This article summarizes the results of dyno testing performed on several Jet City Fieros at the Horsepower Ranch in Hobart, WA.. We covered a wide ride variety of engine 60 degree V6 engines which gives us a pretty good picture of what some of the changes in displacement and modifications will do to change performance. We also have two engines which are in the build process to be tested later. Bill is building up a high performance 3.4, and Jim is working on a similar engine with the exception of doing a 7730 ECM conversion. The table below summarizes the Fieros tested and indicates the maximum HP and TQ figures. The max is not necessarily a good indicator, because it represents a single data point. It is important to look at the graphs to see the performance over the RPM range which are shown later. The configurations and max performance are shown below:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Engine** | **No pulls** | **Description** | **MAX HP** | **RPM** | **MAX TQ** | **RPM** |
| Todd 2.9 | 4 | .030 over 2.8, balanced and blueprinted, ported and gasket matched heads and manifolds, roller rockers, 1985 ECM, 24lb Mustang injectors, adj fuel pressure | 129 | 4400 | 164 | 3685 |
| Jim 2.8 | 2 | 100K mile 2.8 w/Trueleo intake, ported exhaust manifold, ported air filter | 128 | 4400 | 163 | 3775 |
| Jim 2.8 BB | 2 | 100K mile 2.8 w/Trueleo intake, FS big bore throttle body (swapped in), ported exhaust manifold, ported air filter | 127 | 4300 | 163 | 4300 |
| Bill 3.4 | 3 | Stock 3.4 with Fiero intake and exhaust | 138 | 4000 | 197 | 4300 |
| Bill 2.8 | 3 | Stock 2.8 | 114 | 4800 | 144 | 3810 |
| Don 3.1 | 3 | 3.1 stroker crank, balanced, ported heads and manifolds, gasket matched, roller rockers | 135 | 4375 | 176 | 3570 |

The data was received digitally from John (owner of Horsepower Ranch) as text files and pulled into a master Excel spreadsheet with a tab devoted to each dyno record. Summary tabs for Horsepower, Torque, and AFR were created from the raw data. The appropriate values for a select run were pulled into columns (by engine configuration) allowing for analysis and graphs. The raw data includes values for each RPM whole number from 2000 until pull termination. Since the data has some noise in it, a second set of columns was created with each data point being a 10 cell (by RPM) rolling average to smooth out the data. All analysis is performed on the smoothed data. The overall Horsepower graph is shown belowelow.

The following graph compares the HP of each engine to a base 2.8 (Bill’s). The number shown is the mathematical subtraction of the base engine HP from the data for the engine/RPM being plotted.

The overall graph for torque is shown below

The comparison of torque to the base engine is shown below:

And the AFR for the various combinations is:

Observations

* The performance of each engine is consistent with expectations: bigger or more performance work = higher performance. The cheapest way to get horsepower is to put in a 3.4. They are available from GM for about $1800-1900 new
* The 3.4 performance falls down above 4500 RPM which is most likely the result of limited stock intake and exhaust manifolding
* The only engines to rev above 5400 is Jims, with the Trueleo. The Trueleo appears to make a big improvement in breathing above 5000 RPM
* Don’s 3.1 has more horsepower and torque than Bills 3.4 above about 4700. This could be the result of the ported exhaust manifold on the 3.1 or perhaps the higher performance cam.
* According to John, Jim 2.8 BB is the only engine running the correct AFR. All others are running too rich.
* The data for Don’s pull is noisy and was terminated at a lower RPM than others. The engine was recently rebuilt and purposely was not pushed hard or to higher RPMs
* You have to look at TQ and HP across the RPM range to see the RELATIVE performance differences of different engines.. If you relied on individual max values only, you get a distorted view,