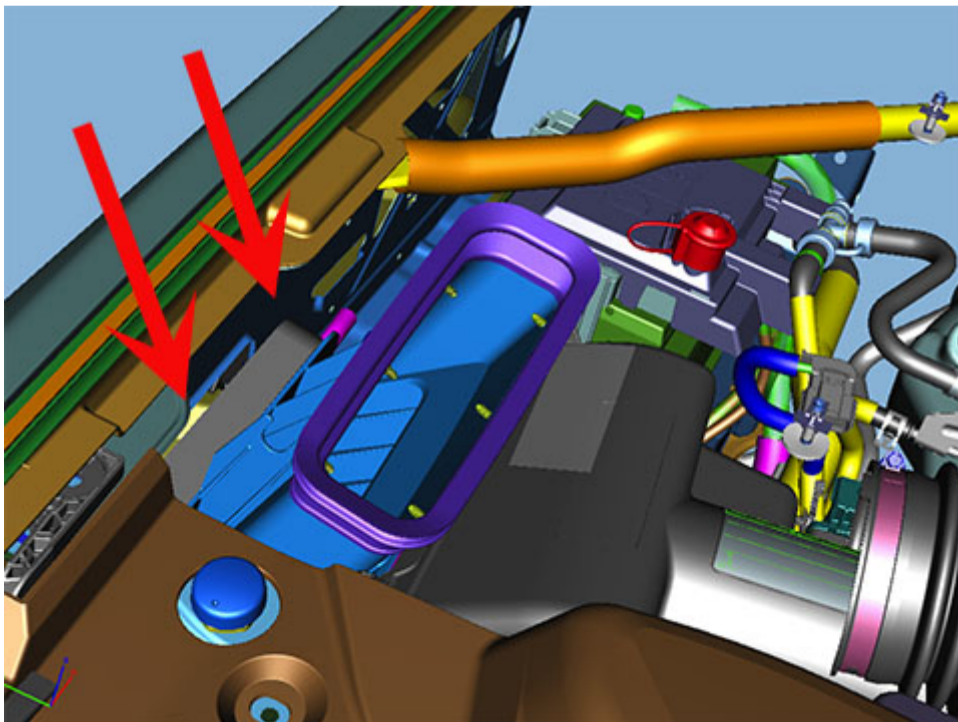


1. Check alignment of box at points 1 and 2 (Refer to illustration above)

- If airbox alignment is poor – realign airbox
- If ok, move to next step



The picture above is of a properly aligned and sealed air box to fender.



The picture above is of a misaligned air box.

2. Check quality/condition of seal at point 3 (Refer to illustration above)



Example of torn seal (Picture 1)



Example of bent seal (Picture 2)

- If seal is found damaged, only replace upper seal
- If seal is found ok, move to next step

3. Check quality/condition of air filter



Example of a good air filter (Picture 3)



Example of a collapsed air filter (Picture 4)



Example of Filter – Early Collapse (Picture 5)



Example of dirty side damage (Picture 6)



Example of moisture damage (Picture 7)

- If filter is found damaged, replace
- If there is no trouble found with the filter, please refer to Service Information for further diagnostics.

Proper sealing between the air box upper gasket (3) and hood can be checked by wetting the gasket (foaming glass cleaner was used in the photos below), closing the hood and then checking for a contact ring witness mark around the entire hood duct opening to the air cleaner assembly.



The photo below shows a lack of contact in the front edge of the air cleaner seal.



Confirm that while the vehicle is operated in temperatures below -17C (0F) that the front end grille cover is in use by the owner.

The induction system on the L5P is designed to prevent snow and water from entering through the hood duct.

If the air filter box is not positioned properly, it may compromise the sealing between the hood and the inner fender.

If sealing is compromised, snow can reach the air cleaner element along with warm air pulled from under the hood.

This can cause the snow to melt and re-freeze on the air cleaner element blocking it with ice.

In addition, if the vehicle is operated at temperatures below -17C (0F) and the front end grille cover is not used, snow can be pulled through the grill duct and over a period of time the filter may accumulate enough ice to reduce airflow.

Caution: The hood should remain closed in wet conditions. If the hood is open water may enter the open port on top of the air cleaner assembly.



Aftermarket Bumper Installed



OEM bumper with intake air box protection to help prevent moisture and other debris getting into the air cleaner box.



Aftermarket bumper without intake air box protection.

Version History

Version	4
Modified	Created on 03/23/2017. 8/30/2017 to add information about aftermarket bumpers, water intrusion and added model year 2018. 2/2/2018 to add additional DTCs and drivability concerns. 7/24/2018 to remove some DTCs, add pictures of the air box, air box to hood seal and air filter and added 2019 model year.



GENERAL MOTORS

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