

This data is for a rolled thread bolt, one might expect the machined thread of the Europa axle to have lower capacity. See

<http://www.portlandbolt.com/technical/faqs/rolled-vs-cut-threads-bolts/>

This material deformation phenomena is why I would not recommend using Loctite on the threads of the nut. The nut isn't the issue, the issue is over-stressing the spacer and axle by the inner bearing race. If the assembly has lost pre-load, you need to know and crucially to be able to accurately restore the correct torque level. Accurate assessment of loss of nut clamp load isn't possible if it's been treated with a locking compound. The astute reader will also realise the same argument is true for splines with Loctite, but the recommendations of this report aim to make metal deformation a thing of the past, in those circumstances Loctite on the splines is helpful.

The ultimate cure is to stop the axle to inner bearing mating face deforming, by using one of two methods, both relying upon increasing the area of contact and thereby lowering the contact stress.

Option A

The solution best suited to a DIY home approach is to use the Hillman Imp inner bearing 6006/31 which doesn't have a reduced abutment area to accommodate the bearing seals, see comparison pictures following. The one on the right is the S2 Europa type with seals popped out. This mod requires that a grease reservoir be created, described in the earlier recommendation section of this report.



Also see picture following of used shafts from a Hillman Imp, I don't know their history because the photo was lifted from eBay, but the ad said they needed new UJs so they're not new by any means. The lower one has a better view of the bearing seat and has no marking, also the splines are still perfect.