“Low compression” FS-ZE dyno results

Engine mods:
FS-ZE intake cam
FS-ZE MazdaSpeed exhaust cam
FS-ZE intake manifold
HKS Super Megaflow Intake

-Stock engine compression (9.1:1), turbo planned. These cams are mild enough for turbo use without problems. This should allow a more even/broad powerband versus too much power at the low end (when the engine is boosted).
-Stock ECU

First 2 pulls were actually lower than the 3rd last one because:
1st run- headlights on

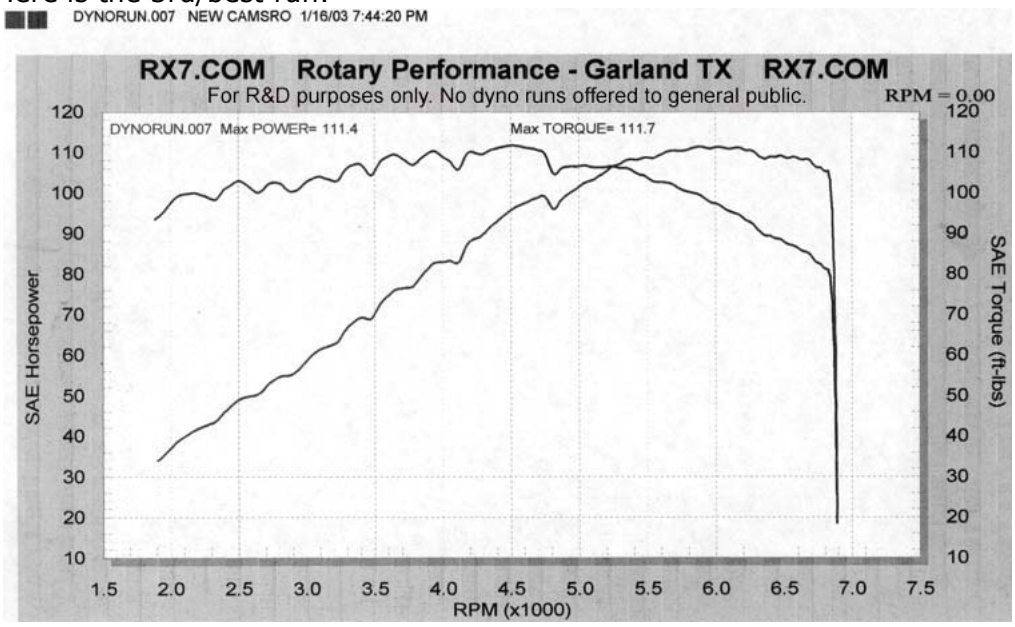
All runs were using 3rd gear. 4th gear is pointless as proven in my stock dyno.

Tire pressures for the front tires were set at my usual/normal street driving pressures: 34psi

Engine has about 25500 miles on it.

First 2 pulls were actually lower than the 3rd last one because:
1st run- headlights on
2nd run- headlights on, radiator fan on
3rd run- everything off but engine

Here is the 3rd/best run:



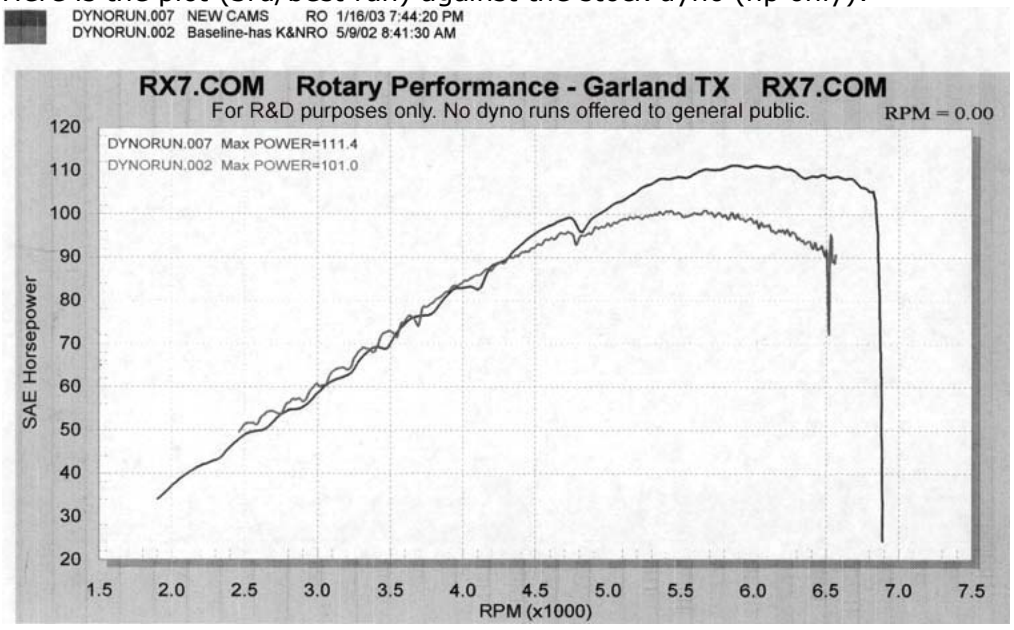
Here is the data chart of the 3rd/best run:

RX7.COM Rotary Performance - Garland TX RX7.COM
For R&D purposes only. No dyno runs offered to general public.

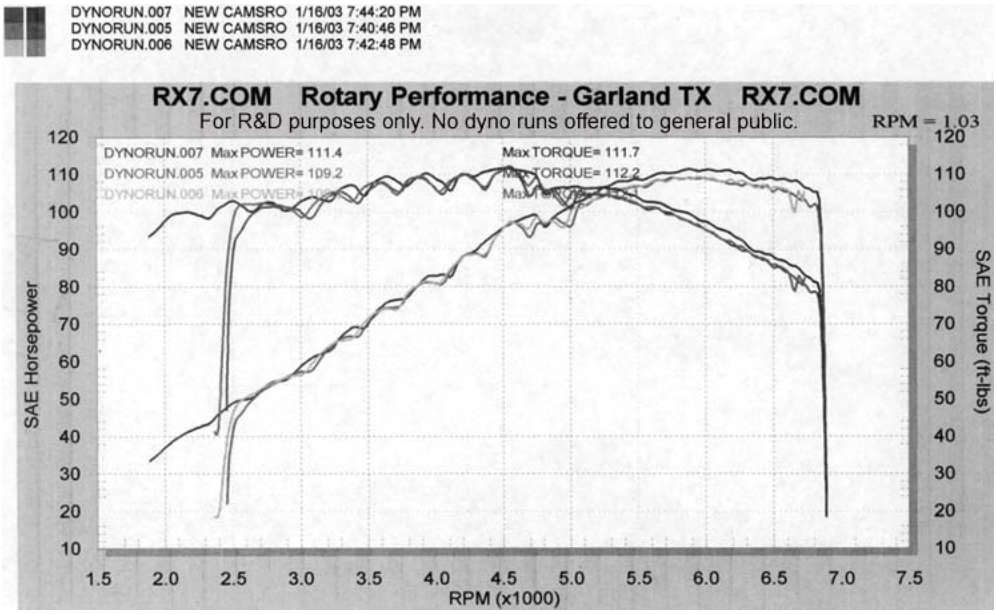
Name: DYNORUN.007
Title: NEW CAMS
Run Date and Time: 1/16/03 7:44:20 PM
Acceleration from 2000 to 6750RPM, interval = 250.00RPM
Absolute barometric pressure : 30.16 in.Hg.
Vapor pressure : 0.057 in.Hg.
Intake air temperature : 54.6 °F
Gear Ratio : 79.70 RPM/MPH
Correction Factor : 0.94 SAE

TIME	RPM	POWER	TORQUE
0.00	2000	37.1	97.5
0.70	2250	42.5	99.3
1.39	2500	49.0	103.0
2.07	2750	53.7	102.6
2.76	3000	58.7	102.7
3.43	3250	64.2	103.8
4.09	3500	70.1	105.2
4.73	3750	76.7	107.4
5.37	4000	83.0	108.9
6.01	4250	88.8	109.7
6.64	4500	95.6	111.6
7.27	4750	99.1	109.6
7.92	5000	101.4	106.6
8.58	5250	106.5	106.5
9.24	5500	108.7	103.8
9.93	5750	110.4	100.8
10.63	6000	111.2	97.4
11.37	6250	110.5	92.8
12.15	6500	108.9	88.0
12.97	6750	106.3	82.7
Column Max			
		111.2	111.6
Column Min			
		37.1	82.7
Column Average			
		84.1	102.0

Here is the plot (3rd/best run) against the stock dyno (hp only):



And finally here is the graph of all 3 (new) pulls:



you can't see it in the scan, but in DYNORUN.006: Max POWER=109.3, Max TORQUE=112.1

I'm making approximately 109-111whp as I expected. My original guess was 110-115whp. Before all these mods, my guesses were a very linear powerband and a power shift of 500rpm higher than stock and they are all correct. As you can see, the engine no longer falls flat on its face at high rpm and pulls strong all the way to redline.

I haven't seen any other dynos with the j-spec cams installed, but right now my guesses is with the FS-ZE intake manifold, it helps the flow after 6000rpm and doesn't allow the power to drop (significantly). It also seems to have allowed the low end power loss to be kept at a minimum. As far as seat of the pants drivability feel goes, I can cruise at 1600-1700rpm in 5th gear with no problems-- just like before the FS-ZE mods.

Is the FS-ZE intake manifold worth it? It is when you get the cams also, otherwise no. It appears both of these components are designed to work with each other to mutually offer a linear powerband.

Also, in case no one has figured it out yet. These dyno runs were done for research purposes only. Rotary Performance does not sell dyno runs to the public. Please do not go ask for one (if you are in the DFW area).