



# Service Bulletin

File in Section: 06 - Engine

Bulletin No.: 09-06-04-028D

Date: April, 2014

## TECHNICAL

**Subject:** MIL Illuminated, DTC P0442, P0446, P0455 or P0449 Set – Fuel Tank Hard to Fill – Moisture, Water, Corrosion at EVAP CVS Valve

**Models:** 2007-2010 Cadillac Escalade Models  
2007-2010 Chevrolet Avalanche, Suburban 1500, Tahoe  
2007-2010 GMC Yukon Models, Yukon XL 1500 Models

**Attention:** The revised EVAP CVS valve assembly comes with two tie-straps attached. These two tie-straps will be used to attach the EVAP CVS valve vent pipe to the fuel tank filler pipe.

This bulletin has been revised to update the Subject, add Hybrid Correction information and graphics and update the Labor Operation to the Global Labor Code (GLC) 4080448. Please discard Corporate Bulletin Number 09-06-04-028C.

### Condition

- Some customers may comment that the fuel tank is hard to fill.
- They may also comment that the malfunction indicator lamp (MIL) is illuminated.
- Upon investigation, a Technician may observe on a scan tool DTC P0442, P0446, P0455 or P0449 set as Current or in History.
- During diagnosis there may be evidence of water intrusion at the evaporative emissions (EVAP) canister vent solenoid (CVS) valve.

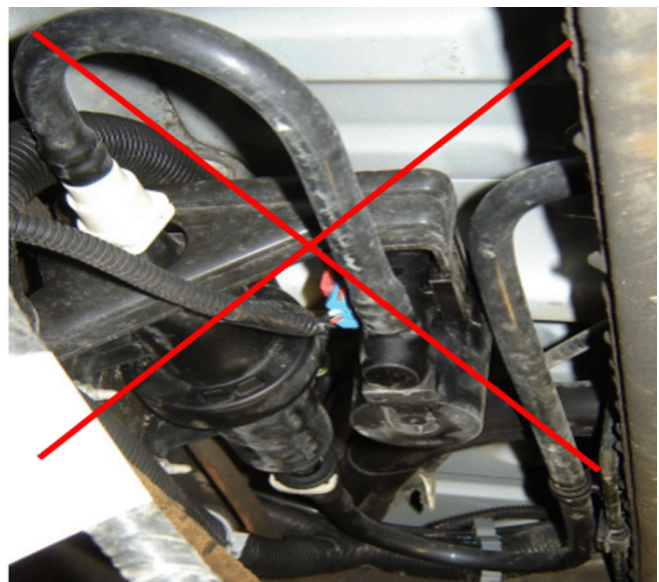
### Cause

The EVAP CVS valve draws fresh air into the EVAP system through a vent attached at the top of the conduit that is secured to the fuel filler pipe. Under certain operating conditions, dirt and dust intrusion into the CVS fresh air intake/venting system may result in restricted air flow.

Under certain operating conditions, if water is ingested into the EVAP CVS fresh air intake/venting system, it may reach the CVS valve causing corrosion in the CVS valve and may cause restrictions in the fresh air intake path when the CVS valve is in the closed position.

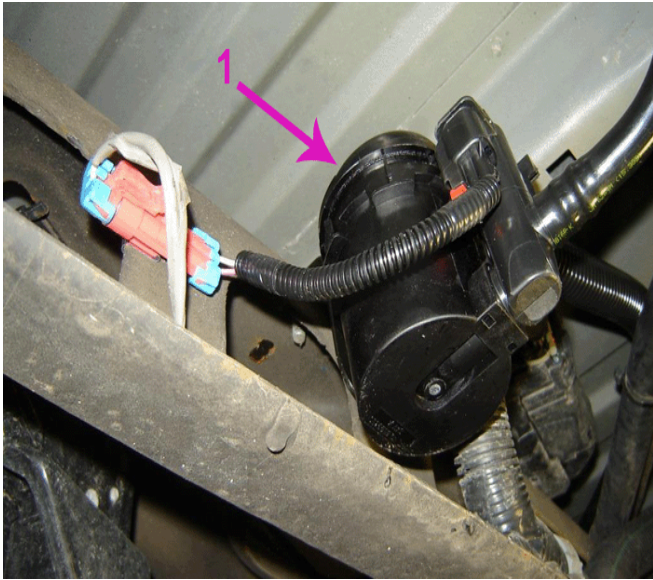
Ingested water will also collect in the CVS valve cyclonic filter in order to protect the EVAP canister. However, if the capacity of the cyclonic filter is exceeded, this may result in water entering the EVAP canister and cause an additional restriction during refueling.

### Correction



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**Notice:** Shown is the original 2008-2009 EVAP canister vent solenoid (CVS) assembly used on hybrid fullsize utility vehicles. This assembly will be removed and discarded.



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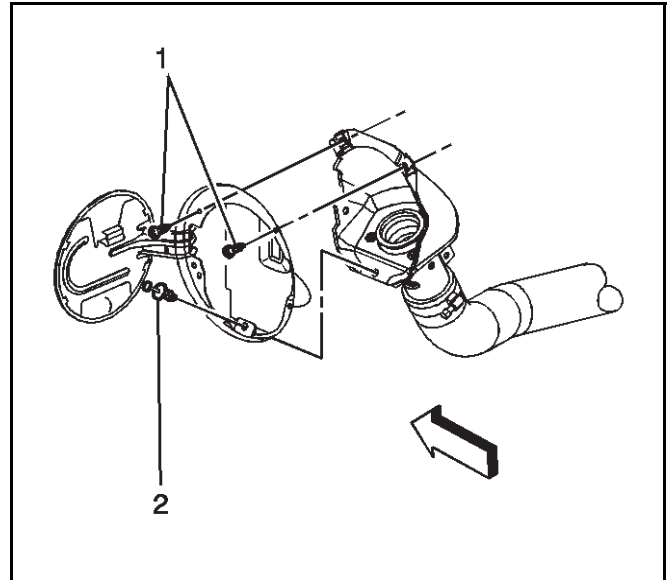
**Notice:** Shown is the updated replacement CVS assembly (1), P/N 20995472 that will be used on all vehicles.

**Note:** DO NOT replace the EVAP canister assembly for this concern unless it fails the leak test or it has ingested excessive amounts of dirt, dust or water.

After following the published SI diagnostics and determining that the EVAP CVS valve is the cause of the MIL illumination or the hard to fill symptom, replace the existing EVAP CVS valve assembly with the new revised design assembly.

The revised EVAP CVS valve assembly is a sealed unit that is vented through a remote pre-filter that is designed to be mounted atop the fuel filler housing. To ensure correct installation follow the procedure outlined below.

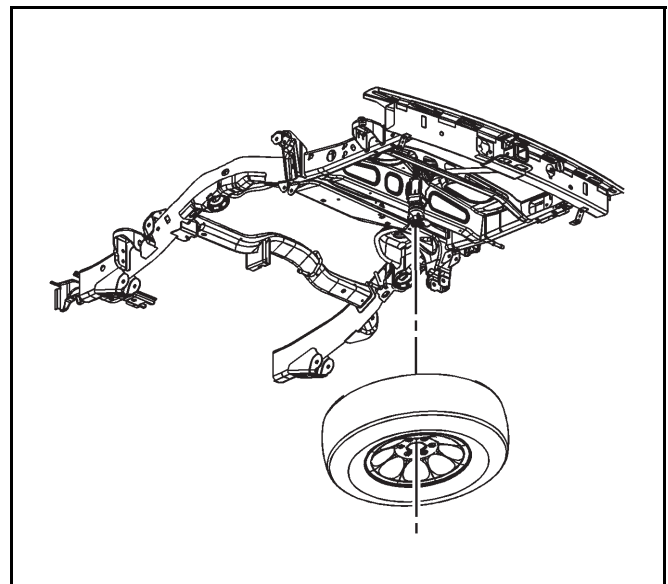
1. Turn OFF the ignition, and all electrical components, including the scan tool.



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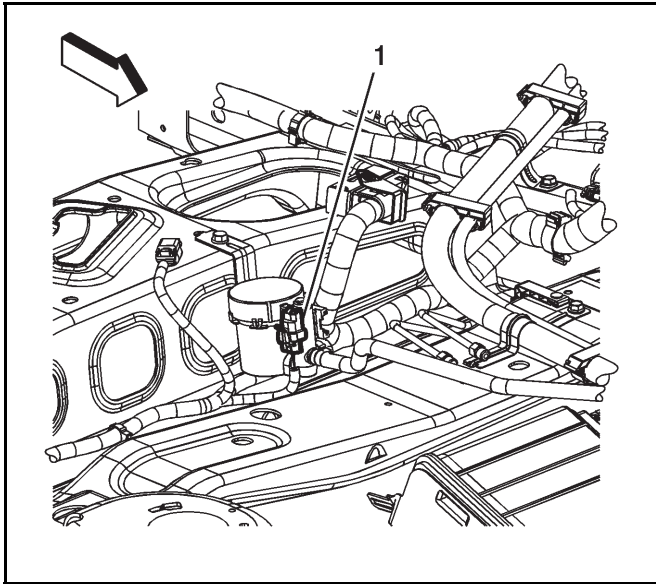
**Note:** DO NOT remove the fuel fill cap in order to prevent any debris from entering the fill pipe.

2. Remove the fuel tank filler pipe housing to body TORX® screws (1) and retainer (2).
3. Raise and support the vehicle at the appropriate height in order to gain access to the spare tire assembly. Refer to Lifting and Jacking the Vehicle in SI.

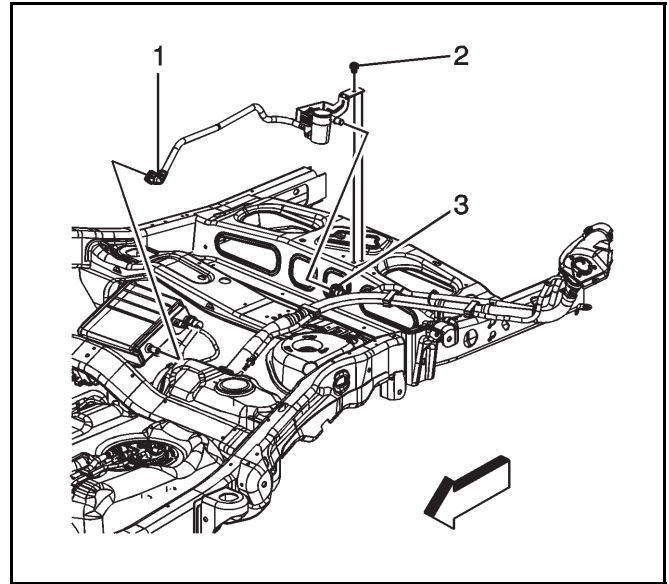


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4. Remove the spare tire and wheel assembly.

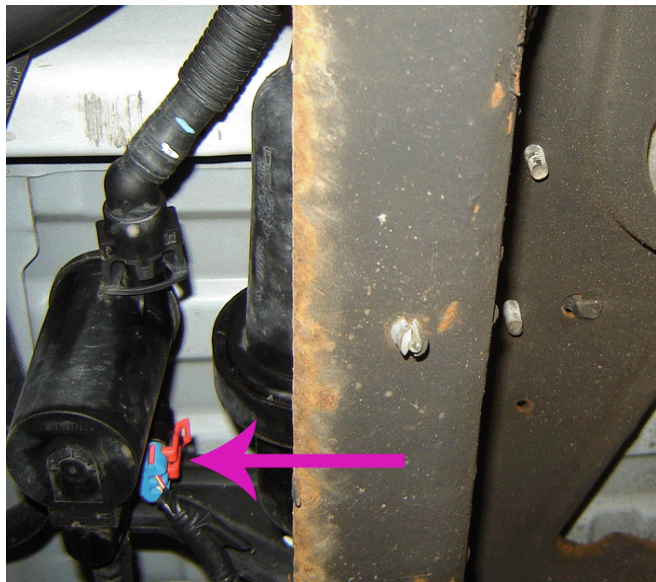


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5. Disconnect the vehicle chassis wiring harness electrical connector (1) from the CVS valve.

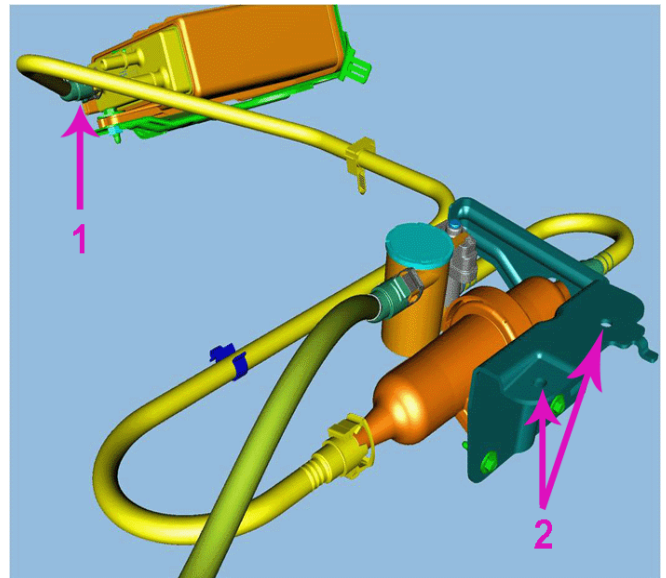


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6. **2008-2009 Hybrid Models:** Disconnect the vehicle chassis wiring harness electrical connector from the CVS valve.

**Important:** Clean the EVAP line connections and surrounding areas prior to disconnecting in order to avoid possible EVAP system contamination.

7. Disconnect the CVS valve assembly quick connect fitting (1) from the EVAP canister. Refer to Plastic Collar Quick Connect Fitting Service in SI.
8. Remove the CVS valve assembly bracket to spare tire cross-car support retaining bolt (2). DO NOT discard the bolt.



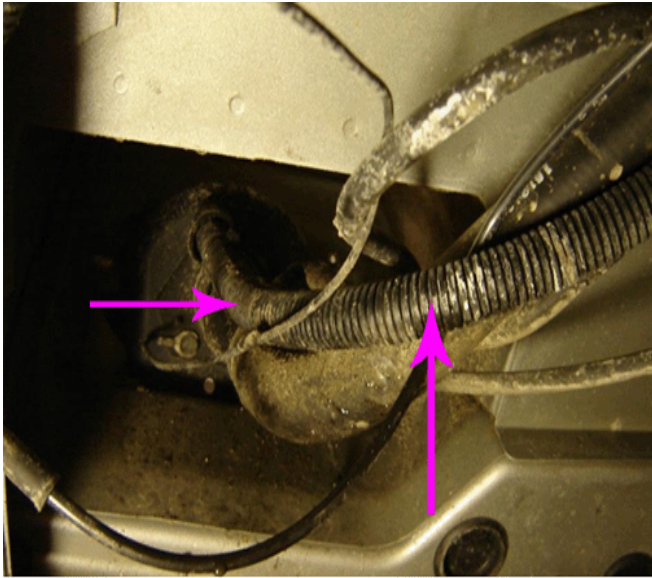
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**Important:** Clean the EVAP line connections and surrounding areas prior to disconnecting in order to avoid possible EVAP system contamination.

9. **2008-2009 Hybrid Models:** Disconnect the CVS valve assembly quick connect fitting (1) from the EVAP canister.  
Remove the CVS valve assembly bracket to spare tire cross-car support retaining bolts (2). Retain one of the bolts.

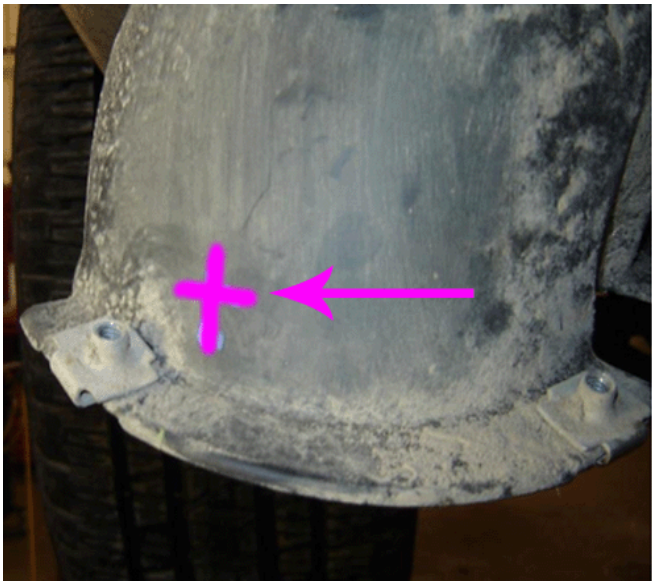


10. **2008-2009 Hybrid Models:** Remove the CVS valve assembly bracket to spare tire cross-car support retaining bolts (2). Retain one of the bolts.



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11. Remove the tie-straps and the CVS valve assembly black conduit from the fuel tank filler pipe assembly.
12. **Remove the complete CVS valve assembly from the vehicle and discard.**
13. Lower the fuel tank filler pipe housing and the fuel tank fill pipe enough to drill a hole into the housing.

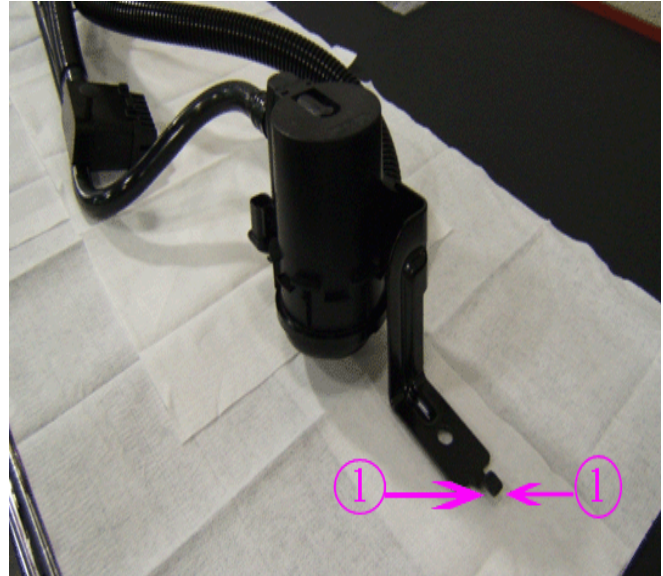


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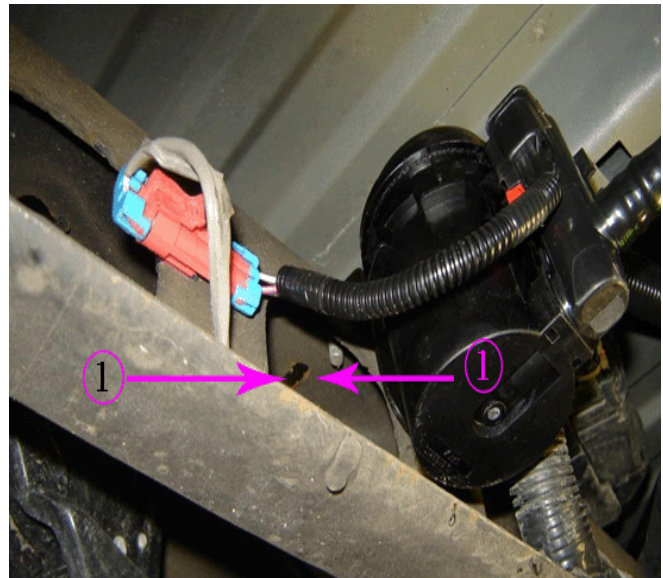
14. Drill a 7 mm (0.27 in) hole in the fuel tank filler pipe housing approximately 15 mm (0.59 in) back from the base of the flange and 15 mm (0.59 in) rearward of the forward housing attachment clip as shown.

Remove any plastic burrs that remain after drilling.

15. Place the revised EVAP CVS valve assembly, P/N 20995472, into position in the vehicle. Ensure the EVAP CVS valve canister pipe is positioned ABOVE the cross-car brace, just forward of the CVS valve.



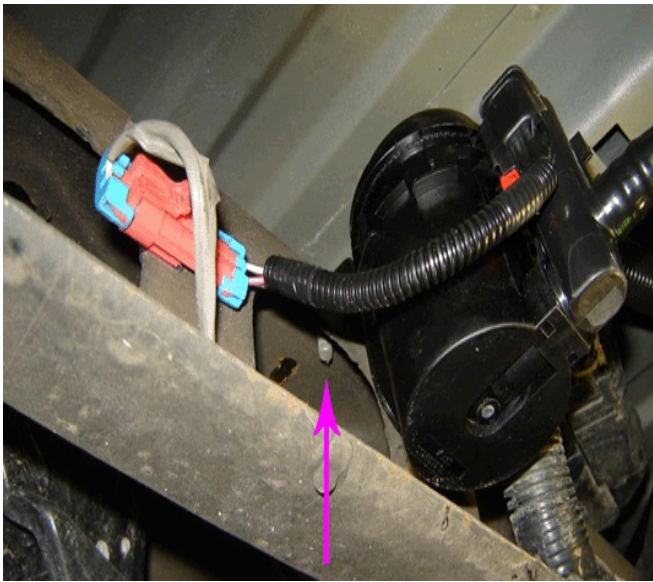
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16. Position the CVS valve bracket anti-rotation tab (1), (shown on the workbench and installed in the vehicle), and fully seat it to the spare tire cross-car support.





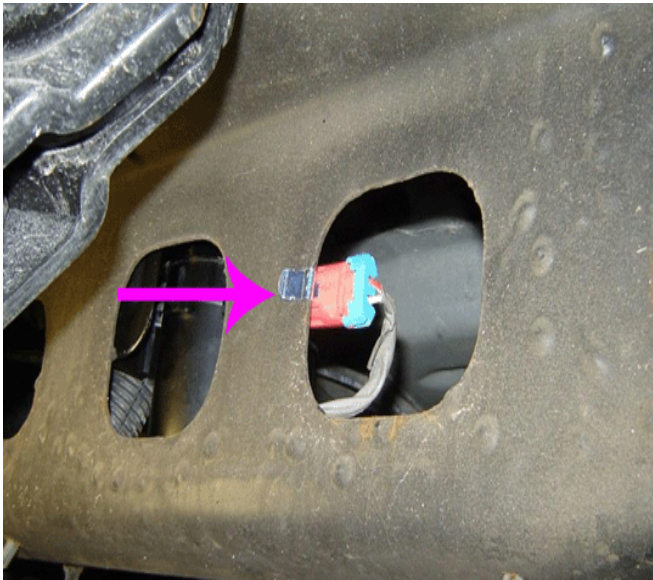
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- 17. Install the bolt for the CVS valve assembly bracket, into the spare tire cross-car support as shown.

**Tighten**

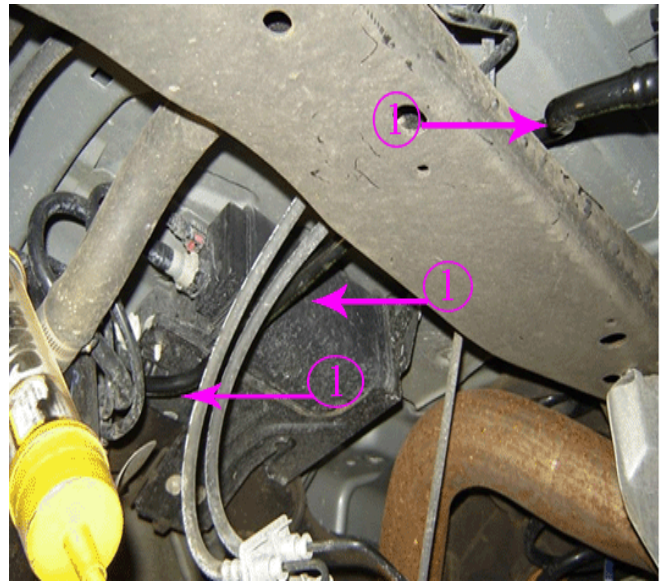
Tighten the bolt to 12 N•m (106 lb in).

- 18. Connect the CVS valve assembly jumper harness, P/N 19257603 between the CVS valve and the vehicle chassis wiring harness electrical connector.



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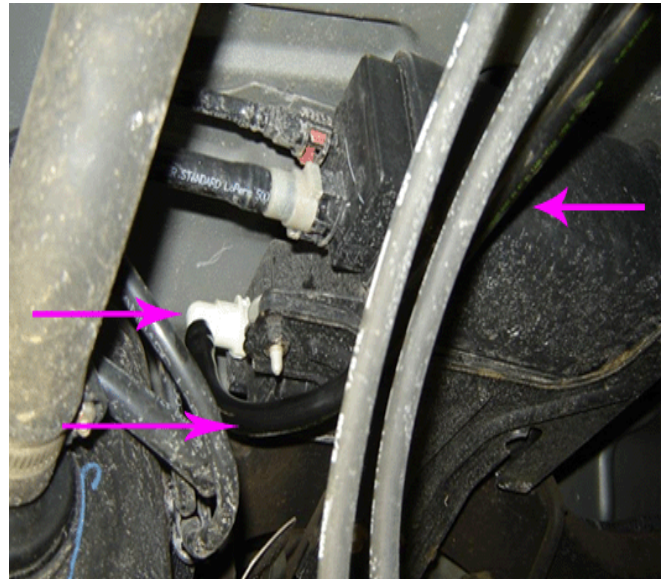
- 19. Secure the clip on the CVS valve jumper harness electrical connector to the spare tire cross-car support as shown.



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**Note: The revised CVS valve assembly EVAP canister pipe (1) MUST BE ROUTED ABOVE the cross-car brace, just forward of the CVS valve and BELOW the EVAP canister, as shown, rather than above the EVAP canister, as the original pipe was routed.**

- 20. Route the CVS valve assembly EVAP canister pipe above the cross-car brace and below the EVAP canister.



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- 21. Connect the CVS valve assembly canister pipe quick connect fitting to the EVAP canister.





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22. Position the CVS valve vent hose along the fuel fill pipe as shown.

22.1. Position the CVS valve pre-filter on the fuel tank filler pipe housing as shown. Align the hole in the CVS valve pre-filter with the hole that was drilled into the fuel tank filler pipe housing. Install the pushpin, P/N 10121502, from within the fuel tank filler pipe housing securely into the CVS valve pre-filter.



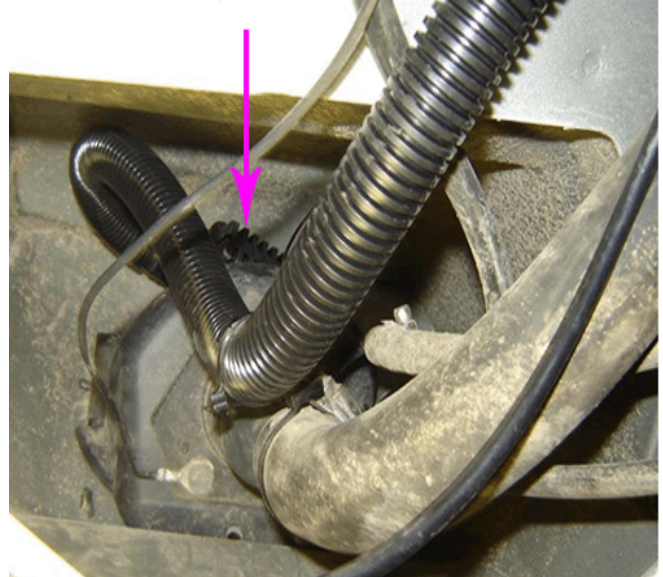
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22.2. In the area near the fuel tank fill pipe to fuel tank fill hose clamp, secure the tie-strap (1) that was provided on the CVS valve vent hose to the fuel tank fill pipe as shown.

22.3. While holding the CVS valve vent hose and CVS valve pre-filter in position, install one additional tie-strap (2), P/N 11509087, around the CVS valve vent hose only, next to the provided tie-strap (1), on the fuel filler housing side of the strap. While maintaining the proper orientation of the CVS valve

pre-filter, secure the additional tie-strap (2) in order to keep the CVS valve vent hose from slipping down, once the fuel filler housing has been raised back to its original position.

22.4. Secure the other tie-strap that was provided on the CVS valve vent hose to the fuel fill pipe.

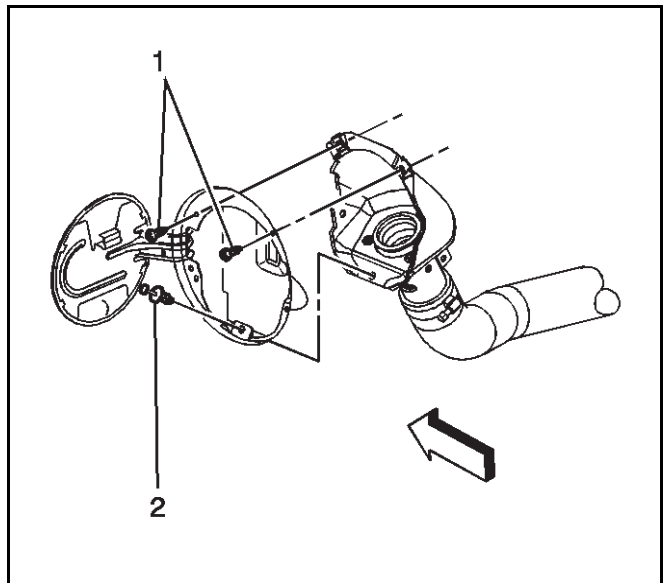


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23. Raise the fuel tank filler pipe housing, and the fuel tank fill pipe back to its original position. Ensure that the CVS valve pre-filter screen openings are pointing downward as shown.

24. Install the spare tire and wheel assembly.

25. Lower the vehicle.



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26. Install the fuel tank filler housing to body TORX® screws (1) and retainer (2).

### Tighten

Tighten the screws to 2.3 N•m (20 lb in).

27. Use a scan tool to clear any DTCs that may be present.

### Parts Information

Part Number	Description	Qty
20995472	VENT ASM - EVAP EMISSION CNSTR	1
19257603	HARNESS ASM, EVAP EMIS CNSTR VENT VLV SOL - JPR WRG	1
10121502	Pushpin	1
11509087	Tie-Strap	1

### Warranty Information

For vehicles repaired under the Emission coverage, use the following Labor Operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Labor Operation	Description	Labor Time
4080448 *	Remove and Replace Revised CVS Valve Assembly and Jumper Harness	0.8 hr
*This is a unique labor operation for bulletin use only. It will not be published in the Labor Time Guide.		

