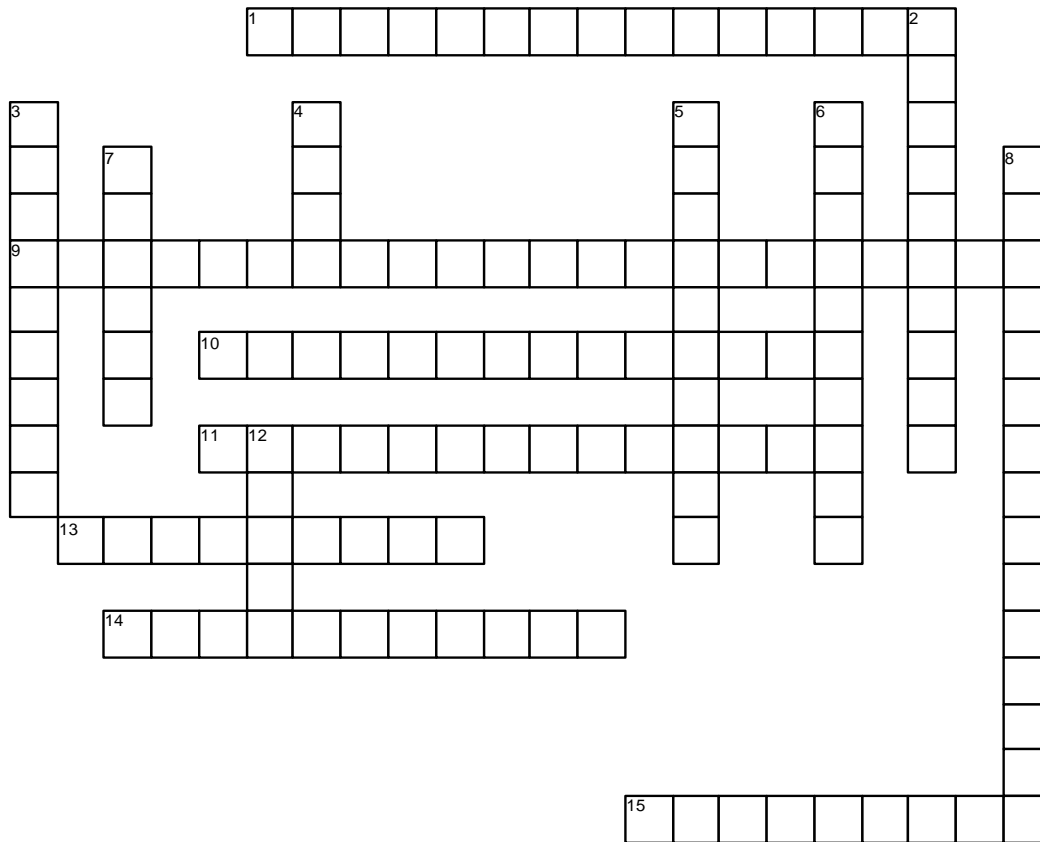


# Exhaust Gas Recirculation Systems

## Chapter 86



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### ACROSS

- 1 Unlike vacuum-operated EGR valves, the \_\_\_\_\_ consists of three solenoids controlled by the PCM.
- 9 A linear potentiometer on the top of the EGR valve stem indicates valve position to the PCM, this is called an \_\_\_\_\_.
- 10 Most GM and many other vehicles use a \_\_\_\_\_ that contains a pulse-width modulated solenoid to precisely regulate exhaust gas flow and a feedback potentiometer that signals the PCM regarding the actual position of the valve.
- 11 In the presence of sunlight, \_\_\_\_\_ react with hydrocarbons in the atmosphere to form ozone or photochemical smog, an air pollutant.
- 13 Some later-model Ford EGR systems use a feedback signal provided by an EGR exhaust back pressure sensor that converts the exhaust back pressure to a voltage signal, this sensor is called a \_\_\_\_\_.
- 14 \_\_\_\_\_ pressure EGR valves require a positive back pressure in the exhaust system.
- 15 Many PCM-controlled EGR systems have one or more \_\_\_\_\_ controlling the EGR vacuum.

### DOWN

- 2 \_\_\_\_\_ recirculation is an emission control system that lowers the amount of NOx formed during combustion.
- 3 EGR system operating is usually not required during \_\_\_\_\_.
- 4 GM calls the EGR valve-control solenoid an \_\_\_\_\_.
- 5 \_\_\_\_\_, also called spark knock or ping, occurs when high pressure and heat cause the air-fuel mixture to ignite.
- 6 Most Fords use an EGR monitor test sensor called a \_\_\_\_\_.
- 7 The digital EGR valve offers precise control and using a swivel pintle design helps prevent \_\_\_\_\_ deposit problems.
- 8 A P0400 DTC would indicate \_\_\_\_\_.
- 12 The recirculated exhaust gas is \_\_\_\_\_ and does not enter into the combustion process.