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The conversion of replacing the standard 2 litre 4 cylinder Saab engine with the all-alloy Rover 3.5 litre V8 (ex Buick) engine carried out by the previous owner presented it's own problems. The gear ratios in the diff were making the car unpleasant to drive. I constantly used 2nd gear when taking off as 1st gear was too vicious and short. Very nice for those guys and dolls who like to burn rubber on the rear wheels. Most vehicles on the road traveling at 120 kmph in 5th gear rev at 3.0 rpm whilst this beast was revving at 5.5 rpm. Not a very economical situation. My information is that the standard 5 speed manual gearbox used in the TR7 was in fact designed and developed for the Rover 3500 model which has the 3,5 litre V8 engine. The problem thus lay in the diff gear ratio. The standard diff ratio for a TR7 2 litre is 3:90 for the 5 speed gearbox, 3:45 for the 4 speed gearbox and 3:08 for the automatic which I am told is rare in this country. It was the latter ratio that the manufacturers used when they built the TR8 for the American market. This would mean changing the crown wheel and pinion shaft, both of which are readily available in the UK AT A PRICE. The original diff housing, side shafts, planetary gears and banjo housing are retained. Armed with this information I thought that this would be a walk in the park and consulted the auto digest and found that the Ford Cortina 3.0 litre and Chev Commodore use a 3:08 ratio and the Chev 4100 uses an even better 2:92 ratio. Simply pull out the crown wheel and pinion and stick in any one of the above, what a pleasure.

Well after much investigation and procrastination I stuck the beast onto stands and dropped the entire rear suspension assembly. After four months of fiddling I had bought both a Cortina 3.0lt and Chev 4100 diffs and was no closer to an end result than when I originally bought the car. The Ford and Chev diffs were wider and their hanger brackets were different. In an effort to keep the car as original as possible the object was to keep the original diff and alter the guts. The banjo housings could be swapped but the problem was that the original side shafts splines were different and would not marry to the foreign planetary gears inside the banjo housings. The planetary gears were also not compatible in that their pitch was different. I sought expert help and was told that for R11 000 they could alter or build a diff to my specifications. The cheapest option would be to import the crown wheel and pinion shaft from the UK. Rimmer Bros offered all of the abovementioned ratios but Brenda contacted SS Preparations and found a good second hand 2:84 ratio. (What a find)

It finally arrived and bolted into place with precision. Besides the original crown wheel and pinion shaft every part went back as it had come out. I took the diff assembly to a reputable gearbox and diff company who checked the components for back lash and excessive free play. Perfect first time and with no adjustments needed the rear suspension was reunited with the beast.

It's an experience driving a V8 with an automatic gearbox but a totally different experience with a nicely geared 5 speed manual gearbox to play with. I'm happy to report that all the gears in the gearbox are now being used and at 120 km/h the revs have dropped down to 2.4 rpm. 1st gear has more than enough grunt to get you going and at a recent trip with the boys and girls to Clarence I used the same amount of fuel as the standard TR7's. Granted I was idling along at the back of the pack.

There was one other stumbling block and that was to loosen and tighten the pinion shaft nut which is 1.7/8 in size. The nut is recessed within the diff nose cone making it impossible for an open end spanner, ring spanner or socket to work. This required a specifically designed tool to loosen and tighten. A socket could be used but you would then have to somehow hold onto the pinion gears which is not advisable. I bought a dropped forged steel 1.7/8 open end / ring spanner, cut it to pieces and re-welded the ends to make it fit. The spanner was then inserted over the nut and strapped to the diff housing in order to hold the nut in place. A bar was bolted to the drive flange, inserted onto the pinion shaft splines and the pinion shaft unwound from the nut. To assemble the process was reversed.

Anybody wanting to remove their pinion shaft nut will have to contact me for this specially designed Murphy product.

Cost of crown wheel and pinions shaft R 2476.65

Postage R 1200.00

Spanner (1.7/8") R 301.42

Total conversion R 3978.07

Edrose Sunroof: At the recent Clarence outing the chairman and I on route to Bethlehem to get spares for the clutch slave cylinder, decided to see just how the gear ratio conversion performed. Well at an undisclosed speed the edrose sunroof decided to part company with the car. To import a new one from Rimmers would cost R 3961.21. Recently Shays Auto Trimmers in Pinetown replaced the damaged material section. An expensive trip to Bethlehem!

Total Cost R 1500.00

Front Shock Absorbers: The front shock absorbers were in desperate need of replacement. I took the samples to Telflo in Westmead (an Armstrong supplier) and spoke to a lovely lass by the name of Debbie but was not successful in matching up a pair. I eventually reverted to James Davidson from Suspension Solution in Gauteng who supplied a pair to the exact spec.

Total Cost R 893.76

Rear Shock Absorbers: The rear shocks were also replaced but this time Debbie the lovely lass from Telflo in Westmead came to the party and was able to match a pair. Part number Armstrong 300270. (John Leonard I think your rear shocks need replacing).

Total Cost R 265.62

Coil Springs: The coils springs had collapsed on the rear and front. These were reset to the correct specs by Stableride off Ungeni road.

Total Cost R 350.00

Gearbox Mounting: The other night going home after a Noggin on the M13, I went through a sharp dip in the road when suddenly there was a vibration throughout the car. I battled to select gears and when they engaged there followed a loud bearing whine. I nursed the car home and put it on stands the following day. With the chairman's advise I found that the bolt that goes through the rear gearbox rubber mounting and into the bottom of the gearbox was not there and had not been there for a long time. The gearbox had jumped and was now lying at an angle thus the stiff gear selection, the bearing whine and the vibration. The threads in the gearbox which hold the bolt were stripped so after finding the correct size bolt with coarse threads and some conveyor belt rubber, new threads were cut and the necessary repairs were carried out and the gearbox realigned. No more funny feeling and noises just smooth sailing.

Total Cost R... (a phone call to the expert and my time)

Brakes: Conversion had also been carried out by the previous owner which is the front calipers being replace with those from a Ford Cortina. These bolt on exactly and no modifications are necessary besides bending the brake piping to meet the new calipers. These calipers have bigger brake pads so in theory the car would have better braking.



