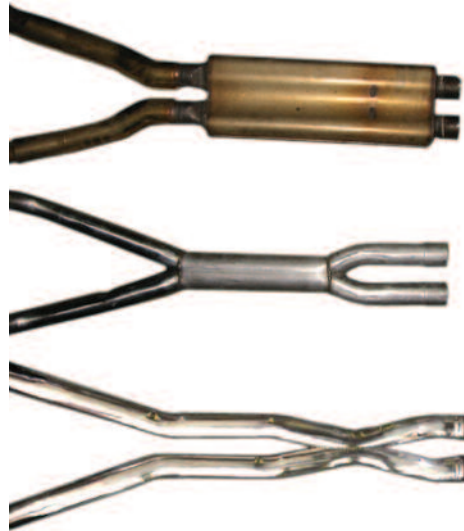


Prototype Testing 550 Tuned Exhaust System

Article and Photography John Guthrie

The 550 is a third-generation Ferrari GT (#1 Enzo era, #2 pre-di Montezemolo/Fiat) defining Ferrari as the global brand now producing the 5th-Gen eco-California. The 456/550/575 platform was the first from Maranello to meet Fiat-mandated parts commonality, maintenance efficiency and global standardization (ie, meeting Swiss noise, U.S. emissions and warranty standards). To achieve this, the 550 design compromised exhaust efficiency and performance. But slapping a “louder” muffler on a Ferrari is like changing the bell of a French horn for a trumpets: The piping and horn performance are the same. The 1994 Ferrari patent



PHOTOS

LEFT - Photo of x-pipes show OEM, cold (Stebro) and hot gas (Hyper-Flow) designs

BELOW - Cat converters: top Hyper-Flow, bottom OEM



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for the 550 silencer (#5,301,503) shows it probably has better flow characteristics than all “loud” units (which typically squeeze gas flow to boost mid-range sound).

For three years/30,000 miles, I've tested and evaluated prototypes of the Hyper-Flow 550 tuned exhaust system. Work began in 2006 with fit and installation at Dave Helm's Scuderia Rampante in Boulder. Dave provided feedback to Hyper-Flow's Troy Bryan and the result was top-level, almost as efficient as straight pipes- yet meeting all state emissions tests. The federal “90 second cold start standard” is never tested by any state. To meet the federal test, platinum cells are positioned smack in the exhaust gas flow, so they heat up in 90 seconds. After that, the cells simply obstruct exhaust efficiency for the car's lifetime! Hyper-Flow's solution is to move the cells downstream, away from the headers, allowing individual exhaust pulses to scavenge adjacent cylinder exhaust gases at

velocities high enough to “tune” the entire flow to the muffler. This setup meets every state's emission standard (measured after the cells get hot.)

The result was amazing:

Instantaneous throttle response and engine torque well beyond the stock plateau of 5,000 rpm. When the cats were installed I was running an x-pipe from a company that pumps cold air through their flow bench and a pair of Quicksilver silencers. After my first test drive around Boulder I got back to Dave's shop and asked why the car shuddered from every drive-off! Dave laughed and said the ASR traction control was clamping the wheel spin and I had a choice, “You can eat the brakes or eat the tires. Tires are cheaper!” (now 5,000mi/set).

With our first success, Hyper-Flow then created a hot gas flow benched x-pipe prototype to match the tuned dynamics of the cats. Afterwards, a 575 owner from Utah with Fiorano track experience said my car would nail his.

Dave estimates I have 530hp and 460ftlbs. With the RDT&E nominally completed, Hyper-Flow began manufacturing the 550 cat and x-pipe system in 2007 and they've been well received.

Driving 10,000 miles a year, my work went on. The increased engine torque wore out the engine mounts and even broke a weld on the right bank of cats! That weld had already been strengthened on production units and Hyper-Flow stood by their prototype and gave me a replacement.

Thankfully, my car gets the best from Ferrari of Denver and Bill Evendale, their top mechanic who mounted the replacement cat and dialed in the O2 sensors. Finally, here's a switch: I may go back to the OEM silencers for quiet high performance! I'm now just too powerfully loud for polite company like deer and tourists in Yellowstone Park! To hear the evolution from OEM-to-tuned, go to Wyo550.com and click “Youtube videos“. Enjoy! 🏎️