Service Information, Tools, and Safety
Chapter 1

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.