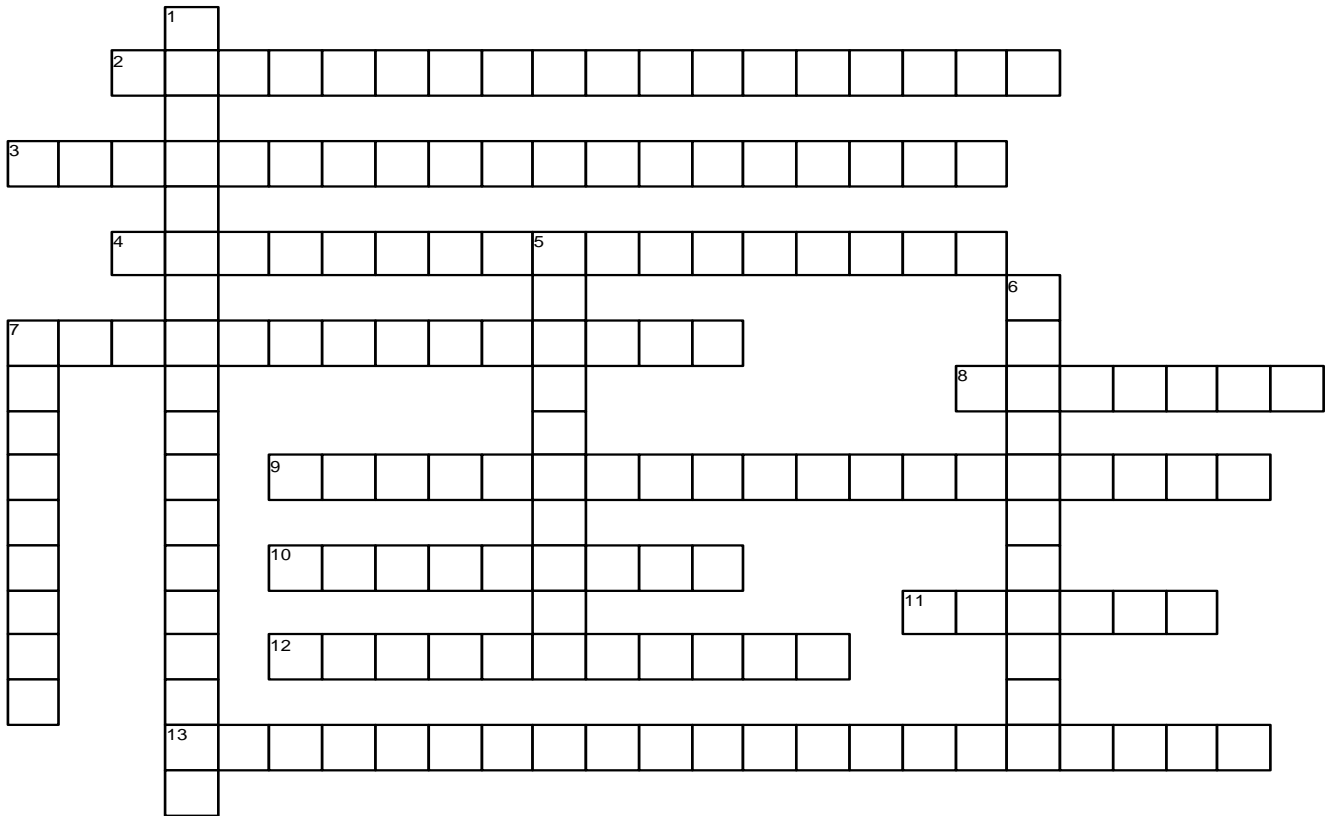


# Fuel-Injection System Diagnosis and Service

## Chapter 24



<http://jameshalderman.com>

### ACROSS

- 2 Using a pressure transducer and a \_\_\_\_\_ allows the service technician to view the fuel pressure over time.
- 3 The \_\_\_\_\_ involves using an electrical timing device to pulse the fuel injectors for a given amount of time, usually 500 ms or 0.5 second, and observing the drop in pressure that accompanies the pulse.
- 4 During port fuel-injection pressure regulator diagnosis, connect a \_\_\_\_-\_\_\_\_\_ to monitor the fuel pressure.
- 7 An electronic stepper motor or pulse-width modulated solenoid is used to maintain the correct idle speed, this is often called the \_\_\_\_\_.
- 8 If gasoline is visible in the vacuum hose, the regulator is \_\_\_\_\_ and should be replaced.
- 9 In a \_\_\_\_\_-\_\_\_\_\_ injector-driven circuit, voltage is applied to the injector.
- 10 A \_\_\_\_\_ is designed to electrically replace the injector in the circuit and to flash if the injector circuit is working correctly.
- 11 Most port-fuel-injected engines use a \_\_\_\_\_ hose connected to the fuel-pressure regulator.
- 12 A \_\_\_\_-\_\_\_\_ type is typically used for TBI and some port low-resistance injectors.
- 13 The \_\_\_\_\_ involves measuring the injector coil winding resistance.

### DOWN

- 1 Using a \_\_\_\_\_ and a digital storage oscilloscope allows the service technician to view the fuel pressure over time.
- 5 Due to the resistance and inductive reactance of the coil itself, it requires a fraction of a second for the coil to reach \_\_\_\_\_ or maximum current flow.
- 6 A commonly used test for injector operation is to listen to the injector using a stethoscope with the engine operating at idle speed.
- 7 Normal \_\_\_\_\_ or percentage is usually 15 to 25.