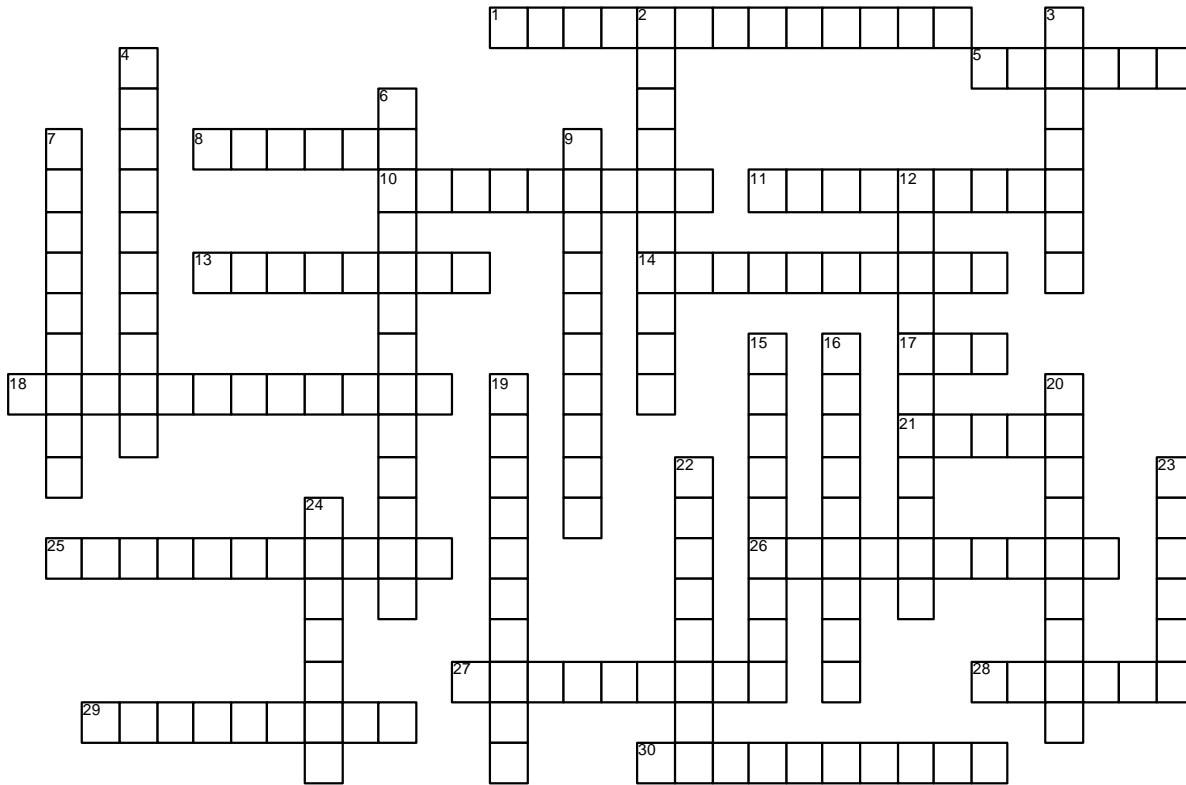


Introduction To Drivetrains

Chapter 1



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ACROSS

- 1 The effective diameter of a gear is the _____ or pitch line.
- 5 The _____ is used to stop the power flow to allow the transmission to be shifted.
- 8 A _____ transmission is also called a standard transmission.
- 10 The purpose and function of an _____ transmission is to provide the forward and reverse gear ratios needed without requiring the driver to make a change in gearing.
- 11 A _____ is a compact combination of a transmission, the final drive gear reduction, and the differential.
- 13 A gear set used with shafts that cross each other but do not intersect is a _____.
- 14 _____ can be determined by dividing the number of teeth on the driven gear (output) by the number of teeth on the driving gear (input).
- 17 _____ is also called full-time four-wheel drive.
- 18 The _____ used in transaxles or drive axles is a torque-splitting device that allows the two axle shafts to operate at different speeds so that the vehicle can turn corners.
- 21 _____ gears are used on nonparallel shafts. The outer edge of the gear must

be cut on the angle that bisects the angle of the two shafts.

- 25 To determine horsepower, a _____ is used to measure the amount of torque an engine can produce at various points through its operating range.
- 26 One _____ is the power required to move 550 pounds on foot in one second.
- 27 _____ drive has a transmission mounted behind the engine and uses a driveshaft to transfer power to the rear axle and driving wheels.
- 28 A _____ converter replaces the manual transmission clutch. It is a type of fluid coupling that can release the power flow at slow engine speeds and also multiply the engine torque during acceleration.
- 29 _____ are the simplest gears and are on parallel shafts with teeth cut straight or parallel to the shaft.
- 30 Many vehicles use a transaxle to drive the front wheels, called _____ drive.

DOWN

- 2 A variation of the spiral bevel gear is the _____, also called an offset-bevel gear.
- 3 In a planetary gear set the _____ is the gear in the center.
- 4 A _____ is also called a propeller shaft.

- 6 In a planetary gear set the _____ hold the planet gears in position.
- 7 If the driving gear has more teeth than the driven gear there will be an increase in speed and a reduction in torque. This is called an _____.
- 9 Two short driveshafts, called _____, are used to connect the transaxle to the front wheels.
- 12 _____ gears, like helical gears, have curved teeth for more quiet operation.
- 15 _____ drive is often designated as "4X4" and refers to a vehicle that has four driven wheels.
- 16 Rear-wheel-drive vehicle driveshafts are usually made from steel tubing, and normally have either a _____ joint or a CV joint at each end.
- 19 The smaller gears in a gear set may also be called a _____.
- 20 Most automatic transmissions use _____ gear sets, which are a combination of gears.
- 22 In a planetary gear set the _____ is also called an annulus gear or internal gear.
- 23 _____ is a rotating or twisting force that may or may not result in motion.
- 24 _____ gears are the most used of all gears used in transmissions. The gears have teeth cut in a spiral or helix shape.