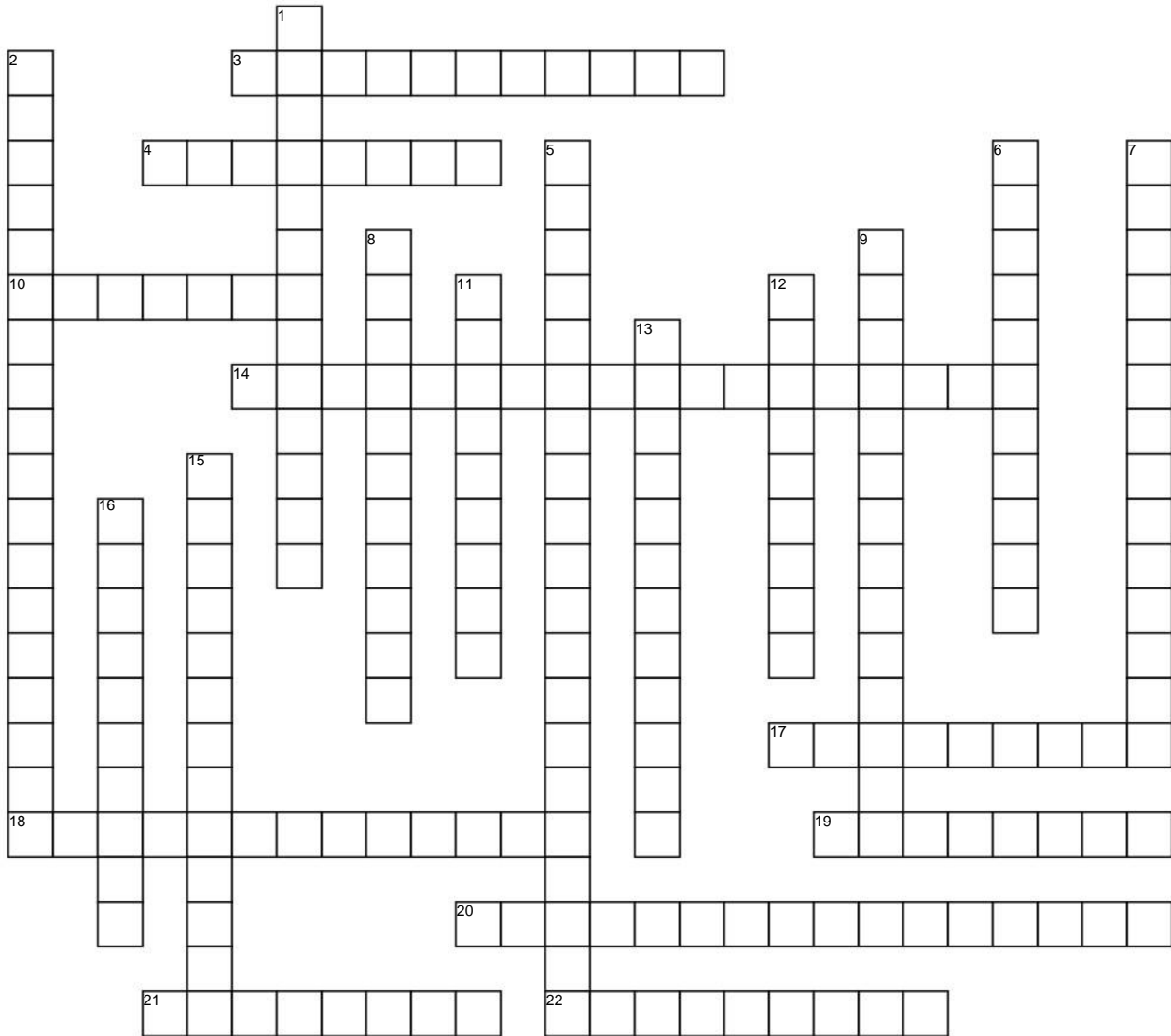


# Steering Columns And Gears

## Chapter 28



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### ACROSS

- 3 A spring-loaded \_\_\_\_\_ and related hardware install through a hole at the back of the steering gear housing to position the rack.
- 4 If the driver can feel vibration and road shocks through the steering wheel, the condition is called \_\_\_\_\_.
- 10 Worm bearing preload is a measurement of how much force is required to turn the steering gear input shaft against the \_\_\_\_\_ that the thrust bearings apply to the worm gear and shaft.
- 14 In a typical \_\_\_\_\_, the steering shaft has a short section at the top joined to the rest of the steering shaft either by a U-joint or gears.
- 17 A U-joint connects the lower end of the steering shaft to a small intermediate shaft, called a \_\_\_\_\_.
- 18 The \_\_\_\_\_ transmits rotary motion from the steering wheel to the steering gear.
- 19 Gear mesh preload is related to another

measurement, called \_\_\_\_\_.

- 20 A \_\_\_\_\_ is a simple device made of rubber, or rubber reinforced with fabric, that is placed between two shafts to allow for a change in angle between them.
- 21 The intermediate shaft is splined to a \_\_\_\_\_ inside a conventional steering gear.
- 22 Some steering columns are designed to \_\_\_\_\_, which means that the top of the steering shaft and jacket can be pulled out toward the driver or pushed in toward the dashboard.

### DOWN

- 1 The \_\_\_\_\_ steering gear is widely used because it is light in weight and takes less space than a conventional steering gear.
- 2 Federal law requires that all vehicles sold in the US have steering columns and shafts that collapse, called \_\_\_\_\_.
- 5 \_\_\_\_\_ is what GM calls the gear mesh preload.
- 6 The sector gear is part of a \_\_\_\_\_.

- 7 A \_\_\_\_\_ consists of two yokes with a steel crosspiece joining them together.
- 8 Another name for the pitman shaft is the \_\_\_\_\_.
- 9 The part of the steering wheel where the airbag is stored is called the \_\_\_\_\_.
- 11 As the steering wheel is turned, the movement is transmitted through the steering gear to the \_\_\_\_\_.
- 12 Underneath the bearing and housing is a \_\_\_\_\_ and coil spring that lock the steering shaft into position when the driver removes the ignition key.
- 13 \_\_\_\_\_ is a measurement of how much turning force is needed at the input shaft for the pinion to overcome the resistance of the rack and move it.
- 15 Most steering gears and some rack-and-pinion steering gears feature a \_\_\_\_\_.
- 16 Around the worm gear is a nut with gear teeth that meshes with the teeth on a section of a gear called a \_\_\_\_\_.