

BATTLE OF OLD FORGE XII

December 2001

By Sean Ray, WNY Contributing Editor

Welcome back!! Although we have not published the results and dyno testing for the "American Snowmobiler Shoot-Out" we have done all the dyno verification for the past five years. This year dyno verification was basically the same as years past. Since it has been several years, I will give you a brief idea of what happens a week prior to the field Shoot-Out.

Sunday all of the sleds are picked at random at the sponsoring Old Forge, NY area dealerships Big Moose Yamaha/Arctic Cat, Smith Marine, and White Lake Polaris. The sleds are then all taken to Big Moose Yamaha/Arctic Cat where they are uncrated, weighed, studded, and cranking compression and squish clearance checked. This is all done under the watchful eye of George Taylor to insure no "anomalies" occur prior to dyno testing. After the sleds are prepared they are locked into trailers for the four-hour trip to Dyno-Tech in Batavia, NY with George hanging onto the trailer keys. Once the sleds arrive here at the dyno we begin our dyno certification. The sled is driven onto our hydraulic table where it is then lifted up and the primary clutch is removed. We then install a tapered coupler to attach to the dyno drive shaft. This year due to the unseasonably warm weather we decided to jet to the manufacturers recommended specifications for altitude and temperature. Next we warm up the sled for about twenty seconds to "clean out" the engine as well as burn off any residue on the exhaust pipes. The 80-mph air from our blower fan is left on to completely clear the room of any exhaust fumes. Then we make a 12-second dyno pass, wait for another minute or so and then make the second and final pass. This process is done for each sled in about twenty minutes. The Polaris and Ski-Doo's were here on Monday. Yamaha and Arctic Cats were here on Tuesday. Unlike last year, where one possible "ringer" was detected, all the sleds torque and hp were in line with expected output. (More on last years "ringer" will come later)

02ZR602

Arctic Cat ZR 600 E.F.I.

Weight: 549

This years ZR power peak shifted up as well as the overall hp compared to last year's carb. Model we tested ('01 98.9 chp @ 8000 RPM compared to '02 107.7chp @ 8300 RPM). Also the exhaust valve opening appears to have changed from 7500 RPM on last years model to 7200 RPM to improve mid-range performance. Peak hp stayed @ 8300 rpm on first and second pass.

02XC601

Polaris XC 600

Main Jet: 370

Weight: 537

The XC 600 was again the 600 class hp king with 116.4 chp @ 7700 rpm. The jetting was dropped to 370 mains for 60 degree temperature. Horsepower dropped to 115.5 on second run and the power peak slid up to 7800 RPM.

02MXZ601

Ski-Doo MXZ 600

Main Jet: stock w/DPM

Weight: 533

The Ski-Doo MXZ 600 did not have the break in timing retard removed according to Smith Marine. Power peak was @ 7600 RPM with 106.7 chp on the first pass and stayed at 7600 RPM on the second pass with a loss of two hp.

02SXR602

Yamaha SXR 600

Main Jet: 131.3 PTO 130 MID 130 MAG

Weight: 551

Yamaha's SXR 600 made 97.6 chp @ 8500 RPM with mid .5 BSFC. Normally this lean of jetting would be drag spec only, but with the carbs vented to under hood pressure and warmer than ambient under hood temperatures this would probably be a safe pump gas spec. Power peak was slightly higher on the first pass (97.4 chp @ 8600)

02XC702

Polaris XC 700

Main Jet: 440

Weight: 554

The Polaris 700 took over the crown of the 700 class with an astonishing 133.1 chp @ 7900 on the first pass with 131.8 @ 8000 on the second pass. This represents a gain of over 9 hp from 6900 to 7800 RPM over last year's shoot-out sled.

02MXZ701

Ski-Doo MXZ 700

Main Jet: Stock w?DPM

Weight: 538

Ski-doo's 700 was down 3 hp from last years shoot-out sled. This is probably due to the break-in retard that was left in this year's sled. Peak power was 119.3 @ 7800 RPM and dropped to 117.6 @ 7600 on the second pass.

02SXV701

Yamaha SX Viper

Main Jet: 138.8

Weight: 559

The much anticipated Viper made very flat power from 8100 to 8500 with a power peak of 119.8 @ 8300 RPM. The second pass lost 3 hp and peak power slid to 8500 RPM.

02ZR801

Arctic Cat ZR800 EFI

Weight: 578

Arctic Cat came back this year to have the highest hp in the 800 class. The precise calibration of the EFI along with the lager 46 mm throttle bodies produced 141 chp @ 7400 RPM. The power valves open at 6900 RPM compared to last years 7100 RPM for a 28-hp increase at 7000 RPM. Arctic Cat really needs a more progressive exhaust valve opening on all their EV motors. The power peak and hp stayed the same for the second pass.

02BL801

FAST Blade 800

Main Jet: 420 PTO 440 MAG

Weight: 519

After mounting the Blade backward on our dyno table the first pass netted us the most power of 134.9 chp @ 7800 RPM. The second pass lost .8 hp and slid the peak to 7900 RPM.

02XC803

Polaris XC 800

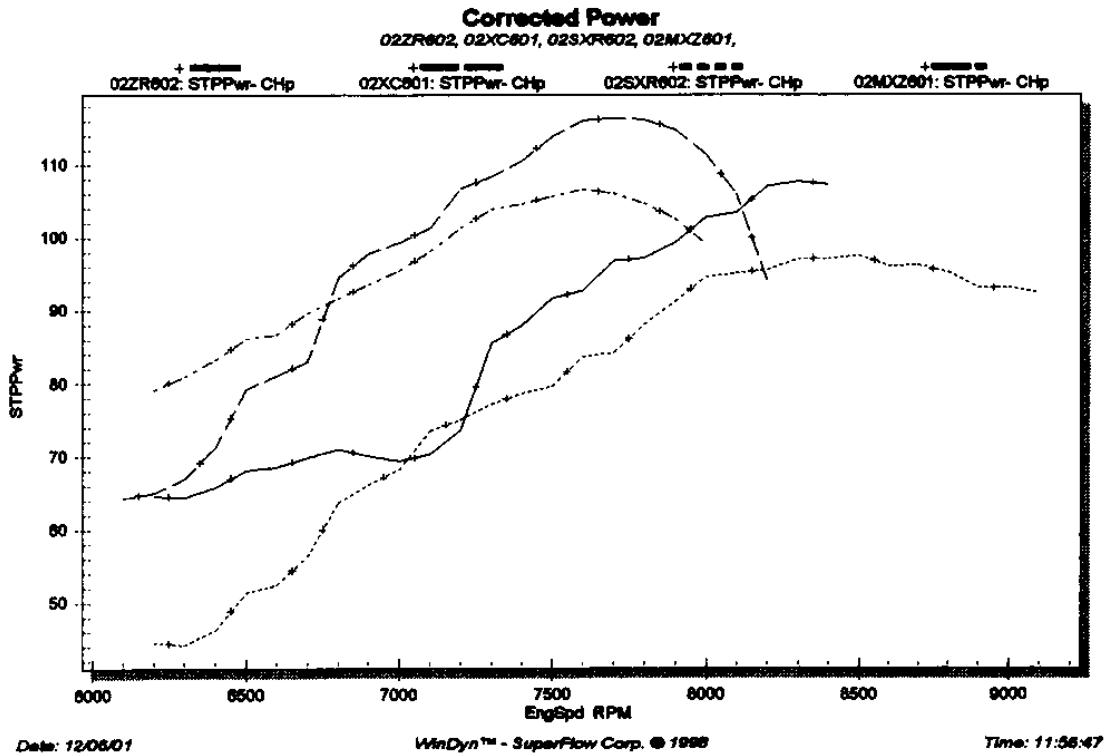
Main Jet: 440

Weight: 555

This years XC is much improved over last years "stock" 800 XC, but still not quite up to par with our last years "anonmolie" (see graphs xxx). This year's sled made 137.5 @ 7800RPM on the 3rd hot pull. Power peak stayed close with 135.3 on the fist cool pull.

OBSERVATIONS:

With this years "American Snowmobiler Shoot-Out" being held on a ¼ mile strip of grass and dirt, without snow, set-up was the key to respectable times. The temperature was in the upper 30's and with the higher altitude the dyno jetting was retained. Extra wheels were allowed considering the conditions. The Big Moose guys elected to add wheels for dealer prep, (obviously looking for the American Snowmobiler cup for the most improved). As part of the "dealer prep" all of the dealers installed their own clutch kits. We're unable to verify actual clutch components (this has become a closely guarded secret for those who's "dealer prep" makes great improvements). The Polaris 700 and 800 had the air boxes gutted for dealer prep, the 600 air box was left stock. All of the Polaris's had shaved hyfax installed, lower windshields, and rear suspension adjustments. The Ski-Doo's had the break-in ignition retard removed and suspension adjustments. The Arctic Cat's and Yamaha's had the carbides removed. Also, each dealer adjusted jetting. This year's shoot-out was won on a combination of horsepower, clutching, and chassis set-up. The Polaris's chassis were set up very well for the grass. Out of the hole the skis lifted about 8" off the ground and stayed just off the ground all the way down the strip. The Ski-Doo's seemed to drag the skis with little weight transfer (the 600 MXZ had the hyfax stuck at the line on the 2nd dealer pass). The Yamaha's also bound up at the 1/8 mile mark. The Arctic Cats did transfer well but the smell of melting hyfax filled the air past 660". Had there been snow the results probably would have been closer. The Polaris's had the least drag, good horsepower, and a very good grass clutch set-up. Hopefully next year we will have snow.



Listing of: 02ZR602 (C:\WINDYN\901\DATA\02ZR602.SFD)
 Channel Group: Corrected Power Page 1
 Printed on Jan 7, 2002 at 14:50:02
 Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	54.7	64.6	0.0	63	0.000	0	4.58
6300	53.7	64.4	0.0	63	0.000	0	4.58
6400	54.0	65.8	0.0	63	0.000	0	4.58
6500	55.1	68.2	0.0	63	0.000	0	4.58
6600	54.6	68.6	0.0	63	0.000	0	4.58
6700	54.7	69.8	0.0	62	0.000	0	4.58
6800	54.8	71.0	0.0	62	0.000	0	4.58
6900	53.4	70.1	0.0	62	0.000	0	4.58
7000	52.0	69.3	0.0	62	0.000	0	4.58
7100	52.0	70.3	0.0	62	0.000	0	4.58
7200	53.7	73.6	0.0	62	0.000	0	4.58
7300	61.5	85.5	0.0	63	0.000	0	4.58
7400	62.4	87.9	0.0	64	0.000	0	4.58
7500	64.2	91.7	0.0	63	0.000	0	4.58
7600	64.1	92.8	0.0	62	0.000	0	4.58
7700	66.1	96.8	0.0	63	0.000	0	4.58
7800	65.4	97.2	0.0	63	0.000	0	4.58
7900	66.1	99.4	0.0	63	0.000	0	4.58
8000	67.5	102.8	0.0	63	0.000	0	4.58
8100	67.1	103.5	0.0	63	0.000	0	4.58
8200	68.6	107.0	0.0	63	0.000	0	4.58
8300	68.1	107.7	0.0	63	0.000	0	4.58
8400	67.1	107.3	0.0	63	0.000	0	4.58

Listing of: 02XC601 (C:\WINDYN\901\DATA\02XC601.SFD)
 Channel Group: Corrected Power Page 1
 Printed on Jan 7, 2002 at 15:16:56
 Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPTrq Clb-ft	STPPwr Chp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6100	55.4	64.3	53.9	58	0.869	0	0.00
6200	55.1	65.0	53.8	58	0.858	0	0.00
6300	55.8	67.0	52.8	57	0.817	0	0.00
6400	58.5	71.3	53.0	57	0.770	0	0.00
6500	64.0	79.3	52.7	59	0.690	0	0.00
6600	64.6	81.1	51.9	59	0.664	0	0.00
6700	65.1	83.0	51.7	59	0.646	0	0.00
6800	73.1	94.6	57.5	58	0.630	0	0.00
6900	74.5	97.9	58.7	59	0.622	0	0.00
7000	74.6	99.4	60.1	60	0.628	0	0.00
7100	75.0	101.4	61.2	59	0.626	0	0.00
7200	77.9	106.8	62.4	59	0.606	0	0.00
7300	77.9	108.3	64.5	58	0.617	0	0.00
7400	78.5	110.6	65.5	59	0.614	0	0.00
7500	79.8	113.9	68.6	58	0.624	0	0.00
7600	80.2	116.1	70.3	57	0.627	0	0.00
7700	79.4	116.4	67.5	57	0.600	0	0.00
7800	78.3	116.3	68.9	56	0.613	0	0.00
7900	76.3	114.8	69.8	57	0.630	0	0.00
8000	73.1	111.4	70.3	56	0.653	0	0.00
8100	68.8	106.1	70.7	54	0.688	0	0.00
8200	60.2	94.1	72.6	57	0.800	0	0.00

Listing of: 02MXZ601 (C:\WINDYN\901\DATA\02MXZ601.SFD)

Channel Group: Corrected Power Page 1

Printed on Jan 7, 2002 at 14:53:37

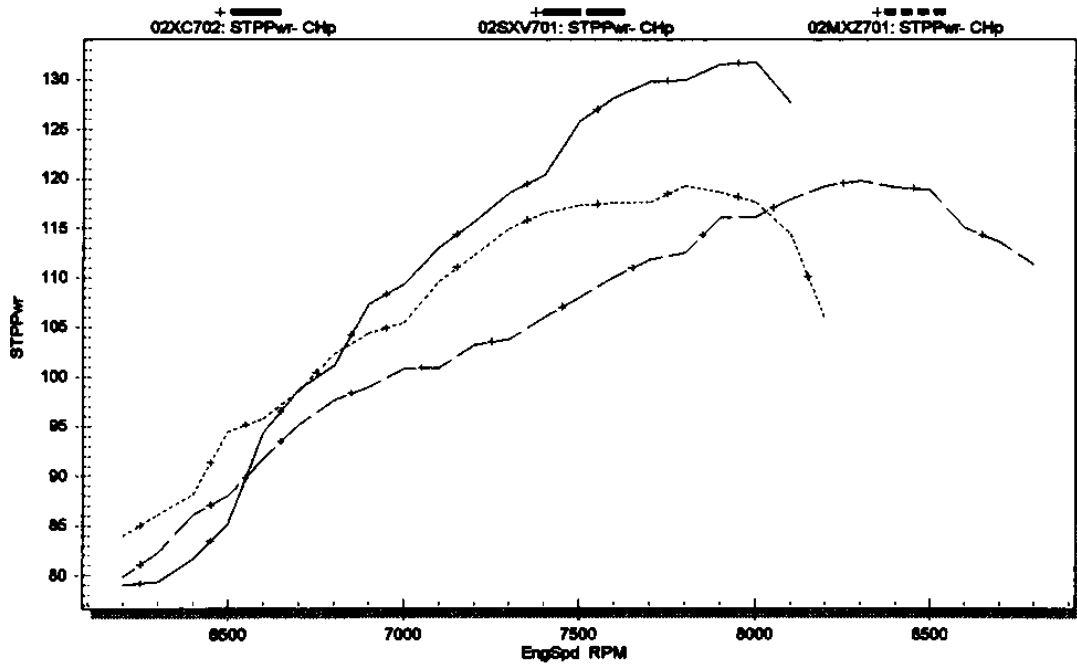
Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	67.1	79.2	68.1	56	0.889	0	0.00
6300	67.5	81.0	73.3	56	0.936	0	0.00
6400	68.3	83.3	74.4	56	0.924	0	0.00
6500	69.6	86.1	60.2	56	0.723	0	0.00
6600	69.0	86.7	56.9	54	0.677	0	0.00
6700	70.3	89.6	57.0	54	0.656	0	0.00
6800	70.8	91.7	58.4	56	0.659	0	0.00
6900	71.2	93.6	58.2	56	0.643	0	0.00
7000	71.7	95.5	58.4	56	0.632	0	0.00
7100	72.6	98.1	58.6	56	0.618	0	0.00
7200	73.9	101.4	59.9	56	0.611	0	0.00
7300	74.8	103.9	62.0	56	0.617	0	0.00
7400	74.3	104.6	62.8	56	0.621	0	0.00
7500	74.0	105.7	63.5	56	0.621	0	0.00
7600	73.7	106.7	64.6	58	0.628	0	0.00
7700	72.4	106.1	65.3	57	0.637	0	0.00
7800	70.5	104.8	65.7	57	0.650	0	0.00
7900	68.2	102.6	66.1	56	0.667	0	0.00
8000	65.1	99.1	66.7	56	0.696	0	0.00

Listing of: 02SKR602 (C:\WINDYN\901\DATA\02SKR602.SFD)
 Channel Group: Corrected Power Page 1
 Printed on Jan 7, 2002 at 15:11:50
 Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPIrq Clb-ft	STPPwr CHp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	37.8	44.6	53.7	51	1.233	0	0.00
6300	36.9	44.2	53.4	51	1.237	0	0.00
6400	38.0	46.3	53.4	51	1.181	0	0.00
6500	41.5	51.4	49.9	52	0.996	0	0.00
6600	41.7	52.4	46.9	52	0.917	0	0.00
6700	44.2	56.3	46.7	52	0.849	0	0.00
6800	49.2	63.7	50.5	52	0.813	0	0.00
6900	50.3	66.1	48.9	52	0.758	0	0.00
7000	51.2	68.3	51.8	52	0.777	0	0.00
7100	54.4	73.5	55.2	52	0.769	0	0.00
7200	54.7	75.0	55.4	51	0.755	0	0.00
7300	55.5	77.1	56.8	52	0.754	0	0.00
7400	55.8	78.6	62.5	52	0.814	0	0.00
7500	55.7	79.6	63.8	52	0.821	0	0.00
7600	57.9	83.7	71.2	52	0.871	0	0.00
7700	57.4	84.2	71.1	52	0.864	0	0.00
7800	59.3	88.0	70.7	52	0.822	0	0.00
7900	60.7	91.3	73.4	52	0.823	0	0.00
8000	62.1	94.7	71.3	52	0.771	0	0.00
8100	61.7	95.2	65.4	52	0.703	0	0.00
8200	61.3	95.6	57.3	51	0.613	0	0.00
8300	61.5	97.1	52.9	51	0.557	0	0.00
8400	60.7	97.1	55.9	52	0.589	0	0.00
8500	60.3	97.6	55.0	53	0.578	0	0.00
8600	58.7	96.1	56.2	52	0.599	0	0.00
8700	58.1	96.2	56.5	52	0.602	0	0.00
8800	56.9	95.3	56.2	52	0.604	0	0.00
8900	55.0	93.1	62.2	51	0.684	0	0.00
9000	54.4	93.1	63.4	51	0.697	0	0.00
9100	53.4	92.6	65.6	52	0.727	0	0.00

Corrected Power
02XC702, 02SXV701, 02MXZ701,



Date: 12/06/01

WinDyn™ - SuperFlow Corp. © 1998

Time: 12:02:35

Listing of: 02XC702 (C:\WINDYN\901\DATA\02XC702.SFD)

Channel Group: Corrected Power Page 1

Printed on Jan 7, 2002 at 15:20:25

Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	66.9	79.0	83.3	59	1.094	0	0.00
6300	66.1	79.3	84.7	58	1.107	0	0.00
6400	67.0	81.7	85.8	59	1.090	0	0.00
6500	68.8	85.2	84.8	58	1.032	0	0.00
6600	75.1	94.4	75.3	58	0.827	0	0.00
6700	77.4	98.7	67.3	58	0.706	0	0.00
6800	78.1	101.1	70.5	58	0.722	0	0.00
6900	81.7	107.4	71.8	58	0.693	0	0.00
7000	82.0	109.3	72.0	59	0.683	0	0.00
7100	83.7	113.1	71.2	59	0.653	0	0.00
7200	84.4	115.7	73.2	58	0.655	0	0.00
7300	85.3	118.6	74.3	58	0.649	0	0.00
7400	85.4	120.4	73.4	59	0.632	0	0.00
7500	88.1	125.9	74.5	59	0.614	0	0.00
7600	88.7	128.3	75.3	59	0.609	0	0.00
7700	88.6	129.8	76.9	58	0.614	0	0.00
7800	87.5	130.0	77.5	58	0.618	0	0.00
7900	87.5	131.7	79.2	58	0.623	0	0.00
8000	86.5	131.8	80.7	58	0.635	0	0.00
8100	82.8	127.7	78.8	58	0.640	0	0.00

Listing of: 02MXZ701 (C:\WINDYN\901\DATA\02MXZ701.SFD)

Channel Group: Corrected Power Page 1

Printed on Jan 7, 2002 at 15:01:44

Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPTrq Cib-ft	STPPwr CHp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	71.1	83.9	60.2	50	0.736	0	0.00
6300	71.7	86.0	61.1	50	0.729	0	0.00
6400	72.3	88.2	61.5	50	0.716	0	0.00
6500	76.3	94.5	66.5	50	0.722	0	0.00
6600	76.2	95.8	68.4	50	0.733	0	0.00
6700	77.3	98.6	68.2	51	0.711	0	0.00
6800	79.0	102.3	69.9	51	0.702	0	0.00
6900	79.4	104.3	72.5	51	0.714	0	0.00
7000	79.1	105.4	74.3	52	0.725	0	0.00
7100	81.1	109.7	77.4	53	0.727	0	0.00
7200	81.9	112.3	77.1	53	0.707	0	0.00
7300	82.8	115.0	79.0	53	0.707	0	0.00
7400	82.8	116.6	83.0	54	0.734	0	0.00
7500	82.2	117.3	82.4	53	0.723	0	0.00
7600	81.3	117.6	81.3	51	0.710	0	0.00
7700	80.2	117.6	82.9	51	0.724	0	0.00
7800	80.3	119.3	83.7	52	0.722	0	0.00
7900	78.9	118.7	86.4	52	0.749	0	0.00
8000	77.3	117.7	83.1	52	0.726	0	0.00
8100	74.2	114.4	84.2	52	0.757	0	0.00
8200	67.7	105.8	87.1	52	0.848	0	0.00

Listing of: 02SKV701 (C:\WINDYN\901\DATA\02SKV701.SFD)

Channel Group: Corrected Power Page 1

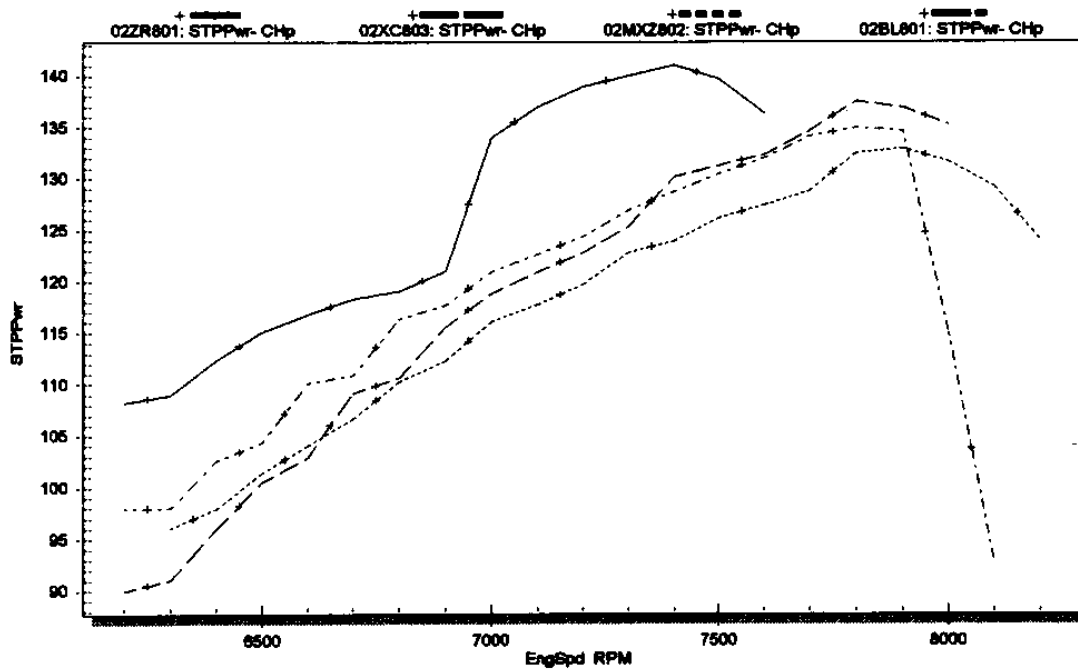
Printed on Jan 7, 2002 at 15:14:06

Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	67.6	79.8	57.9	56	0.745	0	0.00
6300	68.6	82.2	58.1	56	0.726	0	0.00
6400	70.6	86.0	59.2	56	0.707	0	0.00
6500	71.1	88.0	62.9	56	0.734	0	0.00
6600	73.0	91.7	62.4	55	0.698	0	0.00
6700	74.6	95.2	65.9	56	0.712	0	0.00
6800	75.4	97.7	68.9	56	0.725	0	0.00
6900	75.3	99.0	70.5	56	0.732	0	0.00
7000	75.7	100.8	72.4	55	0.737	0	0.00
7100	74.7	100.9	70.9	54	0.720	0	0.00
7200	75.3	103.2	72.4	54	0.720	0	0.00
7300	74.7	103.8	72.7	54	0.719	0	0.00
7400	75.3	106.0	72.7	55	0.704	0	0.00
7500	75.7	108.1	74.3	55	0.706	0	0.00
7600	76.1	110.1	74.7	55	0.697	0	0.00
7700	76.3	111.9	75.8	55	0.696	0	0.00
7800	75.8	112.5	76.8	56	0.702	0	0.00
7900	77.2	116.1	77.8	56	0.689	0	0.00
8000	76.3	116.2	77.3	57	0.685	0	0.00
8100	76.5	118.0	77.9	57	0.680	0	0.00
8200	76.4	119.3	78.5	56	0.677	0	0.00
8300	75.8	119.8	78.6	56	0.675	0	0.00
8400	74.5	119.2	80.1	55	0.691	0	0.00
8500	73.5	118.9	79.0	55	0.683	0	0.00
8600	70.3	115.1	79.6	55	0.711	0	0.00
8700	68.6	113.6	79.8	55	0.722	0	0.00
8800	66.4	111.3	80.1	55	0.740	0	0.00

Corrected Power

02ZR801, 02XC803, 02MXZ802, 02BL801,



Date: 12/06/01

WinDyn™ - SuperFlow Corp. © 1996

Time: 11:58:38

Listing of: 02ZR801 (C:\WINDYN\901\DATA\02ZR801.SFD)
Channel Group: Corrected Power Page 1
Printed on Jan 7, 2002 at 14:52:13
Test Description: Accel. Test - 100 rpm/second

EngSpd RPM	STPTrq Clb-ft	STPPwr Chp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	91.7	108.2	0.0	64	0.000	0	4.58
6300	90.9	109.0	0.0	65	0.000	0	4.58
6400	92.2	112.4	0.0	65	0.000	0	4.58
6500	92.9	115.0	0.0	65	0.000	0	4.58
6600	93.0	116.8	0.0	64	0.000	0	4.58
6700	92.7	118.3	0.0	66	0.000	0	4.58
6800	91.9	119.0	0.0	66	0.000	0	4.58
6900	92.1	121.0	0.0	66	0.000	0	4.58
7000	100.5	134.0	0.0	65	0.000	0	4.58
7100	101.4	137.0	0.0	65	0.000	0	4.58
7200	101.4	139.0	0.0	65	0.000	0	4.58
7300	100.7	140.0	0.0	64	0.000	0	4.58
7400	100.1	141.0	0.0	64	0.000	0	4.58
7500	97.8	139.7	0.0	63	0.000	0	4.58
7600	94.2	136.3	0.0	64	0.000	0	4.58

Listing of: 02BL801 (C:\WINDYN\901\DATA\02BL801.SFD)

Channel Group: Corrected Power Page 1

Printed on Jan 7, 2002 at 15:26:48

Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPTrq Clb-ft	STPPwr CRp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	83.0	97.9	96.1	60	1.014	0	0.00
6300	81.7	98.0	94.6	62	1.000	0	0.00
6400	84.2	102.6	94.7	62	0.956	0	0.00
6500	84.3	104.3	93.9	62	0.932	0	0.00
6600	87.6	110.1	90.5	61	0.850	0	0.00
6700	86.9	110.8	90.6	61	0.846	0	0.00
6800	89.9	116.4	83.6	61	0.743	0	0.00
6900	89.6	117.7	77.3	61	0.679	0	0.00
7000	90.7	120.9	74.3	61	0.636	0	0.00
7100	90.7	122.6	78.2	61	0.660	0	0.00
7200	90.7	124.4	78.9	61	0.656	0	0.00
7300	91.3	127.0	80.7	61	0.658	0	0.00
7400	91.3	128.7	85.0	61	0.683	0	0.00
7500	91.4	130.5	83.3	59	0.659	0	0.00
7600	91.3	132.0	81.3	60	0.636	0	0.00
7700	91.5	134.1	82.4	60	0.635	0	0.00
7800	90.8	134.9	81.7	60	0.626	0	0.00
7900	89.5	134.6	80.7	61	0.620	0	0.00
8000	75.4	114.9	80.8	61	0.729	0	0.00
8100	60.0	92.6	82.9	61	0.928	0	0.00

Listing of: 02XC803 (C:\WINDYN\901\DATA\02XC803.SFD)

Channel Group: Corrected Power Page 1

Printed on Jan 7, 2002 at 15:25:12

Test Description: Accel. Test - 200 rpm/second

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	Fuel B lb/hr	AirTmp degF	BSFC lb/hph	WtrOut degF	A/F Ratio
6200	76.2	90.0	93.3	58	1.074	0	0.00
6300	75.9	91.1	93.9	58	1.068	0	0.00
6400	78.8	96.0	93.6	59	1.011	0	0.00
6500	81.2	100.5	96.7	59	0.998	0	0.00
6600	81.9	102.9	97.3	58	0.979	0	0.00
6700	85.5	109.1	99.8	59	0.948	0	0.00
6800	85.4	110.6	101.9	58	0.954	0	0.00
6900	88.0	115.6	106.6	58	0.955	0	0.00
7000	89.2	118.8	104.5	58	0.911	0	0.00
7100	89.5	120.9	107.8	59	0.924	0	0.00
7200	89.6	122.8	107.6	60	0.910	0	0.00
7300	90.2	125.4	108.1	60	0.895	0	0.00
7400	92.4	130.1	103.3	59	0.823	0	0.00
7500	92.0	131.3	86.9	59	0.686	0	0.00
7600	91.4	132.3	82.9	58	0.649	0	0.00
7700	91.9	134.7	81.4	58	0.626	0	0.00
7800	92.6	137.5	82.6	58	0.622	0	0.00
7900	91.0	136.9	82.4	58	0.623	0	0.00
8000	88.8	135.2	84.8	58	0.650	0	0.00