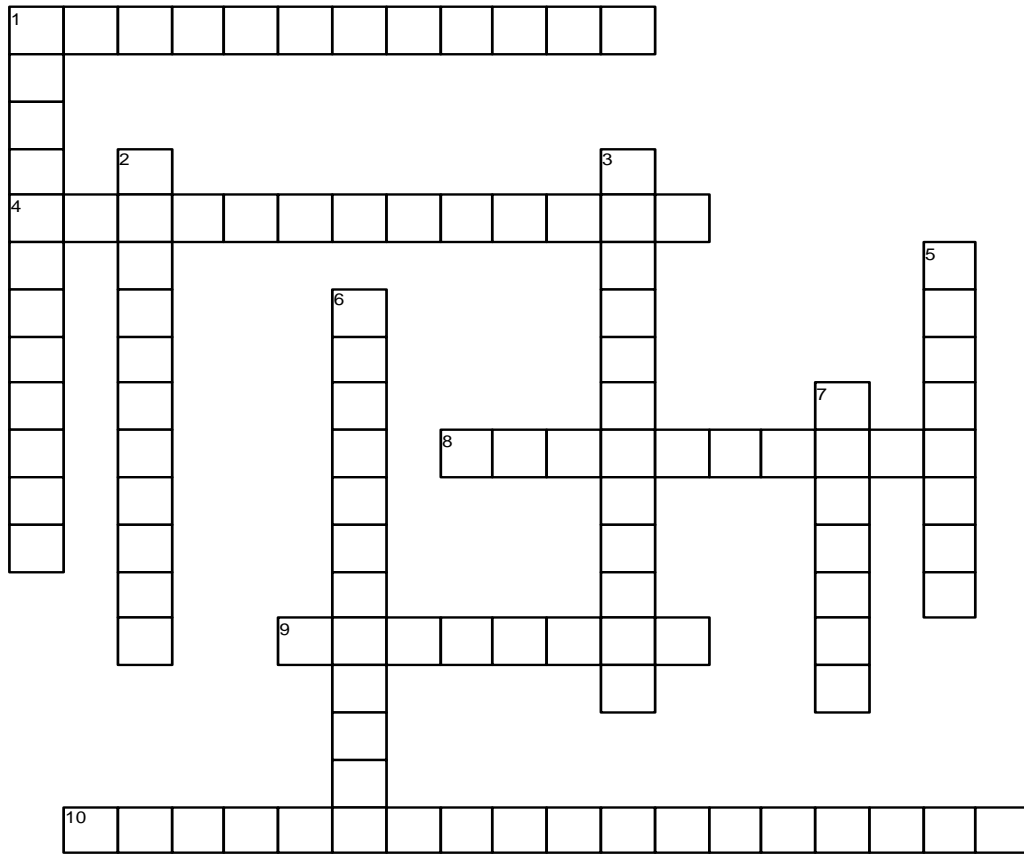


High-Pressure Common Rail Diesel Fuel Systems

Chapter 13



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ACROSS

- 1 a _____ supply line, also called transfer tubes carry the high-pressure fuel from the fuel rail to the injector. The supply lines transfer fuel from the rail to the injector, or in some cases, the rail to the transfer tube.
- 4 In _____ injectors, the solenoid is replaced with a stack of piezo ceramic discs that changes shape when electrical current is introduced.
- 8 The _____ control module contains the driver circuits and the DC-DC converter needed to operate the injectors.
- 9 A fuel rail _____ sensor monitors the fuel pressure in the rail and communicates this information to the powertrain control module.
- 10 A _____ valve is a valve that meters the fuel from the low-pressure system into the high-pressure pump to minimize parasitic loss.

DOWN

- 1 _____ relief valve, also called the fuel pressure control valve is a normally open, pulse-width modified (PWM) valve. This valve, together the volume control valve on the high-pressure pump, regulates fuel rail pressure.
- 2 A Fuel rail _____ sensor is a sensor located on the fuel rail or somewhere downstream in the high-pressure fuel system. It is a two-wire sensor with a reference voltage and a return.
- 3 The _____ common rail is the tube that supplies the manifold and is used to store and distribute pressurized fuel to each injector supply line that will match the engine speed and load.
- 5 A _____ controlled injector uses the electromagnetic field generated by the solenoid and the hydraulic pressure of the fuel to open and close the injector.
- 6 _____ is a tube that carries the high-pressure fuel from the fuel rail to the injector.
- 7 A _____ overflow valve is a serviceable component of the high-pressure pump that determines flow rate and allows for lubrication of internal pump components.