2012 Rules Change Proposals Decisions

Posted by Sterling Doc - 10 Nov 2011 20:22

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While the wording is still in progress, I wanted to get a draft of the decision on the rules change proposals out there now. The intent is to have the final wording of the approved changes off to NASA by Dec 1st.

1) Ram Air

-No change to current rule.

There was a lot of discussion on this, as many good points were raised on both sides by the drivers on the threads. There was clearly divided opinion on this on the forums. Interestingly, the comments when this was clarified last year were uniformly positive. In the end, it was felt that there was not enough evidence that this would be problematic to warrant overturning what is now an established rule. We thought through the case of the 924S, and decided that any potential disadvantage (if any) of not having the foglight to duct through is offset by the 924S's known aero advantage. If there is significant data to the contrary, we will look at that next year.

2) Header coating

-Denied

There was little support for the need for this (outside of the requesting driver) on the forums, or elsewhere. Cost and performance concerns outweighed the claim of improved engine longevity, which was deemed doubtful

3) Castor block mount repair

We decided to allow repair of this, just as crash damage can be repaired. It is incumbent on the racer that the end result retain OEM geometry, and alter the original structure in the minimum way required to

effect the repair. Phil's specific proposed fix to his car was thought to be reasonable, as a guide. No new rule required

4) Turbo valve springs

-Allowed

[i] After further research to establish no reasonable performance benefit from turbo valve springs, the cost savings was thought to warrant a rule change (Apologies to BJ, who requested this last year!)

5) Urethane in windows of the transmission mounts.

-Allowed

Some research indicated that does this may improve CV joint life. While this research was not conclusive, the minimal cost of this modification was not thought to be prohibitive. Also noted was that this modification may save the cost of a new trans mount, which is quite expensive

6) Enlarge oiling hole for crank.

-Allowed, but definition needed

Rod bearing failures, while much less common with cross drilling the crank, are still seen. A simple modification to improve oil flow to this problematic area was thought to have merit

7) Lexan Hatch

-Denied

The cost for implementing this class wide far outweighs the potential benefits, which were deemed to be minimal. There was little support for this outside of the requesting driver. This ruling is highly unlikely to change in the future

8) Turbo Oil FIlters

-Allowed, no rule change needed

Oil filters are not regulated

9) Allow replicating plastic ducting to radiator

-Allowed

Many times these plastic parts are missing, or broken on donor cars, and are critical to maintaining cooling. Replicating this ducting is encouraged if it is missing. No restrictions on materials for this

10) Allow Turbo Axles

-Approved

Late turbo axles are both stronger, and cheaper than the N/A ones. Some suppliers, such as Paragon, have superseded the N/A part with the Turbo one. Dimensions, and performance potential, are the same. The turbo axle has 25 splines, and the N/A, 33 splines. Many of you may have turbo axles in, and not realize it. This rule makes that clearly legal.

Further discussion points among the series directors for future rules consideration:

We have been collecting data from the best motors at Nationals, and elsewhere.

There is increasingly solid evidence that shaving the head on a 9.5:1 piston motors does not allow the same performance *potential* as the 10.2:1 compression motors. The increasing scarcity of of '88 pistons is also becoming an issue. Over the next year, we will be taking a close look at defining the difference in performance potential, and considering options to bridge that gap.

We will also be looking at ways to alleviate issues in parts availability, possibly through aftermarket suppliers, and possibly through rules adjustments. It is too early to go into details about this, but we want to be proactive on dealing with these issues.

None of this impacts next year directly, including the 2012 Nationals.

Expect these bigger issues to be tackled for the 2013 rules.

Keep in mind, that if you are spending extra money building an '88/10.2 compression piston motor this year, the advantage of doing so, may be short lived.

Let me be clear that we will *not* be outlawing '88 motors. They have been, and will remain legal.

However, a carefully executed performance adjustment on the '88 motors, or allowance for the low compression motors is very possible for 2013. We will be looking into, and testing options over the next year.

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Re: 2012 Rules Change Proposals Decisions

Posted by cbuzzetti - 12 Nov 2011 16:32

Hey BJ are we talking about cars with over 140 RWHP?

And what about the TQ numbers. Most cars I have seen are pretty squared. HP and TQ are very close to each other. We should look at the relationship of HP/TQ and A/F ratio.

It would be nice to know what is actually making these bigger numbers.

It could well be that the cam timing is dead on. According to Milledge Porsche used the optimal cam timing. Anything off of stock produced lower HP.

My experience at Miller in 09 was that my car made more HP when I made it richer on the dyno there. The difference was about 2 peak HP. I was expecting to lean out the motor due to altitude.

If it turns out that there is a reasonable HP gain just by tuning on the dyno then we may be able to help the low compression cars get closer.

I dont know if there is any real gains from the front mounted air intake. the dyno will not show us that data. But one option would be to disallow a front air intake for cars with 88 pistons if that proves to be a

factor.

I suspect that the best cars with 88 pistons have been dyno tuned. I know mine was though I did not go to great lengths doing it. I did not swap AFM, throttle body or any sensors. I did swap a DME but nothig was found there. The biggest gain was using the fuel selector switch and mixing 100 octane and 91 octane. Total gains were 3 HP.

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Re: 2012 Rules Change Proposals Decisions

Posted by loftygoals - 12 Nov 2011 17:48

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cbuzzetti wrote:

Hey BJ are we talking about cars with over 140 RWHP?

I won't know until I get them on the dyno. The I don't suspect that the "magic motor" car will make any more peak power. It is in the low to mid-range where is seems to shine. When I get time, I'm going to pull the DME and ensure it is running a stock tune. It was purchased as a built car, so there's no telling...

cbuzzetti wrote:

It would be nice to know what is actually making these bigger numbers.

I agree. As I can, I want to compile as much data as possible. Dyno, different part combinations, etc. I'm planning on pulling the maps off of early, late, and 88 chips for comparison, too.

All the cars I've done with low compression pistons, I have set the timing marks in the closest position to stock. This mean retarding the cam timing. This explains why these cars pull all the way to redline and seem to loose low end torque.

What I haven't tried is advancing the timing a tooth--with the minimum thickness head one tooth is actually less than a full tooth. I'd like to get dynos for each configuration.

-bj

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Re: 2012 Rules Change Proposals Decisions

Posted by Sterling Doc - 13 Nov 2011 21:00

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BJ

-Thanks for the reminder, we'll work on hashing that out.

Get those cars on a dyno!

I'm curious to see how your max shaved head turns out.

I had a max shave earlier 6R head, and while it put down great TQ (141 ft. lbs), peak power was only average (132 HP), and high RPM 6,000+ HP was down relative to the high -compression motors. I did not have time to dyno-tune it, though.

One of the other things we'll be looking into is the 6R head, vs. the 8R head.

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Re: 2012 Rules Change Proposals Decisions

Posted by cbuzzetti - 13 Nov 2011 21:48

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Sounds like a good plan Eric.

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Re: 2012 Rules Change Proposals Decisions

Posted by loftygoals - 14 Nov 2011 04:54

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Sterling Doc wrote:

One of the other things we'll be looking into is the 6R head, vs. the 8R head.

I need to look at the stampings to make sure we are talking about the same things, but I would guess that the 6R, or early head, will never make the power of the 8R head because the intake ports are so much smaller. I think when I measured them, the early head had a intake port volume of 10cc less than the 8R. When you shave the head and leave the timing in the closest to stock setting, it retards the cam timing. This would move the powerband and peak power higher. My guess is that the 6R head can't get enough air to make peak power that high.

-bj

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