



Inside this Issue

Leaves on the Trail – Flight Test orange and two kinds of questions an alien would ask about Fall
Pilot Intervention Rating Scale – Buck Joslin’s 2026 Flight Test Safety Workshop Talk

2027 Flight Test Safety Workshop Announcement

Chia Chat

And of course, we include, again, the usual end-matter like how to contact us, etc.

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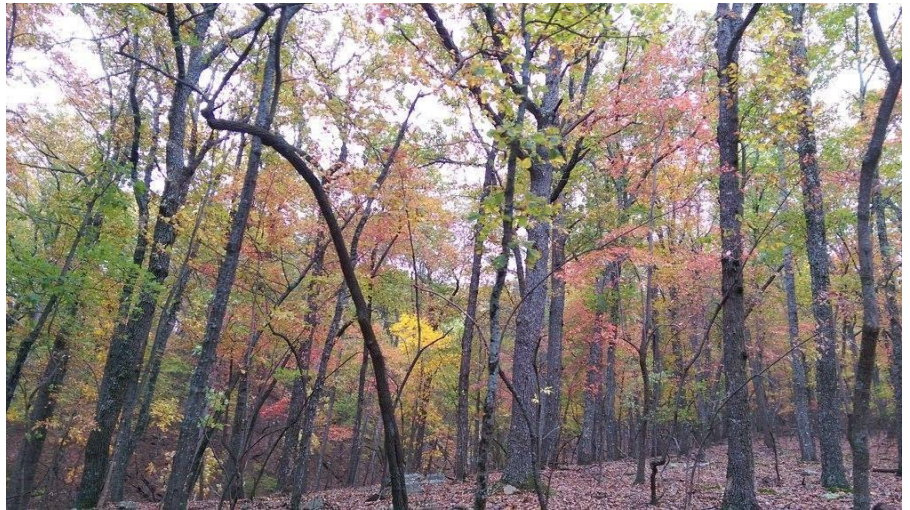
Leaves on the Trail

Orange and red leaves adorned the narrow trail. On an easier run or a cooler day, I would have enjoyed the stark contrast between the orange colors of the fallen leaves and the soil, but the fond memories of other trails and fall days flashed quickly through my mind. “Where are the autumn temperatures and would cooler temperatures...oh look an antler.” It’s impossible to map the wandering path of my thoughts while I ran, in contrast with the carefully tracked GPS digital-breadcrumbs of my route. This trail wound through the foothills of the Sauratown Mountains in central North Carolina, and even though it was still officially summer—according to the astronomical definitions and their correlation with the calendar—I had the autumn season on my mind.

I grew up in the Northeast, and the proliferation of deciduous trees always brought a colorful autumn season. The amount of time I have spent in the South since my childhood has meant fewer colors during this time of year, but Fall is still my favorite season and “flight test orange” is still my second favorite color. For the sake of clarity, I mean “any shade of orange” that is loosely associated with any part of the flight test subdomain. That includes airplane colors, which change almost as much as the seasons. Edward Air Force Base went for a season of several years with orange and white aircraft. When they decided to make the change and why they went away from it...are probably lost to history and those facts have taken their place in the hummus of history like the remains of fallen leaves from yesteryear.



Imagine that you had transported to earth from some distant desert planet (or that you spent twenty years at Edwards AFB and came back to the East Coast) just in time for Fall. What would go through your mind? “Why are the leaves falling from the trees? Is there some disease? Did a drought or heat wave cause this phenomenon?” (The unseasonably warm temperatures last weekend—in this part of the country—would certainly support that hypothesis.) What would you articulate as the problem statement for what you observed? Without describing



the meandering path through the foothills of my own mind, education, and experience, I would like to propose two questions to the alien life form that contrast like the leaves on the trail.

What is this?

Is this autumn?

The questions are stark in their difference. They are two separate lines of inquiry, and I believe they connect directly to flight test safety. Which question is better? Is that even the right question?

Consider the following example. An AHRS failure had caused us to turn back, terminating the mission early. We had three AHRS, so a loss of one is not critical. After a normal touchdown on a long runway, I applied the toe brakes.

Nothing happened.

“The brakes may have failed,” I said aloud. I had rapidly observed and gongculated, and I arrived at the question, “Is this brake failure?” I found the emergency brake handle and began to gently apply it, and the aircraft decelerated as expected. After all was said and done, we determined that there was a blown tire on one side and because of the difference in wheel speed, the anti-skid had prevented the application of brakes. These landing gear had one wheel each, so symmetric release of paired wheels means symmetric release of all braking (for whatever period of time the system commanded the release). We had not, in fact, encountered a brake failure.

I could have, while I was rolling down the runway, asked aloud, “What is this?” I could have also begun to make ordinary observations. “The aircraft does not respond to normal braking.” If I had taken the time, would I have observed a slight list in the roll attitude, one that hinted at a blown tire? The two questions don’t seem to contrast quite so starkly in this context, but the way they approach problem solving and data is quite different.

We could illustrate with many examples from the domain of flight test safety. Is this loss of control? (Or “What is this?”) “What was that?” or “Was that early separation of airflow near the wingtip causing turbulent airflow over the ailerons?” “Is this human error?” or “What is this?” I think the examples are self-explanatory and self-evident. I believe the reader could generate similar scenarios.

Another example arises from the normal routines of post flight data analysis. “Is this the response of an aircraft with a roll time constant of t ?” Or “What is this—what is the time constant based on this aircraft roll response?” Or for the analyst who is looking at noisy data, “What is this?” or “Is this scatter consistent with normally distributed data with ordinary levels of noise?” In this case there is a lot more we could say. A lot more. And I wish I had time to say it. Mathematically speaking, it is much easier to answer the question, “Is this the response



of an aircraft with a roll time constant of t^* ?" than the other. Maybe, if you have time, look up the "fat pencil test," and you may see what I mean.

A final, simple example: 24-7. "What is this?" Or "Is this a hours a day and days per week?" In this particular example, I chose a football score that happens to coincide with other phenomenon, with other common idioms.

We ought to bring both questions with us. Both questions occur naturally in any application of the scientific process, but we may not always apply the scientific process. And we may not always apply the scientific process with the right amount of discipline or timeliness. The questions are useful during safety investigations and data analysis. These questions apply during supersonic dives that shift the center of pressure and airflow patterns over the elevator, something Chuck Yeager discovered on October 14, 1947, another orange milestone that correlates with this season. Last but not least, these questions also apply to PIRs, and the flowchart that outlines the PIR process is also colorful like the leaves on trees during autumn. If you don't know what a PIR is, never fear: This last observation is the subject of the column below, a deeper dive into a 2026 Workshop presentation.



Pilot Intervention Rating Scale – Buck Joslin’s 2026 Flight Test Safety Workshop Talk

The official title of his talk was *Pilot Intervention Rating Scale for Identifying and Categorizing Pilot Contributions to Aviation Safety*, and you can find it on the website here: <https://flighttestsafety.org/2026-fort-worth-tx/42-workshops/565-pilot-intervention-rating-scale-for-identifying-and-categorizing-pilot-contributions-to-aviation-safety>.

It was my favorite talk. I emailed Buck and asked for a copy of the form, which he happily shared. Dr. Joslin also suggested that the article pictured here may add more helpful information for the reader

Artificial Intelligence—Trust But Verify



by Col. Robert Joslin, USAF (Ret.), PhD

Artificial intelligence (AI) systems are being rapidly introduced in emerging and existing aircraft, all of which will require certification by military aviation and/or civil aviation authorities. Measures taken to test the reliability of aircraft AI systems and the best ways for using them may offer practical examples for other areas and applications.

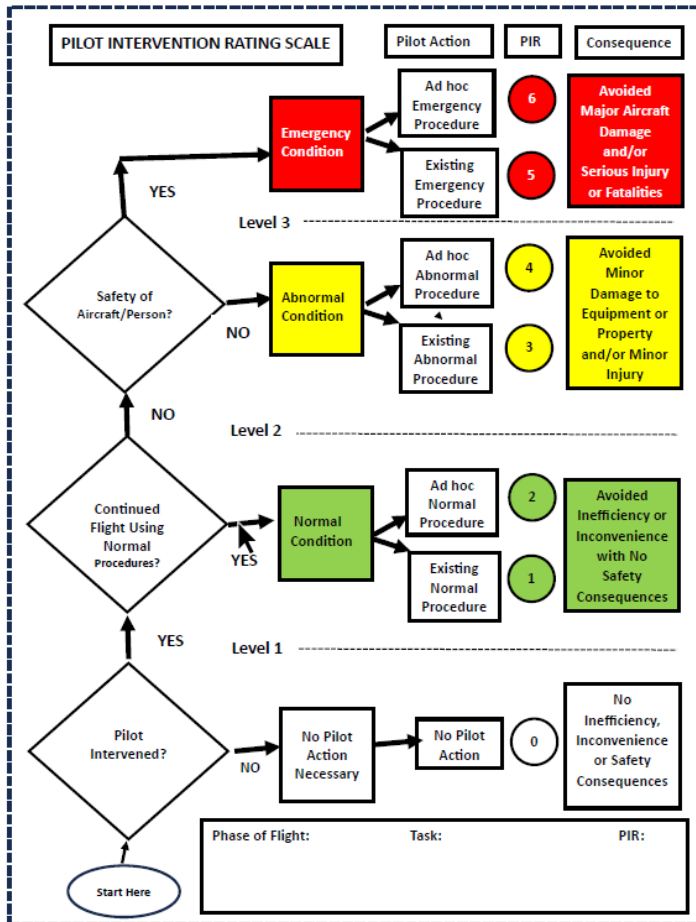
Artificial Intelligence – Trust but Verify
<https://www.dau.edu/library/damag/november-december2025/trust-verify>

In both cases, what you will find is a proactive approach to test safety that addresses some of the challenges of dealing with autonomy and the complexity of measuring safety outcomes.

One of the things I took away from the talk was “a metric for measuring positive test safety outcomes.” It is quite difficult to quantify flight test safety, but aggregating PIR ratings (just like you would collect Bedford workload or Cooper Harper ratings as quantitative data) gives you a way to quantify pilot input and pilot intervention. Our department has started to use these on



flight test training sorties to increase our familiarity, train to the scale, and figure out how to weave it into our data collection in future flight test campaigns. Buck argued several times in his talk that the PIR scale anchors the flight test team member to something he or she already knows, which simplifies implementation.



2026 Fort Worth, TX

Pilot Intervention Rating Scale for Identifying and Categorizing Pilot Contributions to Aviation Safety

6. 2026 DFW FTSW_Pilot Intervention Rating Scale

SETP Foundation

PILOT INTERVENTION RATING SCALE

Pilot Intervention Defined

Pilot Intervention: Pilot action taken to mitigate a threat and maintain safety margins, such as interrupting the performance of an assigned task, correcting loss of controlled aircraft state, or when encountering an obstacle environment and/or undesirable situation

2027 Flight Test Safety Workshop

Read more below or find the latest news on our website: <https://flighttestsafety.org/workshops>.

FLIGHT TEST SAFETY

ABOUT NEWS WORKSHOPS AWARDS REFERENCES/RECOMMENDED PRACTICES RESOURCES/LINKS

PREVIOUS WORKSHOPS

> 2026 Fort Worth, TX

Upcoming Workshops

2027 Flight Test Safety Workshop – from 4 to 5 May 2027

DoubleTree by Hilton Hotel Denver Tech Center

7801 E Orchard Rd

Greenwood Village, CO 80111

The Flight Test Safety Committee, a joint committee of SFTE, AIAA, and SETP, is pleased to announce that the 2027 North American Flight Test Safety Workshop will be held 4-5 May 2027 in Denver, CO.



No GO VTO - The rest of the story and more on training test pilots in this episode

Episode 81 – In this episode find out the rest of the story from the No GO VTO in the X-35B. Turbo continues with the CEO of ITPS about approaching safety and training with a diverse group of students and instructors.

[Dave Lohse Bio](#)

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Chia Chat

I recently had the opportunity to attend SETP's 70th Annual Symposium and Awards Banquet in Anaheim and it did not disappoint. There were so many fantastic papers that I really hope were recorded so others can share them with their flight test teams back home when the videocasts are released. There were a few papers that were focused on accelerated test programs or had critical schedule constraints, and there was an important takeaway we should all consider. As flight test safety professionals, we often consider schedule risk as a program problem and related to money. But what happens if that capability you are testing is a critical safety or capability that may save our customers' lives? The best example of this was the paper on the implementation of AGCAS into the F/A-18. Any schedule slide to the right moved the risk away from the flight test team and put it squarely on the customer, in this case the aircrew members flying the F/A-18. Another CFIT accident in that community was not a question of if, but when, and delays to the implementation of AGAS could result in another fatality. There was an interesting slide in another presentation that treated risk as being a fixed volume and the lesson was that when we mitigate risk, we don't reduce it, we just move it to another area. It is certainly worth considering next time we are asking our flight test team what is an acceptable level of risk for a particular flight test program. Finally, don't miss Turbo's "Danger Makes Us Safe," presentation that wrapped up the technical sessions on Saturday. That will make a perfect presentation for your safety teams and will of course keep them highly entertained—Turbotainment at its best.

In other news, SAFETY NET continues to make improvements to help the flight test community. Hopefully you heard the announcement about a week ago that SAFETY NET can now ingest new THAs, but it is important enough to our community that we repeat it here. The THA tool came online back in May and only utilized the THAs from the original Flight Test Safety Database. Well, Ryan has been hard at work, and the new THA submission pipeline is ready to go. This will be a huge step forward for SAFETY NET since we can rapidly expand the THAs that will be referenced and provided during a query. Now we need the flight test community to step up and submit their THAs for addition to the database. To do that, you can simply email your THAs to ftscrag2@gmail.com. The THA will be parsed and put into the database. The parsing process will remove organization specific details if you have headers or titles and the source document won't exist in SAFETY NET's database. However, if you have organization specific details embedded in the minimizing procedures or



emergency procedures text (ex. "Follow Textron Aviation's SOPs for a controllability check") that won't be removed. Please ensure that type of identifying information is deleted prior to submittal. Finally, I want to make an appeal to our electric, hybrid and E-VTOL flight test organizations. Those fields are rapidly expanding, and we have no THAs to reflect those unique risks associated with these aircraft. Please make it a priority to submit them so everyone can benefit.

In other news related to SAFETY NET, the FTSC recently secured an agreement with the FAA to fund the work we are doing on SAFETY NET. That translates to funding for 15 hours per month of work on the tool. Just this past week we added two requested items. First, copy and export buttons have been added so you can easily use the output of SAFETY NET. Second, an initial acronym dictionary has been added. It currently has about 120 acronyms pulled from FAA orders and the SFTE reference manual. If you come across other specific flight test acronyms that don't work when using SAFETY NET, please forward them along to ftscrag2@gmail.com. Ryan is adding new features on a regular basis and if you click on the "hamburger" on the left hand side and scroll to the bottom, you will see the most recent updates. Finally, did you know SAFETY NET has a user manual. You can find it under the "hamburger" or click here: [SAFETY NET User Guide v1.1.pdf](#).

Thanks again to Mark for putting his time and effort into this newsletter. If you have any topic suggestions or articles, please forward them along. I know he would appreciate any help the community can give. As always, feel free to reach out to me at chairman@flighttestsafety.org if you have any questions or comments. Keep RMing!

Stuart "Chia" Rogerson
Chairman, Flight Test Safety Committee



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