

To: The IF-1 investigative board

From: Thom Richard

Sep 16, 2016

On September 18, 2016, during the Gold final start we experienced a runway starting accident involving our F1 racer, 'Hot Stuff' and Race#11 Endeavor.

We were number four on the starting grid, which was the middle inside position with three aircraft on the front row, one to our right and three behind. Upon running the engine up in anticipation of the start, about 20 seconds before the green flag drop, the engine was not running well enough for flight, as you can hear from the audio, never mind racing. I made the decision to shut the engine down to signal the starters to halt the starting process. The flagman on my row put his hands in an 'X' over his head, as our procedures prescribe, and I opened my canopy to make it clear I was out of the race and so everyone could see me. The alternate airplane was signaled to taxi on to the runway to replace my entry. I felt confident the communications had reached the appropriate people and waited for personnel to push me off the runway.

However, much to my surprise, I saw the flagman run out on to the runway waving his hands over his head as if something was wrong. The aircraft to my right started rolling, the flagman ran back off the runway, and a few seconds later the number six and eight aircraft flew by me on either side. All I could do at that point was hope the number seven (center) aircraft would clear me on the centerline to my right.

The impact was violent and loud. His left leading edge shaved off the top several inches from my vertical and skimmed the turtle-deck without touching until it impacted my right hand holding up the canopy. The left landing gear hit the top of the gull-wing center-section, blowing a hole in the top skin and impacted the rear face of the front spar so hard that it broke the landing gear clean off his airplane and bending my wing forward to the point of breaking the wing root skins off the fuselage. The propeller sliced three evenly spaced gashes about mid span of my right wing, about a foot apart. The right landing gear sheared the wing off just short of the right wingtip. The impact spun me around nearly 180°. Race #11 came to rest several hundred feet in front of me with a folded gear, damaged wing and sheared propeller facing the other way as well. Race #11's pilot received no injuries.

As with any accident, it's always a chain of events. Here are some thoughts on the subject:

1. My ignition system started shorting out at a very inopportune time.
2. I did not transmit 'ABORT' on the radio, although that is not an established procedure, it may have helped. My hands were also busy opening the canopy. As I saw my flagman with his hands in an X, I also didn't think I needed to say

anything over the radio. Once the airplanes started rolling, a radio call may have caused further collisions as some airplanes would not have heard me. We'll never know.

3. There was a grave communications failure in the ranks of the flagmen. My row and the alternate saw the shutdown before the start. The #1 and #3 row did not.
4. The green flag drop was exceptionally fast. Very little if any delay. Instead of a 0-10 second drop, perhaps we should do a 10-20 second drop?
5. Race #11 failed to maintain centerline on takeoff and ended up 20' to the left of his assigned lane, impacting me. See post crash skid mark pictures.
6. Race #11 failed to see Race #1 over the nose. Race #11 has some visibility over the nose in the 3-point attitude, unlike most other F1's.
7. Race #1 was painted silver and sits very low to the ground, which would make it hard to spot. Bright colors are always preferred on racers for obvious reasons.
8. Our procedures call for us to stop the propeller to signal and abort and then opening the canopy. If I had instead commenced the start and taxied down the runway a few thousand feet, the airplanes behind would have had more time to spot my aircraft. Perhaps a procedural discussion about this is in order? I'm undecided on this as to which is safer. My hesitation is primarily based on the fact that engines sometimes quit or may not have enough power to taxi.
9. The spacing between the rows are decided by the ops director, it's not a hard fast rule. Maybe we need larger spacing? Enough to lift the tail up and see obstacles early enough to avoid them?
10. The main flagman should probably do one last visual check of all the individual aircraft before he drops the flag. He has a better view than anyone.

On a good note, I was strapped in very tight with a 5-point harness with my shoulders and head cradled well in the cockpit. In spite of the violence of the crash, I received no whiplash injuries. Something to be said about having your head protected in the cockpit structure.

Please pay particular attention to the post accident conversation between myself and the #2 row flagman on my cockpit video.

I'm available for further questioning.

[REDACTED]

Sep 26, 2016

Thom Richard

[REDACTED]

Kissimmee, FL 34741, USA

[REDACTED]