



Service Bulletin

File in Section: -

Bulletin No.: PI0979

Date: May, 2013

PRELIMINARY INFORMATION

Subject: MIL Illuminated, DTC P0442 Set - EVAP System Small Leak Canister Vent Solenoid (CVS) Valve Not Sealing Under Vacuum

Models: 2012-2013 Buick LaCrosse, Regal, Verano
 2013 Cadillac ATS
 2011-2013 Chevrolet Cruze
 2012-2013 Chevrolet Orlando
 2013 Chevrolet Malibu

Condition/Concern

Some customers may comment on any of the following conditions:

- The malfunction indicator lamp (MIL) is illuminated.
- DTC P0442 may be set as Current or in History.

During diagnosis it may be difficult to determine the source of a small EVAP system leak.

During the EVAP system test for P0442, the EVAP Vent Solenoid (CVS) Valve will be in a vacuum condition. During normal diagnostics with GE or J-41413A, the system is pressurized - to no more than 13" H₂O (0.5 PSI) so a leak under vacuum may not be detected. It is possible for the CVS to seal when pressurized, but leak under vacuum. This leak may be intermittent as the seal may rotate when the CVS is cycled. This leak may also only be present in colder ambient conditions.

Recommendation/Instructions

Notice: DO NOT replace the EVAP canister assembly for this concern unless it fails the leak test.

Vehicles are illuminating the service engine soon (MIL) due to a P0442 diagnostic trouble code (DTC), but a system leak cannot be verified through the system testing instructions identified in SI. The difficulty in determining the cause of the EVAP leak results in improper repairs and customers potentially returning for service with the same issue. If no leak is verified after following system testing instructions in SI, follow these additional steps:

Follow all steps outlined in SI diagnostics along with steps in PIT4943. If no leak sources are identified, continue with the following steps listed below:

1. Connect the scan tool to the vehicle and command the EVAP system (vent solenoid valve) CLOSED.
2. Start the vehicle and monitor the fuel tank pressure sensor output value for approximately two minutes.
3. Open the Purge Valve by commanding some percentage of purge.
4. Ensure the Canister Vent Solenoid (CVS) is closed, and monitor the FTP sensor for a vacuum to develop (Purge & Seal).
5. If Vacuum does not develop, refer to purge valve diagnostics.
6. If Vacuum does develop, command the EVAP system closed (Purge & Seal) and monitor for vacuum decay.
7. If a significant leakdown is not found, cycle the Canister Vent Solenoid (CVS) and retest.
8. If a significant leakdown rate is found, replace the Canister Vent Solenoid (CVS).

Parts Information

Part Number	Description
22740537	SOLENOID ASM-EVAP EMIS CNSTR

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
4027890	Remove and Replace Canister Vent Solenoid	Use Published Labor Operation Time