



Service Bulletin

File In Section: 6E - Engine Fuel & Emission

Bulletin No.: 87-65-07A

Date: July, 1998



Subject: Rough Idle after Start when Vehicle has Sat Overnight/SCPI Poppets Sticking (Clean Fuel Injector Using New Procedure)

**Models: 1996-98 Chevrolet, GMC S/T, M/L, C/K, G, P Models
1996-98 Oldsmobile Bravada
with 4.3L, 5.0L, 5,7L Engine (VINs W, X, M, R - RPOs L35, LF6, L30, L31)**

This bulletin is being revised to clarify procedure used for different VCM applications. Please discard Corporate Bulletin Number 87-65-07 (Section 6E - Engine Fuel and Emission).

Condition

Some owners may comment on rough idle after start, when vehicle has sat overnight. These symptoms may be intermittent. The Service Engine Soon (S.E.S.) light may be illuminated and a history of misfire codes may be present. Current or history DTC's of P0171, P0172, P0174, P0175 may also be set.

Important: Typically this condition will affect one poppet at a time. Claims with more than one injector replaced will be scrutinized to determine if proper injector diagnostics have been performed. The misfire counter is not an accurate tool to determine this condition. An injector balance test must be performed.

Cause

Deposit build up on the ball-to-seat interface may cause a poppet valve to stick closed, therefore depriving that particular cylinder of fuel.

This condition usually will only affect one poppet at a time, and it is not uncommon for the poppet to free itself and resume normal operation.

It is also believed that some fuels may also adversely affect poppet performance.

Correction

Important: UNDER NO CIRCUMSTANCES SHOULD THIS PROCEDURE BE MODIFIED. ALWAYS PERFORM INJECTOR DIAGNOSTICS PRIOR TO CLEANING. PROPER DIAGNOSTICS IS CRITICAL FOR EXPEDIENT CONCERN RESOLUTION.

1. Install Tech 2 and perform OBD Diagnostics in the Service Manual.

2. Perform Injector Balance Diagnostics Procedures as listed below.

For 1996 and 1997 non-VCM models, use the Fuel Injector Balance Test procedure and J tools listed in the Service Manual. For 1997 VCM and 1998 and later models, use the Tech II and the procedure listed below.

Important: This alternate procedure differs from the Service Manual procedure in that it employs the use of the Tech 2 instead of the J 39021, J 39021-210, and J 39021-301/302 series tools referred to in the Service Manual. This method is preferred because it is quicker and does not require manipulation of the SCPI Injector Harness Connector.

- a. Turn OFF the ignition.
- b. Connect fuel pressure gauge J 34730-1.
- c. Turn ON the ignition.
- d. Scroll to the Fuel Injector Balance Test by:

Main Menu	Diagnostics (FO)	<Enter>
Veh. I.D. Screen	Eng. RPO	<Enter>
Veh. I.D. Screen	Truck Line	<Enter>
Veh. I.D. Screen	Transmission Type	<Enter>
Veh. I.D. Screen	G.V.W.	<Enter>
Applications	Special Function (F2)	<Enter>
Applications	Fuel System (F2)	<Enter>
Applications	Injector Balance (F1)	<Enter>

Important: When performing this test, the Tech 2 will automatically cycle the fuel pump and the injector. It is imperative that the technician listen for these operations for his diagnosis.

e. Continue following screen prompts to test each individual injector.

If there is NO apparent drop in fuel pressure for a given injector, and there IS audible confirmation that the injector was firing, then the diagnosis would be a "stuck closed" injector poppet valve for that particular cylinder. At the end of this test, any individually diagnosed "stuck closed" injector/poppet assemblies should be replaced under J-5550 labor operation and published labor time (no additional time for diagnosis). Continue to Step "f" below.

If there is NO apparent drop in fuel pressure for a given injector, and there is NO audible confirmation of injector firing, then refer to Fuel Injector Circuit Diagnosis in the Service Manual. Then return to this bulletin. Continue to Step "f" below.

If there IS a drop in fuel pressure for each individual injector as specified in the Service Manual under Fuel Injector Balance Test, the concern may be intermittent. Continue to Step "f" below.

f. At the conclusion of the Injector Balance Test, remove the Fuel Pressure Gauge J 34730-1, and reinstall engine covers (as required).

Important: At this point:

- Any confirmed "stuck closed" injector/poppet assemblies should have been individually replaced.
- Any electrical concerns have been repaired.
- Concern may be of a No Trouble Found (NTF) status.

In any of these cases, it is IMPERATIVE that the following steps be taken.

3. Advise customer to leave vehicle with an indicated fuel level of at least 1/2 tank.

4. Add one (1) 20 oz. bottle of Port Fuel Injector Detergent, use P/N 12345104 only (in Canada use P/N 12345515).
5. Start vehicle and let run for 20 minutes.
6. Clear Powertrain codes from Vehicle Control Module (VCM).
7. Road test vehicle to confirm customer concern is corrected.
8. Advise customer to change fuel brands.

Parts Information

Use ONLY P/N 12345104 (in Canada, use P/N 12345515).

Parts are currently available from GMSP0.

Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Model	Labor Time
J-5645	Injector, Fuel Diagnose (Includes diagnostics and cleaning)	S/T with V6	0.9 hr
		M/L with V6	1.2 hrs
		C/K with V6	0.9 hr
		C/K with V8	1.0 hr
		G with V6	1.2 hrs
		G with V8	1.3 hrs
		P with V6	0.9 hr
		P with V8	1.0 hr

