

RK TEK SKIDOO MXZ800/ 827 BIG BORE

Here is PA resident Jeff Stranges' RK Tek modified MXZ. He had this done by Smith Marine last year, and put 1000 trouble free trail/ lake miles on it in the Old Forge area last season. This kit includes:

- 1) Bore and replate your cylinders (actual cc is 830)
- 2) Custom engine porting
- 3) 83.5mm cast, hard anodized pistons
- 4) Rave valve modification
- 5) Custom billet head with special combustion chambers to match the larger bore, can be made to run any desired octane (the stock head can be modified to accept the billet combustion chambers for stealth mode)

Jeff's kit has 91 octane domes, and we ran 93 octane pump gas in our testing. Airbox is completely gutted. Stock reeds are used The DPM was disconnected during the tuning session. All data shown is with stock single pipe and muffler. Making big HP with stock exhaust is a good thing, saving cost of the kit and cost of noise tickets in the growing number of states/ counties that enforcing noise ordinances.

We also tested a set of carbs that had been bored two mm, and fitted with Joe DiSpirito's custom hooded needle jets (necessary to deliver adequate fuel—the stock hoodless needle jets don't create enough negative pressure to deliver adequate fuel in the bored carbs). The bored carbs made exactly the same top end airflow CFM (and HP when A/F ratio was matched) as the stock 40mm carbs. Interestingly, the bored carbs' midrange airflow and midrange HP were a few percent higher than the stock carbs. Even so, on this engine, the stock carbs are adequate.

Compared to the stock 02 MXZ800 (I pulled this out of our database), the RK Tek engine has a much broader HP curve with lots of good HP below and beyond the power peak, making it easy to clutch.

RK Tek has more technical info and pricing on their website www.2strokeheads.com .

02 SkiDoo stock MXZ800 twin, stock jetting DPM compensation

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	Time-S Second	BaroP inHg
6300	80.1	96.1	57.3	56	0.616	49.46	29.05
6400	80.4	98.1	61.1	56	0.643	49.83	29.05
6500	81.9	101.4	62.5	56	0.637	50.15	29.05
6600	82.8	104.1	67.1	56	0.667	50.52	29.05
6700	83.6	106.6	69.1	56	0.671	50.74	29.05
6800	85.1	110.2	71.4	56	0.669	51.31	29.05
6900	85.5	112.3	70.8	56	0.652	51.57	29.05
7000	87.1	116.1	75.5	56	0.672	52.01	29.05
7100	87.1	117.8	77.6	56	0.681	52.24	29.05

7200	87.3	119.7	78.8	56	0.681	52.64	29.05
7300	88.4	122.8	82.4	56	0.693	53.01	29.05
7400	87.9	123.9	82.3	56	0.686	53.28	29.05
7500	88.4	126.2	81.5	56	0.668	53.52	29.05
7600	88.1	127.4	78.7	55	0.638	53.98	29.05
7700	87.9	128.8	79.7	56	0.641	54.21	29.05
7800	89.2	132.5	78.7	56	0.614	54.62	29.05
7900	88.4	132.9	80.1	56	0.622	54.94	29.05
8000	86.4	131.6	80.5	57	0.633	55.39	29.05
8100	83.8	129.2	81.1	55	0.648	55.65	29.05
8200	79.4	124.1	84.1	55	0.701	56.01	29.05

827js03 RK Tek SkiDoo 827 big bore twin, stock carbs 400 mj

EngSpd	STPTRq	STPPwr	A/F	BSFC	Fuel B	Time-S	AirTmp	Air1+2
RPM	Clb-ft	CHp	Ratio	lb/hph	lb/hr	Second	degF	scfm
6000	74.5	85.2	12.72	0.774	63.9	38.57	56	177.6
6100	77.7	90.3	12.83	0.742	65.1	39.29	56	182.2
6200	78.4	92.5	12.84	0.737	66.1	39.81	56	185.4
6300	83.4	100.1	12.66	0.717	69.6	40.68	57	192.5
6400	83.9	102.2	12.56	0.711	70.4	40.99	57	193.2
6500	87.7	108.5	12.65	0.691	72.7	41.93	57	200.9
6600	88.6	111.4	12.58	0.682	73.6	42.19	57	202.3
6700	92.6	118.2	12.28	0.685	78.6	43.28	56	210.8
6800	94.6	122.5	12.54	0.658	78.2	43.88	56	214.3
6900	95.7	125.8	12.26	0.665	81.1	44.33	56	217.2
7000	97.6	130.1	11.83	0.681	85.9	45.21	56	222.1
7100	99.4	134.4	11.95	0.665	86.7	45.81	56	226.4
7200	100.1	137.2	11.75	0.672	89.6	46.41	55	229.9
7300	101.9	141.6	11.91	0.653	89.8	47.19	55	233.7
7400	102.9	145.1	12.06	0.639	89.9	47.75	56	236.8
7500	103.7	148.1	12.46	0.612	87.8	48.36	57	239.1
7600	104.8	151.7	12.74	0.591	86.7	49.12	57	241.3
7700	105.7	155.1	12.55	0.593	89.1	49.81	57	244.3
7800	106.5	158.1	12.36	0.597	91.5	50.55	57	247.1
7900	106.2	159.7	12.26	0.599	92.7	50.97	57	248.3
8000	105.6	160.9	12.12	0.605	94.3	51.89	57	249.7
8100	104.8	161.7	12.11	0.605	94.8	52.44	57	250.5
8200	103.7	161.9	12.08	0.608	95.4	53.01	57	251.7
8300	102.2	161.4	12.01	0.614	96.1	53.15	57	252.2
8400	96.2	153.9	11.58	0.673	100.4	54.86	56	253.9

827js02, RK Tek SkiDoo 827 big bore, lean jetting stock carbs 360mj 20 seconds WOT pump gas

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	A/F Ratio	BSFC lb/hph	Fuel B lb/hr	Time-S Second	AirTmp degF	Air1+2 scfm
5700	68.1	73.8	13.46	0.802	57.5	25.65	53	169.1
5800	67.5	74.5	13.82	0.772	55.9	26.15	53	168.8
5900	68.1	76.4	13.76	0.756	56.1	26.26	53	168.7
6000	72.8	83.2	13.94	0.697	56.4	26.62	53	171.7
6100	72.2	83.8	14.18	0.702	57.2	27.57	53	177.2
6200	78.7	92.9	14.29	0.661	59.6	28.79	54	186.1
6300	80.1	96.1	14.31	0.642	59.9	29.16	54	187.1
6400	85.5	104.2	13.92	0.629	63.6	29.91	55	193.4
6500	87.3	108.1	13.41	0.648	68.1	30.73	55	199.1
6600	89.6	112.6	13.01	0.651	71.2	31.26	54	202.2
6700	91.5	116.7	12.84	0.651	73.7	31.92	54	206.7
6800	92.5	119.7	12.94	0.633	73.7	32.12	54	208.4
6900	96.4	126.6	12.83	0.625	76.8	33.21	55	215.3
7000	98.3	131.1	12.83	0.614	78.2	33.99	55	219.2
7100	99.2	134.1	12.43	0.629	82.1	34.58	54	222.7
7200	100.2	137.3	12.56	0.618	82.6	35.25	53	226.7
7300	100.7	140.1	12.38	0.622	84.7	35.67	53	229.1
7400	102.1	143.8	12.56	0.606	84.8	36.38	53	232.6
7500	103.3	147.5	12.86	0.587	84.2	37.18	53	236.5
7600	104.8	151.7	13.46	0.549	80.9	37.73	54	237.8
7700	106.4	155.9	13.53	0.539	81.7	38.58	54	241.4
7800	107.1	158.9	13.49	0.535	82.5	39.19	55	243.2
7900	107.1	160.9	13.27	0.541	84.5	39.63	55	244.9
8000	106.7	162.5	13.24	0.543	85.7	40.59	54	247.8
8100	105.9	163.3	13.29	0.539	85.5	40.88	54	248.3
8200	105.4	164.5	13.47	0.531	84.8	41.91	54	249.6
8300	104.2	164.7	13.25	0.541	86.6	42.21	54	250.6
8400	104.1	166.4	12.96	0.552	89.2	42.98	54	252.6
8500	101.1	163.5	12.95	0.564	89.7	44.17	54	253.8

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