

# Flight Test Safety Fact



## 24 Dead in 15 Accidents since 2011

The numbers vary slightly depending on who reports them and what accidents we categorize as “flight test,” but the data send the same message. Tom Huff, Flight Test Safety Committee Chairman, reported these facts during the Flight Test Safety Workshop and again in a recent edition of the SETP Cockpit magazine. During the 2018 SETP Annual Symposium, Col Douglas “Beaker” Wickert (USAF) quoted the exact numbers above in his presentation on “Risk Awareness: A New Framework for Risk Management in Flight Test” to accompany his paper on the same topic. The video from his talk is available for SETP members at [setp.org](http://setp.org). In an interview, Beaker agreed to share his slides and paper for both feedback, exercise, and the benefit of others. Beaker, Huff, and many more agree, we need to explore ways to communicate better, and this newsletter is just one small step in that experiment. Beaker also said he was not aware of the Flight Test Safety Committee. We need to reach every member of SETP, every member of SFTE, and everyone who has attended a workshop in the last two years. More steps will follow as we experiment with many things—sharing the audio from Beaker’s talk in a different medium, exploring ways to report on Flight Test Safety papers presented at SETP and SFTE with a wider audience and doing it faster, and telling your stories. It’s time for you to do something:

1. **Tell your story:** email Tom Huff or the editor ([chairman@flighttestsafety.org](mailto:chairman@flighttestsafety.org) or [mark@flighttestfact.com](mailto:mark@flighttestfact.com))
2. **Tell Beaker thank you**—it means a lot! Send him a personal note by replying to this, and I will introduce you both by email.
3. **Forward this newsletter to one more person.**



## Flight Test Safety Committee

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## Your Words Matter

Words have the power of life and death. With a single word, you can save the lives of the aircrew or prevent an airplane crash: “Abort!” A word like that normally gets repeated — “Abort! Abort! Abort!” But it only needs to be heard once.

Your words matter. We need to hear them.

In the familiar setting of the cockpit or control room, we have certain protocols for communication. In those situations, there are specific words spoken at specific times. You already know what word to say and when to say it, but that wasn’t always true.

Can you remember back to your early childhood? You didn’t know enough to warn your dad about the car in his blind spot when he started to drift into the other lane. When you learned to drive, though, you gained a perspective that allowed you to contribute meaningfully to the same situation. If you yelled, “Watch out!” your words mattered. Fast forward several years—perhaps you, like me, are teaching your daughter to drive. My children started at a new school this year, and the first morning I drove them, my daughter complained loudly. With the wisdom that only the teenage years can bring, she declared that I went the wrong way. Later, we were having a discussion about “drifting into the other lane,” and she claimed that “going the wrong way” was the same kind of communication. I tried to explain the difference, so I told her, “When lives are at stake don’t remain silent. I need to hear you.”

When we start to talk or write about “safety culture,” we are in unfamiliar territory. The careful procedures for CRM that apply to cockpit and control room communication don’t exist here. When we discuss where safety officers fit on the org chart or what the safety review process should look like, we don’t have clear lines to prevent us from drifting out of our lane. Discussions about organizational drift, complacency, and feedback can create tension and discomfort. These conversations are not quite the same as the debrief either, and the norms we use in the briefing room may not apply. As it turns out, it’s hard to decide if “lives are at stake” and whether or not to blurt something out right there or wait until a more appropriate forum. All of this applies even more at a macroscopic level. How does the FAA ask the DoD hard questions, and how do civilians talk to the military? This community of flight test professionals needs to start that conversation anew as we explore ways to communicate better.

This newsletter is your formal invitation to join the conversation, so do something: Read. Write. Respond.

**Your words matter. We need to hear them.**

## 2019 Flight Test Safety Workshop

Join the Flight Test Safety Committee in Charleston, SC at the Marriott Hotel from May 6-9, 2019. More information available at <http://www.flighttestsafety.org/workshops>. (The office pool predicts we'll be getting a 787 factory tour and daily fly-bys of the greatest aircraft ever made, the C-17A.)



## 2019 Flight Test Safety Award

Nominations for the Tony LeVier Flight Test Safety Award are due in writing by March 30, 2019. Download the nomination form here from the Flight Test Safety Committee website: <http://www.flighttestsafety.org/awards/35-awards/information/54-tony-levier-flight-test-safety-award>.



The Flight Test Safety Committee established the award to formally recognize a single individual, or group of individuals, who over some period of time, has made a significant flight test safety contribution to a specific program, organization, or the flight test profession as a whole.

Nominations for the Tony LeVier Flight Test Safety Award are reviewed by the Flight Test Safety Committee and the most deserving nominee from the past year is selected. The recipient(s) is announced at the North American Flight Test Safety Workshop in the spring of each year. The distinctive flight helmet trophy (pictured above) is officially presented by the corporate sponsor of the award ([The Gentex Corporation](#)) at the fall Society of Experimental Test Pilots (SETP) Annual Awards Banquet.

## Just the Facts?

“Don’t let the facts get in the way of the story.” Journalists developed this saying to convey an important point: Often the information needs to move from our head to our hearts. We like data, and often we want just the facts. But in this case, the facts may obscure the story. Stories raise questions that we may not know how to answer, but they also communicate important things. This story picks up in November 2018. I emailed Beaker with a question, and he responded, almost instantly. That’s quite an accomplishment in this day and age. That turned into several emails and eventually a phone call. During our thirty-minute conversation, he explained that he wrote the paper after doing his own soul-searching and reflection. He hoped to reach group and squadron commanders, but the ideas extend to C-suite executives and even civilian OEMs and the FAA Flight Test organization. We talked for thirty minutes, but I am certain we could have talked for hours. Others have had similar conversations with Beaker, so the ideas in his talk seemed to spark interest. For example, David “Divot” Kern, test pilot and facility flight safety officer for the FAA’s Atlanta Aircraft Certification Office, scheduled the video for mandatory training with his team of test pilots and FTEs. Beaker’s ideas are complicated, and his paper is truly exhaustive with over thirty pages and more than 120 footnotes. These facts alone may dissuade most readers, and I asked him if he thought it would hinder widespread or rapid adoption of his framework.

His answer and the rest of our conversation is too long for this column, and it suggests the timeliness of Flight Test Fact, an experiment in communicating differently about Flight Test, Test Safety, Feedback Loops, Heuristics, and much more.

## FTSC Recommended Practices: FDR

Fellow flight test professionals, on behalf of your Flight Test Safety Committee, I wanted to direct your attention to a new guidance document added to the website under the Recommended Practices tab (<http://flighttestsafety.org/recommended-practices>).

This guidance document details recommended practices related to the use of recorders (Cockpit Voice and Flight Data Recorders) during flight test and was prompted by a NTSB Recommendation following the fatal Bell 525 flight test mishap of July 2016. This guidance accommodates the spectrum of flight test operations and the advantages of recorders to enhance flight test safety and execution (underpinned as a test data capture requirement, not just accident/incident causation tools). The FTSC highly encourages the adoption of the recommended practices within test organization and/or program SOPs and policies. We welcome any feedback on this Flight Test Data Recording Guidance at [chairman@flighttestsafety.org](mailto:chairman@flighttestsafety.org).

Tom Huff, Chairman, Flight Test Safety Committee

## Flight Test Fact – Future Facts, Stories, and Reports

BLUF: “It didn’t work, but it was worth the exercise.” In a future edition, we will review the 2018 SFTE Symposium presentation: *Systems Theoretic Process Analysis Applied to the Air Force Test Safety Process* by Lowell Bishop (412<sup>th</sup> Test Wing Test Safety) and Capt Michael “T-Rex” Tibbs (419<sup>th</sup> Flight Test Squadron). This paper references previous work done by LtCol Montes, USAFTPS.