

Pantera Muffler Modification for Reduced Resonance

By

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Freshly Cut open Mufflers



Close Up View



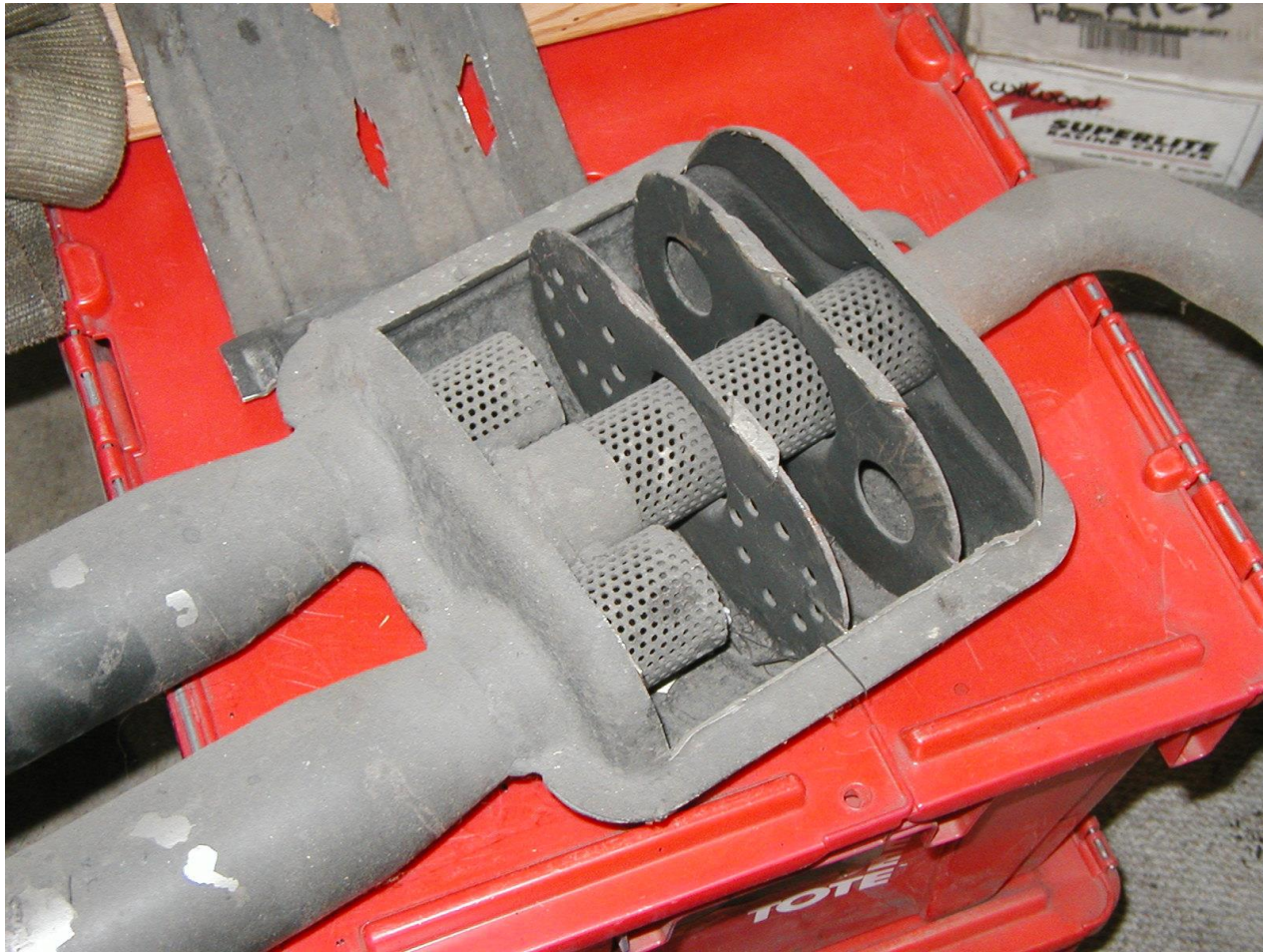
Close Up View



Look at Holes in Center Dividers



Race Prepped- Very Loud



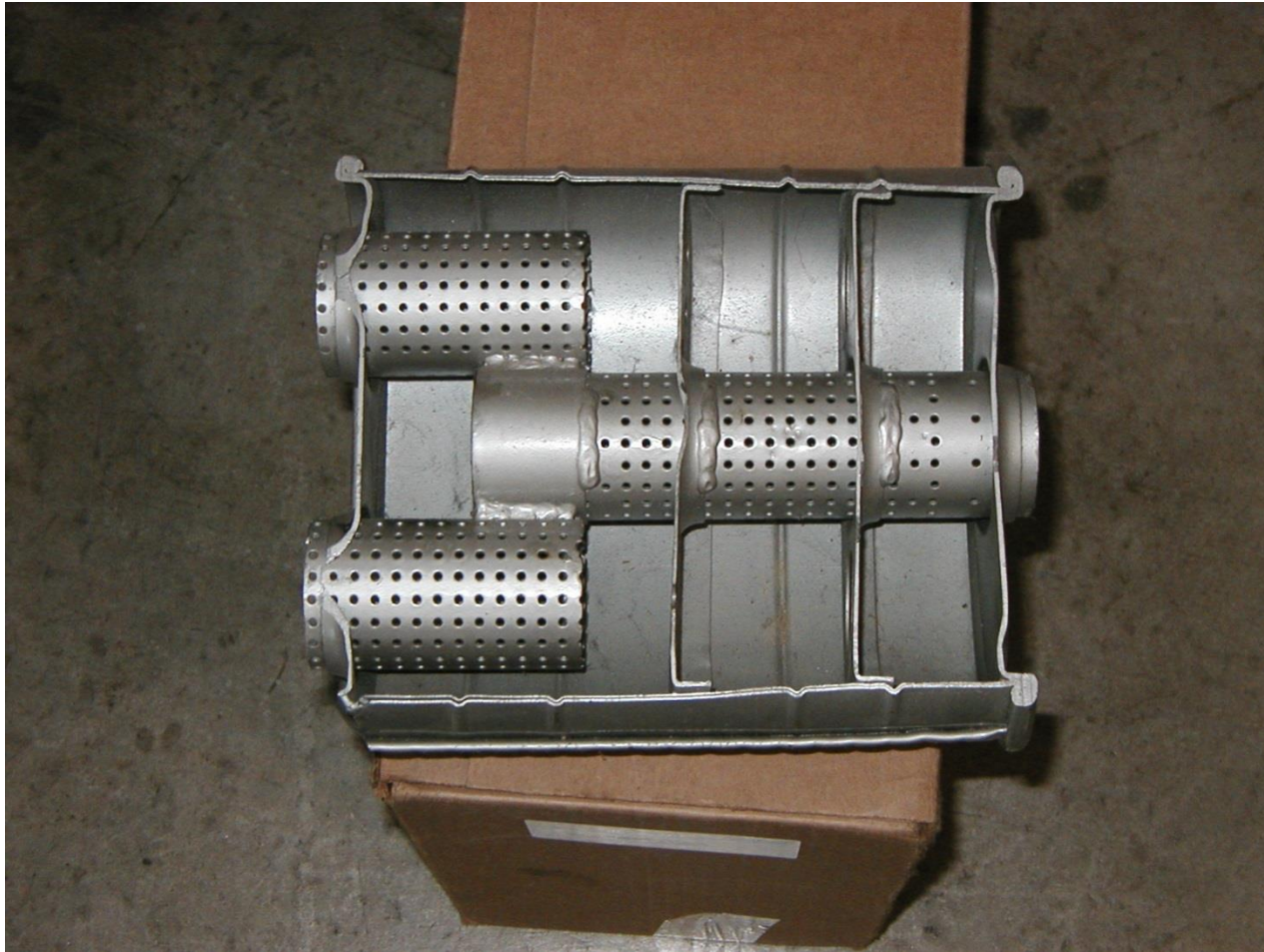
Production Big Bore- Different Tubes & Holes



Better view of the Holes



Notice the Hole Spacing



My added flow Tubes with wall separators and washer to reduce the inner exhaust tube harmonic pulse.



Right Muffler – More Holes with Higher flow- exit tubes cut for $\frac{1}{4}$ Wave



Top View of Right Muffler



Left & Right Mufflers Prior to welding shut and Powder Coating



- Mufflers were packed with high temp wool mesh prior to being welded closed.
- Side Note: The car was Very Quiet for a few months inside and outside for a few months after the muffler modifications. The car became louder at the St. Charles, Illinois, Pantera Club Dyno Day when the muffler packing was blown out of the mufflers on a dyno run. I have a box of this material if you need some...it only takes a few ounces per muffler.
- The Holly injection computer wanted a few points boosted across the fuel map due to increased air flow through the stock Cleveland Heads. A 7 HP increase was noted from the previous year dyno run which later became 32hp with a timing change.

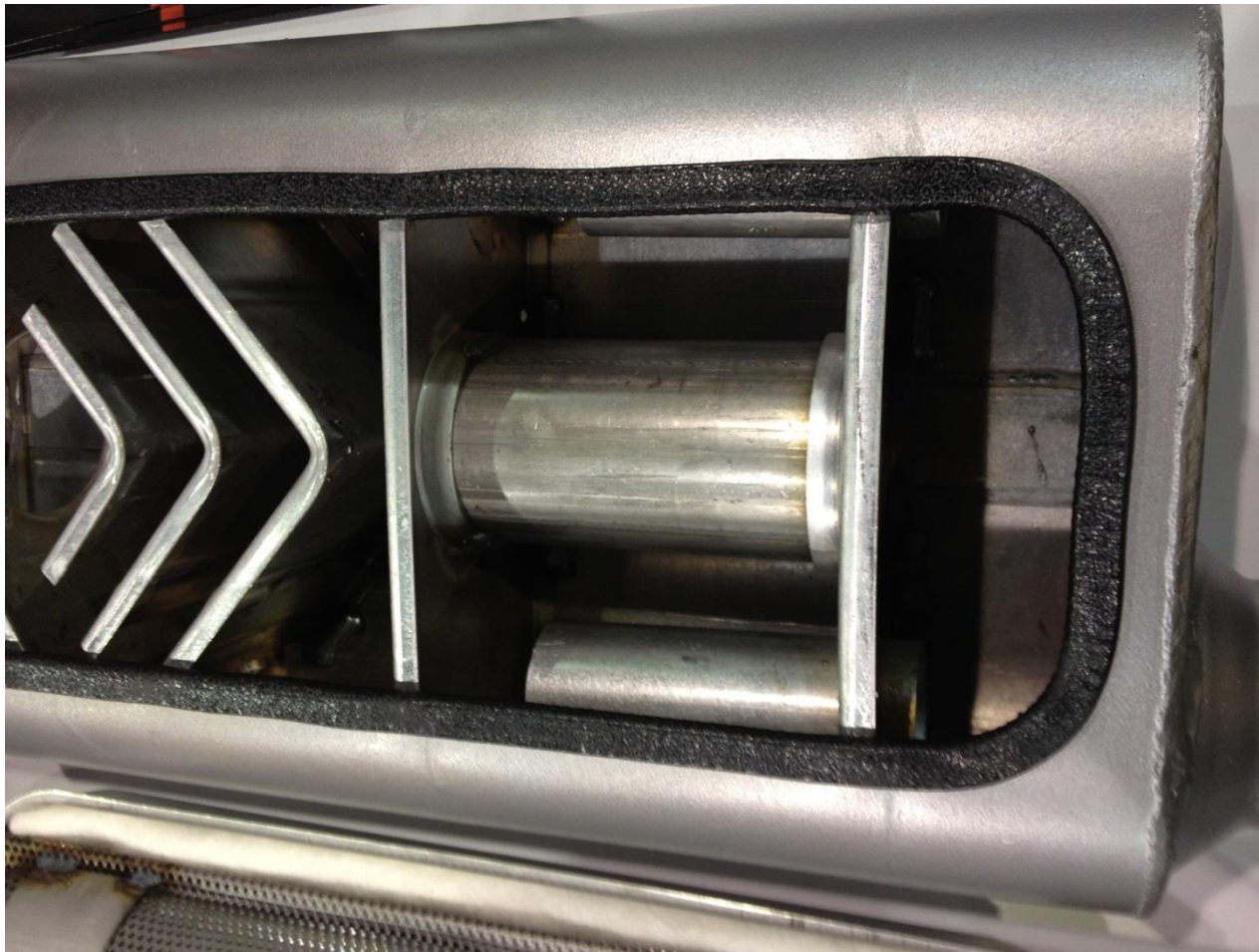
Motorsport Powder Coating in Delevan , Wisconsin. 262-740-2030



Hanging exhaust pipes after Ceramic coating has been applied.



Flowmaster Design – V's create a Cancellation Wave



Black Flowmaster has higher Flow rate



Frequency tuning is used to cancel the exhaust flow resonance at the 2000 rpm. The washer welded on the shorter outlet helps reduce the wave resonance. A further reduction can be achieved by running a tube from the inlet to one totally exclusive outlet.

The purpose of the restriction tube is to use $\frac{1}{4}$ wave cancellation. Stew Hegeman pioneered this technique in loudspeakers in the 70's.

