LUG NUT WARNING!

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This is to inform Model A'ers that a potentially dangerous situation exists with some currently available wheel lug nuts. After much research, consultation with knowledgeable Model A'ers, and careful review of an "AR" wheel lug nut drawing, it has been concluded that there is a potential safety problem with some reproduction lug nuts. Significant wheel and hub damage can, and in two specific cases has, resulted from using these "unacceptable" lug nuts now on the market. If left unnoticed, the wearing condition could ultimately result in the loss of a wheel. It is believed, however, that significant wheel looseness would first occur, providing a warning of the impending serious safety problem.

The two cases were unrelated and had somewhat different conditions leading to the determination that some reproduction lug nuts are not safe to use, and therefore are unacceptable. In both cases, there was no indication that a problem existed when these lug nuts were installed. They tightened up like acceptable lug nut. However, it was later determined that these new lug nuts were not fully seated.

In the first case, the problem was discovered only after driving with the faulty lug nuts for over a thousand miles. While returning from a long tour, a loose wheel was recognized. The driver pulled off the road. The wheel was loose, yet the lug nuts were tight! The wheel was replace with an undamaged wheel and original type lug nuts.

In the second case, after installing a set of 23 reproduction lug nuts, it became necessary to remove the wheels after driving about 100 miles. Three lug nuts on one wheel were very hard to remove. They were found to have damaged the threads on the hub stud. Prior to using them. all the lug nuts and studs were chased. The threads were again chased, and the lug nut thread length was verified to be correct. This included tap drilling deeper to provide .75 inches of full thread on these three lug nuts. After driving a couple hundred more miles, the lug nuts were again hard to remove. After much frustrating analysis, it was determined that a thread relief exists in a normal lug nut that did not exist in these three defective lug nuts!

The enclosed sketch shows these conditions. The first cross-section is the "AR" lug nut. The second is our best estimate of the 11/16" hex size lug nut used for a short time after the "AR" nut was replaced. Lug nut number three is the most common Model A lug nut. The fourth cross-section is the unacceptable reproduction lug nut, which lacks adequate thread depth and lead-in thread relief.

If you have reproduction lug nuts of the common type, check to see that they have the following characteristics:

1. The overall length must be at least 1-1/16 inches.
2. At the entrance, there must be no threads for the first 3/32nds of an inch.
3. The tap drill depth must be at least 7/8 inch, and
4. The full thread length must be at least 3/4 inch (which can be checked with a 1/2-20 UNF x 3/4" long bolt).

It is hoped that this information will provide a warning to Model A owners of a serious safety situation concerning reproduction lug nuts and a means to check their acceptability.

