2008/ 2009 Arctic Cat F8 stock engine.

Prior to this stock F8, I haven't dyno tested any of the new F8 engines in stock form. So far I've only done a BMP trailport/ Y pipe/ single pipe that made good HP. But with all the controversy surrounding the testing we did on the 08.5 Dragon 800, we needed a bone stock F8 to compare with the Dragon 800 and XP 800. This F8 has 3000 trail miles.

We tested the F8 with the hood pod on, then we removed the side panel restriction (which is said to slightly increase intake noise but is imperceptible in the dyno room).

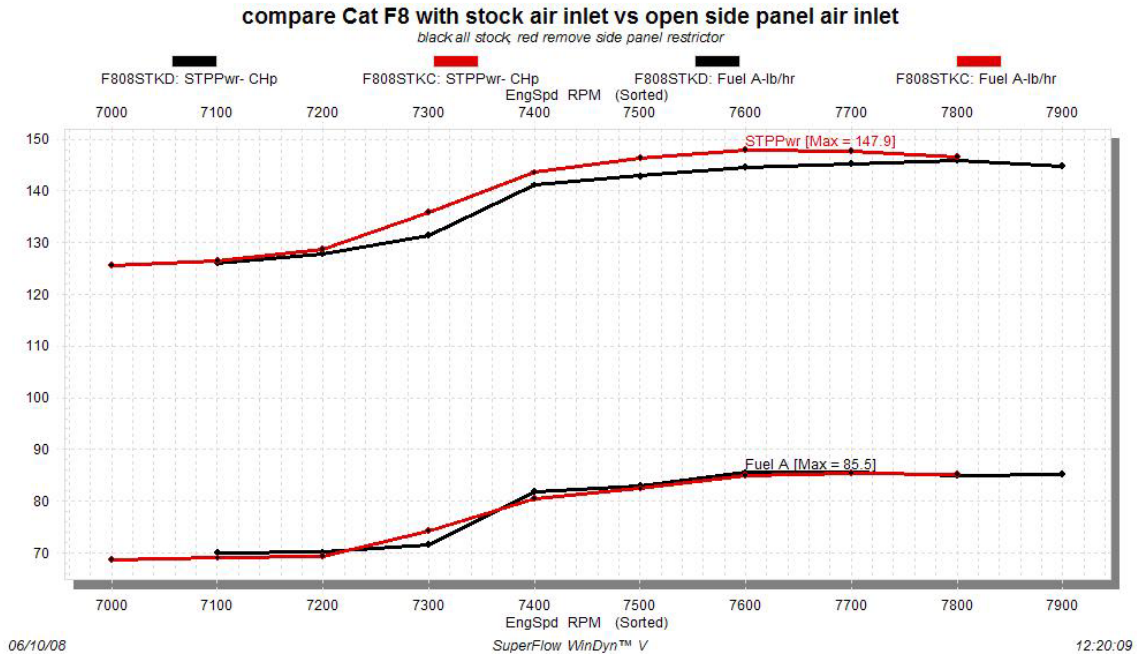
The day of the test, air temperature was in the mid sixties, and the ECU delivered about 85 lb/hr fuel flow (our facility is at about 1000' altitude). This gave us lean .60-61 lb/hphr at peak even with open intake. With deto protection, there should be enough fuel there for reasonable operation with a D&D Ypipe that is said to add three HP (we had one here but no time to test). So it's reasonable to assume that by just removing the air inlet restriction and adding a Y pipe this engine can produce over 150 HP.

Here is the engine with pod on, water temperature at peak HP was 120 degrees F, and pipe center section temp was observed on our Cat diagnostic software at about 1200 degrees F. With 87 octane gas there no deto based upon the knock sensor voltage info from the Cat computer.

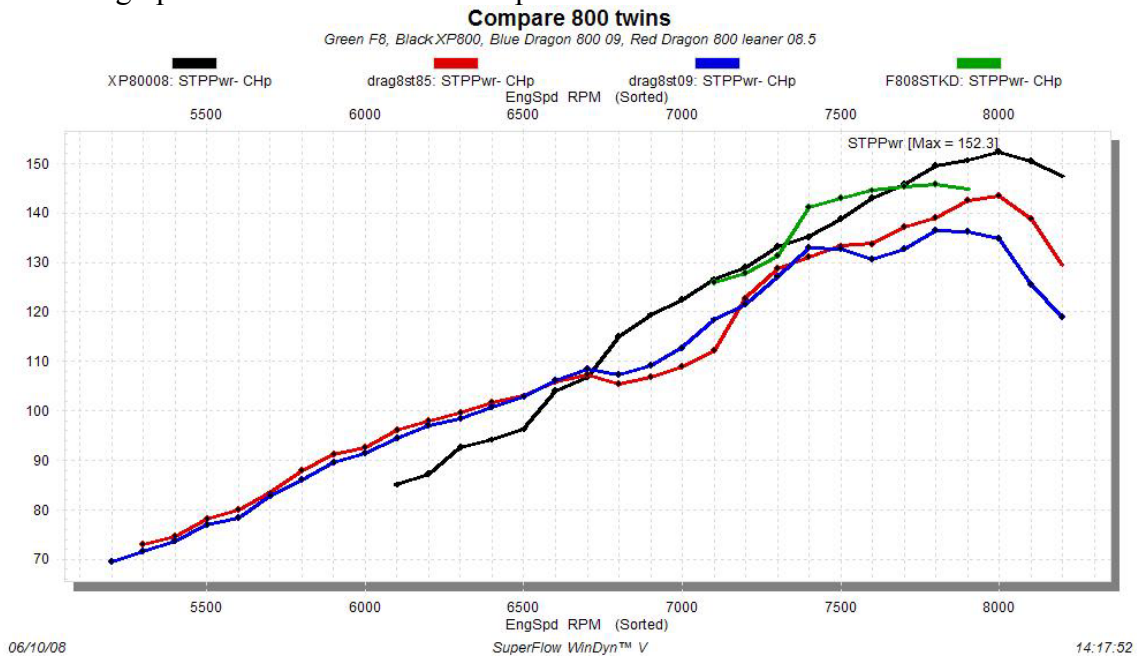
EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	BSFC A lb/hph	Fuel A lb/hr	AirTmp degF	BaroP in/Hg	FuelP psig	STPCor Factor	TsTim2 second
7100	93.2	126.1	0.58	70.0	70	29.19	41.6	1.045	0
7200	93.3	127.8	0.58	70.1	70	29.19	41.6	1.045	0.2
7300	94.5	131.4	0.57	71.6	70	29.19	41.6	1.045	0.4
7400	100.2	141.1	0.61	81.8	69	29.19	41.5	1.044	3.9
7500	100.1	142.9	0.61	82.9	69	29.19	41.4	1.044	4.5
7600	99.9	144.5	0.62	85.5	69	29.19	41.4	1.044	6.3
7700	99.1	145.3	0.62	85.5	69	29.19	41.4	1.044	7.6
7800	98.2	145.8	0.61	84.9	69	29.19	41.4	1.044	8.7
7900	96.2	144.7	0.62	85.2	70	29.19	41.4	1.045	10.2

With air inlet restriction removed from the pod, here is the F8 with 120 degree coolant temp, and pipe center section temp closer to 900 degrees F (= lower RPM HP peak).

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	BSFC A lb/hph	Fuel A lb/hr	AirTmp degF	BaroP in/Hg	FuelP psig	STPCor Factor
7000	94.3	125.7	0.58	68.7	73	29.21	41.7	1.047
7100	93.6	126.5	0.58	69.0	74	29.21	41.7	1.048
7200	93.9	128.7	0.57	69.3	75	29.21	41.6	1.049
7300	97.8	135.9	0.58	74.2	74	29.21	41.6	1.048
7400	101.9	143.6	0.59	80.5	73	29.20	41.5	1.048
7500	102.5	146.4	0.59	82.4	73	29.20	41.5	1.048
7600	102.2	147.9	0.61	85.0	73	29.20	41.4	1.048
7700	100.8	147.7	0.61	85.4	72	29.20	41.4	1.047
7800	98.8	146.7	0.61	85.1	72	29.21	41.4	1.046



Here is a graph of the Arctic Cat F8 compared to the SkiDoo and Polaris 800s.



Remember, this is out-of-the box HP with stock tuning. The Cat and Polaris 800's are capable of over 150 HP with minor add-ons like pipe mods and/ or fuel tuning. But as delivered the SkiDoo has the highest HP.