

## +4 STEERING

By Bill Button

My first Morgan was a 1963 Series IV with a 109E Engine. I loved this car, although I didn't know it at the time. It wasn't until my wife decided she needed a 4 Seater that I found out. My new (and present) Morgan is a 1963 +4-4Str. It does carry Madam's luggage. But it also drove like a truck compared to the 4/4.

This started me on a series of up-grades, modifications and just plain old maintenance to get this truck to drive like I felt it should. I have never been able to get it as nimble as my old 4/4; after all the Triumph engine is a heck of a lot heavier than that Ford. But I certainly have improved it.

My first task was to do the obvious: King Pins, Bushes, Wheel Bearings and a rebuild of the old Burnham Steering. This is the second time I had rebuilt a Burnham. Of course the 4/4 was the first. It was in bad shape; broken bearing race, peg badly worn etc. etc. When I was done it still steered like a truck. I exchanged Steering Box's with my 4/4. 4/4 still steered well and the +4 LIKE A TRUCK. I complained to my Morgan friends over and over. They got tired of me and told me, for gosh sakes, get a 4/4 and shut up. I just about did; or at least I started to look at Miata, Toyota, & Ford engines.

I read Fred Sisson's "Morgan Garage". Fred says; "Do you "steer" your +4 or do you "suggest" that it change direction"? "Be honest.....The old steering box is horrible!" That did it. John Worrall "Heart of England" supplied a Gemmer and I installed it. With the addition of Koni Shocks I now had about as good steering as I could get. It was a lot better. It was with this steering I participated in MOA III (Morgans Over America). 15,000 miles on the clock and those long straight roads in Dakota & Montana were a "Piece of Cake". No wandering about, but dead smooth, straight steering.

But I was/am possessed. John Sheally II claimed he installed "Needle Thrust Bearings" and removed the Brass Plate and Damper Blades. Neat; get rid of the friction. At the Bearing Shop I could not find "Needle" Bearings 1 7/16" ID (the OD size of the stub axle barrel)(JHSII fabricated a collar to fill the void). But they had a "Ball Thrust Bearing" the right size. The rub is; it is 5/8" thick. I liked the Ball Bearings and installed them. It raised my Morgan 1/2".



I was ecstatic. Smooth easy steering. I even considered changing back to a 14" steering wheel rather than my 17" Brooklands. But on a run to the "MOGNW" annual banquet the +4 developed "The Dreaded Morgan Wheel Wobble" or "St-Malverns Dance". The next day I drove the long way home (down Hood's Canal) on a twisty un-even road. One that I could drive at 50MPH + and live to tell about it. Sure enough "Wheel Wobble" big time. Don Griemel suggested a VW Steering Damper. \$25 and a little jury rigging and it looks like the "Wheel Wobble" is cured without adding a major friction source. Don't get excited; I am still testing this to insure it is indeed a cure. I am going on a 2,500 mile run to Northern Canada and back. When I get back I should know the answer.

Now I still have/had a problem. The way the "Ball Thrust Bearing" is designed; it is open at the top. The bottom ID is 1 7/16" and the top ID is about 1.485"; just slightly bigger so the bearing can rotate. Although I installed an "O" Ring and it is full of grease, there is still a very good chance that water, grime & grit will flow down the stub axle and into the Bearing. I needed gaitors for the main spring that were tight enough to seal the bearing. The local commercial hose company had rubber hose 2 1/2" ID that collapses . It has a spiral wire in it similar to a dryer duct. Now; unless the hose wears on the spring I should have a sealed unit.



Peter Mulberry fabricates an interesting kit. If I decide this is the way to go I expect I will purchase his kit. Seems a bit pricey, however, there is machining as well as new springs. I expect he has solved the dirt & grime problem.



Roller Bearing Kit - Replaces the damper blades, supplied with newsprings. £160.00 +VAT

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