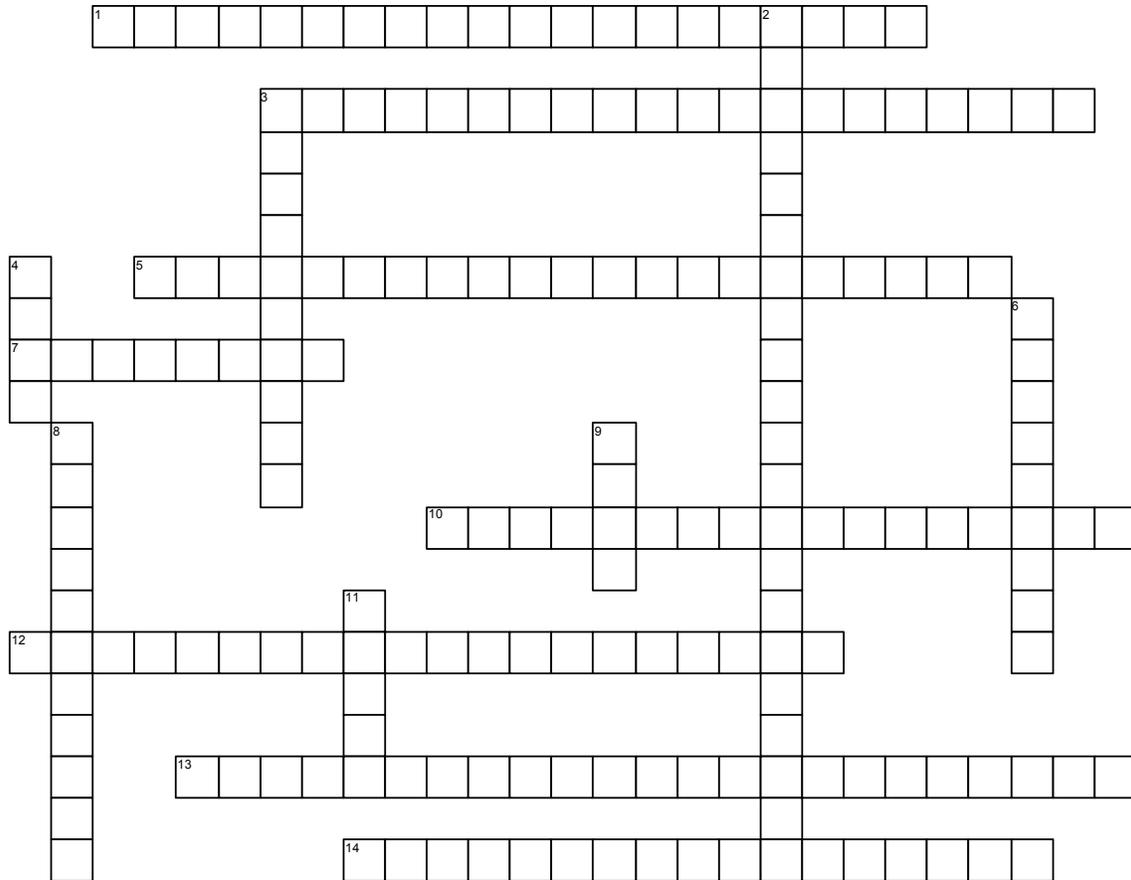


# Fuel-Injection Components And Operation

## Chapter 27



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### ACROSS

- 1 The idle air control valve is also called an \_\_\_\_\_ valve.
- 3 A \_\_\_\_\_ may also be used and can readily reconfigure an existing design fuel sender into a returnless sender.
- 5 In some applications, an externally mounted permanent magnet motor called the \_\_\_\_\_ mechanically advances the throttle linkage to advance the throttle opening.
- 7 A port fuel-injection system uses a pipe or tubes to deliver fuel from the fuel line to the intended fuel injectors, this pipe or tube is called the \_\_\_\_\_.
- 10 A \_\_\_\_\_ design uses a nozzle for each cylinder and the fuel is squirted into the intake manifold about 2 to 3 inches from the intake valve.
- 12 New technology needed to address pulsation dampening/hammering and fuel transient response, therefore, the \_\_\_\_\_ technology was developed.
- 13 In this system, the injectors are timed and pulsed individually, much like the spark plugs are sequentially

operated in firing order of the engine, this system is often called \_\_\_\_\_.

- 14 A \_\_\_\_\_ is employed at the tank to relieve overpressure due to thermal expansion of fuel.

### DOWN

- 2 A \_\_\_\_\_ system delivers fuel from a nozzle into the air above the throttle plate.
- 3 The on-time in milliseconds that the nozzle is open is called the injector \_\_\_\_\_.
- 4 The first production returnless systems employed the \_\_\_\_\_ approach.
- 6 The method for pulsing injectors in groups is sometimes called \_\_\_\_\_.
- 8 Some GM throttle-body units do not hold pressure and are called \_\_\_\_\_.
- 9 The power driver contains a high-current transistor that controls the pump speed using pulse width modulation, this system is called \_\_\_\_\_.
- 11 An increase and then decrease in engine speed is often called an engine \_\_\_\_\_.