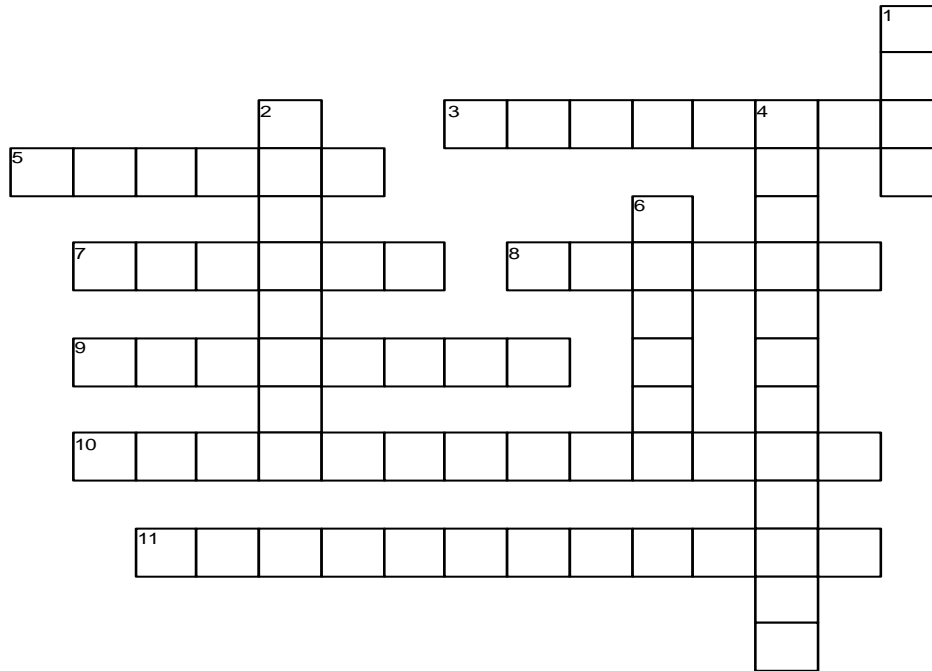


## Advanced Engine Performance Diagnosis 8<sup>th</sup> Edition

### Chapter 16

### Temperature and Throttle Position Sensors



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#### ACROSS

- 3 \_\_\_\_\_ position sensor: A sensor that monitors the position of the throttle valve, providing input to the PCM to regulate air intake and fuel injection.
- 5 Describes a sensor output that is inaccurate or incorrect, often caused by electrical issues such as poor grounding or voltage reference problems.
- 7 The \_\_\_\_\_ air temperature sensor is a negative temperature coefficient (NTC) thermistor that decreases in resistance as the temperature of the sensor increases.
- 8 If the radiator cap is defective and \_\_\_\_\_ allow the cooling system to become pressurized, air pockets could develop.
- 9 \_\_\_\_\_ head temperature: A sensor that monitors the temperature of the cylinder head, providing critical data to the engine control module (ECM) for engine management.
- 10 A variable resistor used in sensors such as throttle position sensors (TP) to provide variable voltage output based on mechanical movement.
- 11 \_\_\_\_\_ fluid temperature: A sensor that monitors the temperature of the automatic transmission fluid, helping the PCM manage transmission shifts and torque converter lock-up for optimal performance.

#### DOWN

- 1 Engine \_\_\_\_\_ temperature: A sensor that monitors the temperature of the fuel, used by the PCM to adjust fuel injection timing and optimize combustion.
- 2 \_\_\_\_\_ temperature coefficient: A type of thermistor whose resistance decreases as temperature increases, commonly used in temperature sensors like ECT and IAT sensors.
- 4 \_\_\_\_\_-\_\_\_\_\_ temperature: A sensor that monitors the temperature of the throttle body, typically used to prevent throttle icing and manage idle air control.
- 6 \_\_\_\_\_ coolant temperature: A sensor that measures the temperature of the engine coolant, providing essential input to the PCM for fuel mixture, spark timing, and idle speed adjustments.