

NY Shootout XXXI by Jim Czekala

After our media partner American Snowmobiler magazine announced that they were ceasing publication this year, I knew it was time for me and DTR to back off. I'd been thinking about this ever since H. "Kirsch" Kirschner and his wife Molly joined me as excellent partners, and AmSnow's departure made this year a perfect time for me to turn the reins over to them. I'll continue helping them by certifying the stockers' HP as long as I can.

But without a media partner, it would prove to be more difficult for Kirsch to get the snowmobile manufacturers and aftermarket companies to participate, which would make it, in turn, more difficult for the snowmobile dealers to participate. At HayDays, Kirsch hooked up with SnowGoer magazine whose 2020 issues' articles are already planned, but they indicated to Kirsch that they can publicize XXXI results with their internet presence this season, then include XXXII in their printed issues next season.

After AmSnow pulled out, so did factory support for some of the Shootout dealers. But Kirsch madly scrambled and eventually came up with dealers for each make of snowmobile. The Cat and SkiDoo dealers were set up early enough to allow me to dyno certify their sleds, but a new dealer for the Polaris' models was a late addition, too late to allow dyno testing of the 2020 Polaris 600 and 850 that Kirsch said each had 75 miles of breakin time on them.

Here are Shootout XXXI dealers and the models provided:

Arctic Cat—Livingston Arctic Cat in Hillsboro, NH. 600, 800 and Thundercat

Polaris—Kubeckas Polaris in Mohawk, NY: 600, 850

SkiDoo—Arctic Adventures in Rosendale, NY 600, 850, Ace 900 turbo

Yamaha—Excell Motor Sports in Hubbardsville, NY: Sidewinder

Both the Arctic Cat and SkiDoo Shootout sleds were brought to DTR on separate occasions by Tom Ferry of Arctic Adventures. He had purchased 93 octane ethanol fuel for all the sleds in Rosendale, but oddly it turned out to have zero ethanol with 92.8 R+M/2 octane (as indicated by our Zeltex 101C octane tester). Last year, since the SkiDoo Etecs had zero miles on them and still were in breakin mode we added 1.5 degrees of timing to both 2019 Etecs to compensate for the fact that the Polaris' were out of breakin mode. On the day we dyno tested the Etecs, we left timing stock which as expected gave us lower midrange and top end HP on the 2020 Etec 600 compared to the 2019. Interestingly, while as expected the 2020 Etec 850 without the benefit of 1.5 degrees advanced timing made less midrange HP than the 2019 Etec 850, it also made *one HP higher peak* compared to the 2019. It is said that the 2020 Etec 850 cylinder has a new part number—does that mean revised port timing? Or could the 2020 have more stock timing at top RPM? Maybe whoever buys the Shootout Etec 850 could bring it back to DTR with ethanol fuel (that the Etecs seem to benefit from) and advanced timing.

We noted, too, much different TQ and HP curves of the new 2020 Cat Ctec 800 compared to last year's Shootout Ctec 800. The curves appear shaped more like the improved midrange and peak HP that Precision EFI created with their reflashed ECU's last season, but with much lower peak torque and HP. The 2020 appears to have richer A/F ratio very much like last year's Precision EFI reflash had. Check out the graphs at the bottom of this piece.

Note that the test numbers in the graphs begin with "AS18..." or "AS19..." which has been my way of storing the test data on the SuperFlow dyno computer over the past 30 years AS for American Snowmobiler and 18 or 19 as the calendar year of the Shootout.

And for new DTR members who mistakenly believe that they achieve best acceleration by getting initial clutch shifting at dyno sheet peak torque RPM ("let the torque pull it in the midrange..."), please look closely at the 4stroke turbo sleds' torque curves. It's obvious that those four strokes need to avoid peak torque RPM like the plague and buzz right up to peak HP RPM and stay there (assuming there is adequate traction). With two-strokes, clutching for a dyno sheet's peak torque RPM initially = clutching for cool pipe peak HP RPM. Kevin Cameron (The Cellar Dweller) wrote a good tech article for us in Volume 5 #4 explaining the physics of pipe temperature and shifting peak HP RPM, and in the same issue asked us to fit a tuned pipe with multiple EGT probes from Ypipe to stinger outlet and do back to back to back to back tests and record what happens. Scroll down to the bottom of this website to V5#4 and see this valuable, eye opening information and data. There are some 30 Kevin Cameron TCD articles in those scanned issues that helped most of us snowmobile hotrodders out of the Neanderthal age.

2020 Arctic Cat ZR6000

EngSpd RPM	STPPwr CHp	STPTRq Clb-ft	LamAF1 Ratio	AirInT degF	Baro_P InHga	DenAlt Feet	STPCor Factor	Humidy %
6800	99.4	76.8	14.50	70.0	28.7	2463	1.071	67.2
6850	99.5	76.3	14.50	70.0	28.7	2463	1.071	67.2
6900	99.6	75.8	14.53	70.0	28.7	2463	1.071	67.2
6950	99.6	75.2	14.58	70.0	28.7	2463	1.071	67.2
7050	99.3	73.9	14.70	70.0	28.7	2464	1.071	67.2
7100	96.0	71.0	14.84	70.0	28.7	2465	1.071	67.2
7000	98.0	73.5	14.32	70.1	28.7	2466	1.071	67.2
7150	101.6	74.6	14.33	70.1	28.7	2466	1.071	67.2
7200	102.3	74.7	14.37	70.1	28.7	2466	1.071	67.2
7250	102.9	74.6	14.40	70.1	28.7	2467	1.071	67.2
7300	107.5	77.4	14.17	70.1	28.7	2470	1.071	67.2
7350	110.5	79.0	14.16	70.1	28.7	2470	1.071	67.2
7400	113.2	80.4	14.16	70.1	28.7	2470	1.071	67.2
7450	115.1	81.2	14.19	70.1	28.7	2470	1.071	67.2
7500	116.3	81.4	14.23	70.1	28.7	2470	1.071	67.2
7550	117.0	81.4	14.26	70.1	28.7	2471	1.071	67.2
7600	117.5	81.2	14.27	70.1	28.7	2472	1.071	67.2
7650	118.0	81.0	14.23	70.2	28.7	2472	1.071	67.2

7700	118.4	80.8	14.17	70.2	28.7	2473	1.071	67.2
7750	118.6	80.4	14.05	70.2	28.7	2474	1.071	67.2
7800	118.6	79.9	13.94	70.2	28.7	2475	1.071	67.2
7850	118.3	79.2	13.83	70.2	28.7	2476	1.071	67.2
7900	117.9	78.4	13.78	70.2	28.7	2476	1.071	67.2
7950	116.7	77.1	13.83	70.2	28.7	2478	1.071	67.1
8000	114.5	75.2	13.94	70.3	28.7	2480	1.071	67.1
8050	110.4	72.0	13.88	70.3	28.7	2480	1.071	67.1
8100	103.7	67.3	13.71	70.3	28.7	2481	1.072	67.1

2020 SkiDoo Etec 600

EngSpd	STPPwr	STPTRq	LamAF1	AirlnT	DenAlt	Baro_P	STPCor	ElpsTm
RPM	CHp	Clb-ft	Ratio	degF	Feet	InHga	Factor	Secnds
6500	80.3	64.9	15.01	37.4	366	28.47	1.035	0.56
6550	81.1	65.0	14.92	37.4	367	28.47	1.035	1.00
6600	81.8	65.1	14.93	37.4	366	28.47	1.035	1.24
6650	82.4	65.1	14.95	37.4	366	28.47	1.035	1.39
6700	83.1	65.2	14.98	37.4	366	28.47	1.035	1.54
6750	83.9	65.3	14.99	37.4	366	28.47	1.035	1.69
6800	85.1	65.7	14.94	37.4	367	28.47	1.035	1.89
6850	87.4	67.0	14.78	37.5	368	28.47	1.035	2.16
6900	89.9	68.5	14.64	37.5	369	28.47	1.035	2.43
6950	91.9	69.4	14.53	37.5	370	28.47	1.035	2.69
7000	92.9	69.7	14.43	37.5	372	28.47	1.035	2.91
7050	93.4	69.5	14.31	37.5	374	28.47	1.035	3.10
7100	93.5	69.2	14.18	37.5	375	28.47	1.035	3.28
7150	93.8	68.9	14.07	37.5	375	28.47	1.035	3.46
7200	94.3	68.8	13.98	37.5	376	28.47	1.035	3.62
7250	95.0	68.8	13.93	37.5	376	28.47	1.035	3.75
7300	96.2	69.2	13.84	37.5	376	28.47	1.035	3.93
7350	98.3	70.2	13.72	37.6	378	28.47	1.035	4.16
7400	100.6	71.4	13.61	37.6	379	28.47	1.035	4.36
7450	103.0	72.6	13.54	37.6	380	28.47	1.035	4.56
7500	105.5	73.9	13.46	37.6	380	28.47	1.035	4.81
7550	107.5	74.8	13.39	37.6	380	28.47	1.035	5.01
7600	109.3	75.6	13.34	37.6	381	28.47	1.035	5.20
7650	110.9	76.1	13.28	37.6	381	28.47	1.036	5.35
7700	112.5	76.7	13.21	37.6	381	28.47	1.036	5.51
7750	114.7	77.7	13.11	37.6	381	28.47	1.036	5.72
7800	118.3	79.6	12.98	37.6	382	28.47	1.036	6.05
7850	121.1	81.0	12.94	37.6	383	28.47	1.036	6.32
7900	122.9	81.7	12.92	37.6	383	28.47	1.036	6.56
7950	124.2	82.0	12.90	37.6	384	28.47	1.036	6.83
8000	125.2	82.2	12.89	37.6	384	28.47	1.036	7.05
8050	125.9	82.1	12.88	37.6	385	28.47	1.036	7.29
8100	126.5	82.0	12.89	37.6	385	28.47	1.036	7.48

8150	126.7	81.6	12.89	37.6	388	28.47	1.036	7.71
8200	126.7	81.2	12.89	37.6	388	28.47	1.036	7.95
8250	126.4	80.5	12.92	37.6	388	28.47	1.036	8.19
8300	125.8	79.6	12.96	37.7	389	28.47	1.036	8.43
8350	124.4	78.3	13.00	37.7	391	28.47	1.036	8.69
8400	121.8	76.1	13.06	37.7	393	28.47	1.036	8.98
8450	118.9	73.9	13.09	37.7	394	28.47	1.036	9.23
8500	116.5	72.0	13.09	37.7	395	28.47	1.036	9.42
8550	113.4	69.7	13.08	37.7	396	28.47	1.036	9.61

2020 Arctic Cat ZR8000

EngSpd RPM	STPPwr CHp	STPTRq Clb-ft	LamAF1 Ratio	AirInT degF	Baro_P InHga	DenAlt Feet	STPCor Factor	SpcPwr HP/CID
6550	106.8	85.6	14.74	74.3	28.7	2730	1.075	2.20
6600	107.1	85.2	14.69	74.3	28.7	2731	1.075	2.20
6650	107.7	85.0	14.62	74.3	28.7	2731	1.075	2.21
6700	108.5	85.0	14.55	74.3	28.7	2731	1.075	2.23
6750	111.7	86.9	14.32	74.3	28.7	2730	1.075	2.30
6800	113.2	87.4	14.28	74.3	28.7	2730	1.075	2.33
6850	114.8	88.0	14.23	74.3	28.7	2731	1.075	2.36
6900	117.2	89.2	14.15	74.4	28.7	2732	1.075	2.41
6950	119.2	90.0	14.13	74.4	28.7	2734	1.075	2.45
7000	121.3	91.0	14.13	74.4	28.7	2734	1.075	2.49
7050	123.1	91.7	14.16	74.4	28.7	2734	1.075	2.53
7100	124.6	92.2	14.17	74.4	28.7	2734	1.075	2.56
7150	127.0	93.3	14.22	74.4	28.7	2737	1.075	2.61
7200	128.6	93.8	14.24	74.4	28.7	2737	1.075	2.64
7250	129.9	94.1	14.25	74.4	28.7	2737	1.075	2.67
7300	132.0	94.9	14.26	74.5	28.7	2739	1.075	2.71
7350	134.3	95.9	14.24	74.5	28.7	2741	1.075	2.76
7400	136.4	96.8	14.25	74.5	28.7	2741	1.075	2.81
7450	138.7	97.8	14.25	74.5	28.7	2743	1.075	2.85
7500	141.7	99.2	14.21	74.5	28.7	2744	1.076	2.91
7550	144.1	100.2	14.16	74.5	28.7	2744	1.076	2.96
7600	146.3	101.1	14.12	74.5	28.7	2746	1.076	3.01
7650	148.9	102.2	14.06	74.6	28.7	2747	1.076	3.06
7700	151.2	103.1	13.99	74.6	28.7	2747	1.076	3.11
7750	152.9	103.6	13.92	74.6	28.7	2748	1.076	3.14
7800	154.1	103.8	13.82	74.6	28.7	2748	1.076	3.17
7850	154.8	103.6	13.66	74.6	28.7	2750	1.076	3.18
7900	155.3	103.3	13.51	74.6	28.7	2751	1.076	3.19
7950	155.3	102.6	13.38	74.6	28.7	2752	1.076	3.19
8000	155.1	101.8	13.26	74.6	28.7	2754	1.076	3.19
8050	154.6	100.8	13.13	74.7	28.7	2756	1.076	3.18
8100	153.8	99.7	13.05	74.7	28.7	2756	1.076	3.16
8150	152.3	98.2	13.00	74.7	28.7	2757	1.076	3.13

8200	149.3	95.6	13.00	74.7	28.7	2758	1.076	3.07
8250	144.8	92.2	13.00	74.7	28.7	2762	1.076	2.98

2020 SkiDoo Etec 850

EngSpd RPM	STPPwr CHp	STPTRq Clb-ft	LamAF1 Ratio	AirInT degF	DenAlt Feet	Baro_P InHga	STPCor Factor	ElpsTm Secnds
6400	109.0	89.4	13.17	36.9	291	28.49	1.033	0.08
6450	109.8	89.4	13.26	36.9	291	28.49	1.033	0.29
6500	109.9	88.8	13.27	36.9	292	28.49	1.033	0.44
6550	110.2	88.4	13.20	36.9	293	28.49	1.033	0.62
6600	114.5	91.1	13.01	36.9	294	28.49	1.033	1.13
6650	116.9	92.3	13.03	36.9	294	28.49	1.033	1.30
6700	119.2	93.4	13.02	36.9	294	28.49	1.033	1.50
6750	122.1	95.0	12.90	36.9	294	28.49	1.033	1.77
6800	124.6	96.3	12.82	36.9	294	28.49	1.033	2.01
6850	126.8	97.3	12.80	36.9	296	28.49	1.034	2.20
6900	128.8	98.0	12.78	36.9	296	28.49	1.034	2.40
6950	130.7	98.7	12.76	36.9	296	28.49	1.034	2.60
7000	132.5	99.4	12.74	36.9	297	28.49	1.034	2.79
7050	134.4	100.1	12.75	36.9	297	28.49	1.034	2.97
7100	136.5	100.9	12.80	36.9	297	28.49	1.034	3.20
7150	138.6	101.8	12.87	36.9	297	28.49	1.034	3.42
7200	140.5	102.5	12.96	37.0	298	28.49	1.034	3.65
7250	142.4	103.2	13.00	37.0	298	28.49	1.034	3.89
7300	144.2	103.7	12.98	37.0	298	28.49	1.034	4.18
7350	145.5	104.0	12.94	37.0	298	28.49	1.034	4.39
7400	146.6	104.0	12.91	37.0	299	28.49	1.034	4.53
7450	147.6	104.1	12.87	37.0	300	28.49	1.034	4.66
7500	148.8	104.2	12.81	37.0	301	28.49	1.034	4.84
7550	150.6	104.8	12.73	37.0	301	28.49	1.034	5.03
7600	152.9	105.6	12.68	37.0	302	28.49	1.034	5.20
7650	155.6	106.8	12.66	37.0	302	28.49	1.034	5.41
7700	158.7	108.2	12.64	37.0	302	28.49	1.034	5.64
7750	161.6	109.5	12.62	37.0	302	28.49	1.034	5.91
7800	163.7	110.3	12.60	37.0	303	28.49	1.034	6.11
7850	165.3	110.6	12.58	37.0	303	28.49	1.034	6.28
7900	166.5	110.7	12.54	37.0	304	28.49	1.034	6.49
7950	167.5	110.6	12.52	37.0	304	28.49	1.034	6.76
8000	168.2	110.4	12.52	37.0	304	28.49	1.034	6.99
8050	168.4	109.8	12.58	37.0	304	28.49	1.034	7.22
8100	168.1	109.0	12.64	37.0	304	28.49	1.034	7.43
8150	166.8	107.5	12.73	37.0	304	28.49	1.034	7.66
8200	164.4	105.3	12.85	37.0	305	28.49	1.034	7.91
8250	161.6	102.9	12.99	37.0	305	28.49	1.034	8.18
8300	158.1	100.1	13.15	37.1	306	28.49	1.034	8.44

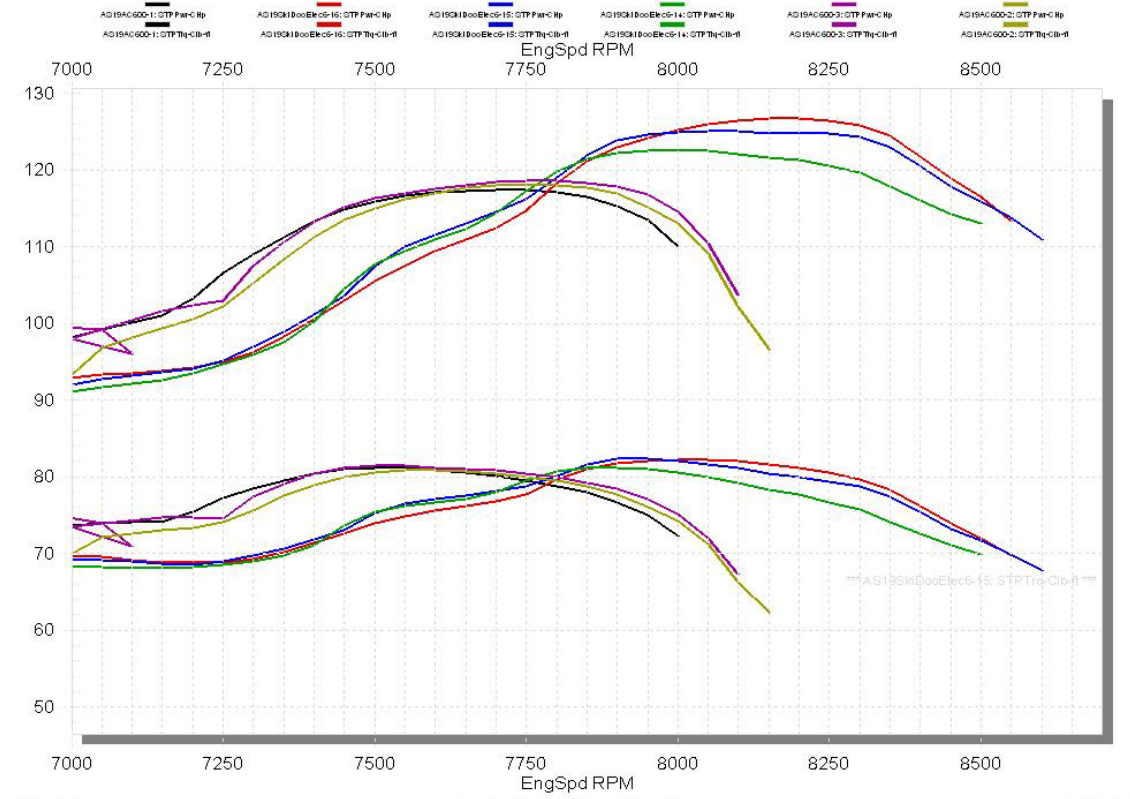
2020 Arctic Cat Thundercat

EngSpd RPM	STPPwr CHp	STPTRq Clb-ft	LamAF1 Ratio	AirInT degF	Baro_P InHga	DenAlt Feet	STPCor Factor	BoostP psig
6950	168.7	127.5	11.65	68.1	28.69	2366	1.071	8.6
7000	168.1	126.1	11.59	68.1	28.69	2371	1.071	8.6
7050	168.0	125.2	11.57	68.2	28.69	2373	1.071	8.6
7100	168.3	124.5	11.57	68.2	28.69	2375	1.071	8.6
7150	168.6	123.9	11.57	68.2	28.69	2378	1.071	8.6
7200	169.1	123.3	11.56	68.2	28.69	2380	1.071	8.7
7250	169.7	123.0	11.55	68.3	28.69	2383	1.071	8.8
7300	171.2	123.2	11.58	68.3	28.69	2387	1.071	9.0
7350	173.0	123.6	11.60	68.4	28.69	2390	1.071	9.1
7400	175.0	124.2	11.60	68.5	28.69	2395	1.071	9.2
7450	177.0	124.8	11.58	68.5	28.69	2399	1.071	9.4
7500	178.7	125.1	11.57	68.5	28.69	2401	1.072	9.5
7550	180.4	125.5	11.57	68.6	28.69	2402	1.072	9.6
7600	182.0	125.8	11.57	68.6	28.69	2404	1.072	9.7
7650	183.6	126.1	11.55	68.6	28.69	2406	1.072	9.8
7700	185.2	126.3	11.54	68.6	28.69	2408	1.072	9.8
7750	186.6	126.4	11.52	68.7	28.69	2411	1.072	9.8
7800	187.6	126.3	11.50	68.7	28.69	2414	1.072	9.8
7850	188.5	126.1	11.48	68.8	28.69	2417	1.072	9.8
7900	189.4	125.9	11.46	68.8	28.69	2420	1.072	9.8
7950	189.9	125.5	11.43	68.9	28.69	2424	1.072	9.8
8000	190.5	125.1	11.41	68.9	28.69	2429	1.072	9.8
8050	191.1	124.7	11.39	69.0	28.69	2435	1.072	9.8
8100	191.8	124.3	11.38	69.1	28.69	2440	1.072	9.8
8150	192.5	124.1	11.38	69.1	28.69	2443	1.072	9.8
8200	193.0	123.6	11.39	69.2	28.69	2447	1.072	9.8
8250	194.0	123.5	11.42	69.3	28.69	2450	1.073	9.9
8300	195.1	123.4	11.46	69.3	28.69	2453	1.073	10.0
8350	196.2	123.4	11.50	69.3	28.69	2456	1.073	10.1
8400	197.5	123.5	11.55	69.4	28.69	2460	1.073	10.1
8450	198.7	123.5	11.61	69.5	28.69	2465	1.073	10.1
8500	199.7	123.4	11.66	69.5	28.69	2471	1.073	10.1
8550	200.7	123.3	11.70	69.6	28.69	2476	1.073	10.2
8600	201.4	123.0	11.71	69.7	28.69	2483	1.073	10.2
8650	202.2	122.8	11.71	69.8	28.69	2490	1.073	10.2
8700	202.4	122.2	11.71	69.9	28.69	2497	1.074	10.2
8750	202.5	121.6	11.71	70.0	28.69	2502	1.074	10.2
8800	202.7	121.0	11.69	70.1	28.69	2508	1.074	10.2
8850	202.0	119.9	11.67	70.2	28.69	2514	1.074	10.2
8900	200.5	118.3	11.63	70.3	28.69	2522	1.074	10.2
8950	199.1	116.8	11.59	70.4	28.69	2530	1.074	10.2
9000	197.9	115.5	11.58	70.5	28.69	2539	1.075	10.3

2020 SkiDoo Ace Turbo

EngSpd RPM	STPPwr CHp	STPTRq Clb-ft	LamAF1 Ratio	AirInT degF	DenAlt Feet	STPCor Factor	Humidy %	Baro_P InHga
6050	133.6	116.9	14.45	54.2	1110	1.039	46.1	28.83
6100	134.5	116.4	14.45	54.2	1109	1.039	46.1	28.83
6150	135.5	116.0	14.43	54.2	1109	1.039	46.2	28.83
6200	136.5	115.9	14.41	54.2	1109	1.039	46.2	28.83
6250	137.8	116.0	14.37	54.2	1110	1.039	46.2	28.83
6300	139.2	116.2	14.32	54.2	1110	1.039	46.3	28.83
6350	140.8	116.5	14.24	54.2	1110	1.039	46.3	28.83
6400	142.5	117.0	14.14	54.2	1110	1.039	46.3	28.83
6450	144.2	117.4	14.02	54.2	1110	1.039	46.3	28.83
6500	145.9	117.8	13.86	54.2	1110	1.039	46.4	28.83
6550	147.6	118.2	13.69	54.2	1110	1.039	46.4	28.83
6600	149.3	118.5	13.53	54.2	1108	1.039	46.4	28.83
6650	150.8	118.8	13.40	54.2	1108	1.039	46.4	28.83
6700	152.3	119.0	13.31	54.2	1108	1.039	46.5	28.83
6750	153.4	119.0	13.25	54.2	1107	1.039	46.5	28.83
6850	154.5	118.9	13.24	54.1	1107	1.039	46.5	28.83
6900	155.4	118.7	13.24	54.1	1107	1.039	46.5	28.83
6950	156.3	118.4	13.25	54.1	1107	1.039	46.5	28.83
7000	157.0	118.1	13.27	54.1	1107	1.039	46.5	28.83
7050	157.8	117.7	13.30	54.1	1107	1.039	46.6	28.83
7100	158.5	117.4	13.32	54.1	1107	1.039	46.6	28.83
7150	159.1	116.9	13.33	54.1	1106	1.039	46.6	28.83
7200	159.7	116.5	13.33	54.1	1106	1.039	46.6	28.83
7250	160.3	116.1	13.33	54.1	1106	1.039	46.6	28.83
7300	160.7	115.5	13.32	54.1	1106	1.039	46.6	28.83
7350	161.0	114.9	13.31	54.1	1106	1.039	46.6	28.83
7400	161.1	114.1	13.27	54.1	1107	1.039	46.6	28.83
7450	161.0	113.2	13.21	54.1	1106	1.039	46.7	28.83
7500	160.7	112.3	13.14	54.1	1106	1.039	46.7	28.83
7600	160.4	111.2	13.05	54.1	1105	1.039	46.7	28.83
7650	160.1	110.3	12.98	54.1	1105	1.039	46.7	28.83
7700	159.9	109.4	12.92	54.1	1105	1.039	46.7	28.83
7750	159.7	108.5	12.86	54.1	1105	1.039	46.7	28.83
7800	159.5	107.6	12.82	54.1	1105	1.039	46.7	28.83
7850	159.5	106.9	12.77	54.1	1105	1.039	46.7	28.83
7900	159.5	106.1	12.72	54.1	1105	1.039	46.7	28.83
7950	159.3	105.3	12.64	54.1	1105	1.039	46.7	28.83
8000	159.1	104.5	12.55	54.1	1104	1.039	46.7	28.83
8050	158.8	103.5	12.44	54.1	1104	1.039	46.7	28.83
8100	158.3	102.6	12.32	54.1	1104	1.039	46.7	28.83
8150	157.6	101.5	12.19	54.1	1105	1.039	46.7	28.83
8200	156.5	99.9	12.04	54.1	1105	1.039	46.7	28.83
8250	155.3	98.4	11.88	54.1	1105	1.039	46.7	28.83

2020 600s for the 2019 NY Shootout, B/B/B

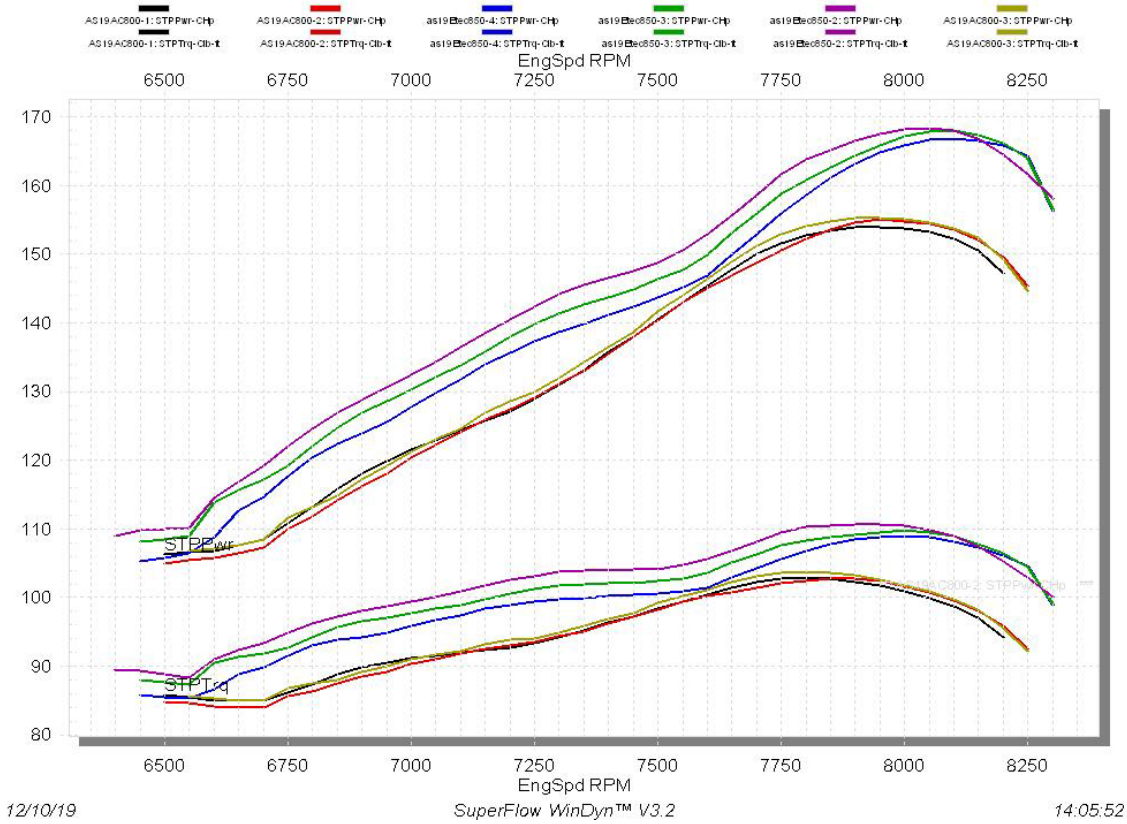


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SuperFlow WinDyn™ V3.2

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2020 800/850 for the 2019 NY Shootout, B/B/B--HP top, TQ bottom

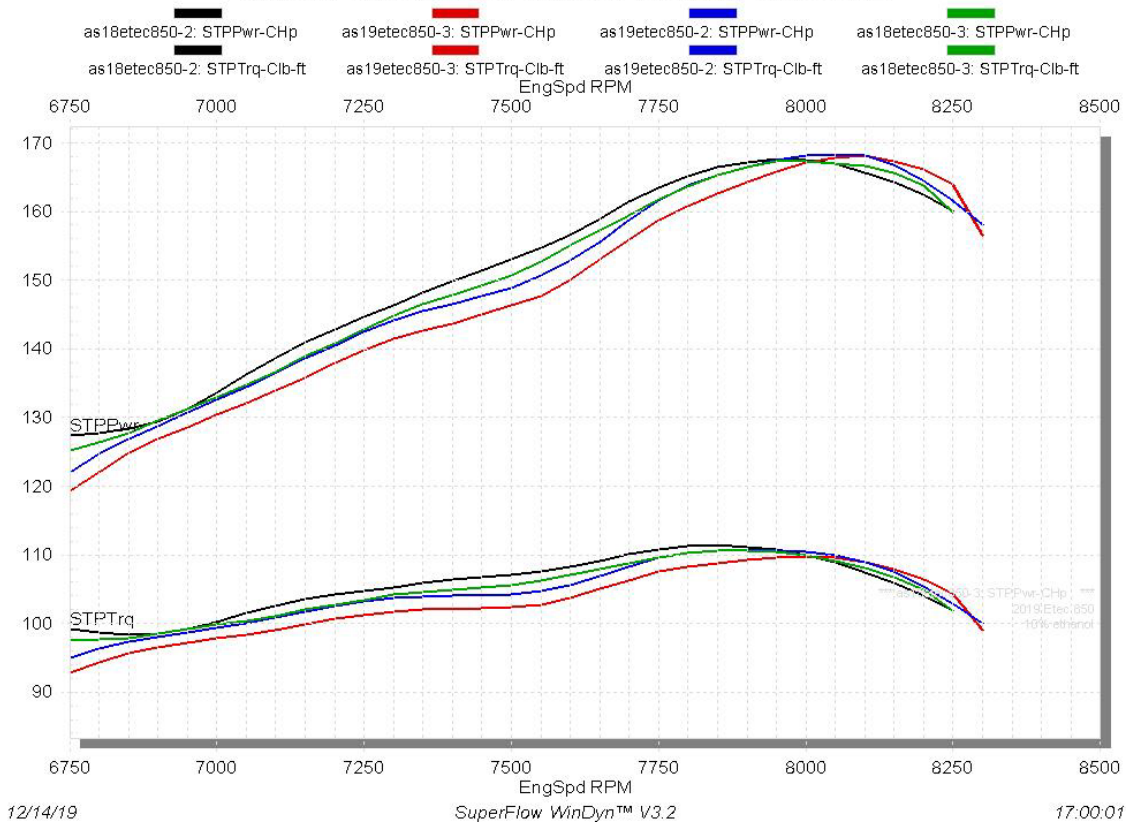


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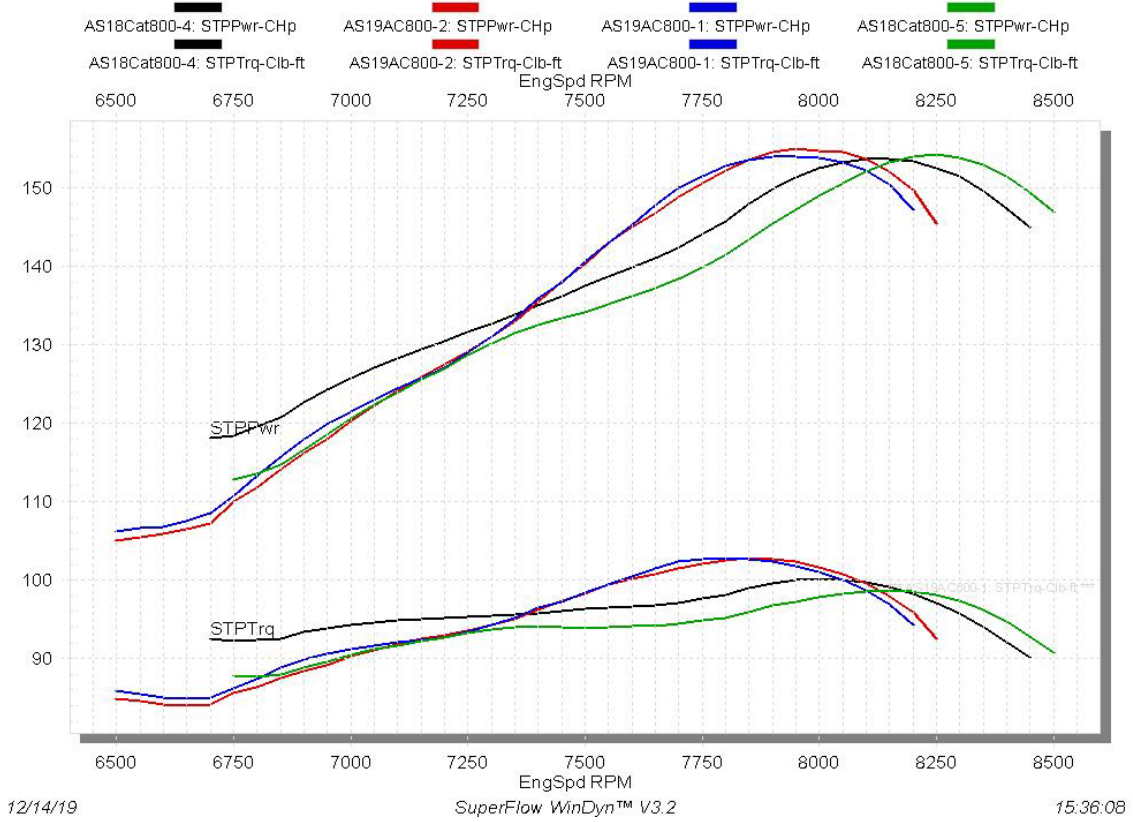
SuperFlow WinDyn™ V3.2

14:05:52

Compare 2019 and 2020 Etec 850 TQ and HP curves B/B



Compare 2019 and 2020 Ctec 800 TQ and HP B/B tests



Compare 2019 and 2020 Ctec 800 A/F ratio B/B tests

