

07 Arctic Cat F8, D&D trailport, D&D Ypipe, D&D tuned pipe

D&D's Dale Roes and right hand man Scooter brought Scooter's new F8 trail sled to dyno test here last week.

This one is with D&D trail/ lake race porting specs, developed after weeks of tweaking on their own dyno. It has a bit more compression than stock, two degree key to advance timing, D&D Vforce3 reeds, and a Boondocker fuel controller. Dale indicated that on the best of 100s of dyno runs, they slightly exceeded 180 CHP. But today, with this air condition and this gasoline we were very slightly off that mark on the DynoTech SuperFlow dyno.

But at 178 HP this is the best single pipe 800 twin of any brand, any modifier dyno tested here. Most twin pipe 800 twins make less HP. Remember Scott Norine's D&D F8 twin piper just touched 180 HP and 120 lb/ft but rattled the spark plugs loose from deto on 93 octane gas. This single pipe 07 F8 was happy as a clam making 15 runs at 177.8- 178.1 HP on pump gas. We even ran it out of gas on one 15 second dyno run—dropping fuel pressure to 20 psi and BSFC down to .40 even as HP dropped. We missed the BSFC and A/F ratio gauges on the dyno computer screen flashing red to warn us. Scooter was in charge of watching that but his euphoria over his massive HP caused his brain to fade (actually I'm supposed to watch those flashing red gauges during the dyno run but I goofed). But no deto, no problem. Refilling the tank with 93 from the car wash around the corner brought HP right back.

Also note that the D&D Ypipe added 2% airflow and 2% more HP to the F8. Not quite as spectacular as the improvement on the F1000 but still a significant increase in HP for not much money.

The high power run shown was one of several created with a "terminal test" where we select actual acceleration rate from point to point, then measuring data every few tenths of a second, hence the odd datapoints.

Scooter's D&D F8 will be entered in the "Trail Mod" class at the SW DTR shootout in two weeks. Scooter will be the pilot.

| stock Ypipe stock pipe | STPTrq | STPPwr | A/FA-B | FuIA-B | BSFC | TsTim2 | FuelP | Air1+2 |
|------------------------------|--------|--------|--------|--------|--------|--------|-------|--------|
| EngSpd RPM | Clb-ft | CHp | Ratio | lb/hr | lb/hph | second | psig | scfm |
| 5100 | 86.1 | 83.7 | 10.51 | 68.7 | 0.845 | 0 | 42.6 | 158 |
| 5200 | 87.5 | 86.7 | 10.69 | 68.9 | 0.819 | 1 | 42.7 | 161 |
| 5300 | 87.6 | 88.4 | 10.94 | 67.9 | 0.791 | 1.4 | 42.7 | 162 |
| 5400 | 90.1 | 92.6 | 11.58 | 66.9 | 0.743 | 2.1 | 42.6 | 169 |
| 5500 | 91.7 | 96.1 | 11.96 | 66.1 | 0.708 | 2.8 | 42.7 | 173 |
| 5600 | 92.7 | 98.9 | 12.46 | 65.3 | 0.678 | 3.6 | 42.7 | 178 |
| 5700 | 92.6 | 100.5 | 12.47 | 65.6 | 0.671 | 3.9 | 42.7 | 179 |
| 5800 | 94.8 | 104.7 | 12.81 | 65.2 | 0.641 | 4.7 | 42.7 | 182 |

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|------|-------|-------|-------|------|-------|------|------|-----|
| 5900 | 95.5 | 107.3 | 12.89 | 66.1 | 0.632 | 5.2 | 42.7 | 186 |
| 6000 | 96.3 | 110.1 | 13.02 | 66.3 | 0.621 | 6.1 | 42.7 | 188 |
| 6100 | 97.1 | 112.8 | 13.05 | 66.9 | 0.611 | 6.8 | 42.6 | 191 |
| 6200 | 97.8 | 115.5 | 13.03 | 68.1 | 0.606 | 7.4 | 42.7 | 194 |
| 6300 | 98.2 | 117.8 | 12.65 | 70.8 | 0.618 | 8.5 | 42.6 | 196 |
| 6400 | 98.2 | 119.7 | 12.64 | 70.9 | 0.611 | 9.1 | 42.6 | 196 |
| 6500 | 98.4 | 121.8 | 12.51 | 72.9 | 0.616 | 9.9 | 42.5 | 199 |
| 6600 | 98.1 | 123.2 | 12.34 | 73.9 | 0.616 | 10.5 | 42.5 | 199 |
| 6700 | 98.1 | 125.1 | 12.58 | 73.6 | 0.605 | 11.3 | 42.5 | 202 |
| 6800 | 97.7 | 126.5 | 12.81 | 73.7 | 0.599 | 11.9 | 42.5 | 206 |
| 6900 | 96.9 | 127.3 | 13.11 | 73.1 | 0.589 | 12.3 | 42.6 | 209 |
| 7000 | 96.9 | 129.2 | 13.13 | 74.5 | 0.593 | 12.7 | 42.6 | 214 |
| 7100 | 97.1 | 131.2 | 13.19 | 74.4 | 0.583 | 12.8 | 42.6 | 214 |
| 7200 | 97.6 | 133.9 | 13.25 | 74.4 | 0.572 | 12.8 | 42.6 | 215 |
| 7300 | 100.1 | 139.2 | 13.21 | 75.7 | 0.561 | 12.9 | 42.5 | 218 |
| 7400 | 114.2 | 160.9 | 12.41 | 92.2 | 0.591 | 15.3 | 42.3 | 250 |
| 7500 | 115.4 | 164.8 | 12.31 | 94.3 | 0.589 | 15.9 | 42.2 | 253 |
| 7600 | 114.4 | 165.5 | 12.43 | 94.1 | 0.585 | 16.6 | 42.2 | 255 |
| 7700 | 113.4 | 166.2 | 12.55 | 93.7 | 0.581 | 17.1 | 42.2 | 257 |
| 7800 | 111.2 | 165.2 | 12.66 | 93.7 | 0.584 | 18.2 | 42.2 | 259 |
| 7900 | 108.5 | 163.3 | 12.55 | 94.9 | 0.598 | 18.8 | 42.2 | 260 |
| 8000 | 100.3 | 152.9 | 12.89 | 91.9 | 0.619 | 19.9 | 42.3 | 259 |

| D&D | | | | | | | | |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Ypipe | | | | | | | | |
| stock pipe | | | | | | | | |
| EngSpd | STPTRq | STPPwr | A/FA-B | FulA-B | BSFC | TsTim2 | FuelIP | Air1+2 |
| RPM | Clb-ft | CHp | Ratio | lb/hr | lb/hph | second | psig | scfm |
| 5100 | 86 | 83.5 | 11.08 | 66.6 | 0.819 | 0 | 42.6 | 161 |
| 5200 | 85.6 | 84.7 | 11.31 | 65.7 | 0.797 | 0.5 | 42.6 | 162 |
| 5300 | 86.6 | 87.4 | 11.56 | 65.3 | 0.768 | 0.8 | 42.6 | 165 |
| 5400 | 88.8 | 91.3 | 11.89 | 64.7 | 0.727 | 1.8 | 42.7 | 168 |
| 5500 | 90.1 | 94.2 | 12.26 | 64.3 | 0.701 | 2.2 | 42.7 | 172 |
| 5600 | 91.8 | 97.9 | 12.91 | 62.9 | 0.661 | 3.1 | 42.7 | 177 |
| 5700 | 93.1 | 101.1 | 13.02 | 63.6 | 0.648 | 3.7 | 42.6 | 181 |
| 5800 | 94.3 | 104.1 | 13.13 | 64.3 | 0.634 | 4.3 | 42.7 | 184 |
| 5900 | 95.3 | 107.1 | 13.27 | 65.2 | 0.625 | 5.2 | 42.8 | 189 |
| 6000 | 95.3 | 108.9 | 13.33 | 65.1 | 0.614 | 5.5 | 42.7 | 189 |
| 6100 | 96.2 | 111.7 | 13.24 | 66.1 | 0.608 | 6.4 | 42.7 | 191 |
| 6200 | 96.8 | 114.3 | 13.03 | 67.8 | 0.609 | 7.3 | 42.6 | 193 |
| 6300 | 97.1 | 116.5 | 12.93 | 68.9 | 0.607 | 8.1 | 42.6 | 195 |
| 6400 | 97.5 | 118.8 | 12.69 | 70.8 | 0.612 | 8.7 | 42.6 | 196 |
| 6500 | 97.7 | 120.9 | 12.44 | 72.9 | 0.619 | 9.6 | 42.6 | 198 |
| 6600 | 97.6 | 122.6 | 12.37 | 73.6 | 0.617 | 10.1 | 42.6 | 199 |
| 6700 | 98.1 | 125.2 | 12.62 | 73.7 | 0.606 | 11.1 | 42.6 | 203 |
| 6800 | 97.1 | 125.8 | 12.61 | 74.1 | 0.607 | 11.4 | 42.6 | 204 |
| 6900 | 97.3 | 127.9 | 12.88 | 74.2 | 0.597 | 12.1 | 42.6 | 209 |
| 7000 | 96.8 | 129.1 | 13.12 | 74.4 | 0.593 | 12.4 | 42.6 | 213 |
| 7100 | 96.8 | 130.8 | 13.16 | 74.4 | 0.585 | 12.5 | 42.6 | 214 |
| 7200 | 97.4 | 133.5 | 13.26 | 74.7 | 0.575 | 12.5 | 42.5 | 216 |
| 7300 | 98.6 | 137.1 | 13.14 | 75.8 | 0.569 | 12.6 | 42.5 | 218 |
| 7400 | 113.9 | 160.7 | 12.71 | 91.8 | 0.587 | 13.9 | 42.3 | 255 |

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|------|-------|-------|-------|------|-------|------|------|-----|
| 7500 | 114.8 | 164.1 | 12.67 | 93.1 | 0.583 | 15.5 | 42.2 | 257 |
| 7600 | 115.4 | 166.9 | 12.68 | 93.8 | 0.578 | 16.1 | 42.2 | 260 |
| 7700 | 115.1 | 168.7 | 12.67 | 94.5 | 0.576 | 16.9 | 42.2 | 261 |
| 7800 | 113.3 | 168.3 | 12.81 | 93.7 | 0.573 | 17.6 | 42.2 | 262 |
| 7900 | 109.9 | 165.4 | 12.81 | 94.3 | 0.586 | 18.4 | 42.2 | 264 |
| 8000 | 104.5 | 159.2 | 12.99 | 92.8 | 0.601 | 19.4 | 42.3 | 264 |

D&D
Ypipe
D&D
single
pipe stock
muffler

| EngSpd | STPTRq | STPPwr | A/FA-B | FulA-B | BSFC | TsTim2 | FuelIP | Air1+2 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| RPM | Clb-ft | CHp | Ratio | lb/hr | lb/hph | second | psig | scfm |
| 5708 | 81.7 | 88.8 | 12.71 | 50.3 | 0.581 | 0 | 42.7 | 162 |
| 5375 | 91.8 | 94.1 | 11.67 | 67.3 | 0.735 | 1.8 | 42.7 | 172 |
| 5454 | 89.7 | 93.1 | 11.39 | 68.4 | 0.754 | 2.1 | 42.6 | 170 |
| 5631 | 93.6 | 100.3 | 11.95 | 66.5 | 0.681 | 2.5 | 42.7 | 174 |
| 5702 | 94.4 | 102.5 | 12.16 | 66.5 | 0.666 | 2.8 | 42.7 | 177 |
| 5811 | 95.5 | 105.7 | 12.26 | 67.1 | 0.651 | 3.1 | 42.7 | 179 |
| 5889 | 95.9 | 107.6 | 12.08 | 67.9 | 0.648 | 3.4 | 42.7 | 179 |
| 6039 | 96.2 | 110.7 | 12.38 | 67.5 | 0.626 | 3.7 | 42.6 | 182 |
| 6102 | 96.1 | 111.6 | 11.98 | 69.5 | 0.639 | 4.1 | 42.7 | 182 |
| 6162 | 95.5 | 112.1 | 12.29 | 68.7 | 0.629 | 4.3 | 42.6 | 184 |
| 6234 | 94.5 | 112.2 | 11.71 | 71.8 | 0.658 | 4.6 | 42.6 | 183 |
| 6336 | 95.7 | 115.5 | 11.76 | 72.7 | 0.646 | 5.1 | 42.5 | 187 |
| 6407 | 94.7 | 115.5 | 11.39 | 74.9 | 0.665 | 5.3 | 42.6 | 186 |
| 6552 | 95.1 | 118.7 | 11.22 | 77.1 | 0.667 | 5.6 | 42.4 | 189 |
| 6615 | 95.5 | 120.3 | 11.44 | 76.4 | 0.652 | 5.9 | 42.5 | 191 |
| 6753 | 94.5 | 121.5 | 11.63 | 76.3 | 0.645 | 6.2 | 42.5 | 194 |
| 6887 | 94.7 | 124.2 | 12.03 | 75.8 | 0.626 | 6.5 | 42.5 | 199 |
| 6891 | 95.1 | 124.8 | 12.04 | 75.9 | 0.624 | 6.5 | 42.5 | 200 |
| 7037 | 95.5 | 128.1 | 12.59 | 75.4 | 0.604 | 6.8 | 42.5 | 207 |
| 7269 | 108.2 | 149.8 | 12.61 | 81.4 | 0.557 | 7.1 | 42.3 | 224 |
| 7244 | 111.3 | 153.5 | 12.11 | 90.1 | 0.601 | 7.5 | 42.1 | 238 |
| 7209 | 108.2 | 148.6 | 11.51 | 95.1 | 0.657 | 7.8 | 42.2 | 239 |
| 7269 | 109.6 | 151.6 | 11.83 | 93.5 | 0.632 | 8.1 | 42.3 | 242 |
| 7310 | 110.5 | 153.8 | 12.19 | 91.1 | 0.607 | 8.4 | 42.2 | 242 |
| 7355 | 110.8 | 155.1 | 12.11 | 92.8 | 0.613 | 8.7 | 42.2 | 245 |
| 7398 | 111.4 | 156.9 | 11.95 | 94.4 | 0.617 | 9.1 | 42.2 | 246 |
| 7425 | 112.2 | 158.7 | 11.86 | 95.3 | 0.616 | 9.3 | 42.2 | 247 |
| 7551 | 114.6 | 164.8 | 12.06 | 94.9 | 0.591 | 9.6 | 42.3 | 250 |
| 7607 | 119.3 | 172.8 | 12.35 | 94.2 | 0.559 | 10.1 | 42.2 | 254 |
| 7613 | 120.1 | 174.1 | 12.27 | 95.1 | 0.561 | 10.3 | 42.2 | 255 |
| 7590 | 118.7 | 171.5 | 12.17 | 95.8 | 0.573 | 10.6 | 42.2 | 255 |
| 7643 | 118.6 | 172.6 | 12.14 | 96.2 | 0.572 | 10.9 | 42.2 | 255 |
| 7682 | 119.9 | 175.4 | 12.36 | 94.9 | 0.555 | 11.2 | 42.2 | 256 |
| 7716 | 119.3 | 175.3 | 12.46 | 94.2 | 0.551 | 11.5 | 42.2 | 256 |
| 7767 | 119.3 | 176.4 | 12.41 | 95.1 | 0.553 | 11.8 | 42.2 | 258 |
| 7797 | 118.9 | 176.5 | 12.44 | 95.5 | 0.555 | 12.1 | 42.2 | 260 |
| 7868 | 117.8 | 176.4 | 12.65 | 94.6 | 0.551 | 12.5 | 42.2 | 261 |

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|------|-------|-------|-------|------|-------|------|------|-----|
| 7868 | 117.8 | 176.4 | 12.65 | 94.6 | 0.551 | 12.5 | 42.2 | 261 |
| 7889 | 118.6 | 178.1 | 12.82 | 93.8 | 0.541 | 12.8 | 42.3 | 263 |
| 7928 | 116.7 | 176.1 | 12.27 | 98.2 | 0.572 | 13.1 | 42.1 | 263 |
| 7976 | 114.2 | 173.4 | 12.12 | 99.4 | 0.588 | 13.4 | 42.1 | 263 |
| 8027 | 112.3 | 171.6 | 12.21 | 98.8 | 0.591 | 13.7 | 42.2 | 263 |
| 8051 | 109.6 | 168.1 | 12.28 | 98.1 | 0.599 | 14.1 | 42.1 | 263 |
| 8093 | 106.2 | 163.7 | 12.13 | 98.9 | 0.621 | 14.3 | 42.2 | 262 |

07 F8 trail ported by D&D with stock muffler

Red stock Y pipe stock pipe, Blue D&D Ypipe stock pipe, Black D&D Ypipe D&D single pipe

