

Engine Spec Cheat Sheet

Block – 454 Chevy bored 40 over

Bore:	4.290"
Stroke:	4.250"
Deck Height:	0.010"
Mains Torque:	105 ftlb with ARP Moly

Crank – Scat forged 4340, 4.250 Stroke, 6.385 rods, internal balanced

Clearances, mains:	0.003" – 0.0032"
Clearances, rods:	0.0028" – 0.003"

Rods – Scat forged 4340 H beam,

Length:	6.385"
Rod Bolts:	7/16 ARP 8740 bolts
Pins:	Floating, dual spiroloc retainer
Side clearance:	0.022" - 0.024"
Rod bolt torque:	66 ft lb w/ ARP Moly

Pistons – Icon FHR 4032 Forged Aluminum Flat top (+2.4cc)

Clearances, piston to wall:	0.055"
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Rings – Total Seal

Top:	5/64" Ductile / Plasmoly
Middle:	5/64" Cast Iron
Oil:	3/16" Stainless
Clearances – top:	0.024"
Clearances – middle:	0.024"
Clearances – oil:	0.018"

Oil pump / filter - Melling 10778

Spring:	Lighter spring (~55 psi)
Filter:	Amsoil EAO24

Balancer / Dampener - ATI 917300

Torque:	110 ft lb w/ARP Moly
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Cam – Comp custom grind (Intake / Exhaust)

@0.006":	271 / 279
@0.050":	224 / 232
Lift:	0.591" / 0.601"
LSA:	112 – ground on a 110 ICL
Timing:	Comp double roller, installed 4 degrees retarded from "straight up"

Valve Train

Rollers: Comp hydraulic rollers

Pushrods:

Intake – Comp Hi Tech 8.650", 0.080" chromoly 3/8"

Exhaust – Comp Hi Tech 7.850", 0.080" chromoly 3/8"

Rockers: Comp "Ultra Pro" chromoly full roller @ 1.7:1 – "lashed" finger tight + 1/2 turn.

Springs: Pacaloy 1924 dual springs ~144 lb seat, 403 lb open pressure

Valves:

Intake: 2.190" Stainless intake

Exhaust: 1.88" Inconel exhaust

Heads - AFR 265 Magnum Partial CNC

Head Gasket: Felpro 1037 - .039" gasket height (~0.048" squish)

Static CR: Calculated @ 9.15:1

Dynamic CR: *estimated* at ~7.55:1 (using intake close @.050)

Head bolt Torque: 72 ft lb

Intake - Edelbrock Victor Jr oval port

Intake Gasket: Felpro 1212 S-3

Intake Torque: 25 ft lb

Sniper Throttle Body EFI

Ignition System – Pertronix Ignitor II

Coil: Flame Thrower II 0.6 ohm

Plug wires: Jegs 8mm wire, 350 ohm/ft

Plugs: NGK BKR6E

Timing curve: Initial (10) until 1000, 24+ initial (~34) all in by 2500.

DYNO GOALS

1. Break in engine and ensure everything works.
2. Set ignition timing and optimize curve for performance w/ 87 octane, vs 91.
3. Tune Sniper EFI as much as possible...efficiency up to 3000 RPM, then performance. Overall goal is to find optimum AFR for the engine under various conditions!
4. See what HP and TQ are doing.
5. Verify (rough) fuel flow numbers at WOT, cruise.

Impeller Formula:

HP=0.2064 RPM – 520

RPM=4.817 HP + 2530

HP	150	200	250	300	350	400	450	500	550	600	650
RPM	3200	3500	3700	4000	4300	4500	4700	4900	5100	5250	5500