Lessons learned from the Infineon crash

Posted by pixrken - 02 Jul 2008 04:34

This is a continuation of my race report from our Infineon race.

http://944spec.org/944SPEC/content/view/125/9/

As with any track incident it's what we can learn from it to make us safer and to talk about it.

Here are some emails between us after the incident.

From: Ken

Hi Team,

I have to tell you this was the scariest event I ever attended since this was the first time a ambulance had to be dispatched. My hit with tire wall last year I wasn't even fazed and just race the next day.

I'm sure all of us are real thankful Greg is O.K. Murphy's law says you will always find a section of wall where it's concrete and not covered by tires.

Greg's injuries were relatively minor considering he hit a concrete wall at what the corner workers were estimating at 90 MPH, the secondary hit at the rear where it pop open the hatch was a tire wall.

Greg suffered a fracture on the 7th rib of his left side and a bruise on his left leg by the shin area.

My observations:

1. I believe the head/neck restraint system really prevented serious injury.

2. I'm guessing the bruise on the left leg was caused by coming into contact to the bolt-in cage. Even though it was padded it's still in relatively close proximity to the leg. That's why I like and use a custom cage where the A-pillar bar is welded to the door sill and further away from the body.

3. The injury to the rib can be minimized with a seat with shoulder containment where the shoulders take the load instead of the side of the body. Like Jim Foxx's seat.

4. Our race cars with the safety systems are real strong. I don't take this as a mindset of invincibility but a street car would have been disasterous.

Jim Foxx whose was also at the event

From: Jim

I will add to this. Thank God Greg was back at the track in the afternoon. A testament to the level of safety gear we are required to have and to the level of gear we choose to have.

Several comments:

Halo seats to contain side to side head movement. The nets allow MUCH more movement (and stress on the neck) than a halo seat.

Leg whip - This can be a serious problem leading to bruises and injury to the legs from banging into cages, tunnels and each other. My seat has optional extensions that extend down to help minimize leg whip. Some pro teams have even developed a center divider to help prevent banging of knees and ankles together. I have looked at that but did not incorporate it YET. I will be now.

Harnesses - having the best harness possible. The Team Tech harness that I use incorporates two leg straps that work like a climbing harness to provide anti-sub protection. I believe this provides better protection for men's vital parts in a frontal crash as the stress is on the thighs and not centered on (you know what) that a conventional sub strap does. It also provides pads on the sternum and groin to dissipate force for less bruising.

Cage - having the drivers side bars bend out into the gutted door will add 4 or 5 inches of crush room for the driver. This is a simple change allowed by rule.

Seat mounting - mount the seat on supports that are attached to the tunnel and the side frame rails. The floor pan can deform in a crash and allow the seat to move. This happened to an Az racer and let his helmet hit the outside bar on his roll cage. Of course, the seat won't be adjustable but having an

adjustable seat means there is no seat back support anyway and that is a concern especially in a rear end collision.

Sorry to rant about safety issues but you guys are great to race with and to hang with. We all need to keep on each other about safety and Greg can attest to it being effective. Being back at the track Sunday afternoon! Wow!

Jim "Big Dog" Foxx

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Re:Lessons learned from the Infineon crash

Posted by joepaluch - 23 Jul 2008 22:43

Tim,

if the wall connects only to the cage fine. If it connects to the tub in anyway it is another attachement point. I suggest making the lower attachment attach to additional cage elements rather than the tub. This way you don't create sheer panel in the cage which can stiffen the tub. You just stiffen the cage.

You can achieve this method with two horizontal cross bars. one at harness height and the other down low just so it crossover hump in the cage. then build your plate structure between the two. This way it only attaches to the cage.

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Re:Lessons learned from the Infineon crash

Posted by Big Dog - 18 Oct 2008 16:56

Tim, you talked about a "crash cage" that far exceeds NASA's requirements.

I also saw a post about building a bulkhead behind the seat to prevent it from being able to submarine below the harness bar in a rear end impact.

I would like to know more about your "crash cage" and how it is designed. Do you have any sketches or photos of what you have put into the crash cage? I am very interested in any imporvements you have come up with. I like your idea on the bulkhead as well, Tim.

Every advance in safety helps us all.

Jim "Big Dog" Foxx

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