Ram Air Rule Clarification Issue

Posted by Sterling Doc - 14 Nov 2013 21:33

Guys,

Since the rule change discussions, I've had several emails questioning the routing of ram air, and what is OK, and what is not. Specifically, if, and where holes can be cut for routing the ram air. This came up about 9 months ago, here: www.944spec.org/944SPEC/forum/race-car-b...old-air-intake-on-87 .

It has been pointed out to me that the provisional allowance made then seems in conflict with one reading of this rule:

17.3 Body Structure

The chassis structure must remain intact and stock except as noted

17.3.1 Headlights and headlight motors may be removed. If the headlights are removed, the

stock covers must be installed in the front body work in the stock location in a secure fashion.

Headlight cover gaps may not be filled in or taped over. ***Headlight positions may not be used for ducting of air in any way.*** .

"Headlight positions" can be read in multiple ways, but in the end it's just not clear as is, and needs to be fixed.

The ram air rules proposals did not address the routing of ram air or cutting holes, just where it came from, or getting rid of it entirely (which were voted down).

As we did not clarify this in the rules debate, and it is a source of confusion and contention, it need to be dealt with, even at this late date.

So moving forward, we need to decide if cutting holes in the headlight buckets (or elsewhere) to allow for straighter/cleaner ducting of ram air should be allowed. We should also address cutting holes for ducting oil coolers, etc for clarity.

Ram air has become such a headache, that it may need to be done away with if we can't sort this out.

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Re: Ram Air Rule Clarification Issue

Posted by Bottoz - 15 Nov 2013 07:44

Stock Airboxes anyone? It would solve all this ram-air chit chat.

"The spirit of the class is for all cars to be equal in weight and horsepower and be competitive with one another. The focus will be on driver ability and not dollar ability. This class is not intended to be an engine builder or innovator’s class."

Ram Air adds hp, but we have a dyno hp cap. Hmmm... how much hp does Ram Air add? Seems like now that we have a hp cap, Ram Air should be eliminated.

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Re: Ram Air Rule Clarification Issue

Posted by KLR - 15 Nov 2013 07:58

Ram air uses the stock airbox. You just replace the plastic tube that goes to the inner fender wall with a flexible tube the pulls the air from the turn signal opening or foglight hole. It requires no engineering and is superior to pulling from the fender both because of the ram air effect and because you don't suck in a ton of hot rubber booger junk from the wheel well. All of the cars in our region (Midwest) have installed it and it makes the racing more spec than it was when there was a random mix of cone filters, etc. FWIW it also helps a bit when passing out of class cars, which is an issue for us as we have active SM and SE30 groups in our region and are constantly having to navigate out of class racing situations.

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Re: Ram Air Rule Clarification Issue

Posted by Bottoz - 15 Nov 2013 08:07

I've seen many Ram Air configs that do not use the stock air box.

In my perfect world, it would be a Stock Air Box with the tube to the fender opening and nothing else. **No innovation**
, just as the 1st paragraph of our rules state. Problem Solved.

Ram Air has to add hp, or else people wouldn't do it. Yet we have a dyno hp cap... so in my opinion, Ram Air is what people use to cheat the system, and get round the hp cap rule.

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Re: Ram Air Rule Clarification Issue

Posted by Big Dog - 15 Nov 2013 08:26

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In areas of the country with high (above 100) air temps, getting oil temps below 250/270 can be a challenge. The small turbo oil coolers, that we started with, simply do not work to keep the oil temps down to a reasonable level in such conditions. If one installs a larger oil cooler, a fair bit of the right side headlight bucket needs to be cut out to accommodate it.

Even with a 7"X14" Septrab cooler the oil temps can get to 240 degrees at times and those border on dangerous for our engines. It is just a fact of life when racing and pushing our cars far beyond what Porsche expected for a street car.

It seems to me that there is no way around us cutting out significant portions of the headlight bucket to accommodate large oil coolers in places with high ambient air temps and there is no reason to even worry about it as it is not a performance issue.

As for the air intake system, it has been allowed for quite some time for whatever reason. As Tim C. says, there are too many cars with headlight buckets modified now to change it.

I agree that cutting the headlight buckets for oil cooling and for air intakes should be specifically included in the rules and do not think that we should be too restrictive about it because we are not trying to create a DQ issue for those that may "overcut" to accommodate their set up or for a larger oil cooler than someone else has. I believe the "floor" of the bucket should be open to cutting as, like Eric said, some cars may not even have it to begin with. The front wall portion of the bucket that comes down and curves back and down, behind the bumper area, also needs to be open to cutting to allow for air to be ducted into the oil cooler or to allow for air intake from the bumper opening.

I do not see any valid reason to be overly restrictive on this modification because different people will have different solutions to the problem and there is no purpose in creating a tech nightmare for our racers. Keep the outside appearance stock but recognize the need to modify the headlight bucket area and remove any tech question.

Jim Foxx

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Re: Ram Air Rule Clarification Issue

Posted by Sterling Doc - 15 Nov 2013 09:18

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I think it's pretty cleare that ram air increases HP. Fortunately, it seems that routing to the stock airbox seems to be the best way to do it, both in our experience, and through extrapolation from factory engineered setups (i.e. factory ram air on motorcyles).

As the best way is also the cheapest, it migitates concerns about buying an unfair advantage. I'd prefer one option was spec'd, but that proposal went down in the rules change voting.

If there are concerns about the routing & cutting holes ,though, these need to be hashed out here for good. We need to be done with this issue.

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