

D&D F9 trail engine with D&D Ypipe and Monster single pipe with stock muffler

A few months ago we dyno tested and posted here this powerful trail engine package, but with the preproduction, hand welded cone monster single pipe.

Now, production pipes are being shipped, manufactured out of stampings. Occasionally production stampings exceed the performance of the hand-built hand fitted dyno pipes. D&D found this to be the case here, and rented my dyno facility to demonstrate the F9ss with production Ypipe and Monster single pipe. Glenn Hall brought the sled here to test, right after dyno tuning on D&D's Huff hydraulic dyno. First, Glenn would show off D&D's pump gas Boondocker setting. I should note here that the D&D Boondocker is necessary for this engine to control the fuel properly to close to 9000 RPM. And I should also note that people who desire to run mile after mile at WOT can add as much fuel as they like to enable them to run deto-free at elevated coolant temps, even on low octane gas. The price for that goofiness, of course is reduced HP at .700+ BSFC but it can be done. These tests are about 20 seconds long, good for easily ½ mile on the lake.

DD F9ss Monster Single pump gas setting on boondocker

EngSpd	STPTrq	STPPwr	A/F	BSFC	Fuel A	FUEL-P	AirTmp
RPM	Clb-ft	CHp	Ratio	lb/hph	lb/hr	psig	degF
6300	84.9	101.9		0.649	64.1	43.7	58
6400	85.7	104.4		0.639	64.6	43.6	57
6500	87.4	108.2		0.612	64.1	43.6	57
6600	88.5	111.2		0.597	64.4	43.6	56
6700	89.4	114.1		0.588	65.1	43.6	57
6800	91.4	118.4		0.588	67.4	43.6	58
6900	93.1	122.2		0.584	69.1	43.5	58
7000	94.5	126.1		0.602	73.2	43.5	60
7100	96.7	130.7		0.592	74.9	43.5	58
7200	97.9	134.3		0.573	74.4	43.4	59
7300	96.9	134.7		0.681	88.8	43.3	58
7400	97.4	137.3		0.684	91.1	43.2	57
7500	102.6	146.5		0.695	98.5	43.1	58
7600	105.1	152.1		0.679	99.9	43.1	58
7700	107.4	157.5		0.676	103.1	42.9	58
7800	108.5	161.1		0.659	102.8	42.9	58
7900	109.2	164.2		0.643	102.4	43.1	57
8000	109.6	167.1		0.643	103.9	43.1	58
8100	109.9	169.6		0.638	104.6	43.1	59
8200	109.1	170.4		0.655	107.9	42.9	59
8300	107.9	170.5		0.656	108.1	42.9	59
8400	106.2	169.9		0.679	111.6	42.8	59
8500	104.1	168.4		0.691	112.5	42.8	59
8600	101.9	166.9		0.689	111.2	42.8	59

Next Greedy Glenn insisted on adding a splash of race gas to the three gallons of 93 octane pump gas in the tank, then going to Glenn's personal lake race Boondocker setting for this F9ss that would prove to add about 12 HP. There is big HP in proper tuning.

DD F9ss Monster single pipe, race gas Boondocker setting

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	A/F Ratio	BSFC lb/hph	Fuel A lb/hr	FUEL-P psig	AirTmp degF	Time-S Second
5700	80.1	86.8		0.644	54.5	43.8	52	21.03
5800	80.8	89.2		0.643	56	43.8	51	22.03
5900	80.5	90.4		0.628	55.4	43.8	52	22.74
6000	80.2	91.6		0.63	56.2	43.8	53	23.72
6100	80.9	94.1		0.634	58.1	43.8	52	24.15
6200	82.3	97.2		0.626	59.3	43.8	52	24.73
6300	82.7	99.3		0.629	60.8	43.8	53	24.99
6400	85.4	104.1		0.621	62.9	43.7	52	25.82
6500	87.2	107.9		0.598	62.9	43.7	52	26.34
6600	88.5	111.2		0.596	64.6	43.6	52	26.96
6700	90.3	115.2		0.586	65.9	43.6	52	27.51
6800	92.5	119.7		0.581	67.9	43.6	51	28.23
6900	92.9	122.1		0.577	68.7	43.6	51	28.92
7000	95.1	126.7		0.577	71.4	43.5	51	29.46
7100	96.6	130.6		0.574	73.2	43.5	51	30.29
7200	97.5	133.7		0.567	73.9	43.5	52	30.84
7300	96.7	134.4		0.668	87.5	43.2	52	31.48
7400	96.3	135.7		0.675	89.3	43.2	52	31.65
7500	101.8	145.4		0.681	96.4	43.1	52	32.46
7600	105.8	153.1		0.668	99.8	43.1	52	33.45
7700	106.2	155.7		0.658	99.8	43.1	53	33.68
7800	108.6	161.3		0.641	100.5	43.1	53	34.55
7900	110.2	165.8		0.609	98.5	43.1	52	35.45
8000	110.3	168.1		0.595	97.5	43.1	52	36.11
8100	111.4	171.9		0.571	95.7	43.1	52	36.91
8200	110.6	172.7		0.569	95.8	43.1	52	37.09
8300	112.3	177.5		0.544	94.3	43.2	51	38.07
8400	111.7	178.7		0.539	94.1	43.2	51	38.63
8500	111.1	179.7		0.535	93.8	43.2	51	39.14
8600	110.6	181.2		0.538	95.1	43.2	52	40.16
8700	110.1	182.3		0.532	94.5	43.1	52	40.51
8800	107.5	180.1		0.541	94.8	43.1	53	41.52
8900	102.5	173.7		0.555	93.8	43.2	53	42.61

Finally, Glenn dyno tested here his own lakeracer F7, with moderate race porting, gonzo compression, squish clearance that was tight enough to prevent any carbon from building up on the squish bands/ pistons, a Cat 500' ECU, Boondocker and a bunch of extra timing not provided by the 500' box. This race gas only engine had the new D&D Ypipe and Monster single. As you can see, the Boondocker enabled Glenn to tune the fuel to match the high revs of the Monster single. I really like the custom Boondocker steps built

into the D&D Boondocker boxes. Though I don't care for the overlap that blends from step to step, these custom boxes are quite dandy, and quite necessary for these hi-revving Firecats. Also I noted that this sled dyno'd within a few tenths of a HP at D&D the same day Glenn brought it here.

DD F7, Glenn Hall, DDY Ddmonster single, race porting & compression, 500'raceECU plus Boondocker 110 octane only

EngSpd RPM	STPTrq Clb-ft	STPPwr CHp	A/F Ratio	BSFC lb/hph	Fuel A lb/hr	FUEL-P psig	AirTmp degF	
7400		89.9	126.7		0.587	72.5	43.7	53
7500		90.8	129.6		0.576	72.8	43.7	52
7600		92.3	133.5		0.581	75.5	43.7	52
7700		96.3	141.1		0.595	81.8	43.6	53
7800		99.4	147.6		0.601	86.3	43.5	54
7900		100.7	151.5		0.591	87.1	43.4	54
8000		103.3	157.3		0.572	87.7	43.4	53
8100		106.3	164.1		0.547	87.4	43.4	52
8200		107.1	167.2		0.536	87.3	43.4	53
8300		108.3	171.1		0.531	88.4	43.4	53
8400		110.1	176.2		0.519	89.1	43.4	53
8500		109.7	177.6		0.506	87.5	43.4	53
8600		109.4	179.2		0.502	87.7	43.4	52
8700		108.1	179.1		0.494	86.1	43.4	53
8800		106.6	178.5		0.491	85.3	43.4	52