

TECH & TUNING TIPS

BLOWZILLA 2200 (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. *Note: The SWITCH CHIP® must be used in combination with the BOOST-A-PUMP™.* Fuel pressure must be 85 psi at WOT with stock injectors. DO NOT do fuel pressure without a "matched" chip. If switching to 50lb 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 SIZE / BOOST / PULLEY RATIO

Supercharger Pulley	7.5" Crank (stock)		9.0 Crank	
	Boost	Ratio	Boost	Ratio
4"	9	1.87	14.5	2.25
3-3/4"	11	2.00	16.0	2.40
3-1/2"	13	2.14	17	2.57
3-1/4"	15	2.3	19	2.77
3"	17	2.51	21	3.00
2-3/4"	19	2.73		
2-1/2"	21	3.0		

Note: Boost is at 6000. Boost does not "drop off" up to 2.5 psi as with the Eaton.

Crankshaft Pulley / Supercharger Pulley = Ratio. Ratio x engine rpm = Supercharger rpm. Maximum rpm for racing is 18,000 rpm.

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

NOTE: Keep engine rpm at 6000.

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

Test	Pulleys	Boost	RWHP	1/4 Mile		Min. ET
				Speed	ET	
Stock	3-1/2" x 7-1/2"	8.3	366	107.0	12.7	12.15
1	4" x 7-1/2"	9	475	115.0	12.0	11.40
2	3-3/4" x 7-1/2"	11	510	118.5	11.80	11.10
3	3-1/2" x 7-1/2"	13	535	121.0	11.60	10.90
4	3-1/4" x 7-1/2"	15	560	123.5	11.40	10.70
5	3" x 7-1/2"	17	583	125.8	11.20	10.50
6	2-3/4" x 7-1/2"	19	617	128	10.90	10.30
7	2-1/2" x 7-1/2"	21	627	130	10.80	10.20
8	3" x 9"	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.

See "AIR FUEL RATIO COMPARISON" in literature to better understand the SWITCH CHIP® function.

PULLEY / GATES BELT GUIDE (Stock Crank Pulley)

Supercharger Pulley	Gates Belt Part#
4"	K080760
3-3/4"	K080760
3-1/2"	K080751 or Stock
3-1/4"	K080745
3"	K080745
2-3/4"	K080740
2-1/2"	K080733