

LAP 36—LET'S TALK EXHAUST

You already know the exhaust system is one of the most important parts of your Mustang. What you may not know is how to really improve it. The aftermarket has figured this out, just pick up any catalog and you'll notice the exhaust section is usually near the front, where it's easy to catch your eye with the latest trick item guaranteeing to increase your horsepower. Don't believe it, stick to the basics and build yourself an exhaust system that performs, is easy to work on and is built to last.

Let's start with sound, seems like everyone wants their car to sound fast. Not me!, I want a car that IS fast. Settling for a less-than-optimal exhaust system because it sounds great is just wasted effort. Finishing last and sounding good is never a good idea. Spectators may be impressed when you fire the motor in the pits but what they remember most is where you finish. A loud car isn't necessarily a fast or powerful car, run mufflers, they won't slow you down. Our Dynamometer testing has shown good mufflers don't cost any horsepower. I drove open exhaust on my previous 1966 Shelby for years before understanding this. My new car has mufflers and I really love them. A quieter car frees your mind to think and allows you to hear suspension noise and other nearby cars. I think, for these reasons, it's safer too. Any good 2- or 3-chamber muffler will give you good results, just watch the weight, they can be heavy.

It is important to understand the exhaust on your Mustang is a "system" that should deliver low end torque and high end power with minimum noise. Making high end power with a small block Ford is actually the easy part, making torque at lower rpms AND high end power is very hard. This is the reason most successful road racers use Tri-Y design headers, to improve scavenging at lower rpms and gain the torque necessary for accelerating hard out of corners. Years ago racers discovered "stepped" headers, ones where the tubes stepped up in size several times between the header flange and collector. This broadened the power band, the portion delivering more horsepower over a wider range. The current hot road racing setup is a combination of Tri-Y headers and stepped headers. These are usually expensive custom fabrications designed for a specific motor, if this doesn't fit your budget, stick to good quality Tri-Y headers and you'll be fine.

The importance of ease of maintenance cannot be overstated. Having an exhaust system that is easily removed is a real benefit that encourages maintenance on things like the clutch linkage, shifter rods, drive shaft, and rear gear. One of the most constraining items in terms of serviceability is the popular X-Pipe exhaust design because it crosses over beneath the transmission and blocks a lot of the car. Having a system that is easy to remove and provides easy access is especially important when using an X-pipe. Personally, I like the H-Pipe

design because it is much simpler, doesn't block nearly so much of the car, and, for my engine, dyno testing confirms The X-pipe doesn't make any more power. Yes, many like the "sound" of the X-pipe better, but we already talked about the value of "good sound" didn't we?

It's a good idea, when making connections in your exhaust system, to use "V-Band" clamps. This system uses two specially designed rings welded to the exhaust tubing that are clamped together using essentially a hose clamp. These connections are metal sealing (requiring no gasket) and provide easy alignment, allowing the tubing to rotate freely relative to each other prior to tightening the clamp. You should be able to design your system where it just hangs in place from hooks with no bolting. Using the V-Band clamps to restrain motion fore and aft at

the headers the remainder of the system merely needs to hang in place. Using an exhaust system like this you can remove the clamps, slide the hooks from the hangers, and get it all out of the way in mere minutes.

Remember to keep your system lightweight. This means select the lightest available mufflers and use

thin-wall tubing. So many cars use tubing that is far too heavy for a race application because the owner just settles for what the local muffler shop or discount dealer has in stock. Look around; there are many sources for thin-wall tubing that will save substantial weight. The exhaust system you build will be on the car for a long while so take the time to do it right. Speaking of doing it right, today many modern exhaust systems are made from stainless steel to reduce the effects of corrosion, it's a good idea but expensive. But hey, it's YOUR Mustang!

See you on the track, but you won't be hearing me coming!

"SETTLING FOR A LESS-THAN-OPTIMAL EXHAUST SYSTEM BECAUSE IT SOUNDS GREAT IS JUST WASTED EFFORT."

Charlie Jones, a.k.a.
Roadracer

