



— LATEST BRIEFING —

## First Half of 2022 Continues a Great Trend for CJP Members

*CJP Identifying Safety Initiatives to Showcase at our Austin Convention*

*by Charlie Precourt, CJP Safety Committee Chairman*



We're thrilled to report that CJP members have stretched their safety streak yet another 3 months. As a community we are now twenty-one months accident and incident free! Nice work all!

In this edition of *Right Seat*, we have a variety of updates for you on our safety initiatives as we prepare for our convention in Austin this fall. Our annual safety stand down has become a great event and we're now putting together this year's convention content around our Safe to Land and FOQA initiatives as well as some great information on flying your Citation internationally.

[In our last \*Right Seat\*](#), we shared some lessons learned from an Air Journey trip to South America, and we're now including trips of this nature as a qualifying event for our Gold Standard Safety Award. So, block your calendars for Austin in October, and between now and then get your applications in for your 2022 Gold Standard Safety Award. The cutoff for the 2022 award is end of August.

Also in this edition, David Miller has some updates on the Safe to Land curriculum development underway with FlightSafety International, as well as work he's completed with Endre Holen on new "What Good Looks Like" videos for legacy Citation aircraft. David also shares some news on Textron Aviation's recent support of the Special Olympics with the Citation airlift.

Finally, CJP Newsletters Editor Rob Finrock shares an article he recently wrote for NBAA's *Business Aviation Insider* magazine highlighting the NTSB's findings in three recent, high-profile business aircraft accidents, and the lessons we can take away from these investigations.

## Always Learning from the Simulator

I recently completed another 61.58 training session at FlightSafety, this time in San Antonio on the CJ2+. It never fails there's something new to learn from these sessions, no matter how many times I go to training. In the category of "you can't make this up" I was presented a scenario that actually happened in a Citation awhile back that resulted in no airspeed indication.



Shortly after takeoff, the pilot encountered a failed left side PFD and reverted to the MFD. If that had been the only problem this would have been pretty uneventful. But shortly after that both pitot tubes became plugged by a swarm of large insects that the aircraft flew through... yes, you can't make this stuff up!

So, during climb, the airspeed indicators start to act like altimeters (pitot pressure is blocked at a constant value, while static pressure continues to drop... the difference between them increases, and therefore so does the indicated airspeed, erroneously.) Since this occurred on a CJ2, there are only two pitot tubes providing information to the pilot's, co-pilot's and standby airspeed indicators. With both pitot tubes blocked, all airspeed indicators in the cockpit were showing a false, increasing airspeed during the climb.

In a scenario like this, flying pitch and power and then making use of AOA are the only options. When clean, 55 - 60% power and level pitch attitude results in 180-200 knots. That gets you started. Then there are a number of other things going on...

If the failure happens at a high enough airspeed your climb can take the indicated airspeed above  $V_{mo}$  and trigger the overspeed tone. You can get it to shut off by descending and hopefully getting the indicated back below  $V_{mo}$ , but a better option is to pull the Warning Lts I and Warning Lts II circuit breakers on the pilot's (left) circuit breaker panel. Getting rid of the beeping allows you to think again! At that point it becomes straightforward to fly pitch and power and use AOA to guide your approach.

We have published the recommended power settings for various phases of flight for each of the Citation models in their respective Inflight Guides. You can find the Inflight Guide for your aircraft on our website Safety Page. On base to final with AoA between .4 and .6 you can configure and fly a pretty normal approach. In a Mustang you won't have an AoA value, but you'll have the  $V_{ref}$  low speed warning system green donut as a target.

Training in the simulator enables us to exercise scenarios like this and the other ADC and AHRS mis-compare failures. It's not practical to train these failures in the aircraft, and yet it's pretty important for us to be able to deal with them successfully. Too often we have

seen loss of control in flight due to ambiguous flight instrument indications. Many of these type failures also result in uncommanded disconnect of the autopilot. There is no time to open the checklist and try to sort out what page you're on for these either.

## **GOLD STANDARD AWARD IMPORTANT DATES**

Don't forget to apply for your 2022 CJP Gold Standard Safety Award! It's even easier this year with an [on-line application on our SAFETY page](#). Criteria must be achieved by July 31 and application submitted by August 20.

If one of these happens to you, the steps you follow ought to be a memorized, well-trained response:

First, go to the Standby Flight Instrument and maintain aircraft control. The Standby is most often going to be your tiebreaker when the left and right sides disagree. Compare the Standby with the PFDs. When I flew into the swarm of insects and lost all airspeed sources, the Standby airspeed was wrong also, but pitch and power allowed me to maintain control. It just wasn't possible to be accelerating through Vmo with ten degrees nose up in a climb.

Once you've compared indications across all instruments, revert as required. Then transfer the autopilot if required (if the right side turns out to be the good side, you'll want to do this). Next ensure you have Nav sources the same on both sides of the cockpit, then set your flight

director modes as needed. And remember that with many avionics failures you'll no longer be RVSM capable.

Another new one for me in the simulator training session this time was a cool new feature enabling iPad connectivity. FlightSafety has set up Bluetooth for your iPad so you can use Foreflight (or other apps) like you would in your aircraft. For GeoRef charts, your aircraft will show relative position just as it does in flight. Another step toward training like we fly.

Additionally, you can connect in the classroom and mirror your iPad to the TV screens when, for example, you're working through performance problems or runway analysis problems with your instructor.

*Fly Safe!*

*Charlie*

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## **CJP Expands Safety Initiatives as Industry Recognizes 'Safe to Land' Benefits**

*by David Miller, CJP Director of Programs and Safety Education*

### **SAFE TO LAND(SM) INITIATIVE**

In late April, Charlie Precourt and I met in Wichita with FlightSafety course development experts to begin design of our Safe to Land(sm) course.

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This groundbreaking effort, resulting from the CJP/Presage study, will include a four-hour ground school and a two-hour simulator session, and will qualify for the CJP Gold Standard Safety award. Our goal is to have the course beta-tested and ready for rollout at our annual convention in October.

Recently, FSI and Presage also announced a "first of its kind" go-around study for crewed operations in Gulfstream aircraft. The Safe to Land(sm) concepts and procedures are receiving broad industry support.

### **LEGACY SAFETY INITIATIVE**

As a result of safety committee recommendations, we have formed a legacy Citation committee, chaired by Endre Holen, owner of a Citation V. Endre and I met in SAT recently to tape a series of "What Good Looks Like" videos in a Citation II simulator provided by FSI.

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These true "legacy" airframes, with varied avionics packages, represent an important part of our membership. Look for additional safety material on legacy aircraft in the future.

### SPECIAL OLYMPICS

Hats off to the scores of CJP members participating in the event in Orlando. IMC conditions prevailed for most of the arrival day, but the "Doves" were handled by ATC and Textron ground personnel with military like precision.



Aircraft arrived every 2-3 minutes and were unloaded, fueled, and ready for departure within minutes. It was quite impressive to see all the aircraft, arriving safely, on the big screen monitor in Textron's elaborate welcoming tent at KORL.

And the smiles on the faces of the athletes will be remembered for years to come.

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## Lessons Learned from Business Aviation Accidents

*(The following is reprinted with permission from the May/June 2022 issue of [Business Aviation Insider](#), the member publication of the National Business Aviation Association.)*

"This accident was not unusual."

Each of the following industry safety experts expressed this sentiment while providing their insights and takeaways from the NTSB reports in three high-profile fatal accidents involving business aircraft.

This reinforces the continued need for business aviation professionals to heed lessons from such accidents in order to avoid repeating the same mistakes.



### May 15, 2017 - Learjet 35A near New Jersey's Teterboro Airport (TEB) - Two Fatalities

**NTSB Probable Cause:** "The pilot-in-command's (PIC) attempt to salvage an unstabilized visual approach, which resulted in an aerodynamic stall at low altitude. Contributing to the accident was the PIC's decision to allow an unapproved second-in-command to act as pilot flying, the PIC's inadequate and incomplete preflight planning, and the flight crew's lack of an approach briefing."

"Also contributing to the accident [was the operator's] lack of safety programs that would have enabled the company to identify and correct patterns of poor performance..."

FAA Safety Team Member Jeff Wofford, chair of the NBAA Safety Committee and the NBAA Professionalism Working Group and aviation director and chief pilot at Commscope, noted "multiple opportunities" where this accident could have been prevented, with the primary issues revolving around improper decision-making, not only by the flight crew, but also the operator.

"The company paired a captain with known performance issues with a first officer (FO) with known deficiencies," said Wofford. "The second error was made by the captain, when he breached company policy by allowing the FO to fly the airplane when he was rated by the company as only allowed to fly with a company instructor pilot."

Cockpit recordings indicated the captain was angered by air traffic control routing for the short repositioning flight from Philadelphia.

"The anger issue was certainly part of the reason that he was distracted and did not fly the procedure as depicted," Wofford said.

"The final issue was allowing the FO to continue to fly in challenging conditions when the FO had made several comments about his reservations to continue."

Operators bear ultimate responsibility to ensure pilots are trained and competent in their positions and aircraft, Wofford emphasized. Developing a flight operations manual and effective standard operating practices ("and following them!") and frequent proficiency checks can be key to ensuring experienced pilots set the right example for new hires.

"Known deficiencies in any crew member need to be addressed," he continued. "Entry-level pilots must be trained to a certain performance standard and then paired with a more experienced pilot to gain the additional experience that qualifies them to operate as an effective crew member. This fell very short of the mark with this crew."

"And last, but certainly not least," Wofford concluded, "be professional! Build an effective safety culture and a good, just culture! Do things the right way. With a good safety and just culture, and a constant, companywide emphasis on professional behavior, this type of accident would not happen."

### **June 30, 2019 - Textron Aviation Beechcraft King Air 350 at Texas' Addison Airport (ADS) - 10 Fatalities**

NTSB Probable Cause: "The pilot's failure to maintain airplane control following a reduction of thrust in the left engine during takeoff... . Contributing to the accident was the pilot's failure to conduct the airplane manufacturer's emergency procedure following a loss of power in one engine and to follow the manufacturer's checklists during all phases of operation."

"When we look at an egregious accident like this, it is easy to believe that it is an outlier, with few lessons that could apply to 'our' flying," said Randy Brooks, vice president of training and business development for Aviation Performance Solutions (APS). "'Flight discipline,' as defined by Dr. Tony Kern, is something that can be supported and nurtured, but ultimately is incumbent upon each individual aviator."

Brooks cited "ample examples" indicating such discipline wasn't practiced in the minutes leading up to the accident. "There was not a call for checklists that would typically be used before takeoff," he noted, "and there was no indicated discussion of what they would do in the case of a loss of engine thrust on takeoff or any other emergency procedure."

"There was also a known risk that engine power levers could move without pilot intent if the friction lock was not appropriately adjusted," Brooks continued, "yet this was one of several items on the pre-takeoff checklist that were not audibly performed."

Lack of discipline extended to the flight deck environment between the 71-year-old pilot in command (PIC) and the non-type rated 28-year-old right seater. "The second-in-command

was not allowed by the PIC to operate the flight controls when passengers were on board," Brooks noted. "That made it unlikely that the SIC would feel empowered to intervene if needed during an emergency."

While Brooks admitted that "recovery from this type of developed cross-control stall encounter at the altitude at which it was encountered is highly unlikely," he also noted the lack of any requirement for angle-of-attack or sideslip data in many non-Part 121 aircraft simulators, including the King Air 350. Such data could have provided invaluable information to the pilots.

"Demonstration of these characteristics - and how to prevent them - are fundamental to comprehensive upset prevention and recovery training at safe altitudes in an aircraft with an appropriate margin of safety," he added.

### **Jan. 26, 2020 - Sikorsky S-76B Near Calabasas, CA - Nine Fatalities**

**NTSB Probable Cause:** "The pilot's decision to continue flight under visual flight rules into instrument meteorological conditions, which resulted in the pilot's spatial disorientation and loss of control." Contributing factors included "the pilot's likely self-induced pressure" to continue the flight and the operator's "inadequate review and oversight of its safety management processes."

Multiple persons interviewed by NTSB noted that the accident pilot prided himself on providing reliable and timely service for his high-profile passenger, NBA basketball star Kobe Bryant.

"The more important the passenger, or the more dire the patient's condition on an ambulance flight, the more self-imposed pressure will exist for the crew," noted Michael Ott, FRAeS, a member of the NBAA Safety Committee and director, program operations at Phoenix Air Group.

Company management must provide an environment in which flight crews can say "no" when conditions are unfavorable, he added. The FAA addressed the matter of self-induced pressure on aeronautical decision-making in Advisory Circular 60-22, which was issued more than 30 years ago.

"No manager would ever have wanted the pilot to do what he did in this accident," Ott continued. He further noted the company's training should have also required instrument training, given frequent fog in the Los Angeles Basin, even though its certificate was only for VFR operations.

"The pilot could still have overcome the unintended entry into instrument conditions and climbed safely into visual conditions," added Ott. "Most importantly, if the company had a safety culture that encouraged employees to stop any activity that appeared to create an unsafe working environment, the pilot might have felt less pressure to complete the flight."

Culture is a key consideration, Ott emphasized, as employees will emulate behaviors rewarded by management.

"If management promotes, praises and gives the best assignments to the people who 'always accomplish the mission,' then employees will strive to meet that standard," he said. "If, however, management provides greater rewards to employees who make great safety decisions, employees will strive to meet that standard, as well."

A safety management system provides important guidance in building such a culture.

"An effective SMS would have caught one or more of these issues," Ott concluded, "by increasing the steps that management would take to protect its crews from the pressures associated with such a flight."

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