



Evaporative Emission System Leak Test

Special Tool(s)

 ST2617-A	VACUTEC Smoke Machine Fuel Evaporative Emission System Tester 218-0002 or equivalent
 ST2834-A	Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalent scan tool

Phase 1 — Leak Verification

1. Run the [EVAP](#) Test with the scan tool.
2. **NOTE:** Some small leaks may not be detected using the [EVAP](#) Test. If the system has passed the test but a leak is still suspected, then proceed to Phase 2.

If the Evaporative Emission (EVAP) system failed the [EVAP](#) Test, then proceed to Phase 2.

Phase 2 — System Leak Check

1. Disconnect the upper vapor tube-to- [EVAP](#) canister purge valve quick connect coupling. For additional information, refer to [Section 310-00](#).
2. Connect the VACUTEC Smoke Machine Fuel Evaporative Emission System Tester to the upper [EVAP](#) canister purge valve fitting. For additional information, refer to the manufacturer's instructions.
3. **NOTE:** The battery ground cable was previously disconnected in the vapor tube quick connect coupling procedure.

Connect the battery ground cable. For additional information, refer to [Section 414-01](#).

4. **NOTE:** In the scan tool, the [EVAP](#) canister purge valve is referred to as the [EVAP](#) vapor management valve.

Open the [EVAP](#) canister purge valve with the scan tool.

5. Close the canister vent solenoid with the scan tool.
6. Carefully turn the fuel tank filler cap counterclockwise until the thread disengages and position aside.
7. **NOTE:** If smoke does not exit the fuel tank filler pipe neck area after the system is pressurized, open the canister vent solenoid with the scan tool to allow the air to purge. Once smoke is seen at the canister vent solenoid, close the canister vent solenoid with the scan tool.

Introduce smoke from the VACUTEC Smoke Machine Fuel Evaporative Emission System Tester into the EVAP system and verify that smoke is exiting the fuel tank filler pipe neck area. For additional information, refer to the manufacturer's instructions.

8. Install the fuel tank filler cap once smoke is observed exiting the fuel tank filler pipe neck area.
 9. Continue to enter smoke into the system for 60 seconds to obtain pressure.
 10. Press and release the remote start button in intervals of 15 seconds ON and 15 seconds OFF while checking for exiting smoke.
 11. Use the halogen light provided with the VACUTEC Smoke Machine Fuel Evaporative Emission System Tester to follow the EVAP system path and look for smoke exiting at the source of the leak(s).
 12. Repair any leaks as necessary.
 13. Repeat the leak test until the system passes.
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