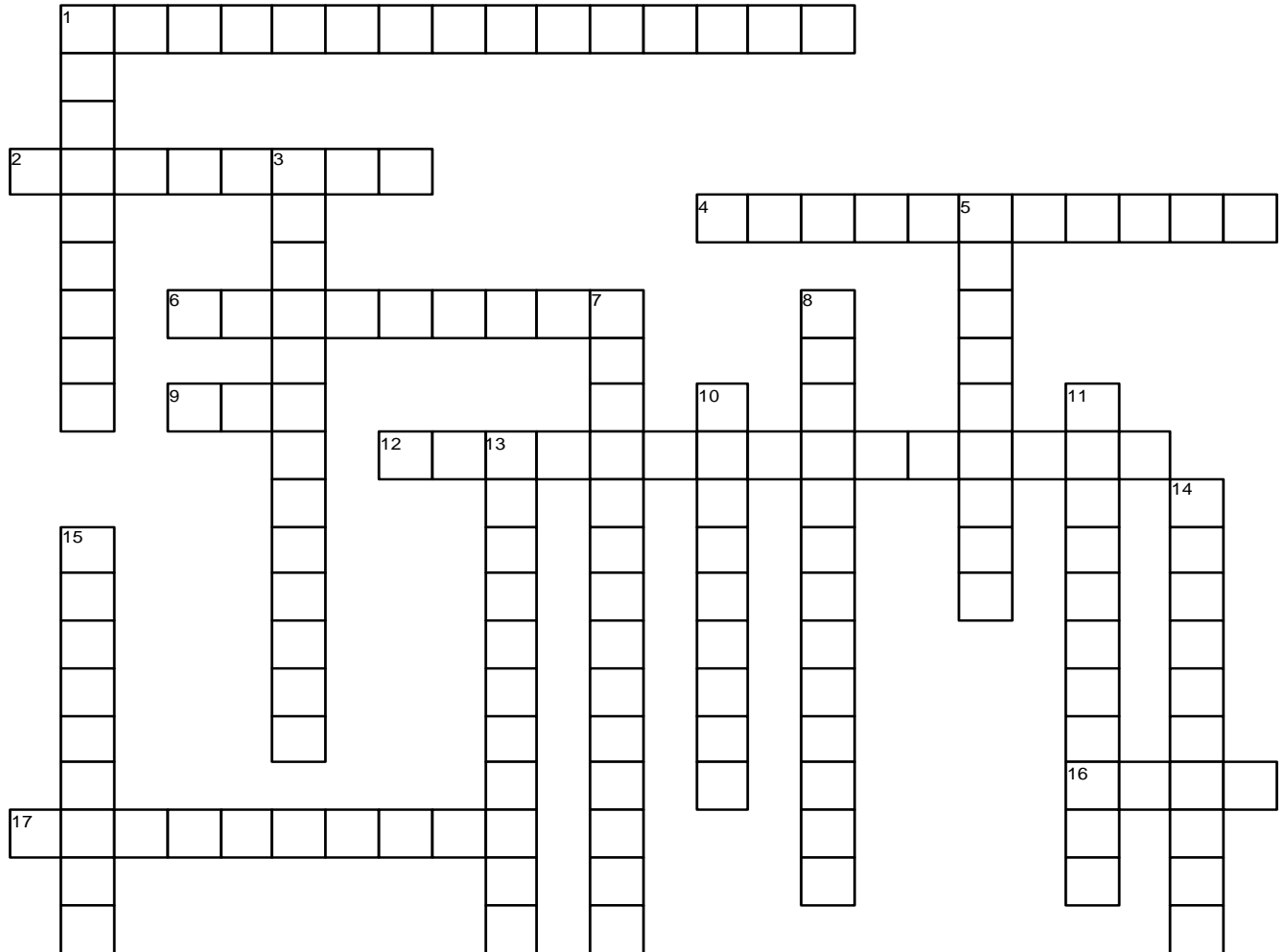


Front Suspension And Service

Chapter 112



<http://jameshalderman.com>

ACROSS

- 1 Early versions of the twin I-beam systems used kingpins, while later models used ball joints to support the _____ and spindle.
- 2 At the end of many solid I-beam or tube axles are _____ that allow the front wheels to rotate for steering.
- 4 A _____ can also be used to help locate worn or defective suspension components.
- 6 A _____ front suspension was used for over 30 years on Ford pickup trucks and vans.
- 9 The two main links in a _____ suspension are the upper control arm and the lower control arm.
- 12 _____ can be of several types, including a MacPherson.
- 16 Another name for an SLA suspension is the _____ suspension.
- 17 Many GM front-wheel-drive vehicles use a MacPherson strut with a large-diameter spring seat area, this is called a _____.

DOWN

- 1 A _____ front suspension is very strong and is still being used in the manufacture of medium and heavy trucks.
- 3 Many load-carrying ball joints have wear indicators with a raised area around the grease fitting, called _____ joints.
- 5 To control longitudinal support, a _____ is attached to each beam and is anchored to the frame of the truck using rubber bushings.
- 7 A _____ suspension uses two control arms as well as a structural strut assembly.
- 8 Defective shock absorbers can cause _____.
- 10 Some replacement control arm bushings have a higher _____ rating than the original.
- 11 Short-/long-arm suspensions use longitudinal _____, especially in trucks.
- 13 Another name for a strut rod is _____.
- 14 Locating the _____ on the lower control arm is the most common SLA-type suspension configuration.
- 15 Some ball joint studs have a slot or groove where a _____ is used to hold the ball joint to the steering knuckle.