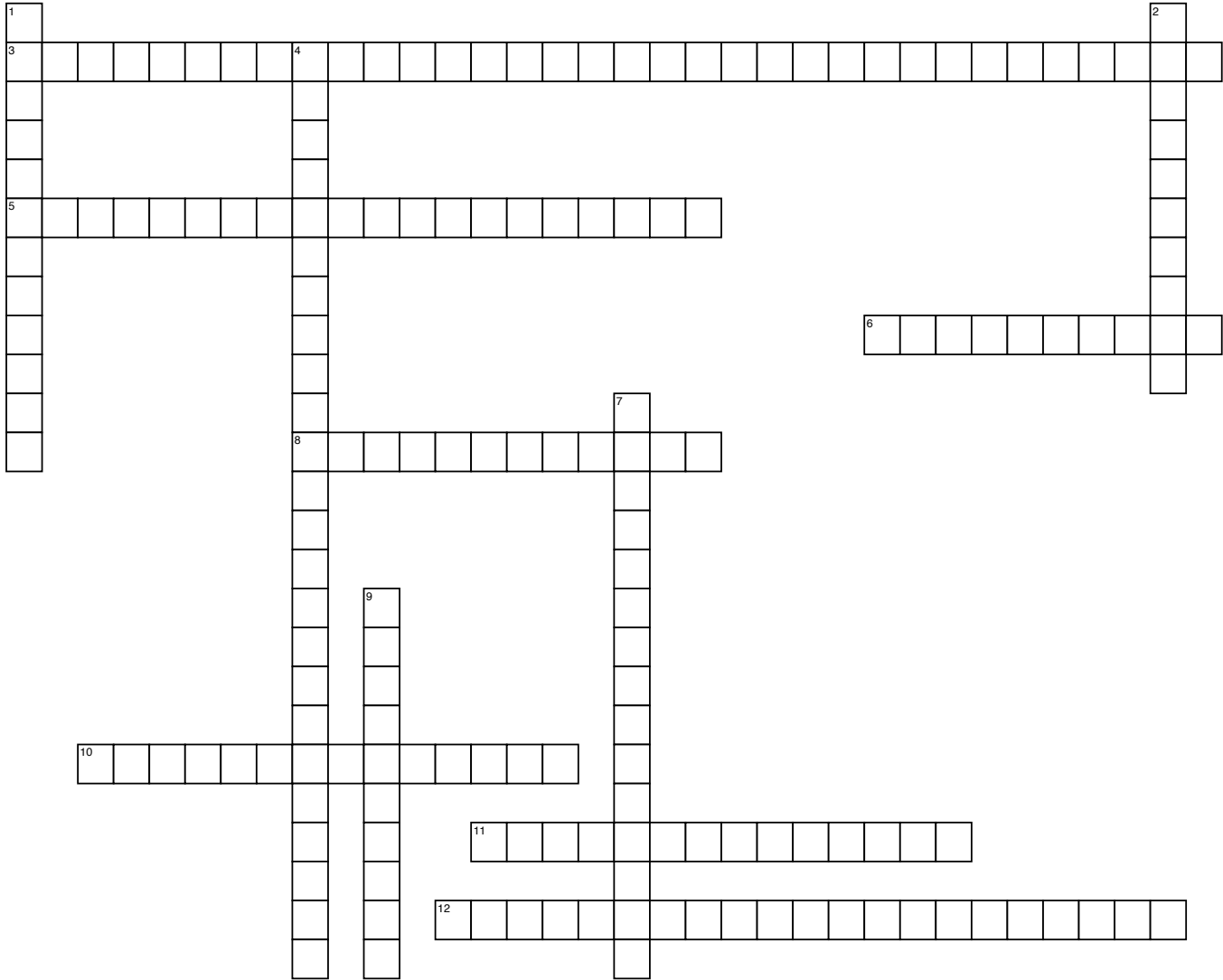


Hybrid Electric Vehicle Transmissions and Transaxles

Chapter 10



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ACROSS

- 3 The _____ includes three simple planetary gear sets with four multi-plate clutches.
- 5 In a _____, the internal combustion engine may be operating even though the vehicle is stopped if the electronic controller has detected that the batteries need to be charged.
- 6 A _____ will incorporate idle stop and regenerative braking but is not capable of using the electric motor to propel the vehicle on its own without help from the internal combustion engine.
- 8 A _____ is not capable of propelling the vehicle from a stop using battery power alone.
- 10 In a _____ design, multiple propulsion sources can be combined, or one of the energy sources alone can drive the vehicle.
- 11 _____ are so named because anything that propels the vehicle is said to provide a traction force.
- 12 The _____ assembly is located between the internal combustion engine and the transmission.

DOWN

- 1 In a _____ design, the engine turns a generator and the generator can either charge the batteries or power an electric motor that drives the

transmission.

- 2 In the _____ transaxle, a large electric motor/generator is directly attached to the transaxle final drive and to the planetary ring gear.
- 4 In a series hybrid design, sole propulsion is by a battery-powered electric motor, but the electric energy for the batteries comes from another on-board energy source, such as an _____.
- 7 The high-voltage battery in a Ford Escape Hybrid is used to power the traction motor in the eCVT, so it is known as a _____.
- 9 A _____ uses idle stop regenerative braking, and is able to propel the vehicle using the electric motor(s) alone.