

Erratic Dyno Chart

Posted by Manuel_M - 24 Mar 2015 10:48

Gentleman, please give me some thoughts on the attached dyno chart. My A/F ratios were in the 15's and they only ran it twice in fear of damaging it (Maxing 120HP @ 4750, 133TQ). A few days later, a fellow driver told me that his chart looked the same and it was due to his TPS not working. The theory being that if the DME does not see WOT it will not supply the correct amount of fuel and thus cause the lean condition.

That being the first thing I checked, the TPS was not sending an idle or WOT signal to the DME. Further investigation revealed that using the adjustment nut to adjust the idle (to 1100) caused the TPS to be open passed the switch point. Apparently this also put it out of range to reach the WOT switch point. The idle screw and TPS have been readjusted and are now sending both signals to the DME.

Since I will be going back to the dyno soon, I'd like to know if the top end erratic readings could be anything other than that the TPS. (I do plan on adjusting the AFM a click or two to take into account the shaved head and removed cat.)

Other Notes:

Fresh rebuild (break-in and 3 autox laps)

Voltage reading increases steadily from .45 to 8.43 in the AFM using the clarks test.

Idle A/F ratio is 11.5

Around 14.5 @ 5000 rpm, not under load.

Fuel pressure at idle 31

Fuel pressure increases under revs

Fuel pressure with no vacuum on fuel pressure regulator 38

No O2 sensor

Tested for vacuum leaks with brake cleaner

All idle control parts removed

Thanks!!

=====

Re: Erratic Dyno Chart

Posted by joeblow - 24 Mar 2015 17:08

I could not read the 'smoothing' setting for the dyno but some times they run the filtering so low that runs look like that.

But more concerning is that a bad ping will do that too. Could also be an individual misfiring cylinder from either too little or too much fuel, or mechanical issues (dead lifter, bent valve, sticky valve guide, broken valve spring etc...). Fuel seems to be your issue though as most others cause richer mixtures.

By the way did you pump your tank dry after it sat all that time? I NEVER run old gas in my cars if they have sat more than a couple of months. I use old gas in my 2 cycle stuff. That could be something to check too. If the gas is old, pump it through the filter and out the rail end cap, change your filter and either send out your injectors to be cleaned or run solvent through them yourself and test them.

I would do a plug read, compression test, and leakdown first. Then pull plugs one by one with it running to see if there is any one cylinder that seems off. But an overall lean mixture like that can ping and cause your issues. The sticky part is that one VERY lean cylinder can make the entire mixture leaner as read at the tailpipe too.

=====

Re: Erratic Dyno Chart

Posted by Manuel_M - 24 Mar 2015 20:35

Thanks for the reply. Based on what you mentioned here are some additional details:

Tank has been cleaned

New sock

New fuel filter

Freshly cleaned injectors

New 93 octane gas

Valve train is making quite the clacking noise.

New turbo valve springs

A/f mix is being read via wide band in the original bung.

Two of my original lifters would not pump up and were replaced with two that did not drain down. All were solid when installed, no idea what the issue is now.

I did run it for 30 seconds with a belt that was too loose. I checked the timing but they were at their appropriate marks.

Better chart image: imgur.com/TDXu5uc

Re: Erratic Dyno Chart

Posted by joeblow - 25 Mar 2015 05:19

Based on the better scan the smoothing on the dump is NOT the issue. So if it is not the overall mixture being off due to the TP then mechanical becomes more likely. Pull the plug and read them to see if you have any once cylinder running funny. A leakdown and compression test is in order too.

Re: Erratic Dyno Chart

Posted by Manuel_M - 26 Mar 2015 06:28

I'm going to do the compression test this weekend.

If the lifters don't quiet down after an event or two I will replace them. Have you had any experience with the rebuilt lifters from 944online? I did not know about them and I definitely do not want to spend \$200 each on new ones.

Re: Erratic Dyno Chart

Posted by joeblow - 26 Mar 2015 13:21

No direct experience. I am curious what he does to 'rebuild' them though.

=====