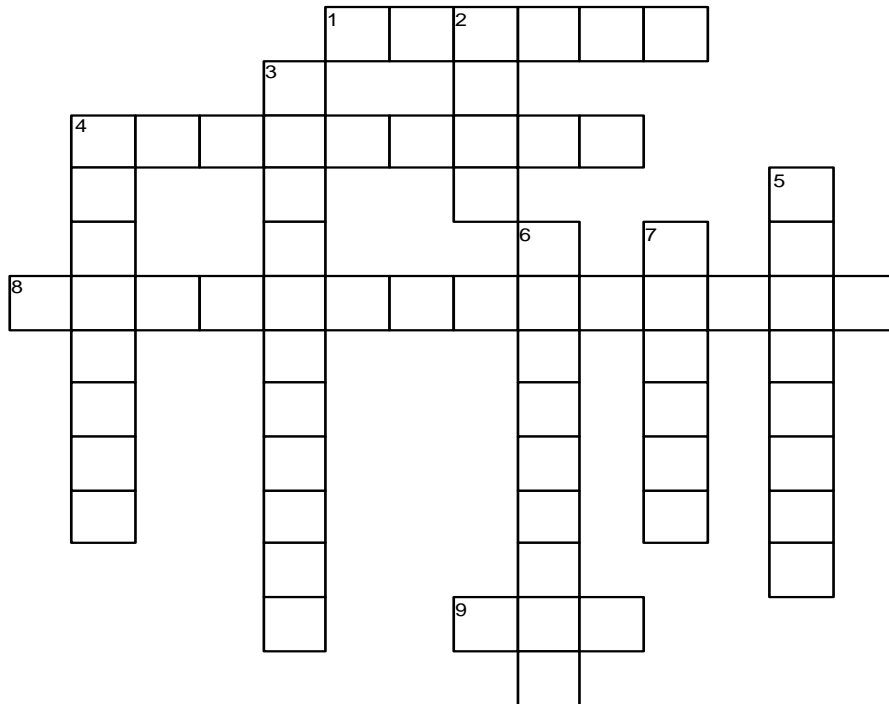


Advanced Engine Performance Diagnosis 8th Edition

Chapter 7

In-Vehicle Engine Service



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ACROSS

- 1 Describes a thermostat that functions but not at the correct temperature range, leading to potential engine overheating or cooler-than-normal operation.
- 4 Many intake manifolds use _____ that are torqued to values expressed in pound-inches and not pound-feet.
- 8 _____ open will cause the engine to warm up slowly if at all. This condition can cause the powertrain control module (PCM) to set a P0128 diagnostic trouble code (DTC) which means that the engine coolant temperature does not reach the specified temperature.
- 9 A vehicle that combines an internal combustion engine with an electric motor, which assists the engine or powers the vehicle in certain situations (abbreviation).

DOWN

- 2 A type of hybrid electric vehicle that operates on battery power alone for a certain range before switching to a gasoline engine to extend the driving range (abbreviation).
- 3 If the thermostat fails closed or almost closed, the engine will likely overheat.
- 4 A failure mechanism where relative movement between two components, such as the intake manifold and the cylinder head, causes wear and potential leaks.
- 5 A feature in hybrid and extended-range electric vehicles where the gasoline engine automatically stops when it is not needed, such as at a stoplight, and starts again when required.
- 6 If a thermostat fails open or partially open, the operating temperature of the engine will be less than normal.
- 7 _____ deposits are often an issue in engines equipped with gasoline direct-injection systems.