

Emma's Exhaust:

When I first started this series of refurbishment articles I mentioned that they are mainly orientated towards the non mechanics amongst us; that still applies and I hope our more experienced Group Members will not think that I am trying to teach my Grannie to suck eggs!

Emma's exhaust has always hung a bit low and I've often thought "I'll fix that." Well the day finally arrived when I had to traverse one of those sleeping policemen that stretch the whole width of the road. Unfortunately the traffic prevented a retreat (known in the army as a tactical withdrawal) and I had no choice but to go over it; of course there was the usual grounding noise followed by a slight exhaust blow.

After putting up with it for a couple of weeks I couldn't put it off any longer. This is one of those jobs that would be fairly easy if you had a pit or a ramp but I have neither, which was why I kept putting it off.

It's not difficult to fit an exhaust system but IMO there are two main factors that govern success or otherwise; first how much each pipe is inserted into its mating part, if you don't get this right the mountings won't line up. Second, and most importantly, once the exhaust system is fitted any dog-leg pipes need to be rotated to give the best positioning of the parts they fit into.

Looking at Emma's exhaust it was fairly obvious that the dog-leg pipe between the two silencers was incorrectly positioned and was making the rear of the front silencer hang low, not only that but it had been cut in half and two pieces of tube were clamped around it, which was the source of the exhaust blow. As most of the exhaust clamps had been over-tightened it was a pig of a job to separate all the component parts.

If I'm removing an old exhaust system that will not be refitted I don't muck about trying to take it apart and attack it with a hacksaw or angle grinder and remove it in big lumps; in this case I wanted to retain most of Emma's existing system which made life difficult.

Next it was down to the bottom garage to retrieve the dog-leg pipe** that came with the abandoned TD kit I bought off Mark Sadler. With everything back together I rotated the dog-leg pipe for best fit, fitted and tightened the clamps and had a well earned cuppa. Only one problem now insofar as my spare exhaust system was earmarked for Muffin and now I'm a dog-leg pipe short.

Note.

*** This dog-leg pipe had been welded which indicates to me that a standard MGB exhaust is not a direct fit to an NG. The best way to weld a stainless exhaust is to use the resources of a garage with TIG welding facilities.*

After nearly three hours work I've gained around two inches in extra ground clearance, got rid of the exhaust leak and now have a one piece dog-leg pipe instead of two pieces clamped together.

Postscript:

During my time in the military I ran Garrison Car Clubs for seven years and although I don't claim to have the experience of a 'Quickfit Fitter' I helped many people to fit part and complete exhaust systems; so for what it's worth here are my tips for fitting an exhaust system.

- 1. If you can source and afford a stainless system then it is cheaper in the long run, but be aware that they can change the note/sound of the exhaust system and they don't last forever.*
- 2. Layout all the parts in the order they will go on the car then check that adjacent pipes really do fit into each other. Note any loose pipes that might require some form of exhaust putty or silicon sealant.*

3. *Make sure the exhaust manifold is tight, or if fitting new header(s) make sure they are fully tightened where they meet the cylinder head(s).*
4. *Working from the front of the car assemble all the parts loosely being careful to make sure the pipes are fitted in equally and far enough to ensure any mounting brackets line up with their supports.***
5. *Check that as far as possible internal pipes are past the slits in the external pipes; if you cannot achieve this the neatest result/cure is obtained by covering the slit with a stainless steel Mikalor style exhaust clamp.*
6. *Rotate silencers as necessary to ensure that any fixed mounting bracket is either vertical or horizontal depending on fitment. Being out of line can cause them to come out of their support brackets/mounting blocks.*
7. *Loosely tighten any nut and bolt fittings.*
8. *Rotate oval silencers without brackets for best appearance.*
9. *Rotate any dog-leg pipes to line up the system and cure any droop.*
10. *If any droop remains block up that part of the system before fitting/tightening clamps.*
11. *Check the whole system and make sure it's not in contact with the chassis or any body parts.*
12. *Do you need to fit a heat shield anywhere? if you do then the easiest way is to use two extra clamps to hold a piece of aluminium plate.*
13. *Securely tighten any nut and bolt fittings.*
14. *Fit and tighten the 'U' clamps ensuring that the nuts are at the top.*
15. *Run the engine to test it then take the car for a road test, but bear in mind that any new exhaust system will/might appear to resonate a bit.*

Note.

*** Various hanger brackets are available for bespoke exhausts. It's not always possible to find stainless steel exhaust clamps of the right size but CBS (Car Builder Solutions) carry a reasonable range.*

IVA Test:

To pass the IVA test you need to eliminate all sharp edges, this applies to the end of exhaust tailpipes. You can buy special end pipes for most diameters of exhaust pipe and some internet firms/advertisers will make unusual sizes to order. When I built 'Kermit' my Aero Merlin Cyclecar I fitted Triumph T21 motorbike silencers and had to make my own end pieces. I will publish this as a future article titled 'Blunting the Exhaust Pipes'.