

Ottawa MG Club - Rack and Pinion Technical Session - 2023/07/29

Presented by Michael Cooke

These are notes and pictures from the tech session, with some supplemental material.

Intent was to look at the MGB rack and pinion steering, its possible wear and tear, and easy solutions.



Picture 1:

The worktable with 3 different racks being used as session samples.

Top is rack 1, the OEM original installed on ALL MGBs.

Right rack 2 is a never-installed Argentinian made 'improved' rack from Moss Motors. See Moss's latest notes for latest offering from Moss part 453-619.

Left rack 3 is a recently installed 'improved-improved' rack from Moss. It was in a front-end crash. It is Moss's latest offering.

There are 2 possible wear spots. First the interface between the rack and the pinion. This will manifest as 'bump steer'. Secondly the interface between the rack ends and the inner tie rod ends. This will manifest as steering rattle.



Picture 2: the various components.

Particularly item 51 is the rack (note the teeth) and item 53 is the pinion that meshes with the rack and moves the rack sideways as the pinion is turned by the steering wheel.

This then pushes or pulls the tie rods (items 36/37) to turn the front wheels.



Picture 3:

For rack 1 (OEM and rusty) shows the basic tools required to service the wear.

On the right is a 1/2 inch wrench and a fridge magnet for adjusting the rack/pinion interface.

On the left are the essentials for adjusting the rack/tie rod interface.

A couple of slip wrenches may be needed to separate the 'lock nut'.



Picture 4:

For rack 3 shows the basic tools to adjust the rack/pinion interface.

Screwdriver and 9/16 inch wrench to adjust the centre screw.

A 7/16 inch wrench allows removal of the cap but isn't really required since this rack does not use oil for lubrication but is 'greased for life'.

The tie rod ends are also greased but rely on 'nylon' bushes.

Hence the rubber gaiters are considered 'dust protection' whereas on the OEM rack the lubrication is by oil and the gaiters hold the surplus oil. Do not use oil instead of grease or vice versa.

For rack 2 the cap is a different size and uses a 1/2 inch wrench to remove.



Pictures 5 and 6:

For rack 2 (and rack 3 is similar) shows the rack/tie rod interface as tightened from the factory and then as loosened for curiosity.

So, if you feel the urgency to replace the grease this is where you go.

If you look at the usual suppliers you will find most of the wear parts are no longer available e.g. bronze bushes and springs.

The funny thing is that some of these are available on MGA or Morris Minor or Mini sites but interchangeability is suspect and the prices are now outrageous.

Almost nothing is interchangeable among the 3 racks shown above.

The good news is that the MG engineers thought this through on the OEM rack and built in a lot of adjustment that you can easily make.

Given the wear on my 1973 and the adjustments I have had to make I estimate that I have about another 125 years left before I need to buy and install the latest and greatest from Moss.

Michael.

For a video look at how this is done search Google for MGB Rack & Pinion Part 2