

Should we grease Trackrod Ends?

“Don't grease the trackrod ends on your Morgan. It's the cones which provide damping to the steering and if you grease them you'll get steering wobble”. That's what I've heard over the years but I found that if I greased the trackrod ends or squirted chain lube, I got lighter steering without the wobble. I spoke to John Rowland at the 2014 Sporting AGM. Here's what he sent me:

“As you know, I believe that track rod ends were meant to be greased from day one....and probably were. The damping should be done by viscous drag in the grease film, not by metal grinding together. If this happens, apart from the strain on the track rod, the car steers in an odd jerky 'click-stop' way, making it difficult to hold in a straight line; it is always creeping to the left or right. Very irritating. I fitted grease nipples around 1979 after this happened to me on a very long motorway in Belgium!

My late-type trackrod ends were drilled and tapped 1/4in. UNF or whatever, and a small diameter hole, (5/64ths, 2mm or similar) drilled obliquely in each from as far down the tapped hole as possible to emerge, one hoped, about half way down the taper bore. In the photo the 'tramlines' finish on the bore was obtained by lapping with coarse valve-grinding paste. (Good for grease retention.)



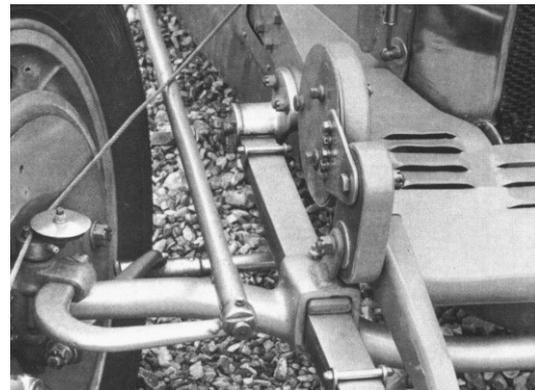
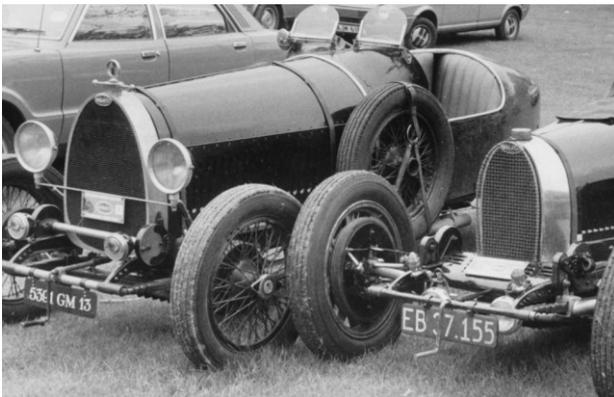
On the passenger side trackrod end, the nipple faces forward, and on the driver's it faces up.....I think I must have done this to stop the nipple getting squashed by the steering drag link on full lock.



The bronze cones (10° taper on one-inch phosphor bronze bar) have been vandalised with a fine triangular file to hold more grease. OK, I'm obsessive.



The lapping tool is just a 10° taper on a odd bit of 1in. steel bar. (The threaded end just happened to be there, but it is useful if you need to hold it in a chuck.) So, after fitting the grease nipples, the obsessive approach is: lap the trackrod end bore until the worst of any ovality and seizure marks have gone, then drill a piece of bronze bar for the bolt, and machine a 10° taper on the end of it. Keep trying the trackrod end until it is a snug fit;..... you may have to tweak the 10° setting; it only takes a few minutes!then part off, ensuring that your new cone doesn't protrude from the top of the taper bore. Yes, you can buy new taper bushes, but there's no guarantee that that they will fit accurately into 70-year-old components that have led an adventurous life! A good fit means a continuous grease film, giving efficient damping. Use any decent 'No.2' consistency grease,(the most usual type) NOT oil.



Another sporting motorcar almost as well known as the Morgan 3-wheeler also used sheared grease film damping devices; it was the Bugatti. From 1920 the Type 23 'Brescia Modifié' Type 30 and from 1924 the legendary Types 35 and 51 used shock absorbers which had to be greased. (The French term 'amortisseurs', or 'deadeners' is more accurate.) The Bugatti shock absorber was a small drum brake, with a single almost circular unlined cast iron shoe which was permanently in contact with the drum. An expander device was used to increase or decrease the 'braking' effort. On some of the attached photos a grease nipple can be seen near the edge of the damper backplate. (The usual 1920s flat-top hexagonal type known as 'plug type', or 'Stauffer Type' in the USA.) I imagine these devices although ingenious were rather messy when in regular use, which could explain why the dry friction Hartford type are often used instead. There used to be a bench-mounted Bugatti shock absorber set up for visitors to try in the Bugatti Trust building at Prescott a few years ago. Fortunately, I happened to be there when Ivan Dutton, Morgan Aero (3W) driver and Bugatti expert was on hand to explain. He said the damping was entirely due to shear in a film of grease, but many of the original dampers had been run dry and wrecked. Unfortunately, there were owners who thought they were intended to run dry. I thought, this is beginning to sound familiar! The feel of the Bugatti device is similar to a Hartford, but with less 'stick' at the end of the travel."