

Polaris Fusion 600/ 660 big bore done by SeanMRay@yahoo.com

Here is Sean Ray's dad's 06 Fusion 600 engine after boring the stock cylinders and installing 700 Polaris pistons. With the shorter stroke this yields 660cc, a 10% increase in displacement over stock. The use of the larger 700 pistons requires relieving the top of the crankcase. Sean blended the stock ports to match the larger bore diameter, and "case ported" the crankcase. Compression ratio is 11.8/1. Vforce3 reeds were installed.

This is the same engine that Sean tweaked to about 130 HP in a previous DTR tuning session. In this case, 10% displacement increase = 10% HP increase, or 144 HP with stock timing. The extra 5 HP shown here is with stator cranked ahead about 3 degrees. Pump gas was used for the dyno session, and for Sean's dad's riding style this should be a good jet spec, especially considering the deto protection built in to the ECU.

We had SLP and DynoPort single pipes on order to test on this engine, SLP's are still B/O'd and the DynoPort pipe arrived just after we had pulled the sled off of the dyno. But the stock pipe and muffler worked well in this case. After Sean gets some other pipes (including HTG twins) we will try to get back on the dyno to see how much HP can be added especially at higher revs.

06 Fusion 600/660 big bore, Polaris 700 pistons, stock pipe and muffler, Vforce3 reeds,

420 main jets, advance timing three degrees

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	BSFC lb/hph	A/F1 Ratio	FulA+B lb/hr	AirTmp degF	Air1+2 scfm	
7200	81.9	112.2	0.667	11.6	72.1	44	168	
7300	82.5	114.7	0.651	12.3	71.7	45	171	
7400	82.8	116.7	0.635	12.4	71.2	45	172	
7500	83.5	119.3	0.622	12.5	71.3	45	173	
7600	85.6	123.9	0.627	12.9	74.8	44	179	
7700	87.3	128.1	0.614	13.1	75.6	44	181	
7800	90.3	134.1	0.594	13.1	76.6	44	187	
7900	92.1	138.4	0.582	12.9	77.5	45	190	
8000	93.1	141.6	0.591	12.9	80.4	45	193	
8100	93.6	144.4	0.586	12.7	81.4	45	195	
8200	93.9	146.6	0.592	12.7	83.4	45	196	
8300	94.9	149.9	0.596	12.5	85.9	45	197	
8400	93.3	149.2	0.588	12.5	84.3	45	198	
8500	90.1	145.6	0.616	12.6	86.2	45	199	

