



Fitting a Panhard Rod in a 1994 +8, or How I stuffed a Swan in to a Moggy.

By Colin Peters

I thought a Panhard Rod was the third thing you had to acquire after a helmet and roll bar when you went racing. However, there has been a lot of discussion in some Morgan circles about the benefits of a Panhard rod fitted to a standard road going Morgan, particularly if driven in a slightly spirited manner.

So what is a Panhard Rod? If you bolt a car body onto cart springs, then bolt the cart springs to the rear axle you have yourself a Morgan. If you try and corner quickly, the car body tries to fly off the road on the outside of the bend, dragging the cart springs with it. If the car body pulls hard enough, the cart springs will pull the axle with them. At this point the whole back end of the car may hop sideways to the outside of the bend if the tyres are pulled off the road surface. Car body, cart springs and axle come back into alignment, and, depending how far round the bend you are, the whole process may start again.

I had this happen to me coming quickly off a roundabout but I did not realise at the time what was happening. The Panhard rod stops this sideways hop by fixing the middle of the cart spring on one side to the chassis on the opposite side. Here ends the science lesson! So a Panhard Rod is supposed to firm up your rear end which sounds good to me!

After a bit of reading I found that installation is not necessarily straight forward in a +8 which did not surprise me in the slightest. The problem is that the outlet from the petrol tank will get in the way of the rod. One answer is the Swan Neck Panhard Rod from Suspension Supplies Limited. The rod, when fitted, flies gracefully over the petrol pipes. Sorted. (Other rods are available.)

I was a little surprised to find no instructions with the kit when it arrived. In fairness to SSL, there is telephone support if required. I am always up for a challenge, how hard can it be? On the plus side though there was none of the pages and pages of safety notices. You know the sort of thing; Do not work on a moving car. Do not poke your eyes out with the Panhard Rod... etc.



This picture shows the components of the kit laid out at the back of the car as they would be installed. The curved end of the rod will arch over the fuel pipe exiting the fuel tank on the off side. This end of the rod will attach to the bracket which in turn is bolted to the cart spring. The rod is positioned behind the back axle and differential. The other end of the rod attaches to a cross brace bolted to both sides of the chassis behind the axle but in front of the petrol tank.



Most other kits have the rod clamped to the spring but there are possibly some disadvantages to this. The SSL kit uses this bracket to attach the rod to the spring. The axle is clamped on to the top of the spring by two large 'U' bolts which are attached to a plate under the spring. By undoing the four 'U' bolt nuts this bracket can be substituted for the plate. The swan neck end of the rod is then bolted to this bracket. This



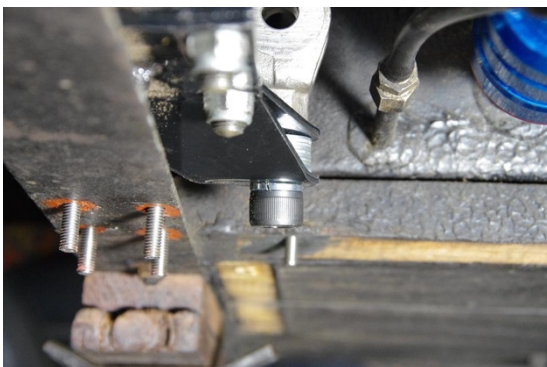
attachment gives a little extra height to the rod and helps to clear the fuel pipe. Note the socket screw under the bracket.



The opposite end of the rod is bolted to this bracket which forms one end of the cross brace and is bolted to the chassis. This arrangement allows the rod to follow the vertical movement of the axle.

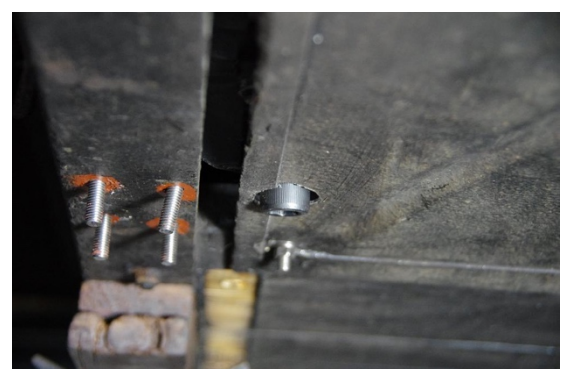
With the car on the ground or on axle stands there is reasonable access to the 'U' bolt nuts and for getting the bolts in for the cross brace. Unfortunately, you cannot slack the 'U' bolt nuts off in this position without dislodging the axle. The answer is to wedge some wood between the chassis and the spring then use axle stands on the chassis. This is also a good tip for checking 'U' bolt tightness as part of your Spring checks.

The blocks of wood can be seen in front of the axle, wedging the springs up on the chassis. Don't put any wood behind the axle, this is where the cross brace goes and you won't get the wood out again! The aluminium plate which the petrol pump is bolted to has been removed for access leaving the pump suspended on the left. The 'U' bolt nuts and plate can be seen below and to the left of the blue petrol filter.



The bracket has been attached below the spring by the 'U' bolts. The chassis has been drilled and the bolts positioned for the cross brace. The wood has been removed. You can see how close the petrol pipe looks to the fixing for the swan neck although clearance is good. The socket screw is projecting downwards and will contact the petrol pump tray. This is probably the lowest extent of travel of the spring and axle with the car on axle stands on the chassis.

The petrol pump tray has been replaced and the cross brace will pass below the tray to bolt onto the chassis. I cut a hole in the tray for the socket screw. This allows adequate clearance and any axle movement will be upwards.





This view from above shows the rod passing over the petrol pipe and filter. The rod is now attached to the 'U' bolt plate. The cross brace is attached but obscured from view by the petrol pump plate. There is plenty of room between the Panhard Rod and the differential; I could get my hand between them.



The installation was straight forward, even without the instructions. The only downside as far as I can see is having to drill holes in the chassis.

The bottom line, has it made any difference to the car? Well, you're not going to see a difference like doubling the horse power! However, with what little chance I have had to drive the car this year I feel it has been beneficial. Any cross bracing of a flexible ladder chassis is going to firm the body a bit. Cornering, even at moderate speeds feels firmer. I do feel a bit more confident in taking bends quickly, but is that just a placebo effect? It is a relatively cheap improvement, more so if you can do it yourself. Anything that can improve road holding in a 1930's designed car is probably worth considering.

Colin Peters.

