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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_ | Period: \_\_\_\_\_\_\_ |

Brakes Crossword

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|  |  |  |  |  |  |  |  |  |  |  |  | 1  B |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  | R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | 2  P |  |  | A |  |  |  |  |  |  |  |  | 3  P |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | R |  |  | K |  |  |  |  |  |  |  |  | A |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  | 4  V | E | N | T | E | D | R | O | T | O | R |  |  | R |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | S |  |  | L |  |  |  |  |  |  |  |  | A |  |  |  |  | 5  D |  |  |  |
|  | 6  H | O | L | D | D | O | W | N | S | P | R | I | N | G | S |  |  |  | 7  D |  | L |  |  |  |  | I |  |  |  |
|  |  |  |  |  |  |  |  |  | U |  |  | N |  |  |  |  |  |  | U |  | L |  |  |  |  | A |  |  |  |
|  |  |  |  |  |  | 8  S | T | A | R | W | H | E | E | L | A | D | J | U | S | T | E | R |  |  |  | L |  |  |  |
|  |  |  |  |  |  |  |  |  | E |  |  | S |  |  |  |  |  |  | T |  | L |  |  |  |  | I |  | 9  V |  |
|  |  |  |  |  |  |  |  |  | D |  |  |  |  |  |  |  |  |  | B |  | I |  |  |  |  | N |  | A |  |
|  |  |  |  |  |  |  |  |  | I |  |  | 10  B |  |  |  |  | 11  B |  | O |  | S |  |  |  |  | D |  | C |  |
|  |  |  |  |  |  |  |  |  | F |  | 12  C | A | L | I | P | E | R |  | O |  | M |  |  | 13  H |  | I |  | U |  |
|  |  |  |  |  |  |  |  |  | F |  |  | C |  |  |  |  | A |  | T |  |  |  |  | Y |  | C |  | U |  |
|  |  |  |  |  |  |  |  |  | E |  |  | K |  |  | 14  A |  | K |  |  |  |  |  |  | G |  | A |  | M |  |
|  |  |  |  |  |  | 15  E |  | 16  G | R | A | V | I | T | Y | B | L | E | E | D | I | N | G |  | R |  | T |  | B |  |
|  |  |  |  |  |  | M |  |  | E |  |  | N |  |  | S |  | F |  |  |  |  |  |  | O |  | O |  | O |  |
|  |  |  |  |  |  | E |  |  | N |  |  | G |  |  |  |  | A |  |  |  | 17  D | U | O | S | E | R | V | O |  |
|  |  |  |  |  |  | R |  |  | T |  |  | P |  |  |  |  | D |  |  |  |  |  |  | C |  |  |  | S |  |
|  |  |  |  |  |  | G |  |  | I |  |  | L |  | 18  L | A | T | E | R | A | L | R | U | N | O | U | T |  | T |  |
|  |  |  |  |  |  | E |  |  | A |  |  | A |  |  |  |  |  |  |  |  |  |  |  | P |  |  |  | E |  |
|  |  |  |  |  |  | N |  | 19  F | L | O | A | T | I | N | G | C | A | L | I | P | E | R |  | I |  |  |  | R |  |
|  |  |  |  |  |  | C |  |  | V |  |  | E |  |  |  |  |  |  |  |  |  |  |  | C |  |  |  |  |  |
|  |  |  |  |  |  | Y |  |  | A |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | B |  | 20  B | L | E | E | D | E | R | S | C | R | E | W |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | R |  |  | V |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 21  M | A | S | T | E | R | C | Y | L | I | N | D | E | R |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | K |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Across**  **4.** A disc brake rotor with cooling fins between its faces  **6.** Hardware in a drum brake system that holds the shoes to the backing plate.  **8.** A threaded adjuster mechanism in a drum brake that moves the brake shoes further apart so the linings will be closer to the drums.  **12.** Found only on disc barkes, houses piston which uses the force of hydraulic brake fluid to squeeze brake pads against the roter  **16.** A method of bleeding the brakes that allows fluid to dribble out of the open bleeder screws by gravity. It's a slow process and rarely used except in applications that require it because of metering valve arrangements that prevent normal manual or power bleeding procedures.  **17.** A brake design that provides servo action regardless of which way the drum is turning (forward or reverse).  **18.** The amount of sideways variation in the movement of a brake rotor or wheel. Lateral runout can be checked by positioning a dial indicator against the rotor and then turning the rotor. The amount of runout can then compared to specs to determine if the rotor needs to be resurfaced or replaced.  **19.** A type of disc brake caliper where the housing is designed to slide on the guide pins from side to side over the brake rotor  **20.** A screw valve designed with a hollow center to allow fluid to be bled through it  **21.** Components in a drum brake setup with two piston that extend outward as the brake fluid pressure increases | **Down**  **1.** Steel tubing that delivers brake fluid under high pressure from the master cylinder to the brake hose at each wheel  **2.** A safetly valve that monitors whether fluid pressure is equal in both seperate brake system circuits  **3.** Refers to variations in the thickness of the rotor, or the parallel alignment of the two surfaces of the rotor. Parallelism is checked with a micrometer at six or more different points around the circumference of the rotor. If the thickness varies more than the specs allow, the rotor must be resurfaced or replaced.  **5.** A special measuring tool with a gauge indicator that can be used to check rotor runout and wheel bearing play.  **7.** A rubber seal on a disc brake caliper which prevents moisture and other debree from entering the cylinder area where the piston compresses the brake fluid  **9.** Unit in a power brake system that multiplies the force exerted on the brake pedal to the master cylinder  **10.** Flat metal plate inside the brake drum on which the brake shoes, wheel cylinders, and other brake parts are mounted  **11.** When brake pad or shoe grip diminishes beacuse brake components have been overheated  **13.** The ability to absorb fluids  **14.** An automatic system that applies brake pressure, then releases, the applies in a rapid, pulsating fashion repeatedly.  **15.** A mechanial back-up system that will activate rear brakes should all hydraulic operation somehow fail |