

ADJUSTING THE FOUR SPEED HYDRAMATIC

(The following was extracted from Issue 50 of Tee One Topics – freely available on a number of web sites.)

We covered this topic way back in March last year (Topics issue 42 page 631) but very recently I answered a query about the front gear box band and its adjustment. Generally, automatic gearboxes seem to have generated their own coven of practitioners who guard their knowledge closer than Aunt Millie and her secret scone recipe. Sadly this knowledge often goes with them to the grave and hapless later owners have to learn the hard way how to keep their transmissions from self-destructing.

The Hydromantic first used by the Factory had already been in production and use for 20 years in a variety of cars and at the time was probably the best unit available at the time. It was robust, very positive and except when subjected to gross abuse would at least get you home. One unique feature which I think is quite foreign to the modern scene is the fact that the Hydromantic enjoys two pumps. The front one is obviously driven by the engine and the rear one by the wheels. The latter allows you to demonstrate push starting – a feature unknown in today’s world of whizz-bang transmissions. The Factory were impressed by this feature as it guarantees that there will always be a connection between the wheels and the engine even if the latter expires! As you know with the later GM400 unit attached to Shadows et al, the engine stops you are instantly in angel gear!!!



The Hydromantic has two bands that grip the drums and their adjustment is fairly critical to the unit’s operation. One of the bits of folklore in the Nation’s Capital is about the box on a fairly prominent vehicle that was considered a little rough in the changes! A couple of specialists not trained in these units decided a little experimentation was in order. The band adjusters as you know are readily accessible from with the car via a hole in the floor. So our intrepid pair adjusted the bands by feel. And indeed they did smooth the box down considerably. Unfortunately the net result internally was epitomised by that great Homeric poem ‘Horatio at the Gate’. The line that comes to mind was ‘those behind cried “forward” and those in front cried “back” ‘! And so it was inside that poor gearbox the two drums fighting each other until on a fairly long trip the whole unit exploded, legend has it that the only reusable bit was the dipstick but no doubt the story has improved over the years!!!

So the band adjustment needs to be done properly with the right tools. Fortunately once they are set up they rarely need re-adjustment which is comforting to those with cars at Terra del Fuego and no adjusting tools! The actual tools for adjustment are basically a tube spanner with another tube spanner inside of it, the former to unlock the lock nut and the latter to turn the adjusting screw. They are not standard tools as they have to be fairly long to reach the bits through the floor. They can be made up as can be seen in the photo at right. As you can see it is a fairly specialized tool, so much so that apparently the Factory supplied them with cars exported to Australia at least!





Elsewhere readers may recall my being fairly pointedly criticized for even suggesting that owners might actually overhaul their own unit. This was followed by an account of my critic's own experience with gearboxes and the satisfaction he had from having the unit overhauled by a 'professional'.

The point of my repeating this is that I had occasion ages ago to ask the very experienced 'professional' whether he had a rear band adjusting gauge for the box fitted to the first Silver Shadows. I explained that while I did not need one I would like a copy in case I did. He in turn assured me that the one gauge would serve both series of boxes. Being an amateur, I didn't argue although I did try a few 'are you

sure's?' and went away scratching my head particularly as the Factory seemed to want two different gauges for the two model boxes! Subsequently one of my mentors let it slip that he had a genuine gauge for the later box. A surprisingly small amount of physical violence followed and the gauge was mine. A quick trip to George the machinist and I had my own.

As you will have seen the dimensions are now on Page 632 of Topics and if you happen to be in Bulawao you can find a machinist and have your own made. This last remark had meaning last week when I corresponded with an owner in the middle of the United States. Seems he was 600 miles from the nearest agent!!! And I thought we were isolated in Canberra.

But the front band adjuster is another matter. If you don't have one you will need to research where to get access to one. If that fails you may care to use the original adjustment procedure which follows.

