

Little Bighorn

KENNE BELL PUTS ITS BOOSTED TUSKS INTO THE MEEKEST MODULARS

Text and Photos by Tom Wilson



▲ It's been a while since we've seen a serious power adder for the Two-Valve Mustang, but Kenne Bell's Mammoth blower kit definitely fills the need. Designed for 4.6 Two-Valve Mustang GT engines that have been mechanically upgraded and run race fuel, this Two-Valve Mammoth kit opens with 560 rwhp on 15 lbs of boost, goes to 703 rwhp at 26 pounds of boost and ultimately can be boosted to 28 or possibly 30 pounds with the largest Mammoth application.

For a while now the distinction at Kenne Bell between merely fast and outright furious is fairly easy to spot. Standard blower kits with their smaller displacement superchargers and easily packaged standard inlets are affordable and run beautifully on the street, yet can be hustled to race-pace when sped up and fed octane booster.

Kenne Bell's larger blowers, those in the 2.6- and 2.8-liter category, coupled with giant Mammoth inlets and throttle bodies, are really more race pieces. Sure, they run great on the street, but pulled for boost potential they'll make so much power they fracture stock pistons and

demand a diet of specialized fuel for their trouble.

That said, nearly 95 percent of Kenne Bell's customers opt for the big Mammoth inlets whenever they're offered, and certainly the larger displacement superchargers are almost as equally popular and tons of them are run on the street. Gee, people

buying superchargers have a need for speed. Imagine that?

Just as obviously, Kenne Bell has been working hard for years to offer big blowers and Mammoth inlets for all of its Ford blowers, along with keeping up development of new kits for new Ford engines as they came along. The good news is all

HORSE SENSE: Just a reminder, but when modding the Two-Valve 4.6 for 15 pounds of boost or more, besides the forged bottom end bits, you must also fit upgraded oil pump gears. Stock 4.6 oil pump gears shatter at high power outputs, immediately ruining your whole day. Triangle Speed Shop (www.trianglespeedshop.com) in Texas has what you need. Mammoth power also far exceeds the humble '96-'04 Mustang's fuel system, so you can count on replacing all of it as well. Finally, '96-'98 engines require aftermarket or Performance Improved cylinder heads found stock on '99-'04 Two-Valves to work with Kenne Bell supercharger kits.

of the push-rod 5.0 and modular 4.6, 5.0, and 5.8 Ford V-8s now have standard and Mammoth kits for them. Well, all but one until early 2013, when the final Mammoth kit was released for the Two-Valve modulars in '96-'04 Mustang GTs. It's the kit we're looking at here.

To best understand the new Mammoth kit, let's recall the standard Two-Valve Kenne Bell kit for the first modular Mustang GTs which has been on-sale for years. It's a street-oriented kit, designed to work with the stock 4.6 Two-Valve short-block and pump gas to give a 151 hp increase over stock. It uses a 2.1-liter KB blower, nominally pulled for 9 psi although it works anywhere between 6 and 14 psi of boost. Kenne Bell has been offering this kit in affordable, non-cooled and pricier, intercooled versions for higher outputs and it's a good seller. The natural limit for this blower kit is 525 rwhp, the point where the stock pistons and rods are suspect and pump gasoline no longer cuts it.

An important note with all '96-'98 Two-Valve engines is they require the '99-'04 PI heads or aftermarket heads according to Kenne Bell. Also, for the record, there is no Mammoth for the 2.1 blower kits as the larger inlet physically doesn't fit the more compact supercharger.

Of course, there have always been folks who wanted more from a Two-Valve than 525 rwhp. They used to be few, as the Cobras attracted most of the big-power fans, but today Two-Valve owners are ready for more. Most importantly, many Two-Valve '96-'04 Mustangs are now old enough to have worn out or blown-up their original short-blocks. They've been replaced by forged internals Two-Valve short-blocks and prepped cylinder heads—another must-have for big power with this engine according to Kenne Bell.

This critical mass of potential buyers is looking for efficient, high-output supercharger kits, and with Kenne Bell having just finished developing Mammoth inlet kits for all of their other big supercharger applications, they had the resources to develop a deep-breathing Two-Valve kit.

As you've likely guessed, the new Mammoth Two-Valve kit does not replace the existing standard kit with its 2.1 blower and Big Tube inlet (which doesn't look big at all compared to the Mammoth). Instead, the new Mammoth kit is offered to take over where the standard kit falls off. Kenne Bell rates the Mammoth kit for 15 to 28 pounds of boost, which is great for track duty; for any normal street application the standard Two-Valve kit is still more efficient and far less expensive.

There are two major components in the new Two-Valve Mammoth kit: the blower and the inlet. The blower is actually your choice of either of KB's 2.6- or 2.8-liter twin-screw blowers. The idea here is the 2.8 blower is so air-happy that

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it's all but impossible to make it run at low-boost, pump-gas levels, so KB offers the 2.6 liter for those currently running a stock short-block or wanting to motor around on pump gas and 10 pounds of boost while still enjoying the reduced inlet restriction and a bit more power the Mammoth inlet will give even on pump gas. A 2.6-liter Mammoth makes a little more power than a 2.1 standard kit at the same boost levels because the larger blower/inlet system is a hair more efficient. Later an upgraded short-block with forged internals can be slid under the 2.6 blower and it can be pulled for up to 26 pounds on race gas or E85. That's over 700 hp, or more than enough for many folks.

Those already sporting a built short-block can opt for the 2.8 blower. It's only \$100 more than the 2.6 and puts out another 2 pounds of boost so it makes that extra horsepower you can't feel on the street but racers need. Physically the 2.6 and 2.8 blowers are identical, save that

the 2.8 is 0.75 inches longer than the 2.6. All the rest is the same. The downside to the 2.8 is it makes two more pounds of boost than the 2.6, so instead of a lower limit of 10 pounds of boost like the 2.6, the 2.8 makes 12 pounds of boost, minimum. That's too much for pump gas and a stock short-block, according to Kenne Bell, hence the 2.6 option.

The other major part of the Two-Valve Mammoth blower kit is its namesake Mammoth inlet system. This is everything upstream of the supercharger, namely the air filter, mass air housing, inlet ducting and throttle body, all of which are truly huge in the Mammoth kit. That's because these items are on the naturally aspirated side of the blower, and pose tremendous restriction on airflow into the supercharger unless they are correctly sized, shaped, and placed in the engine compartment. It isn't as if the blower can power the air into itself; the stuff pushes in there the old fashioned way: the weight of the



▲ Liquid cooling for the 2.8-liter superchargers is optional on the 4.6 Two-Valve Mammoth kit. Liquid cooling is increasingly beneficial as boost and engine rpm climbs into the racy regions. It evens the temperature down the length of the blower's rotors and rotor drive gears, allowing a tighter tolerance and more consistent results. Liquid cooling is best used on seriously high-output applications but is still beneficial on hard-driven, higher-boost street animals.



▲ As always, Kenne Bell is using a twin-screw supercharger that sits on top of the intake manifold in plain sight and aspirates from the rear. The latter offers less inlet restriction than blowers breathing through the front because the blower drive is not in the way. This is a 2.8-liter Liquid Cooled installation.



▲ There is no mistaking the over-sized Mammoth inlet tube and cast aluminum inlet at the back of the supercharger. Similar to the Shelby GT500 blower kits inlet, the Two-Valve Mammoth inlet helps give the lowly Two-Valve engine GT500-like power.



▲ Previous Kenne Bell testing has proven hot underhood air is death to blower engines, so the Two-Valve kit routes the air intake through the inner bodywork in front of the passenger-side tire. A large open-element air filter mounts just below on the other side of the sheetmetal. The mass-air element is visible just after the tubing emerges from the inner fender.



▲ Looking rather compact here without its throttle body, fuel rail, or injectors, the standard Kenne Bell Two-Valve supercharger assembly has been on-sale for years and will continue as KB's street blower for '96-'04 Mustang GTs.

FREE BREATHING

One concept that's apparent with comparing the standard and Mammoth Two-Valve kits is the importance of the inlet systems. We've touched on this idea before in this article and others, but it bears repeating: The inlet side of the supercharger is naturally aspirated and needs as careful attention to reduce restriction as any other naturally aspirated inlet system. Furthermore, the more boost and air volume the supercharger is processing the more important this phenomena is.

Kenne Bell has generous amounts of data showing the efficacy of large inlet systems breathing cool air on high-output supercharged engines; far more data, in fact, than we can show here. But to cut to the specifics of Mustang-based testing (on Coyote engines) KB's testing shows that in the 650 to 800hp range a 1 In Hg inlet restriction (about 0.5 psi) costs 32 hp, should you be engineering your own inlet.



▲ There's no missing the massive Mammoth inlet and matching throttle body on the Two-Valve Mammoth blower assembly. What is more subtle is the 2.8-liter supercharger is slightly longer than the 2.1 on the standard kit. This is exactly how the Two-Valve Mammoth kit comes out of the box.



▲ Viewed from the rear, the Kenne Bell Two-Valve blower assemblies—Mammoth at left, standard at right—show a few tell-tale differences. Obviously the Mammoth inlet is overpoweringly large, but the intake manifold is slightly different in the way it packages the two water nipples. If nothing else, this precludes swapping a Mammoth blower and inlet onto an existing standard intake manifold.



▲ Mammoth Two-Valve kits come with a six-rib blower drive as stock, with an eight-rib kit optional for those operating in the 20 pounds and higher range. The two AN fittings at left denote this is a Liquid Cooled supercharger, and thus a 2.8-liter. The Liquid Cooling keeps temperatures more even from one end of the rotors to the other, something worth thinking about at high boost outputs, but not a factor in street driving.

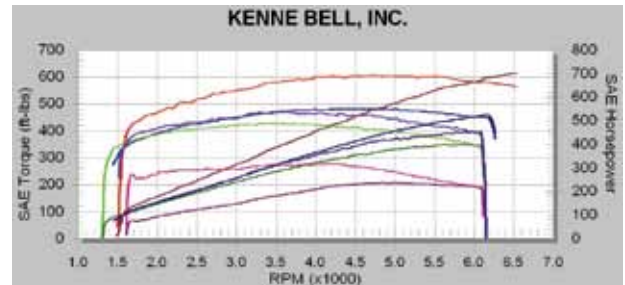
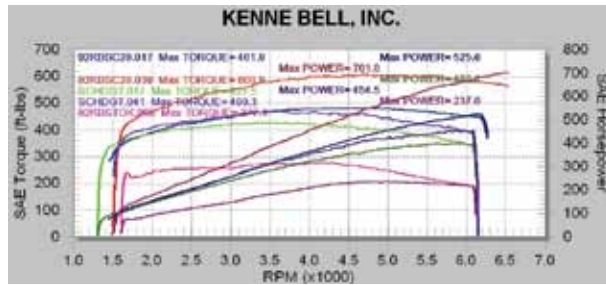
▶ Like all Kenne Bell twin-screws, the Two-Valve Mammoth blower is fitted with a large bypass valve and



plumbing to aid part- and closed-throttle operation. Unlike centrifugal blowers that typically blow-through the throttle body, the bypass does not need to vent excess boost to the atmosphere and is thus silent.

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ON THE DYNO



While it's always fun to see what maximum power a blower can make, Kenne Bell offers so many superchargers, inlets and supporting systems that maximum power isn't a concern unless you're Jonesing for something in the 2,000hp range. Instead, it's more important to show which blower and inlet combination is most efficient for the intended power. Max

efficiency gives the most power for the least cost, along with coolest, most detonation-resistant inlet temperatures.

As we've seen, the Two-Valve Mammoth system is maximized for somewhere in the 15- to 25-plus-pound boost range. To put that in perspective, here are some numbers from Kenne Bell Two-Valve tests.

| RPM | 2.1, 9 psi | | 2.1, 10 psi | | 2.8, 13 psi | | 2.8 LC Mammoth, 26 psi | | 2.1 vs. Mammoth | |
|-------|---------------|--------|---------------|--------|---------------|--------|------------------------|--------|-----------------|--------|
| | TQ | HP | TQ | HP | TQ | HP | TQ | HP | TQ | HP |
| 1,600 | 356.60 | 108.60 | 347.90 | 106.00 | 341.50 | 104.00 | 426.70 | 138.10 | 70.10 | 29.50 |
| 1,700 | 365.90 | 118.40 | 382.00 | 123.60 | 359.20 | 116.30 | 444.70 | 152.40 | 78.80 | 34.00 |
| 1,800 | 373.90 | 128.10 | 393.80 | 135.00 | 370.50 | 127.00 | 460.20 | 166.50 | 86.30 | 38.40 |
| 1,900 | 379.90 | 137.40 | 400.50 | 144.90 | 380.60 | 137.70 | 466.40 | 177.60 | 86.50 | 40.20 |
| 2,000 | 385.20 | 146.70 | 409.20 | 155.80 | 390.00 | 148.50 | 480.40 | 192.10 | 95.20 | 45.40 |
| 2,100 | 392.30 | 156.80 | 417.40 | 166.90 | 399.20 | 159.60 | 484.30 | 202.80 | 92.00 | 46.00 |
| 2,200 | 397.20 | 166.40 | 421.10 | 176.40 | 407.90 | 170.90 | 504.30 | 220.80 | 107.10 | 54.40 |
| 2,300 | 402.90 | 176.40 | 423.60 | 185.50 | 415.80 | 182.10 | 504.90 | 230.70 | 102.00 | 54.30 |
| 2,400 | 403.40 | 184.30 | 429.70 | 196.40 | 421.70 | 192.70 | 516.30 | 245.70 | 112.90 | 61.40 |
| 2,500 | 405.60 | 193.10 | 430.80 | 205.00 | 424.40 | 202.00 | 522.40 | 258.60 | 116.80 | 65.50 |
| 2,600 | 410.10 | 203.00 | 433.20 | 214.40 | 429.90 | 212.80 | 536.40 | 275.70 | 126.30 | 72.70 |
| 2,700 | 411.70 | 211.70 | 443.10 | 227.80 | 434.60 | 223.40 | 540.20 | 288.00 | 128.50 | 76.30 |
| 2,800 | 414.20 | 220.80 | 445.80 | 237.60 | 440.50 | 234.80 | 545.20 | 301.10 | 131.00 | 80.30 |
| 2,900 | 418.40 | 231.00 | 445.30 | 245.90 | 445.30 | 245.90 | 550.90 | 314.70 | 132.50 | 83.70 |
| 3,000 | 419.50 | 239.60 | 446.70 | 255.10 | 449.90 | 257.00 | 552.80 | 326.30 | 133.30 | 86.70 |
| 3,100 | 422.70 | 249.50 | 457.00 | 269.70 | 453.80 | 267.90 | 560.00 | 341.20 | 137.30 | 91.70 |
| 3,200 | 423.40 | 258.00 | 464.00 | 282.70 | 458.60 | 279.40 | 569.30 | 357.70 | 145.90 | 99.70 |
| 3,300 | 425.20 | 267.20 | 466.90 | 293.30 | 463.00 | 290.90 | 578.00 | 374.20 | 152.80 | 107.00 |
| 3,400 | 426.70 | 276.20 | 463.30 | 299.90 | 465.90 | 301.60 | 579.70 | 386.30 | 153.00 | 110.10 |
| 3,500 | 425.00 | 283.20 | 467.10 | 311.20 | 468.10 | 311.90 | 582.70 | 399.40 | 157.70 | 116.20 |
| 3,600 | 425.20 | 291.50 | 468.50 | 321.10 | 470.90 | 322.80 | 584.50 | 411.80 | 159.30 | 120.30 |
| 3,700 | 426.50 | 300.50 | 467.80 | 329.50 | 473.90 | 333.90 | 589.80 | 426.80 | 163.30 | 126.30 |
| 3,800 | 423.70 | 306.60 | 461.50 | 333.90 | 476.00 | 344.40 | 590.50 | 438.50 | 166.80 | 131.90 |
| 3,900 | 423.60 | 314.60 | 464.00 | 344.50 | 477.50 | 354.60 | 598.50 | 455.80 | 174.90 | 141.20 |
| 4,000 | 420.90 | 320.50 | 463.60 | 353.00 | 479.60 | 365.20 | 598.70 | 467.40 | 177.80 | 146.90 |
| 4,100 | 418.90 | 327.00 | 465.50 | 363.40 | 478.70 | 373.70 | 601.50 | 481.00 | 182.60 | 154.00 |
| 4,200 | 417.00 | 333.40 | 458.80 | 366.90 | 480.20 | 384.00 | 599.90 | 491.10 | 182.90 | 157.70 |
| 4,300 | 415.50 | 340.20 | 463.60 | 379.60 | 479.60 | 392.60 | 598.20 | 501.10 | 182.70 | 160.90 |
| 4,400 | 413.80 | 346.70 | 455.20 | 381.40 | 480.00 | 402.10 | 605.80 | 519.10 | 192.00 | 172.40 |
| 4,500 | 412.60 | 353.50 | 455.80 | 390.50 | 480.30 | 411.50 | 603.60 | 528.60 | 191.00 | 175.10 |
| 4,600 | 407.50 | 356.90 | 457.20 | 400.40 | 479.20 | 419.70 | 608.70 | 544.70 | 201.20 | 187.80 |
| 4,700 | 404.70 | 362.20 | 459.80 | 411.50 | 480.80 | 430.30 | 604.00 | 552.00 | 199.30 | 189.80 |
| 4,800 | 404.20 | 369.40 | 452.70 | 413.70 | 481.30 | 439.90 | 604.50 | 563.90 | 200.30 | 194.50 |
| 4,900 | 403.10 | 376.10 | 445.80 | 415.90 | 480.80 | 448.50 | 602.90 | 573.90 | 199.80 | 197.80 |

Continued on page 54

atmosphere drives it into the blower. If the blower inlet is restrictive then horsepower is lost and blower outlet temperatures rise, sometimes dramatically.

Kenne Bell has performed extensive flow-bench and dyno testing on blower inlets, and Jim Bell, the big rotor at KB, is evangelical about the need for low-restriction inlets breathing cooler air from outside the hot engine compartment. For the Two-Valve Mammoth application the solution was as easy as reaching for the Shelby GT500's Mammoth inlet. It's more than big enough for the Two-Valve 4.6.

Because the Mammoth Two-Valve kit is designed for a minimum of 15 pounds of boost, forged pistons, forged rods, and ported cylinder heads, Kenne Bell is offering it more as a tuner kit rather than a full kit. That means KB does not include any fuel system components, including fuel injectors, Boost-a-Pump, nor an electronic tune. Kenne Bell relies on the owners to upgrade those items, so there's no need to package them in a Mammoth kit. If the owner is stepping up from a stock or mild engine then they'll need to upgrade the fuel system and tune as the Mammoth Two-Valve kit can't be fed by a stock Two-Valve fuel system.

Setting a power figure to a tuner kit is an approximation, as the final number depends on injector size, the fuel system, boost, and tuning. However, out of the box (using the stock 5.0-inch crankshaft pulley,



▲ Kenne Bell supplies the Two-Valve Mammoth kits with a set of their aluminum fuel rails. Like all the rails on the market the KB rails are many times larger than necessary and will never pose a fuel restriction. Injectors are not supplied as KB figures Two-Valve engines at this power level have already been thoroughly hot-rodded and will likely need custom fuel injector sizing anyway.



▲ A close-up of the rear of the Two-Valve Mammoth assembly shows the layout of the various hose fittings and fuel crossover hose. This area is rather difficult to reach once the blower and inlet are installed, but the good news is there is nothing to service back here, so cramped access shouldn't matter.

ON THE DYNO CONTINUED

| RPM | 2.1, 9 psi | | 2.1, 10 psi | | 2.8, 13 psi | | 2.8 LC Mammoth, 26 psi | | 2.1 vs. Mammoth | |
|-------|------------|---------------|-------------|---------------|-------------|---------------|------------------------|---------------|-----------------|---------------|
| | TQ | HP | TQ | HP | TQ | HP | TQ | HP | TQ | HP |
| 5,000 | 398.20 | 379.00 | 444.60 | 423.30 | 478.50 | 455.50 | 601.80 | 584.40 | 203.60 | 205.4 |
| 5,100 | 393.00 | 381.60 | 435.90 | 423.30 | 476.40 | 462.60 | 601.40 | 595.40 | 208.40 | 213.80 |
| 5,200 | 389.90 | 386.00 | 431.40 | 427.10 | 474.00 | 469.30 | 597.80 | 603.20 | 207.90 | 217.20 |
| 5,300 | 385.30 | 388.80 | 430.40 | 434.30 | 471.90 | 476.20 | 600.10 | 617.00 | 214.80 | 228.20 |
| 5,400 | 379.50 | 390.20 | 421.60 | 433.40 | 470.50 | 483.70 | 600.50 | 628.80 | 221.00 | 238.60 |
| 5,500 | 377.00 | 394.80 | 415.80 | 435.40 | 468.00 | 490.00 | 598.30 | 638.00 | 221.30 | 243.20 |
| 5,600 | 373.90 | 398.70 | 416.40 | 444.00 | 465.90 | 496.70 | 594.40 | 645.10 | 220.50 | 246.40 |
| 5,700 | 363.20 | 394.20 | 411.60 | 446.70 | 460.80 | 500.10 | 588.90 | 650.40 | 225.70 | 256.20 |
| 5,800 | 361.60 | 399.40 | 409.90 | 452.70 | 457.80 | 505.50 | 584.10 | 656.20 | 222.50 | 256.80 |
| 5,900 | 354.40 | 398.20 | 403.90 | 453.80 | 454.50 | 510.60 | 580.60 | 663.30 | 226.20 | 265.10 |
| 6,000 | 345.20 | 394.30 | 394.90 | 451.20 | 452.10 | 516.50 | 580.40 | 674.10 | 235.20 | 279.80 |
| 6,100 | 323.90 | 376.20 | 357.80 | 415.50 | 449.00 | 521.40 | 579.20 | 683.80 | 255.30 | 307.60 |
| 6,200 | n/a | n/a | n/a | n/a | 438.80 | 518.00 | 573.90 | 688.50 | n/a | n/a |
| 6,300 | n/a | n/a | n/a | n/a | n/a | n/a | 569.80 | 694.40 | n/a | n/a |
| 6,400 | n/a | n/a | n/a | n/a | n/a | n/a | 566.60 | 701.20 | n/a | n/a |

Of special interest is the 15-pound tests comparing the 2.1 and 2.8 blowers (Standard vs. Mammoth kits). The extra 65 hp from the 2.8-liter supercharger is obviously not from boost as both were turning out the same amount; the power gain indicates the intake's greater efficiency and the reduced power it takes to drive the larger supercharger at that boost level. In short, it takes less power to drive the larger 2.8 blower to 15 pounds of boost than it does to get the same pressure out of a smaller, faster-turning 2.1 breathing through a more restrictive intake. Less power lost to driving the supercharger means more power to the rear tires, and that's why the Two-Valve Mammoth kit uses larger superchargers.

While not shown in this data, the 2.1 standard kit is fiscally far more efficient than the Mammoth kits are at pump-gas, daily driven levels, and the power advantage to the Mammoth is

| Supercharger | Boost | HP | Notes |
|--------------|-------|-----|---|
| None | 0 | 245 | Stock baseline |
| 2.1 | 9 | 431 | Standard KB 4.6 Two-Valve kit |
| 2.1 | 10 | 453 | With 75mm Big Tube inlet |
| 2.1 | 15 | 507 | Standard KB kit with 15 lb pulley. |
| 2.8 | 15 | 572 | Two-Valve Mammoth kit |
| 2.8 | 26 | 703 | Two-Valve Mammoth kit, optimized engine |

minimal at such easy-going tunes. We show the useful dyno tests from the standard 2.1 and 2.8 Mammoth kits. As is typical, the precise maximum power and torque figures in the charts don't necessarily line up with those in the text because the maximums fall between the 100-rpm increments shown in the charts.



▲ Jim Bell was running flow tests on various 4.6 Two-Valve modular intakes when we visited. At bottom is a stock 4.6 Mustang GT unit. As the duct taped number indicates, it flows a modest 536 cfm on KB's flowbench. The elephant trunk at top is the KB intake ducting from their standard 2.1-liter Two-Valve kit. It flows substantially better at 782 cfm, but that's still not enough to support major power initiatives.



2.750-inch blower pulley) for an entry-level 15 pounds of boost during an abbreviated 6,000 rpm test the Two-Valve Mammoth is good for 535 rwhp. That extrapolates to 580 rwhp at 6,500 rpm.

Set to pump 26 pounds of boost using a 6.50-inch crank pulley and 2.375-inch blower pulley the Two-Valve Mammoth put down an impressive 703 rwhp on Kenne Bell's Dynojet. There were no cats in the exhaust on that run. Set on kill, the Mammoth has put down an eye-watering 1,004 hp on an engine dyno (that's 218 hp/liter or 3.57 hp/ci, race fans) and 850 rwhp on heavily prepped Two-Valve race engines.

Real-world cost is also a moving target with a tuner kit. Kenne Bell offers the Two-Valve Mammoth kit starting at \$6,199, but of course that doesn't include the

◀ Here the same Two-Valve standard intake ducting at bottom is compared with the 4.5-inch diameter Two-Valve Mammoth duct. The advantages of the Mammoth duct are obvious—it's shorter, larger, smoother, and straighter—but even then its 1,800-cfm flow rating is surprisingly large. That's enough airflow to support more horsepower than the Two-Valve is going to make.

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necessary fuel system parts or tuning. Options are a polished supercharger (add \$500) and an eight-rib pulley set (useful starting at just 15 pounds of boost; required at 20 pounds or more) for \$699. You'll also need to choose among 5.0-, 6.5-, 7.5-, and 8.5-inch diameter crankshaft pulleys. There's more pricing information in the sidebar.

For once, we don't have to pass along a date for when the Two-Valve Mammoth kit will reach the market. It's been on sale since January 30, 2013, so you can have one right away. It seems like a powerful way to upgrade a hot-rodged Two-Valve Mustang, or as an alternative to an engine swap, or for a real surprise to unsuspecting Three- and Four-Valve drivers.



▲ Airflow can be unintuitive at times. The corrugated tubing on the standard air inlet is much more restrictive than it looks as the corrugations trip and tumble the air, not to mention its small mass air meter housing.



◀ Just in case anyone missed it, the Mammoth inlet tube at top uses a simple mounting pad for the mass air meter electronics, effectively giving it a 4.5-inch mass air meter (electronic tuning adjusts for the ducting size difference). By comparison, the standard Two-Valve kit uses the stock mass air meter or an optional 90mm (3.53-inch) unit that is still far more restrictive than the one inch larger Mammoth.



▲ Another not so subtle clue to the Mammoth inlet tube's power capacity is its belled throttle body adapter hose. The standard kit, by comparison, necks down to mate with its throttle body.



▲ Show 'em your 2x75mm Mammoth throttle body and you probably won't even have to race them. The gulping Mammoth unit is posed here with the stock Ford 60mm (left) and standard 2.1-liter Kenne Bell kit's optional 75mm (center) throttle bodies. In what already seems strangely quaint, the Two-Valve modular's use a throttle cable. **5.0**

BOOST ECONOMICS

When we say the standard 2.1 blower is less expensive than the Mammoth kits, we mean the Mammoth kit costs noticeably more than the standard kit. The Mammoth kit is not as complete as the standard kits so the ultimate price is higher yet. That's because the standard kits are complete kits, so they include everything needed to bolt on the supercharger and make it run, while the tuner kits are designed for pro installation or on already modified vehicles, so the injectors, hand-held tuner, tune, Boost-A-Pump and in some cases the drive belt, are not included in the KB kit and will have to be accounted for separately.

| Kit | Price | Notes |
|-----------------|---------|---|
| STANDARD | | |
| 2.1 | \$3,899 | Complete kit, non-intercooled |
| 2.1 cooled | \$4,999 | Complete kit intercooled |
| MAMMOTH | | |
| 2.6 | \$6,199 | Tuner kit, does not include injectors, tuner, BAP or drive belt |
| 2.8 | \$6,299 | Tuner kit, does not include injectors, tuner, BAP or drive belt |
| 2.8 LC | \$6,599 | Tuner kit as above, adds Liquid Cooled supercharger |

Note: All Mammoth kits are intercooled; the Liquid Cooled supercharger is not intercooling (see photos). Kenne Bell offers Boost-a-Pumps at \$239 or \$259; drive belts are \$46 for six-rib and \$76 for eight-rib. KB does not sell injectors, but they are typically \$365-\$465 for this application from other vendors. Polished superchargers are \$500 extra; an eight-rib belt upgrade is \$699.



SOURCE

KENNE BELL
(909) 941-6646
www.kennebell.net