PRISM

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SAFETYWIRE

Pilot Error Really? Page 1

New Service Difficulty Reporting System Page 3

5G and Aviation Safety Updates Page 5

U.S. Fatal Bizav Accidents Double in 2021 Page 7

Safety Manager's Corner— ARGUS Safety IQ Page 9

Here we go again, “pilot error”, really?

(Source: Dr. Shawn Pruchnicki. Flight Safety Information on behalf of Curt Lewis & Associates, LLC. January 6, 2022 No. 004)

It is with great interest that I read last week several reports regarding an Emirates Boeing 777 flight from Dubai (DXB) to Washington Dulles (IAD) on December 20, 2021 that has been described as “almost crashing”. Naturally as an accident investigator I was drawn to these reports in an effort to understand the preliminary information that was being reported at this early stage. However, as many of you know, this information is notoriously unreliable and any further speculation regarding the cause of the incident is simply ridiculous. Yet, there it was in print, exhortations claiming “pilot error” and calling for their termination. There was even one report saying that all four pilots had already been terminated.

It appears that the crux of the incident is that the pilots of the incident flight failed to set the initial departure altitude of 4,000 ft. MSL in the MCP and instead it was left set at zero feet from the previous crew for their landing in Dubai earlier. On climb out when the autopilot was engaged, the aircraft started to rapidly descend. However, the crew was able to intervene prior to impact. After the incident, it is reported that Emirates sent the following memo to its pilot group

CREWS ARE REMINDED THAT THERE ARE NO FCOM NORMAL PROCEDURE REQUIREMENTS TO CHANGE THE MCP AFTER LANDING OR SHUTDOWN. THERE HAVE BEEN TIMES WHEN THE MCP “ALTITUDE WINDOW” HAS BEEN SET TO THE AIRPORT ELEVATION WHICH MAY CAUSE ISSUES ON THE SUBSEQUENT DEPARTURE. CREWS SHALL NOT SET AIRPORT ELEVATION ON THE MCP AFTER LANDING OR SHUT DOWN.

Well they were right, just as the memo says, setting the MCP to airport elevation can cause issues later for departing crews. That has been clearly demonstrated by this event. For an airline to send a reminding memo like this to its pilot group, this is not the only event of this type that has occurred. There would have been others. But yet, this trap is still occurring. This is another case of our industry slapping on the critical and pointless term “pilot error”. It tells us nothing of why something happened. It tells us nothing about the autoflight system design, the procedures the manufacture has crafted, in addition to those of the operator.

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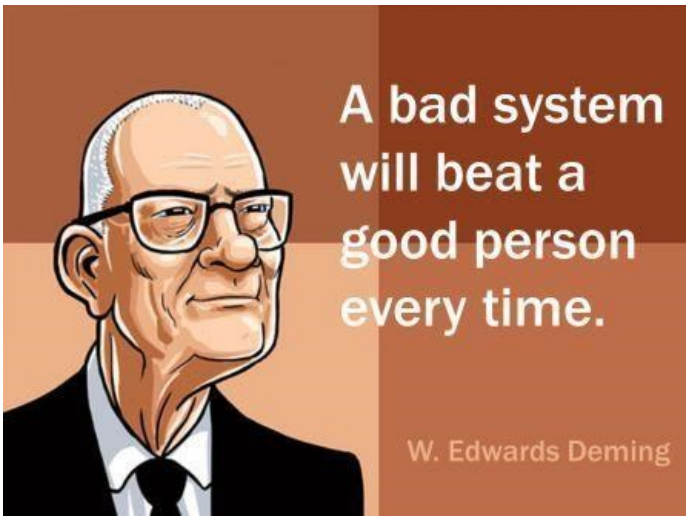
This very well might be another case of a poorly designed procedure for both landing and departing crews. We just do not know at this early phase. However, we have seen this many times in our industry and usually after killing enough people these procedure changes are finally implemented. Sad, but historically true. Why are these types of events still happening resulting in such a memo being sent to a highly trained and skilled pilot group? Apparently this is not the first time at this airline and I would bet that other operators have seen similar events as well. Why are we waiting for an accident to happen before these events are further investigated? Shouldn't we be spending far more resources than we typically do investigating incidents that are so close to being an accident? Why not? They are freebies. We can get 99% of the information gleaned from an accident without suffering a hull loss and loss of life. Take advantage of that! Dig into it, uncover the layers of information, discover the second stories and make meaningful recommendations before there is a loss of life.

Firing the employees in the name of "pilot error" does absolutely nothing to enhance safety in complex socio-technical systems such as aviation. In fact, there is an overwhelming amount of evidence that it does the opposite. It drives safety reporting and event capturing underground. One example of how this would be harmful is in our event reporting systems like ASAP programs. Typically the reports received are around 65% sole-source reports. In other words, had the reporter not come forward and reported the event (confession if you like) your operation would have never known about it. Think about that, never would have known about the safety issue they are telling you about. Why would you want to suppress the flow of that valuable information?

Additionally, determining pilot error to be the "cause" of an event provides a dead-end for making any meaningful recommendations. How can you make any recommendations to prevent further events if "bad apples" were deemed the cause with a "pilot error" diagnosis? Once the bad apples are gone, you should be fine right? Hardly, the system with all of its interactions, imperfections, automation considerations, trade-offs and more remain completely unchanged. If you do not investigate the system as a whole, understanding the human-computer interface and all of the other facets of the system, your luck will eventually run out. Review numerous accidents that have occurred over the years and the signals that were present prior that were not recognized or even ignored because of our oblivious fascination with pointless terms such as "pilot error".



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In closing, I would like to remind everyone that our worldwide aviation system is as safe as it is because of the humans, not unsafe because of them. Computers will do whatever you tell them to do, regardless of the context, they are literal and brittle. They are simply not adaptable and are unreliably awful at communicating their intentions and when reaching the limits of their capabilities. A classy bumpy-transfer situation. We are the ones that can recognize when a situation is only slightly starting to change or mildly becoming suspicious of changes. Computers will push along blind fully and dutifully. We are also the ones that can recognize a rapidly changing situation and develop a new plan within seconds. We are the only system on the flight deck that has ever been able to be adaptive. And WE are the reason that aviation is the safest form of travel – we make it that way everyday all over the world.

New Service Difficulty Reporting System

(Source: Jennifer Caron, FAA Safety Briefing Magazine)

Phase I of the new Service Difficulty Reporting System (SDR) is complete and launched this past November at av-info.faa.gov/sdrx. SDR is refreshed, updated, personalized, and packed with new features that take the power of this aviation reporting system to an entirely new level.

Improved Navigation

Now you can find everything you need — right there on the navigation bar. Click the tabs to reach your links quickly and easily.

New Reporting Tools

In just one click, general aviation users can now create a Malfunction or Defect Report straight from the home screen and search and find all processed reports faster.

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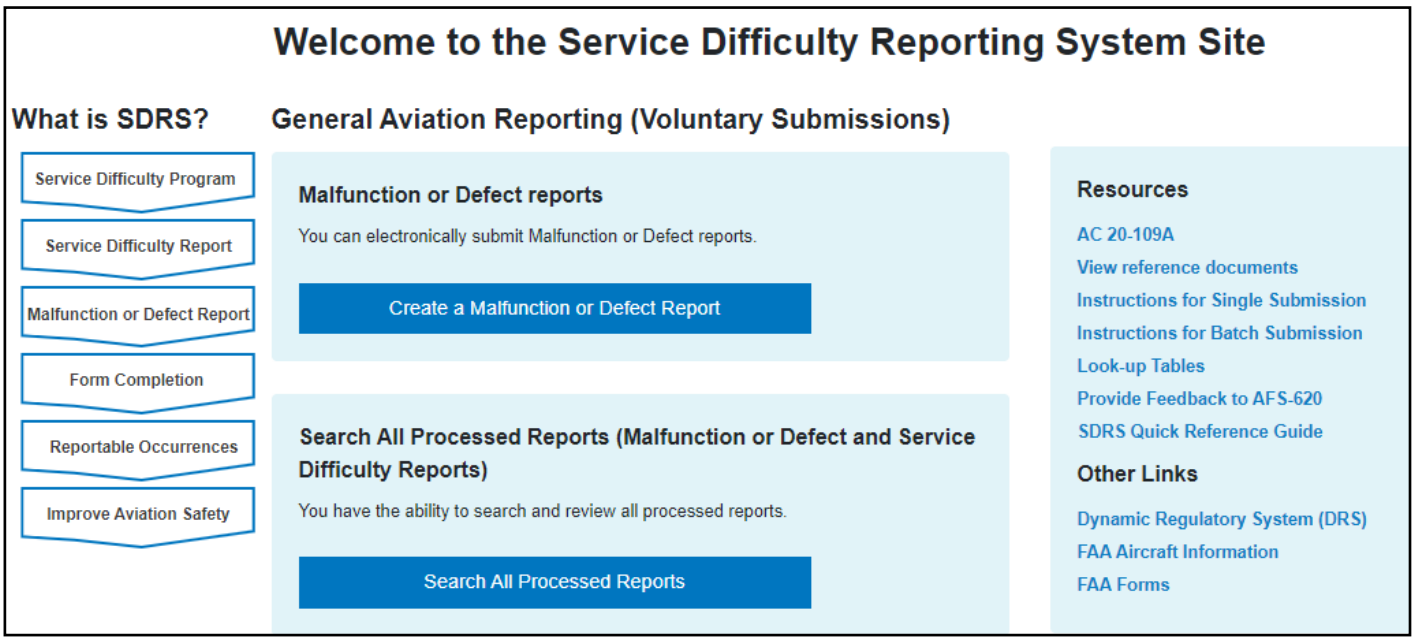
New Quick Reference Panels

Instantly jump to information using the Quick Reference Panels on the left-hand side.



Updated References and Resources

Questions? Click “FAQs” to find answers. Click “What’s New?” for updates. Rules and regulations are on the right side of the screen.

The Best Is Still To Come!

Now you have a powerful new tool to let the aviation community know when you see something that could potentially cause a safety hazard. If a system component or a part has malfunctioned, report it. If there’s a flaw or an imperfection, report that too. We need your input. Check out the new SDR and take it for a flight.

The data you provide improves safety. The FAA uses your data to identify equipment malfunctions, and your reports also help manufacturers catch issues that could potentially cause a safety hazard.

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"These reports provide valuable safety information and may be the first indication of a potential safety problem or a defect," says Gracie Robino, Business Program Manager in the FAA's Flight Standards Service. "They help us spot the trends and identify problems early so that we can create airworthiness directives, service bulletins, and alerts to mitigate the safety hazard proactively," she explains.

The next phase of updates and new features will roll out this spring. New tools will prompt you to fill in the gaps and details to help you build a detailed, comprehensive, and format-friendly document to expedite the processing of your report.

"We've received positive feedback from our initial updates," says Robino, "and we're excited about this next phase as we continue to revamp the system, making it even more user-friendly and responsive to your needs."

5G and Aviation Safety

(Source: FAA and PRISM Team)

From the PRISM Team: This information is changing often, in some cases, daily. Please review FAA and industry information regularly.

The FAA is working on measures to ensure that radio signals from newly activated wireless telecommunications systems can coexist safely with flight operations in the United States, with input from the aviation sector and telecommunications industry.

Check here for information and updates as this work continues.

The Safety Issue

Safety is our mission, and it guides all of our decisions. In the United States, 5G services are planned for launch beginning January 19 using frequencies in a radio spectrum called the C-band. These frequencies can be close to those used by radar altimeters, an important piece of safety equipment in aircraft. To make sure that this does not lead to hazardous interference, the FAA requires that radar altimeters are accurate and reliable.

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Disruption Risk to Aviation from 5G

Because the proposed 5G deployment involves a new combination of power levels, frequencies, proximity to flight operations, and other factors, the FAA will need to impose restrictions on flight operations using certain types of radar altimeter equipment close to antennas in 5G networks.

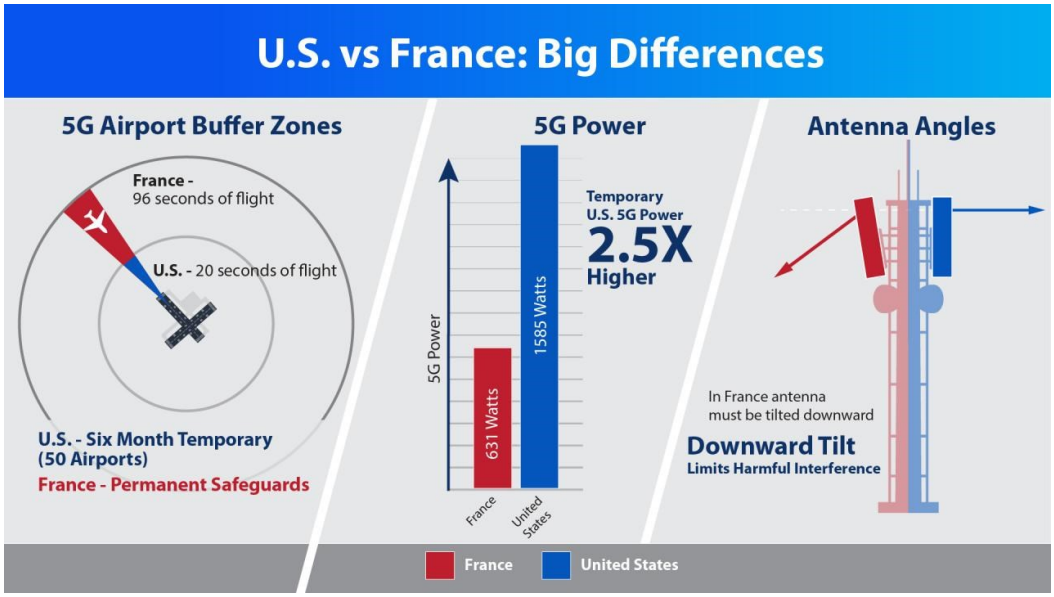
These safety restrictions could affect flight schedules and operations, affecting the aviation system. Before and after the 5G deployment begins, the FAA will continue to work every day to reduce effects of this disruption as we make progress to safely integrate 5G and aviation.

Airports with 5G buffers

Telecommunications carriers have offered to voluntarily delay 5G deployment by two weeks and to restrict their own antenna operations in areas close to key airports where interference could lead to significant disruptions. The FAA, working with the aviation community and wireless companies, established buffer zones around 50 airports with wireless transmitters in close proximity to the runways. View list of airports.

The FAA has issued approximately 1500 NOTAMs. Please review them regularly.

In addition to disruptions at airports, helicopter and other low level operations could be affected anywhere there is a tower.



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U.S. Fatal Bizav Accidents Double in 2021

(Source: Gordon Gilbert - January 11, 2022, 10:38 AM, AIN)

U.S.-registered business jets and turboprops, which flew significantly more in 2021 than in 2020, also experienced more fatal accidents last year. According to preliminary figures compiled by **AIN**, business turbine airplanes suffered 16 fatal crashes in 2021, double the number recorded in 2020. What's more, fatalities from last year's accidents increased nearly 62 percent, from 18 passengers and crew killed in 2020 to 46 in 2021.

Twenty-three people were killed in six crashes of N-numbered business jets last year, compared with four in a single accident in 2020. All six of the fatal bizjet accidents in 2021 occurred during Part 91 flights. The single fatal crash in 2020 was the February 8 in-flight breakup of a Cessna Citation 501 in which the two pilots and two passengers died. The NTSB reports that the Citation broke up while climbing through 15,400 to 16,000 feet after its pilots reported "problems" with the autopilot and the left-side attitude indicator. The twin jet, whose rated pilot was flying from the right seat, was on a Part 91 personal flight in day IMC and had filed an IFR flight plan. This accident remains under investigation.

The six U.S.-registered business jet accidents and fatalities (shown in parenthesis) last year were: January 9, Cessna Citation V (one); May 4, Gulfstream IV in the Dominican Republic (one); May 29, Citation 501 (seven); July 26, Bombardier Challenger 605 (six); September 2, Citation XLS (four); and the Part 135 crash on December 27 of a Bombardier Learjet 35A (four). Investigation of all these accidents remains in the preliminary phase. Not included in **AIN**'s analysis is the October 5 crash of a cargo Dassault Falcon 20 in which the two crew lost their lives.

Non-fatal mishaps of N-numbered business jets increased from 13 in 2020 to 19 last year. Reportable incidents ticked up from 65 to 69 year over year, including two involving aircraft manufacturers. There were no official reports of accidents or incidents involving operations under Part 91K, although several incidents involved fractional aircraft being flown under Part 135.

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Instances of non-fatal accidents by U.S.-registered turboprops totaled 18 in both 2021 and 2020. However, fatal accidents increased nearly 30 percent year over year: seven accidents took the lives of 17 people in 2020 versus 10 crashes and 23 fatalities last year (the same number who perished in U.S. jet accidents in 2021). Updated information shows that all fatal N-numbered turboprop accidents occurred under Part 91 or its equivalent.

The fatal accidents of N-numbered turboprops last year were: February 7, Cessna Conquest (two fatalities); April 23, Swearingen SA226 (two); May 5, Mitsubishi MU-2 (three plus one on the ground); July 10, Beechcraft King Air C90 (two); July 18, C90 in Mexico (three); August 20, Daher TBM 700 (one); September 28, Rockwell 690 (three); October 8, Cessna Turbine P210 (four); November 15, King Air E90 (two); and December 10, Piper Meridian (one). Not shown in our charts or narrative is the December 10 crash of a cargo SA226 that killed one crewmember.

In 2021, two non-U.S. business jets had fatal accidents that claimed 10 lives compared with four accidents causing 14 fatalities in 2020. On April 20, the co-pilot died in the crash of a Learjet 35A in Brazil while undergoing a flight test or training. On December 15, all nine occupants died in the crash of a chartered GIV in the Dominican Republic. Fatal accidents involving non-U.S. registered turboprops quadrupled from two to eight, year over year, and the number of fatalities rocketed from nine in 2020 to 40 in 2021.

AIN's charts and narrative do not include mishaps involving solely cargo or military operations, illegal flights, shootdowns, or intentional crashes.

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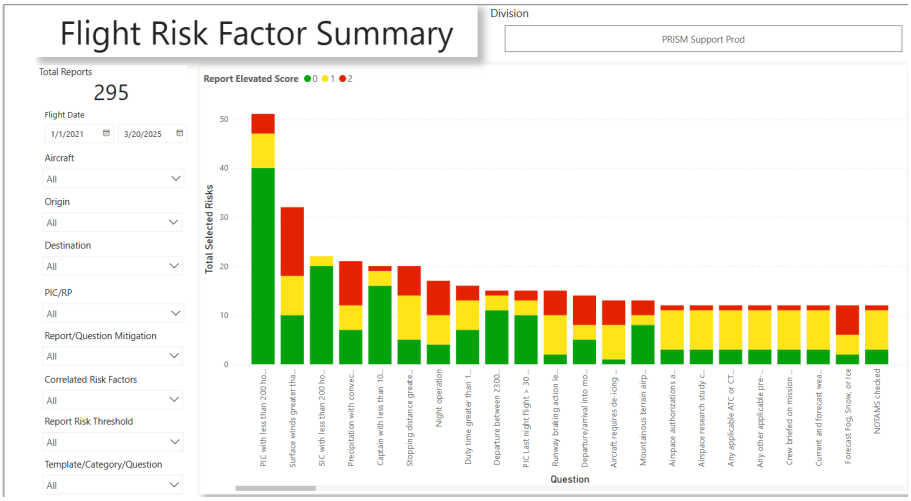
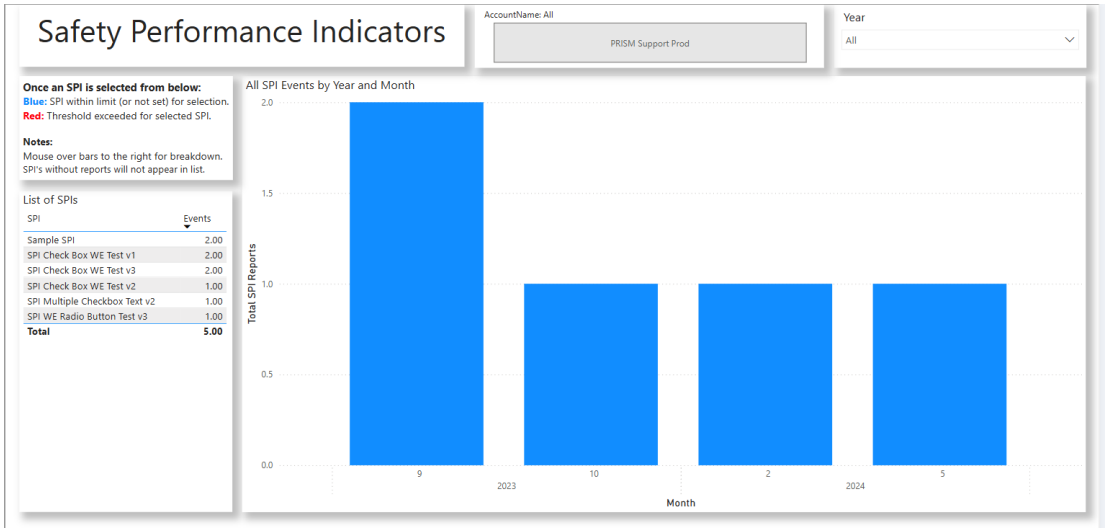


- ARGUS Safety IQ enables risk management by turning your operation's safety data into proactive and predictive displays that help drive better decisions.
- Discover common issues and trends through in-depth graphical analysis.
- Track Safety Performance Indicators with ease.

ARGUS Safety IQ makes accessing valuable, real-time safety data, quick-view performance and risk metrics easier than ever before.

To get started select ARGUS Safety IQ within the PRISM SMS Tools.

Utilizing raw safety data and turning it into risk and performance insights raises safety management to higher levels.



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Quote of the Month

The time is always right to do the right thing.

BY: Dr. Martin Luther King Jr.

We always want to do the right thing but sometimes doing the right thing can be difficult—or just seem to be difficult. This applies to everyone at all levels of an organization, from the accountable executive to the most junior employee. Speak up when you have a concern and treat others who speak up with professionalism and respect. You may not get all the answers right away, but you may break the chain of events leading to an accident.

On Short Final...

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IOSA Auditor Training

Aug 22-26, 2022 — PROS Course
Aviation Lead Auditor Training (ALAT)

Sep 27-29, 2022 — SMS Training
Safety Management Systems Training

Oct 3-7, 2022 — PROS Course
IOSA Auditor Training

Nov 28—Dec 2, 2022 — PROS Course
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Dec 12-16, 2022 — PROS Course
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