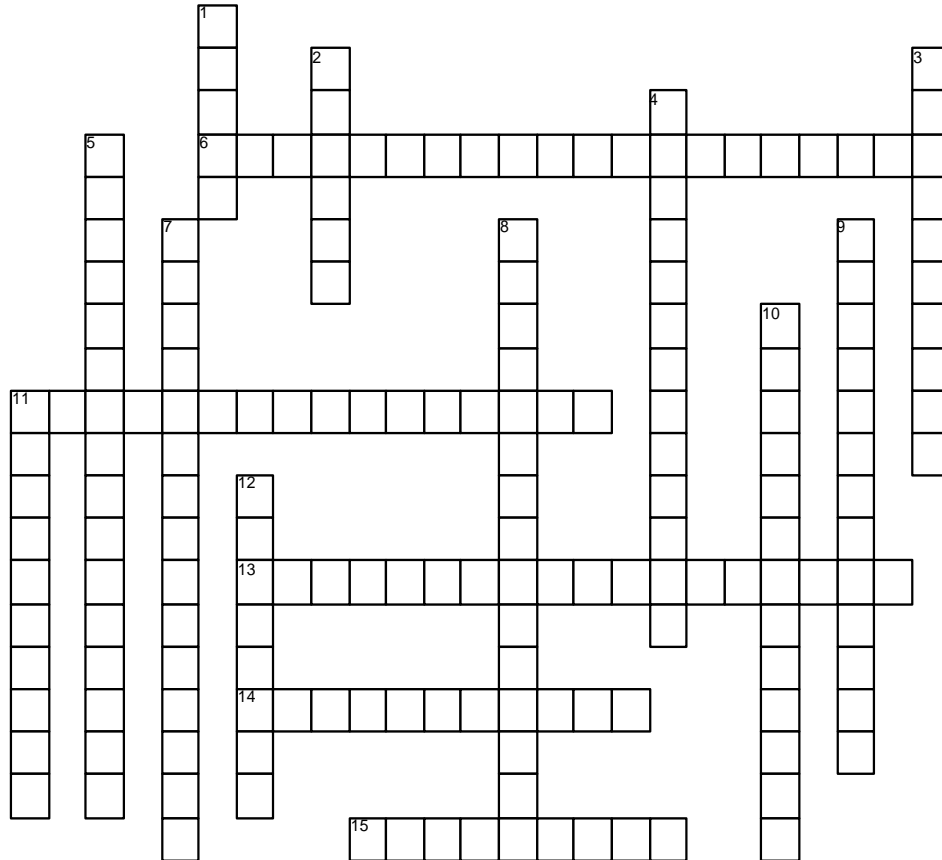


# Hydraulic Valves And Switches

## Chapter 99



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### ACROSS

- 6** A \_\_\_\_\_-\_\_\_\_\_ switch is used on all vehicles built after 1967 with dual master cylinders to warn the driver of a loss of pressure in one of the two separate systems by lighting the dashboard red brake warning indicator lamp.
- 11** The job of the \_\_\_\_\_ is to turn on the brake lights at the back of the vehicle when the brakes are applied.
- 13** A \_\_\_\_\_ improves brake balance during hard stops by limiting hydraulic pressure to the rear brakes.
- 14** Often referred to as \_\_\_\_\_ proportioning (DRP), this system removes the need for a mechanical proportioning valve.
- 15** A metering valve consists of a piston controlled by a strong spring and a \_\_\_\_\_ controlled by a weak spring.

### DOWN

- 1** Brake engineers refer to the ratio of front to rear brake pressure proportioning as the \_\_\_\_\_.
- 2** If the button is rubber coated, then you \_\_\_\_\_.
- 3** Before proportioning action will begin, brake system hydraulic pressure must reach a minimum level called the \_\_\_\_\_.
- 4** Many vehicles use a proportioning valve that varies the

amount of pressure that can be sent to the rear brakes depending on the height of the rear suspension, this type of valve is called a \_\_\_\_\_-\_\_\_\_\_ proportioning valve.

- 5** Most vehicle manufacturers combine the function of a proportioning valve with one or more other valves into one unit called a \_\_\_\_\_.
- 7** Many master cylinders, especially systems that are diagonal split, usually use a \_\_\_\_\_ sensor switch in the master cylinder reservoir.
- 8** \_\_\_\_\_ proportioning in the antilock braking system is accomplished by monitoring front- and rear-wheel speeds, and reducing pressure to the rear brakes as needed using the ABS solenoids when there is a difference in wheel deceleration rates.
- 9** A \_\_\_\_\_ is used on all front-disc, rear-drum-brake-equipped vehicles.
- 10** A \_\_\_\_\_ valve has been used on some drum brake systems to keep a slight amount of pressure, about 5 to 12 PSI, on the entire hydraulic system for drum brakes.
- 11** Most new vehicles use the \_\_\_\_\_ position (BPP) sensor or switch as an input to the body computer for many functions.
- 12** The residual check valve has been eliminated by equipping the wheel cylinder internal spring with a sealing cup \_\_\_\_\_ to prevent sealing cup lip collapse.