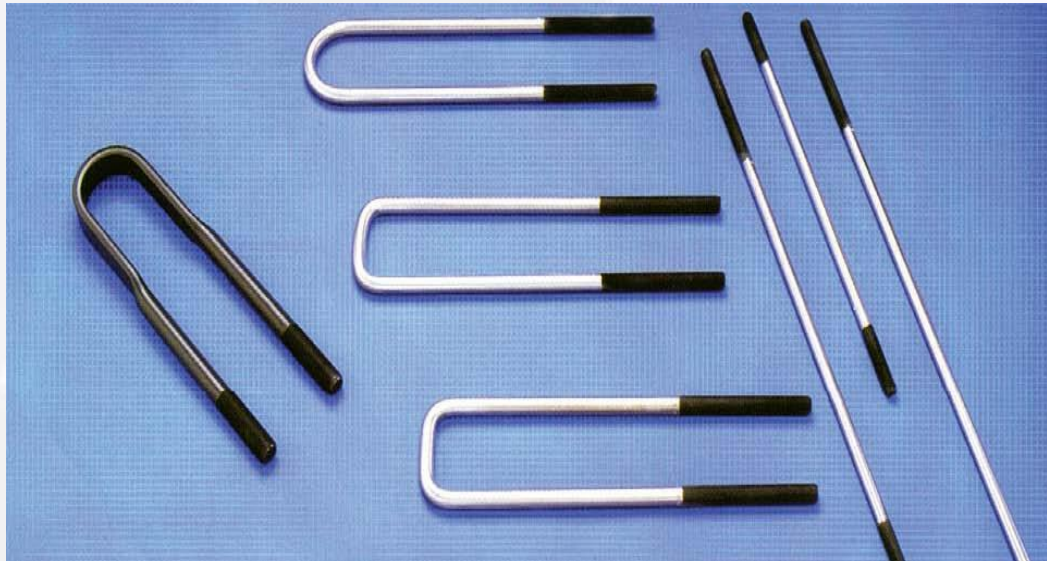




U-Bolts

Properly Maintained U-Bolts Can Extend Spring Life.





U-Bolts

MAINTENANCE PRACTICES

- Following two highly-recommended maintenance practices will help avoid premature spring failure:
- --- KEEP the U-bolt nuts on your suspensions Tight. Upon delivery of a new vehicle, or after repairing springs on your current vehicle, re-torque the U-bolt nuts after the First day's operation certainly within 500 miles. This will accommodate any settling which might have occurred in the springs. *Recheck* periodically.
- --- *NEVER* re-use U-bolts! A properly installed U-bolt will stretch under torque. The results of stretching, and its effect on the threads, lower a used U-bolt's ability to sustain the required clamploads.





U-Bolts

WHAT DO U-BOLTS DO?

- On many suspensions, U-bolts provide the force necessary to create what is termed the CENTER CLAMP. This provides the permanent tie between not only the spring leaves, but between the spring and spring seat as well.
- The primary functions of the clamp are threefold:
 - 1) attach the springs firmly to the seat
 - 2) prevent leaf breakage through the center bolt section
 - 3) prevent center bolt breakage due to shear.





U-Bolts

WHAT DO U-BOLTS DO? (cont.)

- When the spring's center bolt area is clamped solidly against the axle pad, as in a vise, then the center section cannot bend.
- If it cannot bend, then it should not be able to break at that point.
- For the above process to work, U-bolts **MUST REMAIN TIGHT.**





U-Bolts

U-BOLT INSTALLATION

- Are you using the proper grade?
- Are the U-bolts *Properly Aligned*?
- Is the *Top Plate* bent or worn?
- Are the *Alignment Holes* in the *Saddle* worn?
- Have you *Properly Torqued* the U-bolts?
- If the spring has broken in the center bolt section, it will push up and can bend the top plate. If this has occurred, do not re-use the top plate.





U-Bolts

- Similarly, if the alignment holes in the saddle are worn, the spring may twist back and forth.
- The effects of that twisting motion will cause premature failure.

TORQUING

- Consult your vehicle manual for required torque.
- To check for proper clamping torque, *rap* the U-bolt *with a brass hammer* after torquing, *the U-bolt should ring*. If it gives a dull thud, it is not clamping the system.



U-Bolts

- Here are some general torquing guidelines.

U-BOLT TORQUE CHART

SIZE (dia. x thread)	TORQUE (ft. lbs.)	SIZE (dia. x thread)	TORQUE (ft. lbs.)
1/2 x 20	66 - 84	3/4 x 16	279 - 330
9/16 x 18	93 - 116	7/8 x 14	441 - 511
5/8 x 18	129 - 157	1 x 14	665 - 757
3/4 x 16	223 - 264	1-1/8 x 12	943 - 1059
7/8 x 14	353 - 409	1-1/4 x 12	1300 - 1443

RETORQUE TO THE ABOVE TORQUES AFTER 500 MILES & RECHECK TORQUE PERIODICALLY

