**Study Notes for Chpt 3**

**Fasteners and Seals /25**

A lock washer CUTS INTO THE MATING SURFACES OF THE NUT AND THE ENGINE COMPONENT SECURING IT to the small engine.

5 styles of nuts used on a small engine.

* Hexagon
* Square
* Jam
* Wing
* Acorn / Castellated

THREAD ADHEASIVES / LOCK TITE can be used to prevent nuts, bolts or screws from loosening during the operation of a small engine. Vibration can cause fasteners to loosen.

The tools required to tap a hole or to clean out an existing hole are:

* Drill.
* Tap Handle.
* Threading Tap.

CORROSION, VIBRATION, HEATING AND COOLING, CYCLIC LOADING, TENSILE AND SHEARING FORCES are some of the conditions that a small engine are exposed to during normal operation.

A gasket has several key functions on an engine is has to SEAL, PREVENT LEAKAGE OF OIL, COOLANT, HOLD COMPRESSION AND CREATE VACUUM. A gasket must be in very good condition to do its job properly.

There are areas of the small engine that must pay close attention to when assembling or disassembling an engine.

* location of all parts, fasteners and washers
* damaged or worn fasteners
* rusted fasteners
* reassembly / thread adhesives and anti-seize compounds

Anti-seize compound is important to use on an engine because it PREVENTS METAL MATERIAL FROM BEING COLD WELDED AS WELL IT PROTECTS BOLTS THAT ARE EXPOSED TO CONSTANT HEAT. The bolt expands and contracts during operation causing it to seize in the hole.

UNF / UNC for standard bolts and MM for metric bolts are the 2 types of notations used to identify the thread of a bolt. It can only be one or the other.

Glasses with side shields should be worn if you are installing SNAP RINGS WITH A PAIR OF SNAP RING PLIERS