



Knowledge Article

EGR Carbon Fouling and Build-Up

Effected Vehicles:

- All vehicles using the Delphi EG10599 EGR valve application

Carbon fouling is typically a vehicle-induced condition rather than a valve manufacturing defect. Carbon deposits form when soot and combustion byproducts accumulate on the EGR pintle and in the EGR passages over time.

How to Prevent Carbon Fouling

- 1. Drive the Vehicle at Full Operating Temperature:** Frequent short trips are one of the biggest contributors to carbon buildup because the engine and EGR system do not remain hot long enough to burn off deposits. Regular highway driving helps reduce soot accumulation in the EGR passages.
- 2. Maintain the Engine Properly:** Conditions that increase soot production will accelerate EGR contamination:
 - Misfires
 - Worn spark plugs
 - Faulty ignition coils
 - Rich air/fuel mixtures
 - Dirty air filters

Addressing these issues promptly reduces carbon generation entering the EGR system.

- 3. Use Quality Fuel:** Poor combustion increases particulate formation. Using fuel that meets OEM specifications and periodically using detergent-containing fuels can help minimize combustion deposits.



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5. Clean EGR Passages During Service: On Honda Fit and CR-Z applications, the EGR passages can become restricted independently of the EGR valve itself. Cleaning the passages whenever an EGR-related DTC is diagnosed can significantly extend valve life.

6. Address Check Engine Lights Immediately: Continuing to drive with:

- P0401
- P0402
- Misfire codes
- Fuel system codes

All can accelerate deposit formation and eventually cause the EGR valve to stick open or closed.

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