

TECH & TUNING TIPS

BIG BORE 3.2L, 2.8L, 2.6L & 2.4L, 2.2L '03 COBRA

PULLEY / BOOST / RATIO / HP / 1/4 MILEGUIDE

These are "real" dyno tests performed with calibrated sensors. A Ford NGS Scanner also monitored fuel, spark, load, temps etc. to guarantee accuracy of tests. Boost and HP tests were conducted with 3rd party Tom Wilson for 5.0 Mustang Magazine. The vehicle was a 100% stock '03 Cobra. The Kenne Bell BOOST-A-SPARK™ was added at 10 psi to insure adequate ignition. The fuel system was 100% stock except for the Kenne Bell BOOST-A-PUMP™ and SWITCH CHIP®. The Kenne Bell BOOST-A-PUMP™ was necessary to increase fuel pressure. If switching to 60lb injectors, the BOOST-A-PUMP™ is all that's necessary for 25% more fuel capacity. Note that 1 psi boost is approx. 11-13HP rear wheel HP (RWHP).

PULLEY / BOOST / RATIO / HP GUIDE

Supercharger Pulley	Pulley Ratio	Supercharger RPM @ 6500	BIG BORE			Discontinued BLOWZILLA	
			3.2L	2.8L	2.6L	2.4L	2.2L
4-1/4"	1.76	11440	17.5	14.5	11.5	9.5	7
4"	1.87	12155	19.5	16.5	14	11.5	9
3-3/4"	2.00	13000	21.5	18.5	16	13.5	11
3-1/2"	2.14	13900	23.5	20.5	18	15.5	13
3-1/4"	2.30	14950	25.5	22.5	20	17.5	15
3"	2.51	16315	27.5	24.5	22	19.5	17
2-3/4"	2.73	17745	-	26.5	24	21.5	19

Note: Boost does not "drop off" up to 2.5 psi as with Eaton. Boost info is for reference with stock 7.5" crank pulley. For 9.5", 9.0", 8.5", 8.0" divide by ratio to determine boost.

$\frac{\text{Crankshaft Pulley}}{\text{Supercharger Pulley}} = \text{Ratio}$. $\text{Ratio} \times \text{engine rpm} = \text{Supercharger rpm}$. Maximum rpm for racing is 18,000 rpm.

Example: Max RPM = 6000 engine x 3.0 Ratio = 18000 Supercharger rpm

MAXIMUM RECOMMENDED BOOST FOR STREET IS 18 PSI, REGARDLESS OF FUEL OCTANE OR TUNE. 19-23 PSI FOR COMPETITION USE ONLY WITH HIGHER OCTANE FUEL.

REAR WHEEL HORSEPOWER GUIDE (HP vs. BOOST VS. 1/4 MILE)*

Test	Boost	RWHP	1/4 Mile		Min. ET
			Speed	ET	
Eaton Stock	8.3	366	107.0	12.7	12.15
Kenne Bell 1	9	475	115.0	12.0	11.40
Kenne Bell 2	11	510	118.5	11.80	11.10
Kenne Bell 3	13	535	121.0	11.60	10.90
Kenne Bell 4	15	560	123.5	11.40	10.70
Kenne Bell 5	17	583	125.8	11.20	10.50
Kenne Bell 6	19	617	128	10.90	10.30
Kenne Bell 7	21	627	130	10.80	10.20

Divide rear wheel HP by .85 to determine engine HP

1/4 times are based on customer and Kenne Bell test vehicles with Street Drag Radials. "Minimum ET" is the lowest ET possible for the corresponding speed. It's usually around .6 sec lower than the average street car.

*All above tests except "stock" with the Eaton were conducted with our Cobra Cool Air Kit. Baseline Eaton at 8.3 psi was 366HP. Inlet losses will depend on HP level and filter/hose size and efficiency. Kenne Bell Cobra Cool Air Kit loses no HP at the 600HP level. It's hardly worth removing and risking a rock in the supercharger and engine.

2.6L / 2.8L / 3.2L PULLEY / GATES BELT GUIDE (Stock Crank Pulley)

Supercharger Pulley	Gates Belt Part#
4-1/4"	K080774
4"	K080765
3-3/4"	K080765 or K080760 (Tight)
3-1/2"	K080760
3-1/4"	K080760 (Loose)*
3"	K080751
2-3/4"	K080745
2-1/2"	K080745

Note:
The 2.2L, 2.4L have been upgraded to the BIG BORE 2.6L, 2.8L, 3.2L respectively. Kenne Bell will continue to support, service and stock parts for the 2.2L, 2.4L indefinitely.

*Requires underdrive (larger) alternator pulley to tighten belt. Belt is .5" too loose. All other belts work with stock Cobra pulleys and Kenne Bell 2.6L or 2.8L superchargers.