

## 2011 Rules change Proposal HP limit 2011-8

Posted by SvoChuck - 04 Nov 2010 22:28

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### proposal 2011-8)

**Dyno Max HP limit 142.0 =  $(hp+ tq)/2$  on a Dynojet.** Pulls done in 4th gear, SAE net corrections Smoothing factor (TBD). Rear tires and wheels must be legal during runs. - (Note other classes that use dyno's for limit will be consulted to validate all the dyno nuances to limit variability.)

**Justification:** Prevent expanding the performance envelope beyond the current demonstrated limit. This is being proposed as an upper limit to ensure future builds do not exceed the current performance levels. It is understood that continuing minor gains might increase effective hp output levels of the class. These minor gains while small in individualy can add up to noticeable gains. Such minor issues may also negatively impact the reliability of both engines and chassis. This overall limit will help to reduce the drive to make modifications that sacrifice reliability for minor hp gains. Items such as super light weight engine and gear oils may increase wheel hp, but at the expense of reliability.

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## Re: 2011 Rules change Proposal HP limit 2011-8

Posted by SvoChuck - 04 Nov 2010 22:40

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First off. This is a compromise your series directors came up with.

Can the lower \$ cars reach this number, no. Will someone try to get more power because this rule is out there ... yep.

How did we get 142 ? 140 is about what Dave Dirks had at Nationals on the dyno  $(HP + TQ) / 2$  so we are giving you 2hp for dyno error 142.

Do you need to go out and get your car on the dyno to verify you are under this number ? maybe. Did you rebuild your engine with 88 pistons then shave the head to near 10.5/1 ? 88 computer ? index plugs ? Race fuel ? adjust rotor and cap ? etc etc... if yes then it's a good idea to take it to the dyno. if not then you will be under 140.

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## Re: 2011 Rules change Proposal HP limit 2011-8

Posted by JerryW - 05 Nov 2010 11:22

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I see that GTS has some allowances built in on their procedures, as do AI and AIX. ( the series that I'm aware of relying on Dyno Certification).

GTS Rules state for example:

To allow a small safety margin for dyno variance, a forgiveness of 4WHP will be given to cars with WHP greater than WTQ and a -4 factor will be applied to the formula for cars using the averaging method for WTQ greater than WHP. However, if a car does not meet the minimum weight listed on the certification sheet, the forgiveness cannot be used to arrive at a compliant number.

Given the complaints in other series about the Dyno at Miller how far do we propose to take this.

Issues to think of include Numbers of Pulls, Average of Number of Pulls, Procedure (cold car,hot car etc),

Is the ratio from 140 (you state that was Dave's number ) to 142 within the margin of error of a Dyno ?

What if dyno's are not common at the regions' tracks

Who pays the cost of the Dyno - NASA, the competitor or the person requesting the compliance.

I'm still really uncomfortable with the max horsepower approach unless used as an indicator to further compliance checking.

For the sake of full disclosure I'm planning to do some engine rebuilds in my garage and do not have easy access to a Dyno. Which only checks the engine AFTER is rebuilt. Measuring of components and standard dimensions can be measured WHILE rebuilding.

(Note - I'm just uncomfortable with it - not shooting it down. Trying to flesh out the thoughts more)

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## Re: 2011 Rules change Proposal HP limit 2011-8

Posted by rd7839 - 05 Nov 2010 12:12

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HORRIBLE IDEA!!!

If you pay for the dyno runs, knock yourself out, if I have to pay I'll race elsewhere!

There are processes in place to check for compliance, dyno tests are notoriously inaccurate and expensive, not to mention time consuming.

I am not a professional and do not make much money. I race on a tight budget and do most of the work on my car myself. I paid a shop to rebuild my engine for reliability not hp. I HAVE ABSOLUTELY NO PROBLEM WITH SOMEBODY ELSE SPENDING 10 GRAND ON A MOTOR, CAR PREP AND DRIVER ARE THE FACTORS, NOT 137 VS 140hp.

If you want to fracture the class, make rules for your region and we'll have spec 944 and the "others";.

Let's just race

Ron

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## Re: 2011 Rules change Proposal HP limit 2011-8

Posted by joepaluch - 05 Nov 2010 12:59

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Couple things to add.

The proposal is to use a Dyno as tool to validate compliance. In 2009 and 2010 at Nationals the dyno was used as tool validate that a stock DME chip was being used. However there was no upper limit on

the dyno output. Just a check that for both your chip and stock reference chip the power curves did not change. Dyno's were paid for by NASA.

For 2011 based on the proposal above the numbers generated by a dyno could be used for compliance. There has been no talk about requiring dynos to be produced on a cars before racing is allowed. Just like weight in that we don't require you to tell us what your weight is before you race you would not be required to have dyno chart to race. However just like scales you may be required to run over dyno to make sure your car is within limits.

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## Re: 2011 Rules change Proposal HP limit 2011-8

Posted by Sterling Doc - 05 Nov 2010 14:48

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Dynos for compliance are not paid for by the competitor, unless you are protested, and found non compliant. No one with a legally built motor has anything to worry about at this cut off (142 HP+TQ/2).

None of the series directors has seen any legal motor dyno at these levels, ever, pro built or otherwise, on any dyno, over many years. This is a cap set high - intended to discourage expensive or risky tricks to gain a bit more HP, and is not intended to equalize all cars at some lower HP level. Running 0W20 oil 1 quart low, motor oil in the trans, light weight bearing grease etc. These are all done elsewhere, and the series directors, as a group, don't want them here. We don't want to encourage hand grenade, short lifespan, high output motors (or driveline parts). Rather than ban all of these things (impossible to police), it is better to make them not worthwhile with the cap.

This adds no cost to the average guy, nor mandates them to do anything - you can "just race." If this rule is used on you, you get a dyno, courtesy of NASA.

Dyno variation was taken into account in setting that number. Dirks best dyno was 138, Buzzetti at 136-140 on various pulls, with a motor that was right at the limits, compression wise. 142 is a "safe" number - no one has anything to fear from this, even considering dyno variation, unless you are heavily exploiting gray areas.

This rule does not apply to Traqmate generated numbers - it is not felt these numbers are accurate enough to be used for rules enforcement at this time. There is a strong precedent for (and procedures for) dyno-based compliance, but not data-acquisition based compliance, at this point.

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