DYNOmite DYNAMOMETER

Average Performance

How can I improve my engine's average power?

Strive for AVERAGE performance! What??? Well, we don't mean run-of-the-mill performance; we're talking about making your engine's entire Hp curve stronger. Too often during dynamometer testing there is a tendency to focus on flash power peaks. Customers and novice dyno operators do this all the time... mostly because the numbers are higher!

However, vehicles must accelerate using their entire RPM band.... and even drag engines must produce strong power for more than just a single 1/10 second line on a data points listing! You want sustainable power.

Both the DYNOmite data-acquisition computer and DYNO-MAX software have features that help you stay focused on average results. Instead of just capturing and examining short sweep test data, make some longer duration pulls at fixed RPM steps.

Next, crank up your Time Averaging period. See how the horsepower holds up. Averages will be lower (but more consistent) than peaks, but if those numbers start tanking, you're onto tracking down some power leaches.

Run tests to see if climbing engine temperature is killing power. Since 4-strokes like the efficiency of warm blocks, maybe the induction system's thermal isolation could be better. Or, perhaps detonation is beginning as piston crown temperatures rise! Sometimes the exhaust's sonic tuning changes as the pipe temperatures stabilize. Are you tuning for the wrong temperatures? Is exhaust heat or leakage affecting the inlet air supply?

DYNO-MAX's tools can even pull average data from quick sweep tests... with its "Average Hp" formula. The "Pro" version's Graph Setup has an "Average Columns" checkbox... that averages every formula on your Data Points listing. Or, when doing graph overlays, it can average multiple test pulls into a set of averaged data lines.