

## Episode 4: Shocks and Underbody

Hi, my name is Alister (Al) Gardiner. This is another episode in the trials and tribulations of our Morris 8 "remobilisation". I hope readers might find something of interest amongst the content. My apologies if it is all a bit ho-hum to the more accomplished of you. For feedback I can be contacted on 0279222242, or at [grannybigal@xtra.co.nz](mailto:grannybigal@xtra.co.nz).



## Topics

The topic of this instalment covers a few things I found necessary to do under the car, although the chassis was complete and pretty much refurbished. As mentioned previously, I still have a few future articles lined up, such as:

- starter motor nightmare - did these things ever work at 6V?
- additional instrumentation and electrics - LEDs, turn indicators and 12V
- upholstery trim - a bit of individuality on the door pockets
- starting issues - how can some things so simple be so difficult?
- my car battery – a custom solution using the ubiquitous 18650 lithium ion cell

## Condition of the Underpinnings

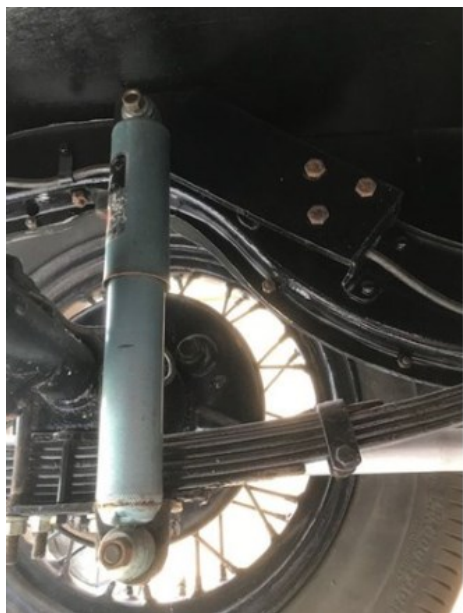
Fortunately most of the underbody work was carried out when the chassis was refurbished by the previous owner, prior to our acquisition. The chassis had been completely painted, new brake lines had been run, and a front to back wiring loom had been installed. The body had been rebuilt and fitted. From what I can see, the chassis is pretty much rust-free. Main items that still needed attention were the reconditioning of the brake master cylinder along with general brake adjustments, installation of a full exhaust system, adding front axle bump stops, sorting out the fuel tank sender (which was covered in an earlier instalment), freeing up the LHS swivel axle, and selecting and installing telescopic front shock absorbers. I also swapped the rear springs over to reduce right side sag; this instalment focuses mainly on the front shock absorbers

# Shock Absorber/Damper Substitution

## Rear

The rear shocks had already been replaced with telescopic units; I understand that the 1937 Series 1 used the pear shaped types which as far as I know are no longer available. The telescopic units previously installed on the rear are Monroe Wylie 110 series. The photos below show the LHS arrangement with an adaptor arm at the top.

For anyone who intends similar, the modification bracket connecting the top shock mounting eye to the original 3-hole chassis mount position is approx. 80mm wide at its narrowest point and is made from 8.5mm thick steel plate. I am assuming that this conversion was made prior to the car being taken off the road.



## Front

Two reconditioned Armstrong lever arm dampers were found in one of the loose parts boxes that came with the car. I thought I was in luck until I realised that these were both oriented for the same side, and also had slightly different arm lengths! Careful measurements established that neither unit would work and so they are now back in the box. These Armstrong lever arm hydraulic units were not original, and anyway refurbished ones are only available on exchange - and of course they are expensive.

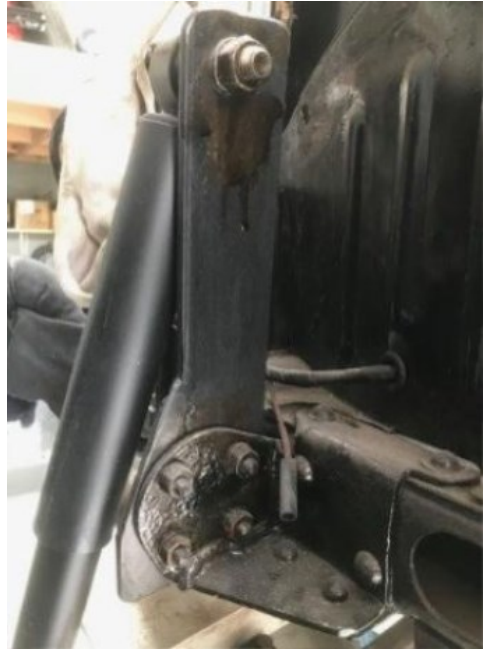
Many enthusiasts recommend a telescopic replacement as being superior, so it was not a difficult decision to go for this at the front as well. I found an early on-line reference to a Morris 8 front mounting conversion kit which appeared easy to fabricate. This is shown in the photo opposite.



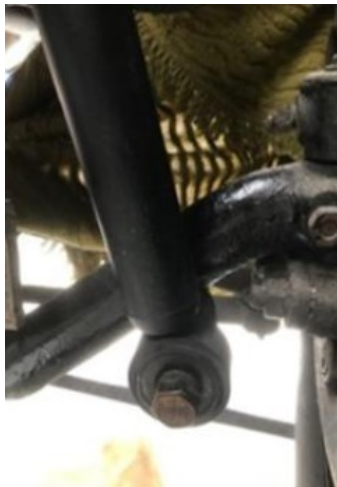
*Earlier conversion kit for front shock absorbers (internet source)*

Next step was to select a suitable model of shock absorber. My main criteria for selection were the weight of the vehicle, the relatively long travel required, and the top and bottom mounting methods (unfortunately manufacturers rarely provide the damping coefficient, which is the most important characteristic of the lot). After wading through dozens of models and narrowing these down to those available locally, I located a good long-travel light vehicle shock, the KYB 342022. Furthermore it is reasonably priced (currently available from SCA NZ for \$124, although from memory I got them from Australia for around \$170 for the pair). This damper is intended for use on small vehicles. I selected it for the relatively long travel of 187mm (desirable here due to direct attachment close to the end of the axle, where maximum axle deflection occurs). The dust cover dia. = 38.8mm.

The bracket used to locate the top of the shock absorber for the chassis mounting was fabricated from a 260mm long piece of mild steel angle with a section of 50 x 50 x 5.25 mm thick. I welded a flat extension to the bottom of the angle bracket so that it could use the 4 bolt holes of the original damper mounting bracket fixed to the chassis. Overall the new bracket provides an “at rest” distance of approx. 392mm between the shock absorber top and bottom mounting eyes (this is approx. 50% extension).



*View from rear) LHS shock and bracket fitted*



*(view from front) LHS shock and bracket fitted, showing top attachment to the new bracket and bottom attached to the axle mount.*

## **Shock Absorber Performance**

How well do these telescopic dampers work on the car? I don't have much idea at this point, since I have only run the car up and down the road a few times. Having said that, we live in an older suburb and the road is pretty rough. The ride felt very firm and stable (ignoring the somewhat indistinct steering). It is certainly not over-soft.

## **Exhaust Pipe**

Because the car was not mobile at the time, I made up a pattern and had an exhaust system fabricated, manifold flange and all by a local supplier. This was not very successful, as I had no real idea of where the original pipe should run. I believe the pipe was originally 1 1/8" diameter in one complete section, but I was told that this gauge pipe was no longer available. So I had 1 1/4" diameter pipe fabricated in two sections, and supplied with a separate muffler for fitting to the car. I had to adjust the bend angles a little and fabricate my own extra brackets. A fiddly job that I am not particularly proud of! Still, it is not easily seen. One day I might make a better job of it.

## **Underbody Protection**

I have still to treat the underbody and chassis for rust protection, but I don't intend to do this until I have obtained reregistration and WOF. I will then use my time honoured method of hand brushing a thick black petroleum based body sealer on all under-surfaces that are easily reached, followed up by spraying fish oil with a pressure fed flexible wand into every other nook and cranny I can get to. This includes drilling holes where required into closed sills and compartments. From an initial inspection, this does not appear to be necessary on the Morris 8 as most chassis rail internal surfaces are reasonably accessible. A messy job, because it drips for days and remains tacky for weeks, but over the years I have found it a successful method.

That's it for this this instalment - more next time.