

NOW YOU HAVE IT - NOW YOU DON'T, SYNCROMESH THAT IS

So how did the Morrie end up on the back of the recovery truck known as the “Truck of Shame”? Well it all came down to 3 little springs and yes they were little.

It all started well enough that day, just join the others on a VCC club run on a pleasant Sunday run on the outskirts of Wellington. I was motoring along enjoying the run in the Morris and came up to an intersection, which of course, meant a change down in gear from 3rd to 2nd. Well that was the plan. The gearbox had other ideas because without warning it decided that 2nd gear was not going to be allowed. So I drifted to a stop on the side of the road around the corner. I could find reverse, 1st and 3rd but no amount of persuasion would convince the gearbox I needed 2nd. 1st and 3rd was not enough to negotiate the hills of Wellington to get me home. So the AA was called and home we went on the “truck of shame”



The ride home on the “Truck of Shame”

A few days later it was time to investigate further and an archaeological dig into the gearbox was ordered. I should explain that in having owned this car for 51 years, I have never had to open the gearbox before. Only oil changes and new rear mounts had been the attention it had received over the years. First, out with the furniture (i.e. seats and carpets,) off with the steering wheel to make room to operate, and up with the floor boards to expose the patient. Surgery began by disconnecting the drive shaft, then unbolting the gearbox from the engine. Next, the rear gearbox mounts were removed allowing the offending gearbox to be removed and lifted onto the operating table. When peering into the box to remove the main shaft, it was clear what had happened to stop the gearbox working. Two small springs had partially escaped their assigned positions in the synchromesh unit and jammed the unit. Opening up the box was done by following the recommended procedure and sequence to allow the gear main shaft with the gear clusters, forks and bearings to be removed along with other bits and pieces. The synchro unit was then removed from the shaft. Cleaning out the box revealed more fragments of spring plus two ball bearings that should have been in the synchro unit but had escaped in a successful bid for freedom.



That's the bits of spring found plus the two ball bearings. I have no idea where the rest of the springs or the 3rd ball bearing had gone as there should be in total six springs and ball bearings. They were never found. Three of the springs and ball bearings shown are lined up with the holes within which they reside.



Showing the position of the replacement synchro unit position on the shaft with the old unit at the top

Fortunately, I had a couple of gearboxes lying around so they were gathered up and likewise disembowelled to extract the synchro units. A good unit was assembled from all the various parts and fitted onto the main shaft. A word of advice is to also check the brass (?) lining of the synchro unit for wear and pick the least worn as this part is vital for silent gear changes. And yes, you too can have fun getting the six springs and ball bearings into their respective holes while getting the outer ring mechanism on. (Hint, use a suitably sized jubilee clip or a piston ring compressor if you can get your hands on one, otherwise you can expect

all six springs and ball bearings to be forcefully expelled to the far nether regions of your garage never to be seen again. I prevented this by assembling the unit inside a bag to catch any escapees while manoeuvring the jubilee clip and outer ring. While the box was apart, I used this opportunity to replace the main shaft bearings with new ones.

While down in the lower depths of the car, I also used the opportunity to also change the clutch plate and also refurbished the brake master cylinder as it was showing signs of leaking. Easier to get at those things from the top than by writhing around on the floor beneath the car.

Assembly was of course, in the fashion of that found in all workshop manuals, “assemble everything in the reverse order it was dismantled”.

I would like to thank Joe Greenaway for collating my order of parts and sending them. I also thank him for advice on dealing with gearbox synchro units.

In conclusion, I can only guess that the three springs had disintegrated over time. One had probably broken and ejected its ball bearing which came out unnoticed in an oil change and the other two finally gave up and also parted company from the synchro unit. I had noticed that there was some gear crunching increasing over the last couple of years so the badly worn brass (?) lining and broken spring may have been the first signs of trouble in the synchro unit.

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