My Hawk build part 21 by Stuart Clarke

The exhaust.

I'm starting to make some real headway now with the Hawk and to enable me to finish a few of the other items off I need to fit the exhaust.

There are many alternatives for this and there are many exhaust suppliers that can no doubt design and manufacture an excellent system. The thing that remains a common requirement if the Hawk has to go through IVA is the sound level limit of 99 dB whilst the engine is running at ¾ of the rpm of the engines peak power and the exterior projections ruling that everything must have a minimum radius of 2.5mm. Which means the tailpipe ends cannot be sharp. Gerry supplies a system that fits in the confines of the Hawk engine bay and has two silencers for each leg of the exhaust (4 silencers in total) and has nice chromed rounded ended tail pipes. This should fulfill all of the requirements.

I ordered the headers first as this gave me the opportunity to see how close everything was in the engine bay.

They are very well made block huggers. I did a dry run and they fitted well.

After some discussion with other members of the Cobra fraternity, I found out that it'd be a good idea to install some fuel mixture probe bungs in the down pipes as this would allow the sensors to be fitted and allow the carb to be set up using proper science rather than trial and error. The sockets need to have M18 x 1.5 threads and there needs to be a threaded bung to block each socket when the probes aren't fitted.

There are versions on the market but these are a bit lightweight. I had a couple of sturdier sockets and bungs made, cut the holes in the downpipes and welded the sockets in. The probes like to be vertical when installed so this gives an indication where to fit the sockets.
I had also ordered the remainder of the exhaust which is all made in stainless steel.

The back part of the exhaust comes with all the brackets, rubber bobbins and clamps required and I had the header bolts in the 289 engine bolt kit that I had and the header gaskets were in the gasket kit. The only other things needed, in addition to what was already supplied, to fit the exhaust were a couple of M10 bolts, nuts and washers (to mount the centre brackets to the chassis), and some exhaust assembly paste.

Before I decided to fit the exhaust I decided to get the headers Ceramic coated. This coating acts as a thermal barrier and also doubles as a corrosion inhibiter. There are a number of company's about that provide the service and the price can vary quite a bit to. I went for an option that offers an internal and external base coat and a polished external top coat.

Not bad! Can't beat a bit of bling.

This picture also shows the position of the fuel mixture probe sockets and bungs.

I did a dry fit first and found out that I had to remove some of the internal coating on the overlap of the header to downpipe and I also finally found out that I needed to shorten the 1st section of the back pipes where they slotted into the header downpipes.

There's no way all that was going in there!

I cut 5” off both sides of the stainless pipe which still left more than 4” to slot inside the downpipes.

Once this was done it all lined up and fitted together.

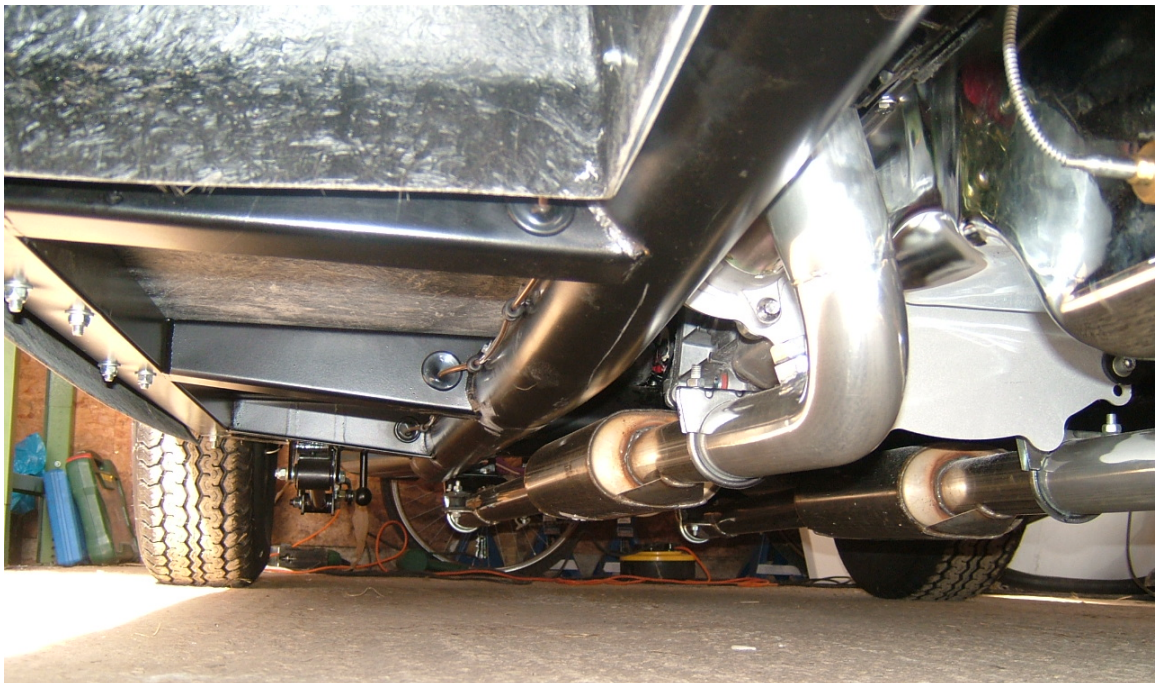
I started with the headers and fitted the gaskets and used copper slip on the header bolts. These need torquing to 13-18 ft/lbs and need retorquing as the gaskets relax.

I smeared exhaust assembly paste on all of the joints and assembled the exhaust.

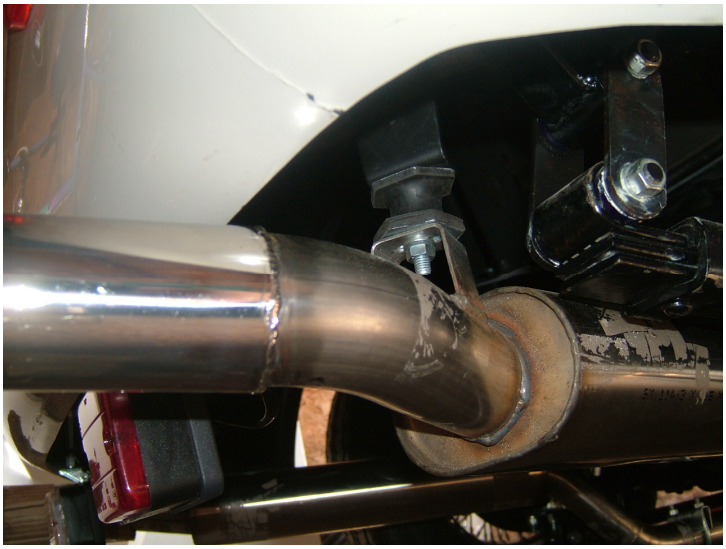
Sounds rather simple and I'd be telling fibs if I said it was easy.

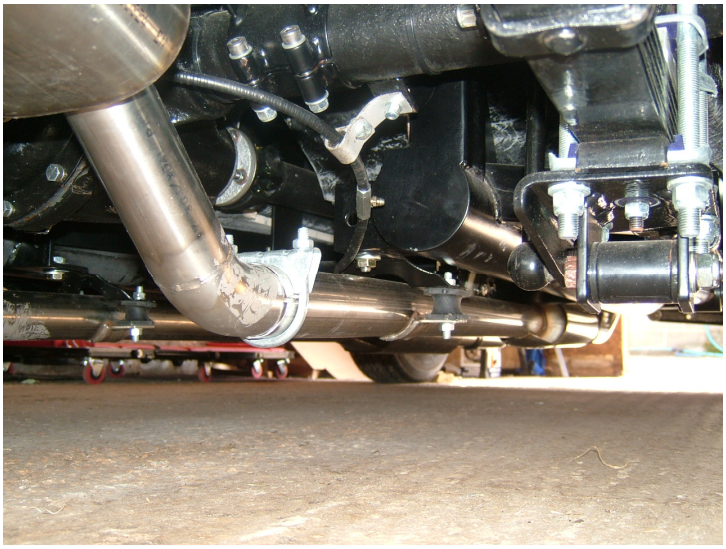
Lets say it took a couple of days and I had a bit of a bad back for a week or so afterwards. It'd have been much easier if I had a pit or similar but I haven't.

The exhaust fitted quite well in the end. I tried to fit it as high as possible to give the maximum ground clearance. Luckily I live out in the sticks where speed bumps have never been heard of.



I tightened up all the clamps and made sure that the bobbins and brackets were tight.





It’s starting to come together now.