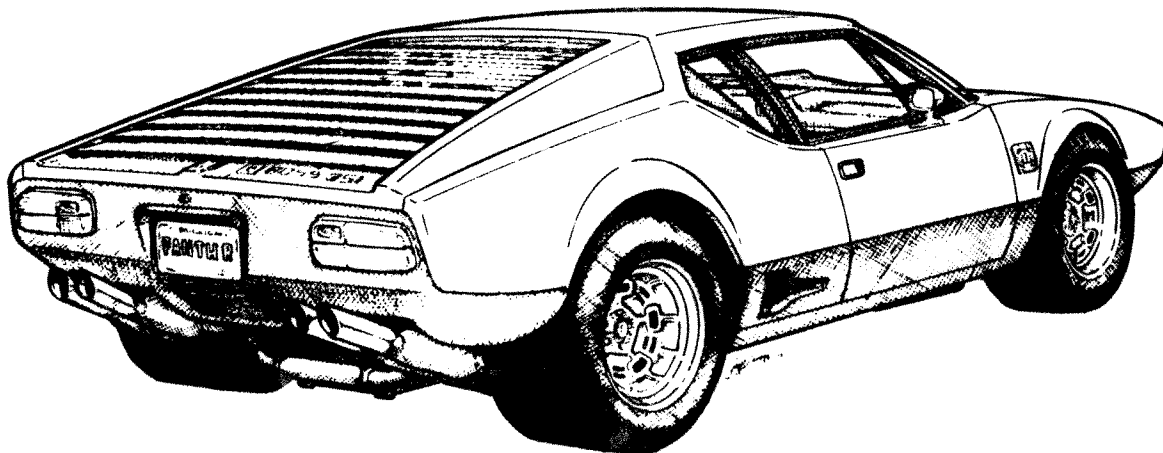


~ \$10⁰⁰ ~

MIND-TRAIN

Accessories-*FINE* Quality

PANTERA



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LOS ANGELES, CALIFORNIA 90034



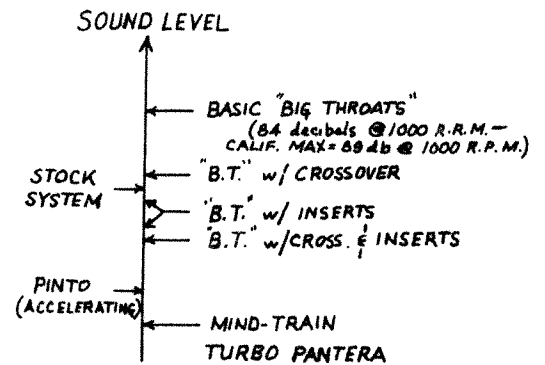
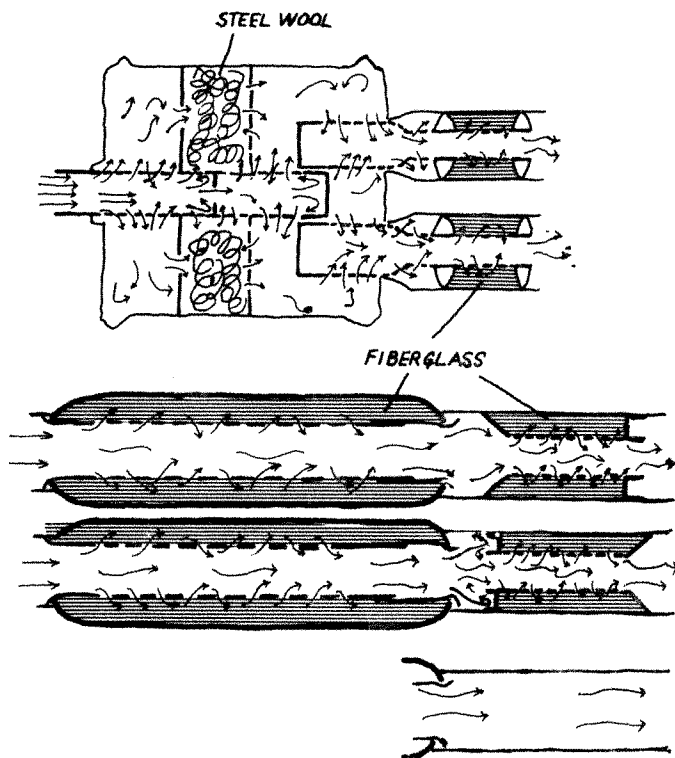
BIG THROATS~

...a step up into quiet (and powerful) elegance.

MYTH BREAKERS - Everyone's heard these, but what's the truth?

MYTH 1 - A high performance exhaust system is loud (you need back-pressure to reduce sound levels).

FACT - Backpressure is a "by-product" of any muffling device. Back-pressure in itself is not what quiets an engine. It is instead the interfering of (or cancelling of) strong shock waves that reduces the sound. This can be done in a number of ways and consequently the efficiency of a muffler will vary from unit to unit. The Big Throats system is far more efficient than the restrictive stock Ansa set-up and will give you better performance with less noise.



INSERT IN "A" POSITION
(MINIMUM ACTION)

INSERT IN "B" POSITION
(MAXIMUM ACTION)

WITHOUT INSERTS
(LOUD MODE)



MYTH 2 - *Since a certain amount of backpressure is necessary for low-end torque, the Ansa system is probably better for a street driven Pantera while the Big Throats are necessary only for racing.*

FACT - A stock Pantera equipped with Big Throats will outperform a stock Pantera from idle on up. The 351 Cleveland was designed as a breathing motor (one look at the size of the intake ports to the heads and you'll see why). Literally choking it with the over-restrictive Ansa system was a serious error. Stock Panteras that change to the Big Throats show a minimum of 30-50 horsepower increase. A modified engine (new carb, manifold, cam, etc.) will show even greater increases with the Big Throats.

A change to the Big Throats will result in better performance throughout the RPM range with the greatest boost in the midrange. The engine will rev and respond much quicker due to the new gained efficiency.

MYTH 3 - *My mechanic says that headers require extensive work to install - pounding, cutting, torching away body panels, etc. Also, sparkplug access is next to impossible.*

FACT - Our system is guaranteed to fit. No body or chassis section need be cut or pounded.

MYTH 4 - *Any aftermarket exhaust system will detract from the looks of the Pantera.*

FACT - Take a good look at the rear of your Pantera (don't just visualize it - actually study the cans you now have from every possible angle) and see if you still agree with Myth 4. True, there are other "systems" and home-remedies around that look like they should be hidden, but the Big Throats look so good you may want to paint them white so that they'll stand out!



MYTH 5 - Since there are only a limited number of Panteras, after-market accessories tend to be overpriced and can even reduce the resale value.

FACT - Lower total sales potential requires that the design, testing, and tooling costs must be spread over a smaller number - hence the higher unit cost as compared to say headers for a Camaro or Mustang. As for affecting resale value, it depends on whether or not the accessory is an improvement over stock. A poorly designed exhaust system may cost the same to make as our Big Throats, but they're not worth the effort to install. If you still feel that the Pantera is worth more (to a collector, say) if the stock system is retained, no matter how much better our system is, then remove your stock system before it rusts through and save it to reinstall at a later date. You'll save money and enjoy the benefits of a quieter, better looking, and better performing Pantera now! Here are some dollar figures for those of you who may be interested.

	<u>BIG THROATS</u>	<u>STOCK ANSA (as of 3/1/77)</u>	
Headers	\$150/pr	\$162ea	\$324/pr
Tailpipe/Muffler	185/pr	130ea	260/pr
Rubber Hanger	included	5ea	10/pr
Gasket	included		26
Removable Inserts	50/set		not available
Crossover	50		not available
	<hr/>		<hr/>
	\$435 *		\$620

*complete exhaust system discount - \$400. We pay shipping via Air Delivery.



SPECIFICATIONS:

Headers - 16 gauge primaries mandril bent (constant diameter).
18 gauge collector (2½" outlet).

Tailpipe - 2½" diameter. 18 gauge mandril bent.

Muffler - 2" core. 14 gauge casing (extra heavy). high quality
long-strand fiberglass-filled. These mufflers are
guaranteed for the life of the car. Will not rust through
as with thin cased stock Ansas.

Tailpipe Tip - show quality chrome (no imperfections - high polish,
far superior to stock).

Resonators - slip fit. removable. fiberglass packed.

Crossover Kit - asbestos wrapped and fiberglass filled (encapsulated
in muffler-like body) to prevent heating of air near air
conditioning condensor.

Gaskets - asbestos based.

Muffler Hanger - nylon reinforced (will not crack in two as the
stock solid rubber ones often do).

ABOVE ITEMS INCLUDE ALL NECESSARY GASKETS, BOLTS, NUTS, ETC.



"Why Tune an Exhaust System?"

Exhaust systems are interesting. Without a doubt, more exhaust systems are purchased than any other Pantera accessory. And yet there is more misunderstanding and erroneous knowledge about exhaust systems than any other accessory. Some of these "myths" have just been cleared up. In this article, the aim is to explain what a true "tuned" exhaust system is and to discuss some of the benefits and drawbacks. You will also see what "street tuning" is all about.

Exhaust tuning was successfully achieved a number of years ago by racers who wanted maximum performance. What few "street racers" realize is the fact that "tuning" severely narrows the horsepower curve. That is, a system "tuned" to work at say 7000 rpm doesn't work worth beans at 4000 rpm. (For more theory on tuning, see "Power - How to Achieve It".) Also, at 6000 rpm, a system tuned for 8000 rpm will not produce nearly the horsepower or efficiency of a system designed to "tune-in" at 6000 rpm. It is important to note here that with "tuned headers", mufflers are not used. In racing, nobody is willing to compromise performance for ear comfort.

"Equal length" is a term used when tuned systems are discussed. The purpose of equal length primary tubes is to provide each cylinder with the same operating condition so that all cylinders are tuned at the same rpm. Unfortunately, as we move from pure theory to practical applications, it becomes necessary to fit the "tuned" header into the car.

Ideally, a system designed for a Pantera tuned at 6000 rpm should have straight 32"-34" long by 1 3/4" diameter primary tubes leading to a 12" - 15" collector (transition tube), 3 1/2" in diameter. It is obvious that it is impossible to fit such a system into the confines of



the Pantera engine compartment. It becomes necessary to bend the primary tubes to fit them into the engine compartment. Also, it is impossible to run a 3 1/2" collector through the suspension areas to the rear bumper. Every bend and reduction in collector diameter leads away from the "tuned" exhaust concept. Every bend in the primary tubes is a restriction as exhaust gases can more easily flow from the exhaust valve to the collector through a straight pipe than a pipe the same length but having many restrictive bends. Remember an exhaust system can never be tuned if it is restrictive. A restrictive exhaust system, such as the Ansa System that comes stock on the Pantera, cannot provide equal back pressure for all cylinders and the excessive back pressure is detrimental to both engine performance and gas mileage. It is possible, however, to fit equal-length 20"-22" long primary tubes into the Pantera. Combined with a 4" diameter by 12" long collector, the system could be built to "tune-in" at a very unusable 9000 rpm.

Working with these parameters, the MIND-TRAIN "Big Throats" exhaust system was designed to be the best system possible for everyday driving. It is the only "street-tunable" exhaust system for the Pantera.

Starting with the exhaust headers, notice that the exhaust gases from all cylinders flow easily through one bend to the collector. Notice also that the longer tubes flow through an easier bend than the shorter tubes at the rear of the engine. This is one of the "tricks" used to fine tune our headers to provide optimum working conditions for the engine.

Removable muffler inserts control both the sound and back pressure in the system. Also, the "Big Throats" system is the only one incorporating a "Crossover & Equalizer".

On one side of the engine or the other (remember we're talking about a V-8 with 4 cylinders per side), two exhaust valves are dumping gases into the tailpipe and this should be done without creating unequal and excessive back pressure. Since the ideal 3 1/2" diameter by 12" long collector will not fit, our "Big Throats" utilizes a 2 1/2" diameter tailpipe as an extra long collector to lower the effective "tuned" rpm to a more usable range. Any exhaust system utilizing a 2" (or smaller) diameter tailpipe cannot efficiently handle the flow from the



two exhaust valves that are open and therefore not only creates unequal and excessive back pressure but cannot be tuned at any rpm. The first requisite of a tuned exhaust system is that it be free-flowing. The "Big Throats" 2 1/2" diameter tailpipe can easily handle the flow from two primary pipes of 1 3/4" diameter.

The purpose of the Crossover & Equalizer tube is to take some of the exhaust gases from the side of the engine with two exhaust valves open (remember this is at any given time the engine is running) and transfer it to the other side of the engine where only one exhaust valve is open. This actually reduces the back pressure for each cylinder bank and additional performance is gained. Also, there will be a noticeable drop in exhaust noise level (it will sound more like a V-16 than a split-flow V-8) and an increase in low to mid-range (idle to 3000 rpm) performance.

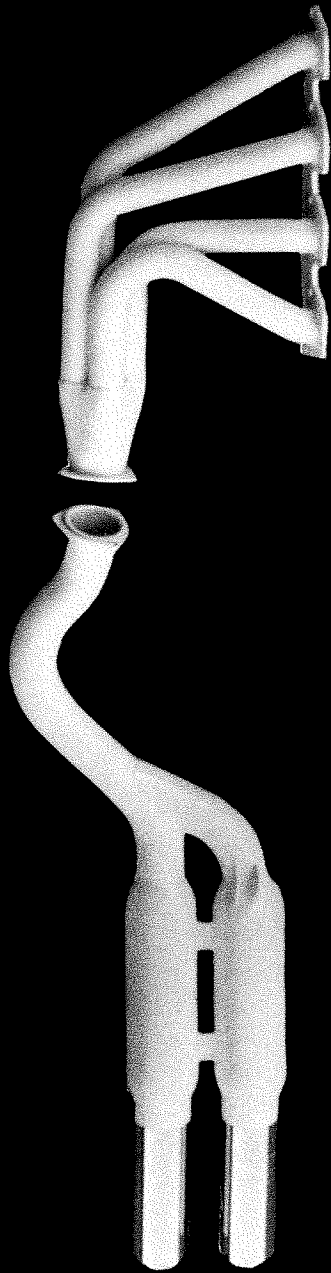
The mufflers used in the "Big Throats" system are of the straight thru type (low restriction) rather than the reverse flow used in the stock Ansa system. Dyno tests have shown that the stock Ansa mufflers can literally choke an engine with losses of over 50 horsepower.

Here are the possible ways to "street-tune" your "Big Throats":

- | | |
|--|---|
| ① Headers → 2½" Tailpipes → dual low restriction mufflers | Tuned for top performance - <u>LOUD</u> . |
| ② Headers → 2½" Tailpipes → crossover kit → dual low restriction mufflers | Smoother running, more low - mid-range performance. (Reduction in sound level without additional back pressure.)
*Actually outperforms #1. |
| ③ Headers → 2½" Tailpipes → dual low restriction mufflers → inserts | Simplest way to reduce sound. (Also increases back pressure.) More effective as sound reducer than crossover above. |
| ④ Headers → 2½" Tailpipe → crossover kit → dual low restriction mufflers → inserts | Lowest possible noise level. Removable inserts allow you to obtain added performance whenever necessary. |

Any of the above configurations will outperform anything on the market. . .they were engineered to.

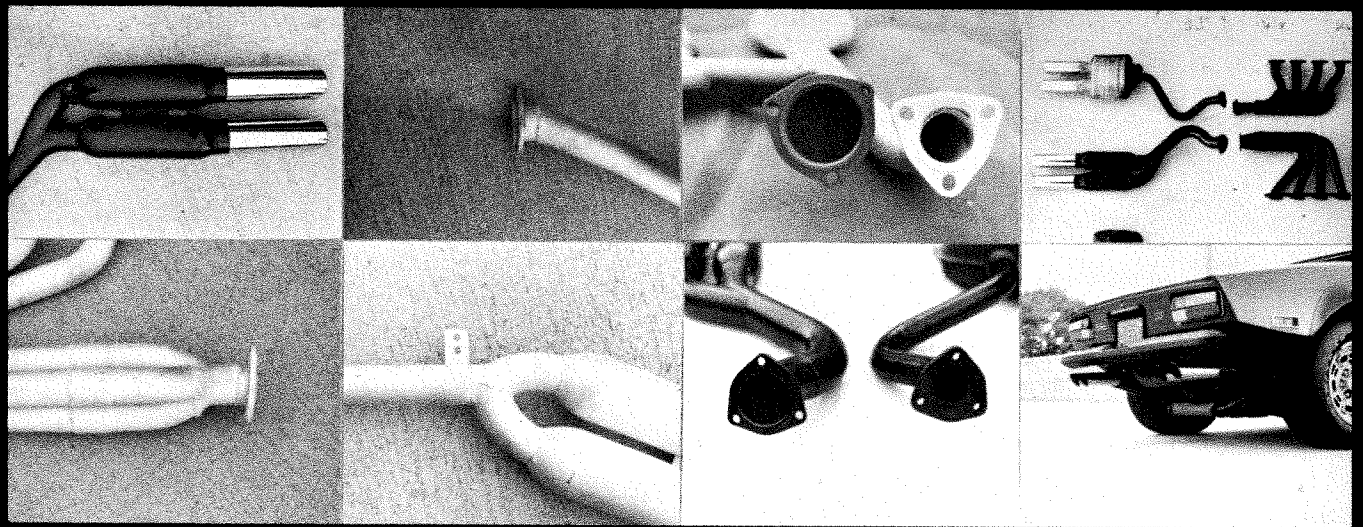
"SPEAK SOFTLY AND CARRY A BIG THROAT."



Lately, more and more Pantera owners have been thinking about exhaust systems. Some enjoy the power and now want more. Others have had their stock mufflers and exhaust manifolds crack or rust through. And everyone has heard of "changing over" to a "free flowing" system.

Unfortunately, there are those who changed over and are now sorry they did. Some say little power, if any, was gained. Others can't stand the noise. And too many now have dented tailpipes, dinged a-arms and bodies, and wish their mufflers didn't look so out-of-place hanging off-center and cock-eyed. The fact that such systems are available is truly sad. Although just about any non-stock system will improve the performance of a stock Pantera (the stock system is very restrictive), there is no reason why anyone should compromise on quality and design.

We at Mind-Train strive to bring you the best accessories at fair prices. This has been our policy from day one. Pay close attention to the design and detail as you study the photos and you'll see why so many owners are upgrading their Panteras by changing to "Big Throats". Engineering does make a difference.



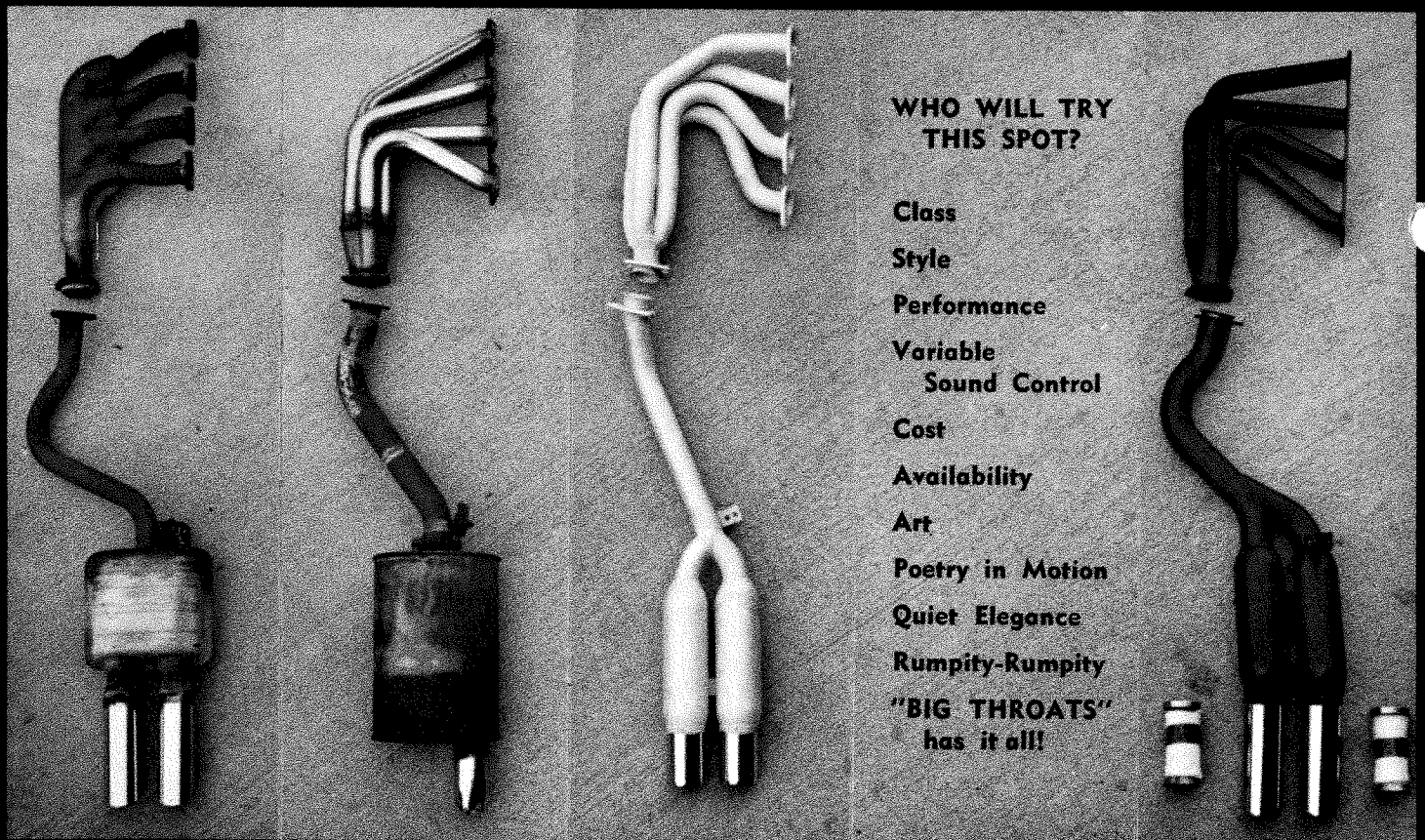
Why are more and more Pantera owners switching from other brand exhaust systems to the "Big Throats" system? Look at our competition.

ANSA

TURBO

BIG BORE

"BIG THROATS"



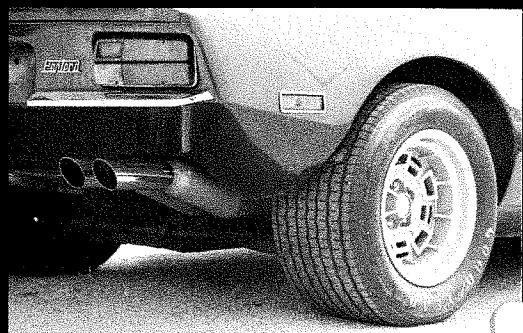
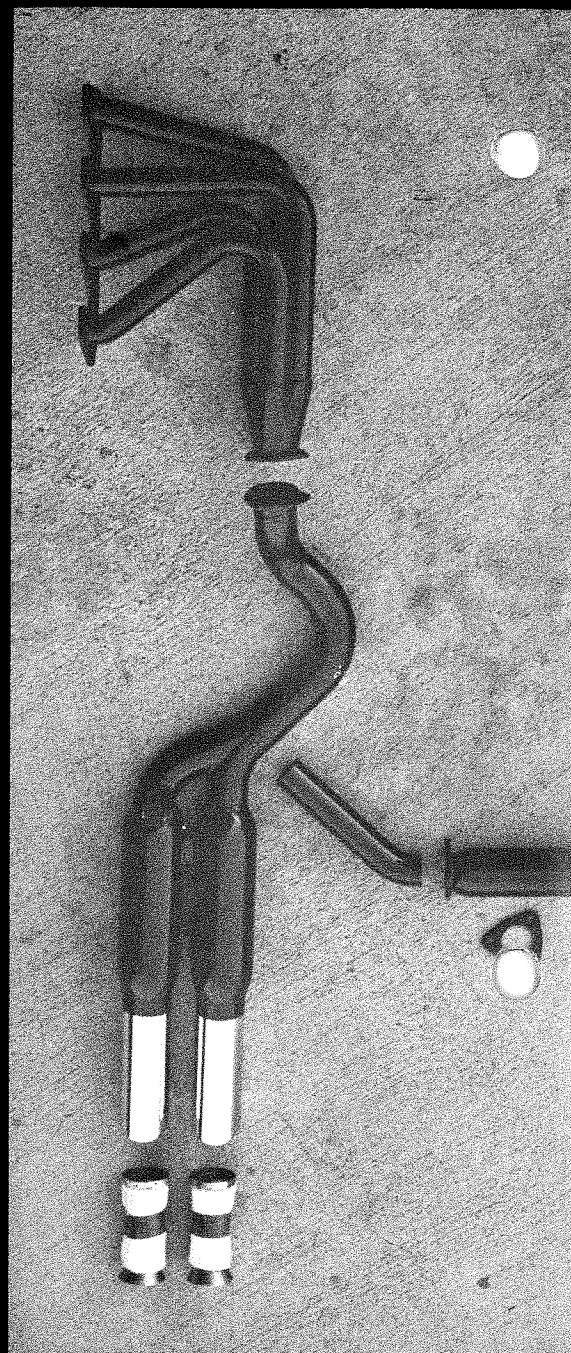
WHO WILL TRY THIS SPOT?

- Class
- Style
- Performance
- Variable
- Sound Control
- Cost
- Availability
- Art
- Poetry in Motion
- Quiet Elegance
- Rumpity-Rumpity
- "BIG THROATS" has it all!

Stage II Thunderbird Headers	\$150pr.
"Big Throats" Tailpipes & Mufflers	\$185pr.
Resonator Inserts (set of four)	\$ 50
Equalizer & Crossover Assembly (kit)	\$ 50
Complete Exhaust System (discount)	(\$400)

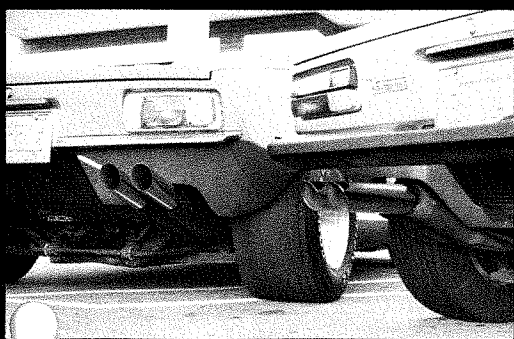
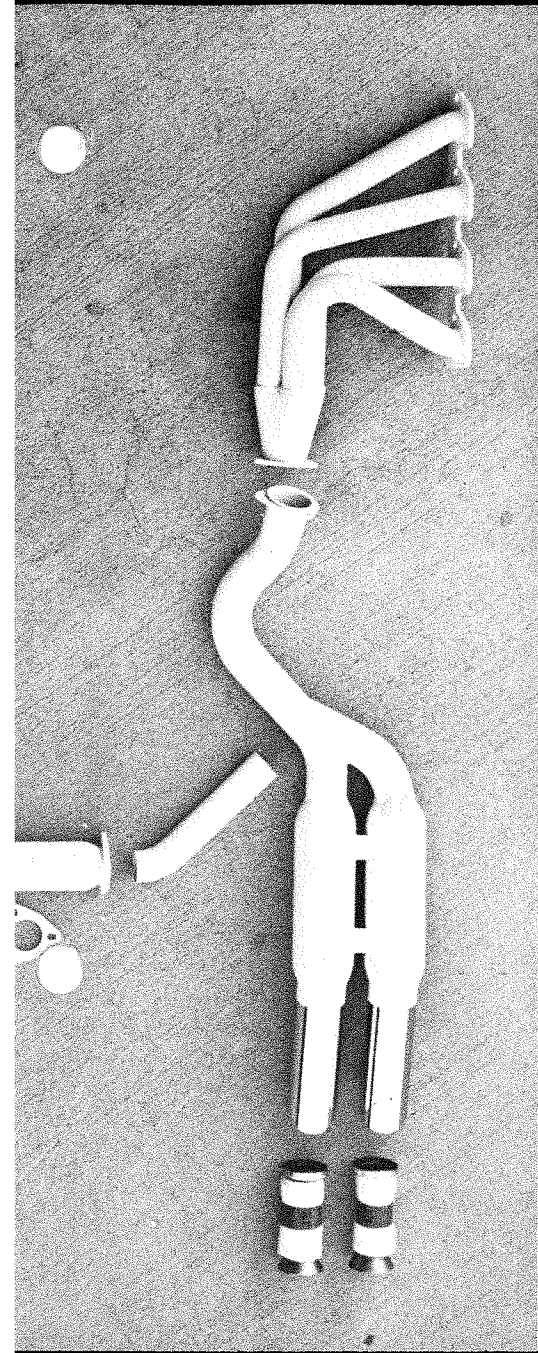


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