Brake Principles And Friction Materials
Chapter 4

ACROSS

2 Leverage creates a ____________ __________ that, at the brake pedal, is called the pedal ratio.
4 Inertia, in the form of ____________, plays a major part in a vehicle's braking performance.
6 The ______ in brake systems are used to increase force, so they are either first- or second-class.
8 One measurement of the coefficient of friction is the ____________ coefficient.
10 Most vehicles have a forward ________, which means that even when stopped, more than 50% of their weight is supported by the front wheels.
11 ________ ________ is a fundamental form of mechanical energy.
15 The amount of friction between two objects or surfaces is commonly expressed as a value called the ____________ __ __________.

DOWN

1 One measurement of the coefficient of friction is the ____________ coefficient.
3 The primary mechanical principle used to increase application force in every brake system is ________.
5 ________ is the ability to do work.
7 A ________ of 5 to 1 is common for manual brakes, which means that a force of 10 lb at the brake pedal will result in a force of 50 lb at the pedal pushrod.
9 ________ is the resistance to movement between two surfaces in contact with one another.
12 ________ is defined by Isaac Newton's first law of motion, which states that a body at rest tends to remain at rest, and a body in motion tends to remain in motion in a straight line unless acted upon by an outside force.
13 In the science of mechanics, a lever is a simple machine that consists of a rigid object, typically a metal bar that pivots about a fixed point called a ________.
14 ________ is the transfer of energy from one physical system to another, especially the transfer of energy to an object through the application of force.