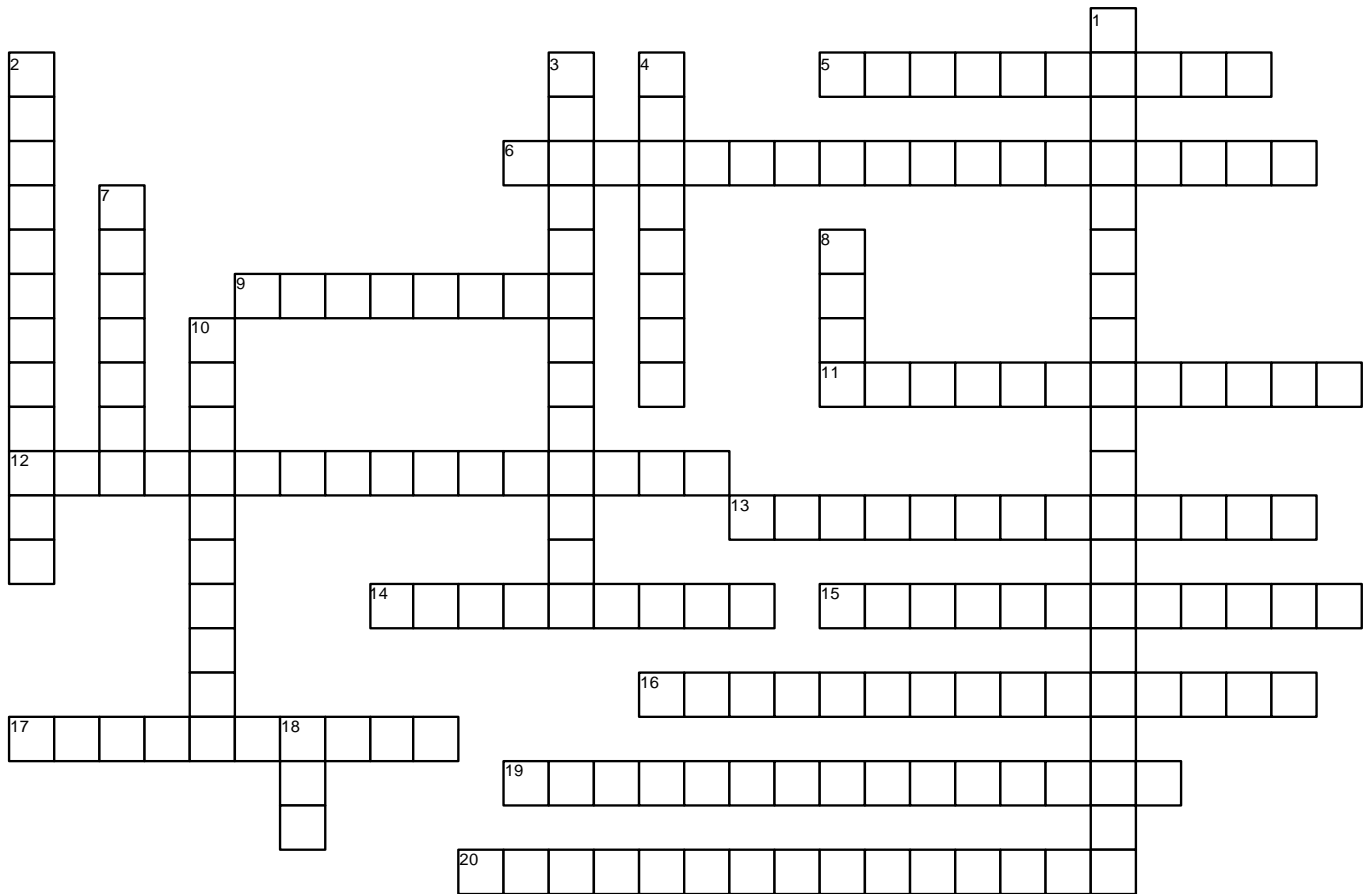


# Cranking System

## Chapter 52



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### ACROSS

- 5** These magnets, when energized, create strong magnetic fields inside the starter housing and, therefore, are called \_\_\_\_\_.
- 6** The ends of the copper armature windings are soldered to \_\_\_\_\_.
- 9** A small current switch operates a \_\_\_\_\_ or relay that controls the high current to the starter.
- 11** A starter consists of the main structural support of a starter called the main \_\_\_\_\_.
- 12** \_\_\_\_\_ are in holders and are insulated from the

housing.

- 13** A heavier-gauge winding (called the \_\_\_\_\_) is needed to draw the plunger into the solenoid and is grounded through the starter motor.
- 14** The soft-iron cores are called \_\_\_\_\_.
- 15** \_\_\_\_\_ hold the three components of the starter together.
- 16** Another name for the commutator-end housing is the \_\_\_\_\_.
- 17** The spring between the drive tang or pulley and the overrunning clutch and pinion is called a \_\_\_\_\_.
- 19** A \_\_\_\_\_ is

an electromagnetic switch containing two separate, but connected electromagnetic windings.

- 20** One end of the field housing is called the \_\_\_\_\_.

wire connections to the brushes.

- 4** Inside the field coils is an \_\_\_\_\_ that is supported with either bushings or ball bearings at both ends, which permit it to rotate.
- 7** \_\_\_\_\_ are made of a combination of copper and carbon.
- 8** Current that works against battery voltage is called \_\_\_\_\_.
- 10** Another name for the pole shoes is \_\_\_\_\_.
- 18** \_\_\_\_\_ is a system that allows the driver to start the engine of the vehicle from inside the house or a building at a distance of about 200 ft.

### DOWN

- 1** One end of the field housing is called the \_\_\_\_\_.
- 2** The \_\_\_\_\_ uses a small pinion gear that contacts the engine flywheel gear teeth and transmits starter motor power to rotate the engine.
- 3** \_\_\_\_\_ use bare, stranded copper