

**Wheels:** *J.C.T. writes by e-mail: "I have a 1996 Chevrolet pickup doing some strange things. A little background, I bought it used, 179,000 miles on the odometer, and had complete tune-up performed including a new exhaust gas recirculation (EGR) valve. This truck misfires on the several cylinders when the EGR valve opens up driving down the road, when the EGR disconnected, it works fine. The diagnostic trouble code (DTC) is always P0300 (random misfire detected). The misfire counter shows extreme misfire on cylinders 3, 4, 5 and 6. My first thought was EGR valve, it doesn't seem as bad (the problem, as the old EGR valve was sticking), but it is still misfiring, worse during a hill.*

*Do you think I should look into having the P.C.M. reprogrammed?*

*By the way, I do not know if this would affect drivability, but the catalytic converters don't seem to be working either, but the code hasn't set for awhile. The oxygen sensors do seem to be working fine. Let me know what you think."*

**Halderman:** Your truck is equipped with a central sequential type of fuel injection which is unique and only used on General Motors trucks. This design of fuel injection uses injector nozzles that are opened by the force of the fuel under pressure when it is pulsed on. This system has a pattern failure mode for becoming clogged and not being able to supply fuel to all of the cylinders in the correct amounts. This can lead to misfires. Another pattern failure with this unit is that the fuel pressure regulator leaks fuel. The fuel that leaks is then drawn into the cylinders that are close to the leak. The oxygen sensors then sense a richer than normal air-fuel mixture in the exhaust. The computer then commands a leaner mixture to be supplied by the injectors. It is this rich then lean condition that could be causing your misfire condition.

While there are many other possible causes for this condition, I think it is time to check the fuel injection system for proper operation.

For more information about this type of fuel injection system go to [www.lindertech.com](http://www.lindertech.com)

Below is a summary of the faults that can occur with this type of system as posted on the Linder Technical Services web site:

**Resistance:** The minimum resistance of this injector is 11.8 ohms at room temperature.

**Recommendation:** Replace the original poppet style unit with the newer mini injector style. This unit uses a mini injector at the end of each tube. There are plastic injector protectors attached to each injector that fits into the intake ports protecting the injectors from carbon and sticking. The unit is a direct replacement. Always replace the upper intake gasket when replacing this unit.

**EXTRA:** Fuel pressure is very critical on these systems. One of the first checks made should be fuel pressure. Pressure should be 58 psi or above with key on, engine off and idle pressure should be 54 psi or above.

