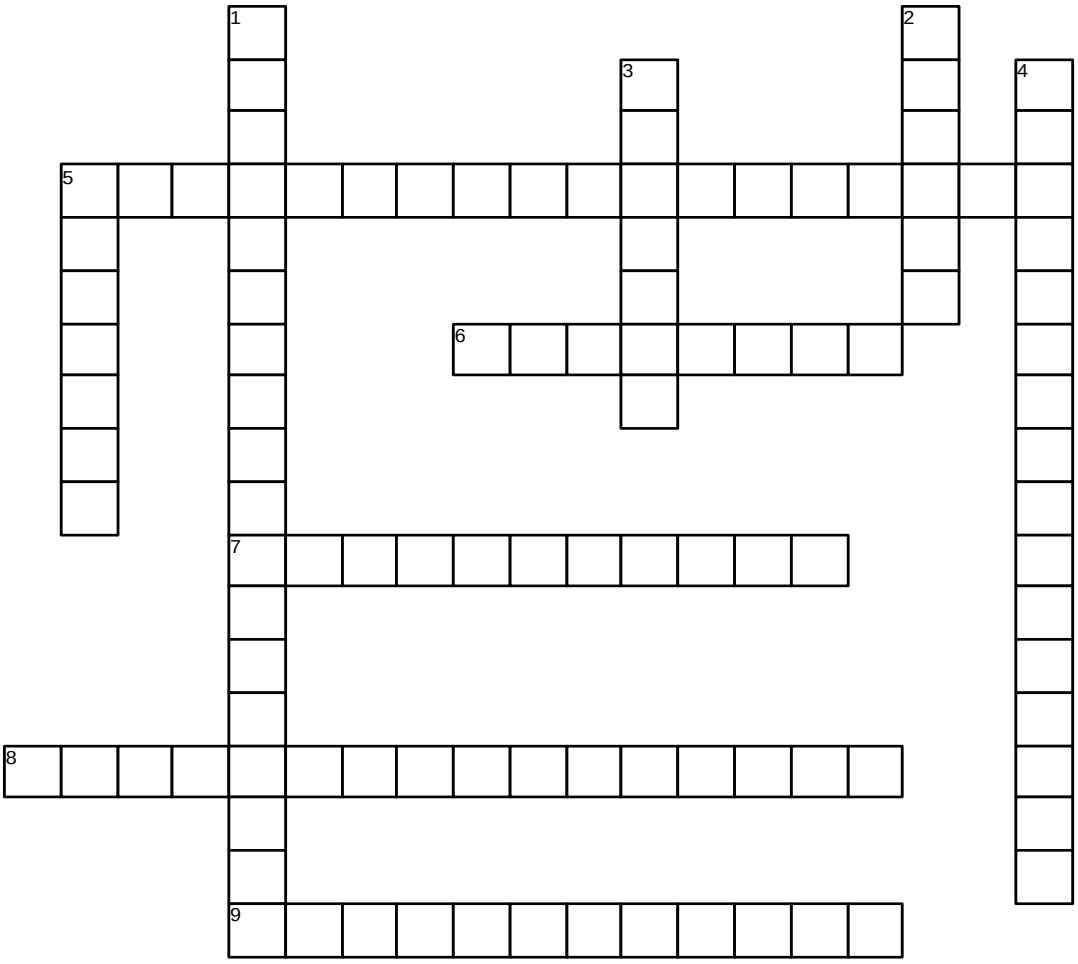
# MAP and MAF Sensors

Chapter 72



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**ACROSS**

**5** A _____ _____ (BARO) sensor is similar in design, but senses more subtle changes in barometric absolute pressure (atmospheric air pressure). It is vented directly to the atmosphere.

**6** Airflow sensors and mass airflow (MAF) sensors are designed to measure all the air entering the engine. if an air inlet hose was loose or had a hole, extra air could enter the engine without being measured. This extra air is often called _____ ___.

**7** These types of sensors are referred to as ____ _____ (MAF) sensors because, unlike the air vane sensor, the MAF sensor takes into account relative humidity, altitude, and temperature of the air.

**8** The _____ _____ pressure (MAP) sensor may be a ceramic capacitor diaphragm, an aneroid bellows, or a piezoresistive crystal.

**9** Vacuum causes the higher-pressure air on the outside to flow into the low-pressure area inside the cylinder. The difference in pressure between the two areas is called a pressure _____.

**DOWN**

**1** The _____ _____ absolute pressure (BMAP) sensor is actually a combination of a BARO and MAP sensor in the same housing. The BMAP sensor has individual circuits to measure barometric and manifold pressure.

**2** The low pressure within the engine is called _____ and is measured in inches of Mercury, abbreviated in. Hg.

**3** With the engine running at idle speed, gently tap the MAF sensor with the fingers of an open hand. If the engine stumbles or stalls, the MAF sensor is defective. This test is commonly called the ____ _____

**4** There are four resistors attached to the silicon wafer, which changes in resistance when strain is applied to the wafer. This change in resistance due to strain is called _____.

**5** Some MAF sensors use a ____-___circuit to keep the sensing wire clean of dust and dirt.