

## 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 Sterling Doc - 08 Nov 2010 10:17

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Good points, and I would agree, I've seen no evidence of cheating this year in my region, and no good evidence (from data & video) that there was cheating at Nationals. In fact, I saw some damn good racing in the videos I did look at during the course of all of this.

The concern about trends towards the future remains. The series directors are working on hashing this out, so we can move forward. Thanks to all who are giving the input, it is being heard. Stay tuned...

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

Posted by SvoChuck - 08 Nov 2010 10:19

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maybe we need to restate this . this is not a cheating issue. it is power creep 135 ,138 now 140 ... next year 142 then 144 . then ????? so you want 944-spec "low cost equal racing" or NOT. there are other classes in NASA who cater to engine builders or free thinkers who want more power and less rules. I think they do a great job. !

this is 944-spec .

If we put a cap on it now where we now are then it should be painless. or we need to equalize the cars a different way.

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

Posted by cbuzzetti - 08 Nov 2010 10:45

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Something that is very important but has not yet been discussed is that we are talking about peak HP not the HP curve. This is what the target should be. If there needs to be a target at all.

Peak HP can be quite skewed by a dyno (it sees the absolute peak, not HP curve)

We have all seen dyno graphs that are not smooth but have a saw tooth line. The dyno reads only the max HP peak. Even with a smoothing factor on the dyno it still has peaks. An anomaly really but a very common part of dyno information.

Since we are at this peak for only a short time is this really what we should be chasing? The torque curve is sustained for a much longer time and has a greater effect on exit speed and acceleration.

I raced last weekend with a car that dynoed 10 rwhp less than mine. I could not just drive by him on the straight, heck I could barely pull up to him with a draft.

He and I are both competent drivers and had equal exit speeds coming on to the straight.

I just don't see this as a huge thing.

Drive ability has way more effect on lap times than HP. Granted at a track like Miller it will have a larger effect but the car still has to be driven well no matter what the HP.

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

Posted by cbuzzetti - 08 Nov 2010 10:52

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So I will now bring up the obvious again.

Have the Regional Directors polled their drivers to see what the actual consensus is for this issue?

The majority of the posters have asked to not have this imposed on us.

Is there a large group of drivers who are not voicing their opinion and want this to happen?

And to ALL drivers out there. The directors job is to reccomend to NASA the proposed rules changes. The top 3 directors of NASA are the ones who decide if these rules changes will take place.

It is not a dictatorship. We are the customers of NASA. If you want your voice heard be sure to speak loudly.

Thank you to those who have spoken up. Regardless of what side you are on you should have your say.

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

Posted by Al Fernandez - 08 Nov 2010 12:34

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I thought I'd post something as obviously this topic draws a lot of energy out. Take this as the opinion of an outsider looking in...I do not believe there is a problem with cheating in any nasa class, but I do believe there is a problem with continual escalation of complexity and cost to any component of a race car that cannot be limited and policed.

I come from the AI and CMC world, where dynos have been around since the rules started. We have a dyno procedure that minimizes the variables involved quite well, and even to this day we make adjustments to it here and there to make it better. If 944 is going to use dynos I would certainly encourage the decision makers to adopt the same procedure for standardization purposes.

The natural evolution of race classes is for the drivers to push the limits of the envelope. Yes, seat time is king, but the car gets the brunt of the focus. Make no mistake about it, as the class grows in popularity

and the rewards of placing on the podium increase, the desire to push the envelope increases as well. Things that were completely at one time are a &quot;must do&quot; as the driver/car grows with the competition. Anything that has no limit will get pushed and pushed and pushed. In the end, the only protection from continual escalation is limits on what you can do that can be enforced. Power is one of the big ones.

I would propose that the absence of dyno testing is far worse than the issues dynos bring. That's because the only alternative is engine and drivetrain tear downs. Does anyone want to disassemble their transmission to prove they have not mirror polished their gears to reduce friction? Does anyone want to take their engine apart down to the crank? Does anyone want to spend four hours in post race tech and push their car home with several boxes of parts? Honda Challenge and Spec Miata are the two largest classes that do not have dyno rules and guess what, that is exactly what you see at Nationals. Meanwhile AI, FFR, and CMC (all dyno classes) were out of post race tech within the hour other than for dynos since those are one at a time.

There is no free lunch. No, this hasnt been an issue and probably wont be for some time. Yes, eventually people will do things that most of us wouldnt to get that little edge. Clear and easily obtained limits are the way to go.

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