

Fasteners, Gaskets, Seals, and Sealants

Textbook: *Modern Automotive Technology*, James E. Duffy, The Goodheart-Willcox Company, Inc., Tinley Park, IL, 2000

Vocabulary (p. 121)


Fasteners	Snap ring	Minor thread
Bolt	Key	damage
Cap screw	Keyseat	Major thread damage
Nut	Keyway	Tap
Tensile strength	Set screws	Die
Bolt head markings	Adhesives	Thread repair insert
Cotter pin	Torquing	Locking pliers
Washers	Torque	Stud puller
Machine screws	specifications	Screw extractor
Sheet metal screws	Torque-to-yield	Rust penetrant
Sheet metal screws	Bolt tightening	Gasket
Tapping screws	sequence	Sealer
Non-threaded	Crisscross pattern	Seals
fasteners	Torque wrench	

Summary (p. 121)

1. Fasteners are devices that hold the parts of a vehicle together.
2. When a high-quality bolt is threaded into a part without a nut, it can also be called a cap screw.
3. Bolt size is a measurement of the outside diameter of the bolt threads.
4. Tensile strength, or grade, refers to the amount of pull or stretch a fastener can withstand before breaking.
5. A flat washer increases the clamping surface under the fastener.
6. A lock washer prevents the bolt or nut from becoming loose under stress and vibration.
7. It is very important that bolts and nuts are torqued properly.

8. Torque specifications are tightening values given by the vehicle manufacturer.
9. Generally, tightening a group of fasteners on a part follows a crisscross pattern.
10. A torque wrench measures the twisting force applied when tightening a threaded fastener.
11. A tap is a threaded tool for cutting internal threads in holes. A die cuts external threads.
12. Machine screws are similar to bolts, but they normally have screwdriver type heads.
13. Numerous types of non-threaded fasteners such as snap rings, clips, and adhesives are utilized in the assembly of a vehicle.
14. Adhesives are widely used on most vehicles.
15. A gasket is a soft, flexible material placed between parts to prevent leakage.
16. RTV sealer, also called silicone sealer, cures in the presence of air. It is used to form a rubber-like gasket on thin, flexible flanges.
17. Seals prevent leakage between a stationary part and a moving part.

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