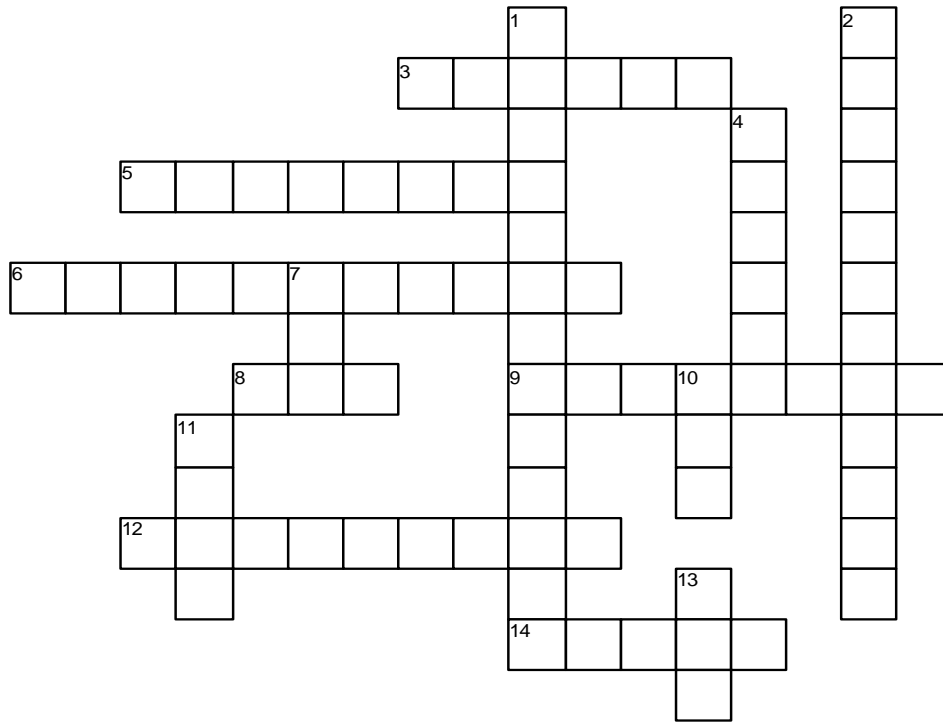


Automotive Electrical and Engine Performance 9th Edition

Chapter 20 - Airbag and Pretensioner Circuits



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ACROSS

- 3 A safety device designed to deploy rapidly in the event of a collision to protect occupants by cushioning the impact.
- 5 _____ Detection System (ODS): A system that determines the presence and size of a passenger to adjust airbag deployment accordingly.
- 6 A coil of wire in the steering column that allows the transmission of electrical signals to the airbag and other components while the steering wheel is turning.
- 8 ___ (Supplemental Restraint System): A safety system that includes airbags and seat belt pretensioners to protect occupants during a collision.
- 9 _____ sensors: Sensors embedded in the airbag module or vehicle structure that monitor conditions for airbag deployment.
- 12 _____ Presence System (PPS): A system that disables the passenger airbag if no passenger is detected to prevent unnecessary deployment.
- 14 A small explosive device within the airbag inflator that ignites the gas-generating material, causing the airbag to deploy.

DOWN

- 1 Devices that tighten seat belts in the event of a collision to reduce occupant movement and enhance airbag effectiveness.
- 2 _____ sensors: Sensors that detect a sudden decrease in vehicle speed, triggering airbag deployment in the event of a collision.
- 4 _____ sensor: A sensor that provides the electrical power needed to deploy an airbag when a collision is detected.
- 7 ___ (Supplemental Airbag Restraint): An additional safety system that provides protection beyond the standard airbag deployment.
- 10 ___ (Event Data Recorder): A device that records specific vehicle data during a collision, such as speed, seatbelt usage, and airbag deployment status.
- 11 ___-stage airbags: Airbags that deploy in two stages depending on the severity of the collision to reduce the impact on occupants.
- 13 ___ (Supplemental Inflatable Restraint): Another term for the airbag system designed to supplement the use of seat belts.