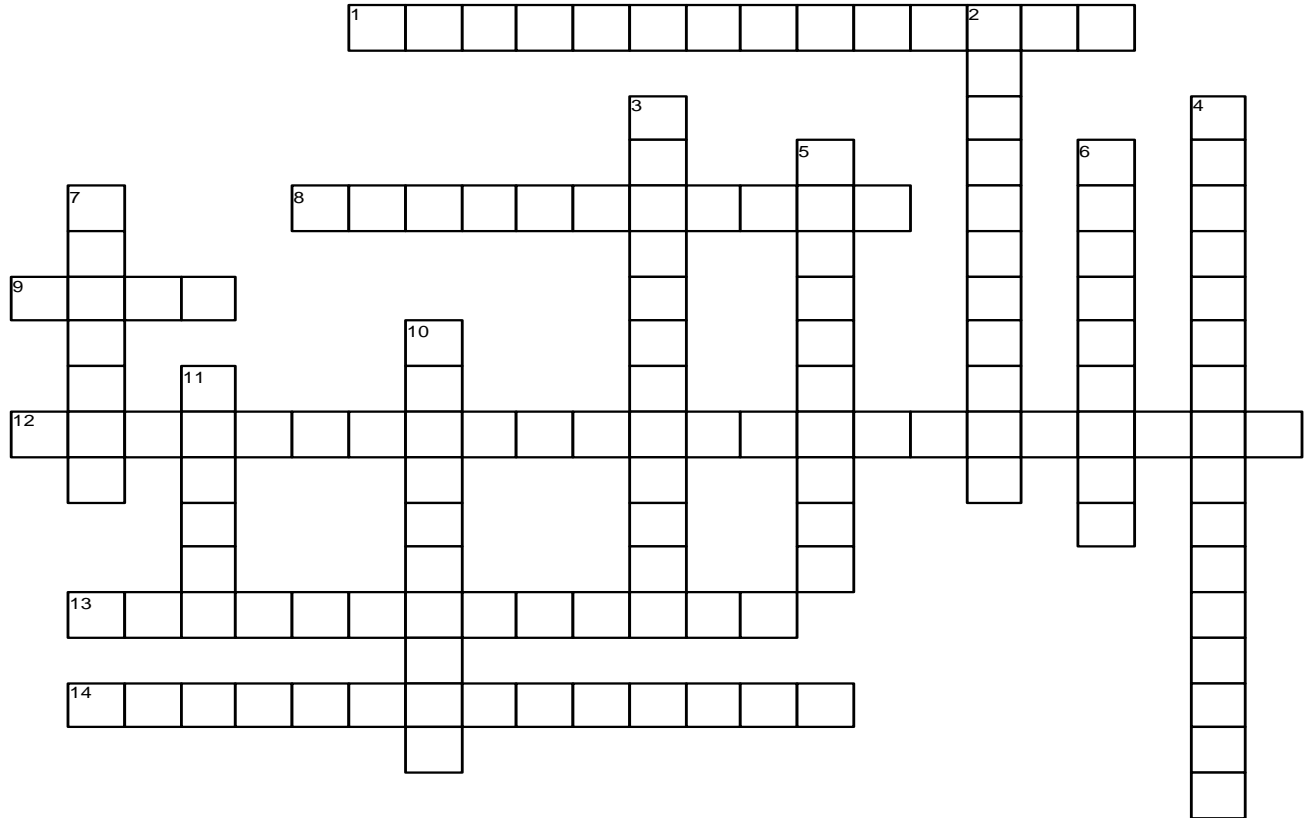


# Fuel Pumps, Lines, and Filters

## Chapter 21



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### ACROSS

- 1 Creating and maintaining a correct air-fuel mixture requires a properly functioning fuel and air \_\_\_\_\_.
- 8 Some manufacturers use an \_\_\_\_\_ in the system to reduce pressure pulses and noise.
- 9 \_\_\_\_\_ systems have been developed to reduce evaporative emissions during refueling.
- 12 With late-model vehicles, there has been some concern about too much heat being sent back to the fuel tank, causing rising in-tank temperatures and increases in fuel vaporization and \_\_\_\_\_ emissions.
- 13 Ford vehicles use an \_\_\_\_\_.
- 14 A \_\_\_\_\_ consists of a central impeller disk, several rollers or vanes that ride in notches in the impeller, and a pump housing that is offset from the impeller centerline.

### DOWN

- 2 A \_\_\_\_\_ is the most common because it tends to be less noisy.
- 3 The final filter, also called a \_\_\_\_\_, is the last filter in the fuel system.
- 4 The word hydro means liquid and the term kinetic refers to motion, so the term \_\_\_\_\_ means that this design of pump rapidly moves the fuel to create pressure.
- 5 In the \_\_\_\_\_ or vane pump, the impeller draws fuel into the pump, and then pushes it out through the fuel line to the injection system.
- 6 If any part of the line is located near too much heat, the gasoline passing through it vaporizes and \_\_\_\_\_ occurs.
- 7 An internal gear pump, called a \_\_\_\_\_, is another type of positive displacement pump that is often used in engine oil pumps.
- 10 Variations of the basic one-way \_\_\_\_\_ may be installed in any number of places between the fuel tank and the engine.
- 11 A vertical \_\_\_\_\_ in fuel tanks limits fuel sloshing as the vehicle moves.