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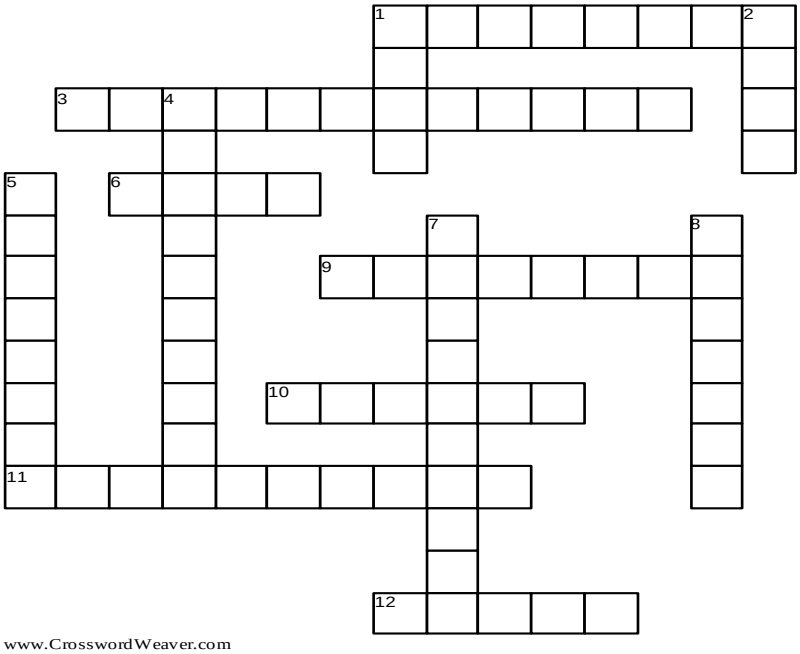
Advanced Engine Performance Diagnosis 8th Edition

Chapter 22

Fuel-Injection Parts and Operation



ACROSS

1 When the ignition is turned to the start (on) position, the engine cranks and the PCM energizes the _____-_____ relay.
3 The _____-_____ method does not use an air quantity sensor, but rather calculates the amount of fuel required by the engine.
6 Pressure _____ valve: A valve that releases excess pressure in a system, often used in fuel systems to prevent over-pressurization.
9 _____ control valve: A valve that regulates fuel or air pressure within a system, ensuring consistent pressure for proper operation.
10 Most PFI systems use an idle air control (IAC) motor to regulate idle _____ air.
11 _____ returnless fuel system: A fuel system that regulates fuel pressure electronically without returning unused fuel to the tank, improving fuel efficiency and reducing emissions.
12 A temporary increase in engine speed when shifting gears, often caused by delayed engagement or release of the clutch or transmission.

DOWN

1 _____ rail: A pipe or channel that delivers fuel to the fuel injectors, ensuring an even distribution of fuel to each cylinder.
2 _____ fuel-injection: A type of fuel-injection system where fuel is injected into the intake port of each cylinder, rather than into a common intake manifold.
4 _____ air controll: A system used to control airflow electronically, usually in relation to engine idle speed or emissions control.
5 The BARO sensor compensates for _____ and adds up to about 10% under high-pressure conditions and subtracts as much as 50% from the base pulse width at high _____s.
7 _____ returnless fuel system (MRFS): A fuel system that mechanically regulates fuel pressure without returning excess fuel to the tank, commonly used to simplify the fuel system and reduce emissions.
8 Both engine coolant temperature (ECT) and intake air temperature (IAT) are used to calculate the _____ of the air and the need of the engine for fuel.