

ADD 138 HP! BANKS BIG HOSS POWER STROKE UPGRADE

FORD PERFORMANCE TRUCKS

FROM THE EDITORS OF
**MUSTANGS
& FAST FORDS**
YOUR #1 & #2 POWER SOURCE



THE PERFECT STORM?

HOMEBUILT
700 HP
TURBO
LIGHTNING



PLUS!

LIGHTNING FEST IV

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IN THE NATION

TOUGH TECH!

F-150 SHAKER-HOOD INSTALL
LIGHTNING REAREND BUILDUP
MORE TRACTION FOR YOUR LIGHTNING

LIGHTNING SHOOTOUT AT E-TOWN
STREET-LEGAL F-150 DESERT RACER

JANUARY 2007
USA \$4.99 • CANADA \$6.99



DISPLAY UNTIL MARCH 6, 2007



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FORD PERFORMANCE TRUCKS

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ADD 138HP! BANKS BIG HOSS POWER STROKE UPGRADE

FORD PERFORMANCE TRUCKS

THE PERFECT STORM? HOME BUILT 700 HP TURBO LIGHTNING

PLUG & FITTING FEST IV

TOUGH TECH!
F-150 SHOCKS & HEADS INSTALLED LIGHTNING! FIRE ARMED! BUILT FOR MORE TRACTION FOR YOUR LIGHTNING! LIGHTNING SHOOTOUT AT E-TOWN STREET-LEGAL F-150 DESERT RACER

ON THE COVER: This great looking turbo Lightning throws down 700 hp at the tires and whoops up on twin-screw-equipped Lightnings as well as other slow vehicles on the roads. Photo by Mike Galimi. Inset: West Coast superstar-freelancer Steve Temple followed along as a Banks Big Hoss Bundle picked up 138 hp on a 6.0L Power Stroke.

ALL FIRED UP



JBA's Firecone heats up a Ford F-150.

BY STEVE TEMPLE

Obviously, *Ford Performance Trucks* is all about optimizing the output of your pickup. Now, suppose a fellow F-150 owner says he or she has bolted on a "Firecone." Would you know where to look? Sounds like something you'd find on the nose of the space shuttle rather than a special feature of an aftermarket exhaust system.

Well, that's the term JBA uses to describe a patented, pyramid-shaped section inside the header that smooths the exhaust flow and maintains its velocity. Without this feature, there can be an abrupt change in exhaust-manifold volume in the transition from a primary tube to the larger collector, which results in increased turbulence and a drop in exhaust-gas velocity, thereby robbing power.

To prevent this from happening, JBA's race-inspired Firecone merge collector eases the transition into the collector, helping to maintain the direction and speed of the exhaust-gas flow. The result is a noticeable increase in power and efficiency. In the case of the '04 Ford F-150, powered by a 5.4L V-8 and fitted with JBA Cat4ward headers and exhaust, the chassis dyno showed peak gains of nearly 20 horses and 22 lb-ft of torque. The greatest gains on the powerband were 25.4 hp at 3,070 rpm and a whopping 44 lb-ft at 2,800 rpm. Clearly, the JBA system loosens the reins on a whole lot more ponies.

What's responsible for most of these

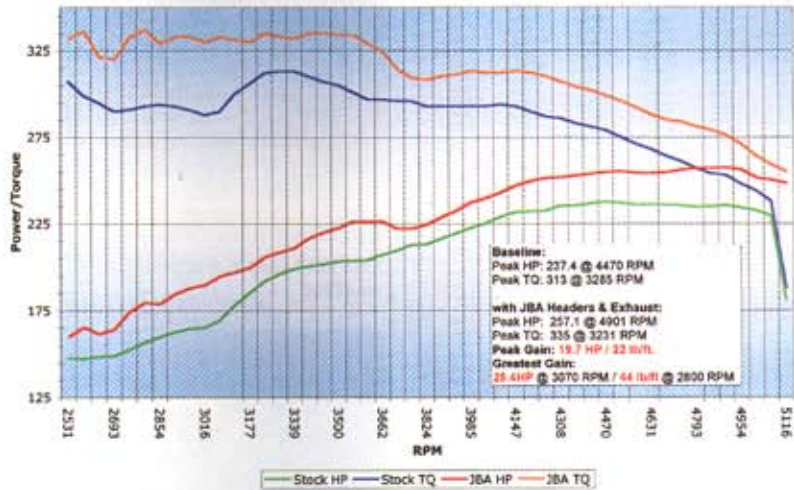


JBA's exhaust systems, tuned to work in concert with the company's headers, are available in either 304 stainless steel or with an aluminized finish.



2004 Ford F-150 5.4L 3v Dyno

with JBA Catéward® Headers p/n 16795JT and JBA Exhaust System p/n 30-2526



The dyno graph shows the graphic differences between a stock system (green and blue) and JBA's high-performance exhaust (red and orange).

gains is improved scavenging: using exhaust pulses to siphon out spent gases and draw in the fresh air/fuel mixture during valve overlap. The effect is an increase in volumetric efficiency (more air in the cylinder) and a decrease in contamination from spent gases.

Typical performance gains with the addition of JBA headers on a fuel-injected V-8 are anywhere from 10 to 25 hp with similar numbers for torque. With a complete exhaust-system upgrade (headers, muffler, and pipe),

gains of 20-50 hp or more are not uncommon. For V-6 applications, expect a gain of 10-15 hp.

How much performance is seen on an individual application depends on the condition of the engine and any upgrades already made. On supercharged applications, for instance, you'll likely see an even more dramatic increase, as much as 40-plus horses. That's a lot of giddy-up and go!



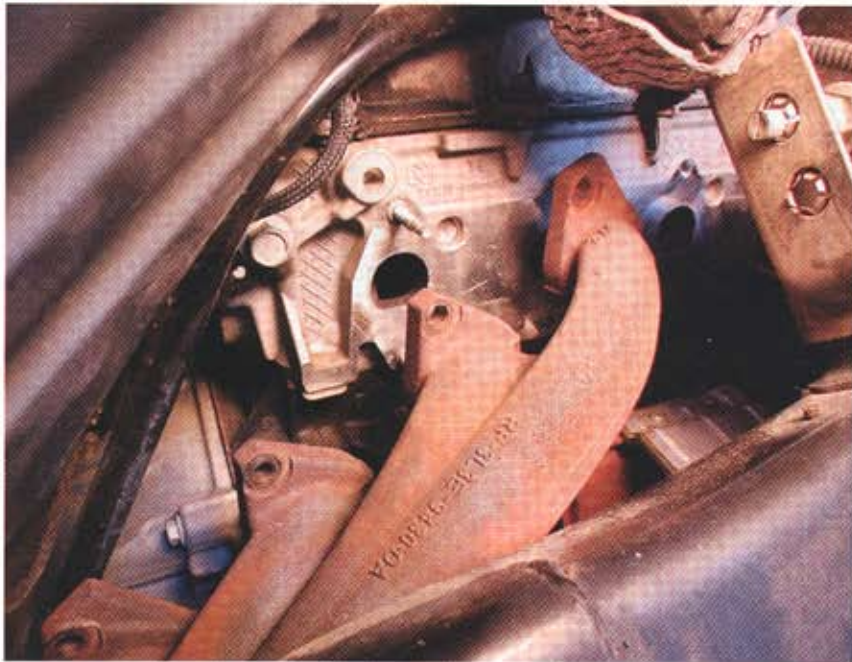
JBA's patented Firecone has a pyramid shape designed to smooth the exhaust flow and maintain velocity for optimum performance.



In addition to the Firecone in the merge collector, JBA headers feature thick, laser-cut flanges, over-sized exhaust ports, and smooth, mandrel-bent tubing.



Old versus new: The visual differences between the stock and JBA system really tell the story. Note the differences in the header flanges, tubing, and muffler shape.



Note JBA's simple, one-piece gasket for the manifold.



Removing the stock headers and replacing them with the JBA units is the most challenging part of the job.



Be prepared to do a few contortions to get at all the header bolts. The clearances around the block can be tight.



You'll likely need a combination of flexible extensions for your socket wrench.



You might think you're staring into the mouth of a python, but it's just a JBA muffler. The scallops cancel out noise without creating excessive flow restrictions.



Bigger isn't always better. The larger factory muffler is full of power-robbing baffles.



You need to drop down the catalytic converter in order to install the JBA exhaust system.



A recess in joints of the JBA tubing ensures that it locks into the proper location.



Larger tubing, however, does make a big difference.



The crossover pipe must be loosened as well.



We ran into a bit of difficulty with the hangers, since Ford had made a mid-year change in some of the specs of the stock system. If that's the case with your particular truck, it may take a bit of custom fitting to get the hangers in place.



Be sure to add some Ultra Copper high-temp RTV sealant to the collector before bolting on the JBA exhaust pipe.



Place the aft end over the rear axle before fitting in the tubing.



A polished tip nicely finishes off the tail end of the JBA system.



Next fit the muffer to the rear section of tubing.



JBA welds all tubing connections for a secure installation.



Then you can join the forward sections.



The JBA equipment was verified on a chassis dyno.

SOURCE

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