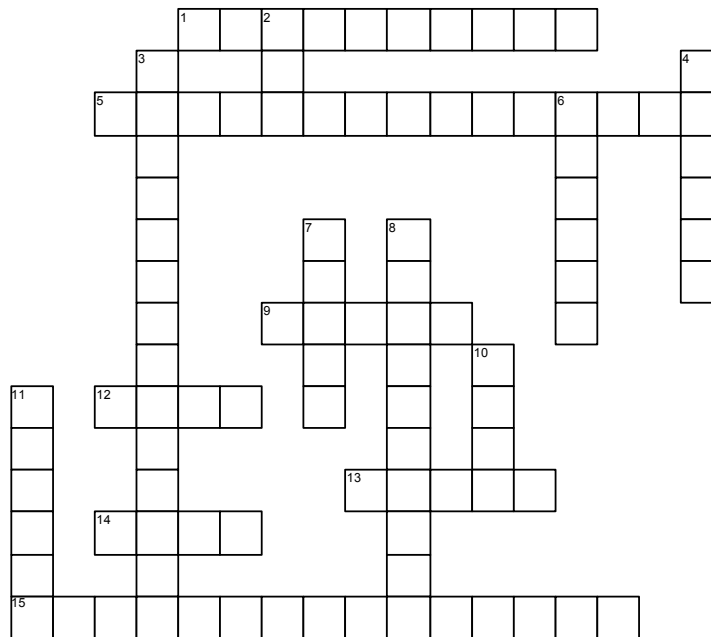


Service Information, Tools, and Safety

Chapter 1



<http://jameshaldeman.com>

ACROSS

- 1 The size of a _____ is specified by the letter M followed by the diameter in millimeters (mm) across the outside of the threads.
- 5 Whenever diagnosing an engine operating fault, it is often necessary to use the _____ to be sure that the vehicle is the subject of a technical service bulletin or other service procedure.
- 9 _____ are used to smooth metal and are constructed of hardened steel with diagonal rows of teeth.
- 12 _____ are the female part of a threaded fastener.
- 13 The strength or classification of a bolt is called the _____.
- 14 The _____ label under the hood of the vehicle shows information settings and emission hose routing information.
- 15 _____ is the maximum stress used under tension without causing the failure of a fastener.

DOWN

- 2 _____ are issued by the vehicle manufacturer to notify service technicians of a problem and include the necessary corrective action.
- 3 _____ can be used to identify the part and check dimensions such as the cubic inch displacement and other information, such as the year of manufacture.
- 4 A _____ or campaign is issued by a vehicle manufacturer and a notice is sent to all owners in the event of a safety-related fault or concern.
- 6 A _____ has a straight, sharp cutting end that is used for cutting off rivets or to separate two pieces of an assembly.
- 7 Service technicians are often asked to fabricate sheet metal brackets or heat shields and need to use one or more types of cutters available called _____.
- 8 Whenever a fastener is difficult to remove, some technicians will insert the handle of a ratchet or a breaker bar into a length of steel pipe sometimes called a _____.
- 10 Often, a _____ will have coarse threads on one end and fine threads on the other end.
- 11 A _____ fits over the fastener and grips the points and/or flats of the bolt or nut.