

Magnaflow Custom Exhaust (Bobs W/D WB) by [KRH](#)

Ok with the help of Bob we have cut through all the guesswork and established what the **Magnaflow** guys used in the custom exhaust build. So we down to just using their off the shelf **mufflers**

What we are not talking about is their one-off custom headers and down pipes that they made up by copying the AMG version.

Magnaflow have confirmed they will not be putting that design they now have into production. Same as the exhaust set up they wont be releasing a kit as well. So we down to just using their off the shelf **mufflers**

What we are talking about is replicating the design from existing Tri-Y' down pipes that are already bolted up to owners cars.

So we are assuming you have Tri-Y's and downpipes installed and just want to swap out your existing factory exhaust under the car.

If you happen to run cats then you would have to install two high flow cats in the front section where the new exhaust pipes will bolt up to the down-pipes.

If you don't have to worry about cats (like me) it will just be all pipe-work and the **Magnaflowmufflers** as per Bob's WB coupe.

It appears from Bob's investigation (thanks Bob) that the pipes are 2.25inch and the front 11inch case dual muffler is twin 2.25inch
The rear 14inch case muffler is the dual 2.50inch

Where the 2.25inch exhaust pipes meets the rear muffler it is just flared to match up to the 2.50inch intake pipe of the muffler

On the rear exit side of the 2.50inch muffler the tips are the 3inch variety which reduce down to 2.50inch where the tip meets the pipe for easy joining.

Pipework just requires various mandrel bends as per the route the standard pipes take under the car.

What i am curious about in terms of low end street driveable cruising torque!! Question -

Would you be better having factory 2inch pipe up front coming off the Tri-Y down pipe joiner and to the front muffler

Then 2.25inch pipe from the the rear of the front muffler up to the rear muffler

It is all about exhaust gas velocity (scavenging) in that up-front section of the exhaust where the hot gases exiting the engine can be affected by too large piping up front in normal street driving sweat spot torque range 1,500 to 4,000rpm without having to be hard on the peddle all the time.

I don't think the rear half of the exhaust matters so much but it does up front for good street torque manners.

Unfortunately we have no dyno work on the exhaust systems only to do the numbers.

Your thoughts-

2.25inch all the way

or 2.00inch up front and 2.25inch after the front muffler

Twin 2.25" is perfect for the M117 , no cats.

I gained 28 wheel torque and 26whp with this.

It made a night and day difference to the way car drove and much more effortless.

As well as my white coupe I just had a custom exhaust built for my SEL from the Tri-Ys back in 2.25inch S/Steel using a **Magnaflow performance S/steel twin-in-twin out 11inch centre muffler and in the rear a Magnaflow performance S/Steel 17inch twin-in-twin out 2.5inch with internal crossover** and discretely hidden twin dumpers.

I went hidden twin dumpers on the coupe as well and love the look

on both

(i used a 14inch length rear muffler on the white coupe) Both set ups have no Cats.

This is duplicating the **Magnaflow** exhaust build on Bobs widebody build on the Wheelers & Dealers TV show.

Boy oh boy the sound is just insanely incredible on the white 5litre coupe!!! -

but i thought i would tame it down just a tad on the SEL by using a 17inch length in the rear muffler (also has an internal crossover like the 14inch rear one)

Bloody hell with the bit extra length in the pipes due to the length on the SEL body & 3inch more length in the rear muffle this sounds even more deep rumble than the coupe but just a tad quieter - but its f***n awesome!!!! and perfect for cruising in an SEL with a bit more luxury than an SEC.

I am in heaven now driving this SEL.

I did not know how damn good you could get these M117 engines to sound with the correct set-up.

Just like on the TV show it is a deep visceral rumble at idle and when you take off it is better than a Gen3 and cruising it makes the hair stand up on the back of your neck.

It reminds me of the Aussie 5 litre V8 sound with a good system.

Magnaflow put a bit of effort into getting it right as the TV show goes out Global and they sure got it right on this as a great plug for themselves - good on them.

My exhaust guy could not believe the amount of weight shredded by dropping the factory system- as he states its bloody heavy like having a big boat anchor.

When i get a chance i will post it up on a youtube vid of both the SEC and SEL.

The Euro 560 SEL with 10:1 CR came with 300HP from the factory, and 279 with cats.

KRH

At the **M117-968 heads flow well stock** so that is really not an issue in the equation - although if you have them off for re-furbing then that is the time to tidy them up - but no porting is required other than removing casting dags and minor touch up work. Relieving the valves a tad for a bit more flow will help. **My engine shop has just finished working 2 sets of 560 heads but that included swapping in aftermarket Ferrea intake valves to AMG Spec to help a bit more. I have aftermarket springs & Ti retainers** but that is not necessary for a basic head makeover.

The intake Manifold plenum design is the main issue to restriction as i see it besides the stock US spec cams which are very mild

The 560 throttle is also not a restriction as proved by Carobu in the 560SL engine rebuild with flow testing done

Hendrik is a very smart guy and he replicated the AMG design but in s/steel and i am sure if you purchased his product they would work just fine.

There was never very little difference in performance with the Tri-Ys versus the AMG design as MB tested the AMG version and came up with their own design being the cast-iron Tri-Ys. The internal diameter of the AMG version were slightly larger but that is not necessarily better for lower end street torque band.

Today the Carobu guys achieved another 10hp by running the lid off the air cleaner. Illustrating all the restrictions our cars have in stock form. The CIS lump in the air cleaner restricts flow. Food for thought

Yes that air-cleaner design proved to also be a restriction to air-flow - so another item that needs a good think tank to come up with a better solution

Re M117 engines, one thing to add is that the stock engine in the R107 560SL (like the car their initial engine went in) makes a little less power than in W126 sedan or coupe.

The 500SL Euro cars came with factory Tri-Y's, but I assume there is less space under the hood, or it is the way the downpipes have to be compromised to get around the steering box etc ?

A few updates from Carobu:

Installed ECE cams - 281.6 hp (+20hp), 317tq
ECE cams with 4 deg offset key 278 (-3hp), 327 tq (+10tq)

"As you can see, the lower rpm torque and peak torque improved. There was some loss of top end power, but not drastic. In the car, this combination would feel snappier than with the cams set "on the marks".

Here we go, (graph of) the comparison of the cams straight up verses advanced. In this case, the torque improvement outweighs the high-rpm HP in most driving situations except Autobahn top speed contests.

If ordering the Magnaflow 14inch rear case with internal x-pipe then don't put a x-pipe up front - not necessary

Supposedly the x-pipe is generally advantageous above the mid RPM range, and H-pipe can be low-mid.

Mufflers arrived as per KRH recommendations from the Magnaflow/Wheelerdealers design.

Kim why with the rear muffler are we going 2.5 in out, when all the tubing recommended was 2.25 as with the middle resonator...