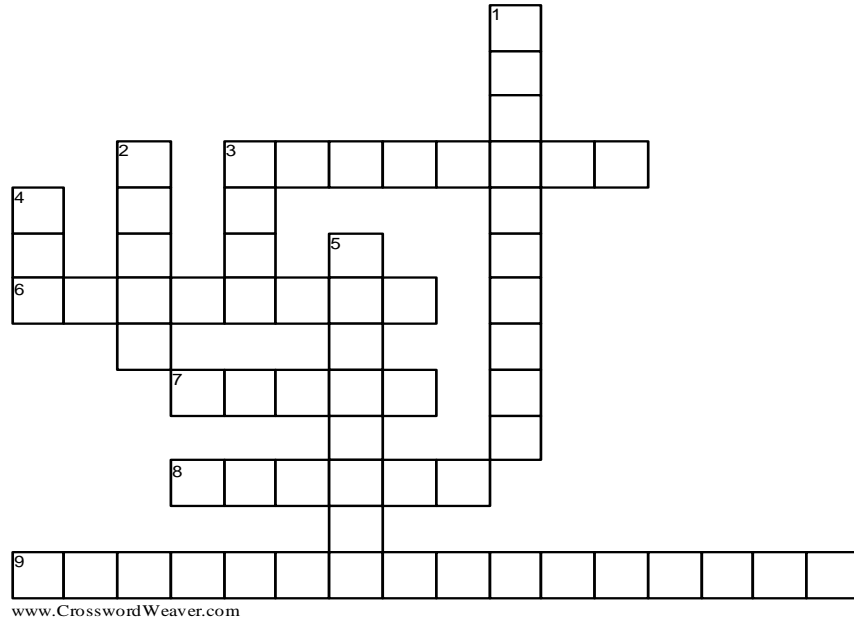


Automotive Electrical and Engine Performance 9th Edition

Chapter 32 - MAP and MAF Sensors



ACROSS

- 3** _____ absolute pressure (MAP) sensor: A sensor that measures the pressure inside the intake manifold, providing data to the engine control module to manage fuel injection and ignition timing.
- 6** _____ differential: The difference in pressure between two points, important for understanding airflow and engine load.
- 7** _____ air: Air that enters the engine without passing through the airflow sensor, leading to inaccurate measurements and affecting fuel-air mixture.
- 8** A condition where pressure is below atmospheric pressure, commonly used to describe the pressure inside the intake manifold during engine operation.
- 9** A property of materials where electrical resistance changes in response to applied pressure, used in some pressure sensors.

DOWN

- 1** _____ manifold absolute pressure (BMAP) sensor: A sensor that combines barometric pressure and manifold pressure measurements to adjust the engine's performance based on atmospheric conditions.
- 2** _____ density: A method of calculating the engine's air intake using the MAP sensor and engine speed instead of a MAF sensor.
- 3** _____ airflow (MAF) sensor: A sensor that measures the amount of air entering the engine to ensure the proper air-fuel mixture for combustion.
- 4** _____ test: A diagnostic procedure used to check the reliability of a sensor by gently tapping it to detect any changes in its output signal.
- 5** Barometric _____ (BARO) sensor: A sensor that measures atmospheric pressure to help the engine control module adjust fuel delivery and ignition timing based on altitude.