

# Aviation Human Factors Industry News

Volume XV. Issue 25, December 22, 2019



From the sands of Kitty Hawk, the tradition lives on.

Hello all,

To subscribe send an email to: [rhughes@humanfactorsedu.com](mailto:rhughes@humanfactorsedu.com)

In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

★Crew Resource Management

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★Vectors For Safety

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## **Crew Resource Management**

As a pilot, you know how challenging it can be to manage all of your available resources during flight. But if you master the [magic of crew resource management](#), or CRM, you can take advantage of all of your sources of information to help [ensure a safe flight](#). Learn about the [five-step process to CRM](#), and pick up some helpful tips from John and Martha King at <http://bit.ly/FAA-CRM>. For more resource management and error mitigation techniques, check out the Nov/Dec 2019 issue of FAA Safety Briefing magazine at [www.faa.gov/news/safety\\_briefing](http://www.faa.gov/news/safety_briefing).



<http://bit.ly/FAA-CRM>

[http://www.faa.gov/news/safety\\_briefing](http://www.faa.gov/news/safety_briefing)

## **Aviation Safety Demands More than Soundbites and Other Takeaways from Boeing on Capitol Hill**

### **Episode 10**

John and Greg explore [what was said and what wasn't said](#) when Boeing executives recently spent two days on Capitol Hill testifying before congress. Their take: the hearings were an emotional platform for congressmen to point fingers, not an opportunity for fact finding. As always, John and Greg use the podcast format [to go deeper](#) than 30 second soundbites.



They talk in detail about the questions that need to be asked. They refocus the discussion on the facts of the Indonesian National Transportation Safety Committee (NTSC) final report.

The narrative that the crash was caused solely by the 737 Max Maneuvering Characteristics Augmentation System (MCAS) [isn't the whole story](#). Join John and Greg as they dive into the complex issues that deserve attention.

<https://www.pama.org/reports.html#/>



by Gene Benson

## Vectors for Safety Mid-Month Update

I once wrote an article around the holidays titled, "[The Best Gift](#)." It asked pilots to evaluate what the best gift they could provide their loved ones and I of course provided my version of an answer. I said that the best gift they could provide was [to be a safe pilot](#). Every holiday season, we see general aviation accidents with an underlying cause involving a pilot's [perceived need to be somewhere on a particular day or at a particular time](#). We can all relate to that when holiday travel to visit family is concerned.

So, my plea to everyone is to not allow external factors to influence your decision making. Be safe so that you can enjoy many more happy holidays in the future!

Naturally, I will make my point with a couple of accident examples. The following information comes from the NTSB accident report. On December 24, 2014, a pilot and his passenger died in the crash of a Cessna 172 in Sutter Creek, California. The non-instrument rated private pilot was returning to his home airport. The pilot encountered forecast low ceilings and poor visibility; based on radar data, he was likely maneuvering in an attempt to locate the airport to land. The airplane impacted near the top of a hill at an elevation of 1,590 ft. Instrument flight rule conditions with ceilings below 1,000 ft above ground level (agl), visibility below 3 miles in precipitation and mist, and mountain obscuration were forecast in the area at the time of the accident. However, a search of official weather sources revealed that the pilot had obtained no weather briefings. Reported observations at the destination airport (about 2 miles from the accident site) showed overcast ceilings of about 100 ft agl with a visibility of 1/4 mile about the time of the accident. Radar data showed that the accident airplane approached the area from the southwest (from the departure airport), overflew the destination airport about 4,000 ft agl, and continued tracking to the northeast for about 6 miles before descending and turning back toward the airport. In the minutes before the accident, radar data showed the airplane circling near the accident area at a low altitude. It is likely that the pilot encountered instrument meteorological conditions while maneuvering, which would have been conducive to spatial disorientation, and that the pilot subsequently lost airplane control due to spatial disorientation.

The NTSB probable cause finding states, "The non-instrument-rated pilot's encounter with instrument meteorological conditions (IMC) while maneuvering, which resulted in a loss of airplane control due to spatial disorientation. Contributing to the accident was the pilot's decision to attempt to descend into an area of widespread IMC."

For another example, again on a Christmas eve, this time in 2017, five people, including the pilot, died in the crash of a Cessna 340. This happened in Bartow, Florida. The following information comes from the NTSB accident report. The instrument-rated private pilot and four passengers boarded the multiengine airplane inside a hangar.

The pilot then requested that the airplane be towed from the hangar to the ramp, since he did not want to hit anything on the ramp while taxiing in the dense fog. Witnesses heard the pre-takeoff engine run-up toward the end of the runway but could not see the airplane as it departed; the engines sounded normal during the run-up and takeoff. A witness video recorded the takeoff but the airplane was not visible due to the dense fog. During the takeoff roll the airplane's tires chirped, which is consistent with the wheels touching down on the runway with a side load. The video ended before the accident occurred. The witnesses stated that the takeoff continued and then they heard the airplane impact the ground and saw an explosion. The weather conditions at the time of the accident included visibility less than 1/4 mile in fog and an overcast ceiling at 300 ft above ground level. The airplane's weight at the time of the accident was about 105 lbs over the maximum takeoff weight, which exceeded the center of gravity moment envelope. The excess weight would have likely extended the takeoff roll, decreased the climb rate, and increased the amount of elevator pressure required to lift off of the runway. Based on the evidence it's likely that when the airplane entered instrument meteorological conditions the pilot experienced spatial disorientation, which resulted in a loss of control and descent into terrain.

The NTSB Probable Cause states, "The pilot's loss of control due to spatial disorientation during takeoff in instrument meteorological conditions."

Click [here](#) to read the full report on the NTSB website.

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**[Click here for the sign-up form on my website.](#)**

## A fully electric aircraft has just made its first commercial flight

The first flight of a fully electric commercial aircraft took place yesterday around Vancouver, Canada. It lasted just 15 minutes.

About the plane: The plane was a 62-year-old, six-passenger seaplane that had been retrofitted with an electric motor. It was designed by

Australian engineering firm MagniX and tested in partnership with Harbour Air, the world's largest seaplane airline. Harbour Air says it plans to electrify its entire fleet by 2022, depending on whether it can secure the necessary safety and regulatory approvals. The aircraft can only fly about 100 miles (160 kilometers) for now, but that's sufficient for the sort of short-hop journeys the airline needs.



Why it's exciting: The aviation sector is a significant-and rapidly growing-contributor to global carbon emissions, and there are numerous research projects around the world under way to try to reduce its impact. A move to electric modes of transport is the ultimate goal for many of them.

Some big caveats: Although the technology for small electric aircraft (those carrying around five passengers) has advanced, transporting 50 people or more represents a much bigger challenge, requiring far more power. That relies on a significant breakthrough in battery technology, which has so far remained elusive. For now, a switch to hybrid planes looks more feasible.

## FLIGHT ATTENDANT AVERTS 'POTENTIAL DISASTER' AFTER SPOTTING ICE ON AIRCRAFT WINGS

'It became clear to me that they had no intention of de-icing the aircraft,' says cabin crew member

The Civil Aviation Authority (CAA) has reported that the plane was already on the runway when the pilots abandoned the planned departure. The sequence of events is explained in startling detail in the latest report from the [Confidential Human Factors Incident Reporting Programme](#) – the CAA scheme that encourages airline staff to raise safety concerns with complete anonymity.



The cabin crew member reported that when they closed the aircraft door after boarding was completed, "I noticed that there was a significant layer of snow accumulating on the wings".

They added: "Following several aircraft accidents in the past, we know today that an aircraft should not attempt to take-off with any snow or ice on the wings."

The member of cabin crew said [they did not mention](#) it to any of the other crew [because they assumed that the pilots must be aware](#) of the snow and had requested de-icing.

But during the captain's pre-flight announcement to the passengers, no mention was made of de-icing the aircraft – even though it is customary to warn of a short delay while the wings, tail and fuselage are sprayed.

"Still I didn't say anything because I was still sure that they were going to do it," the cabin crew member reported.

“I was also thinking that, as experienced pilots, **they must know** what they are doing and **it wasn't my place** to tell them how to do their job.”

The doors were “armed” for departure – in which the escape slides are primed to deploy when a door opens – and the crew took their positions in the cabin for the safety demonstration.

“During the safety demo, I heard the flight crew lock the flight-deck door and start the engines.

“This was when it became clear to me that **they had no intention of de-icing the aircraft.**”

The aircraft began the short taxi to the runway. By the time the safety demonstration had finished, the plane was already at the holding point ready to enter the runway for take-off as soon as the standard “cabin secure” message had been passed to the pilots.

“Therefore, before beginning to secure the cabin, I told the SCCM [senior cabin crew member] that there was a significant layer of snow on the wings and that it would be a good idea to let the pilots know.

“They looked at the wings and agreed with me and called [the pilots]. They initially replied to ‘stand by’.”

The aircraft actually taxied on to runway, **but the planned take-off was then abandoned.** The aircraft taxied off the runway and parked in a holding area.

“At this point an announcement was made to the passengers to explain what was happening and the FO [first officer, or co-pilot] came out from the flight deck, asked two passengers sat by the wings to get up from their seat while they shone a torch light over them.

“**They then confirmed that it was ice,** went back into the flight deck and the captain then made an announcement to say that we would have to de-ice the aircraft.”

During this procedure, the captain called the cabin crew member on the plane's internal phone system **to thank them**.

The captain is reported as saying that during the walk-around – part of the standard pre-flight checks – they had seen only snow on the wing but no ice, and had therefore not requested de-icing.

The cabin-crew member reported: **“My understanding was that there should be zero contamination on the wings during take-off be it snow or ice.**

“In the end, we were delayed so much that the runway was closed due to the snow and our flight was cancelled.”

The member of cabin crew wrote that it was **“extremely worrying”** that “nobody, except myself, had noticed the severity of the situation which potentially could have ended in disaster.”

The CAA added that the cabin-crew member had not used the airline's own reporting system “as they felt that they may be penalized for reporting to the company”.

The authority concluded: “If any member of cabin crew has any concerns relating to potential ice or snow, they must raise these as soon as possible with both the SCCM and the operating captain.

**“It must never be assumed that someone else has already spotted a potential safety issue** – it is better to report something twice than not at all.”

Stephanie Dykes, who is the cabin crew program manager for the Confidential Human Factors Incident Reporting Program, explained the purpose of the system in the same report: “Our role is to ensure that concerns are raised at the relevant level within an organization or the CAA.

“Our aim is to contribute to the enhancement of flight/cabin safety.”

[https://www.chirp.co.uk/upload/docs/Cabin%20Crew/CCFB%20Edition%2070%20-%20November%202019%20\(Electronic\)%20FINAL.pdf?mc\\_cid=212597ed30&mc\\_eid=cf4345696d](https://www.chirp.co.uk/upload/docs/Cabin%20Crew/CCFB%20Edition%2070%20-%20November%202019%20(Electronic)%20FINAL.pdf?mc_cid=212597ed30&mc_eid=cf4345696d)

## **SPIRIT AIRLINES AIRBUS A319 SERIOUSLY DAMAGED DURING MAINTENANCE**

A Spirit Airlines Airbus A319 has been seriously damaged during a [maintenance mishap](#), in what appears to be a Lufthansa Technik facility in Aguadilla, Puerto Rico. The aircraft, registered N533NK and serial number 3393, first flew on the 28th of January 2008 under test registration D-AVWJ. Spirit ferried the aircraft to Aguadilla on the 27th of November to undergo maintenance.



Whilst being held up on jacks, [it appears that the aircraft slipped off, or a jack moved from its position](#), resulting in serious damage to the airframe. Pictures of the accident show the jacks penetrating the fuselage and wings:

Little information about the accident is available at this time, however initial impressions of the photos show a [significant amount of repair work](#) will be required to get the aircraft airworthy again. Until more information is released, it remains unknown as to whether the aircraft will be repaired or not.

## Reducing Pilot Fatigue through Avionics

In an effort to combat fatigue on the flight deck, the FAA has hosted fatigue symposiums, created a working group [centered on sleep and fatigue awareness](#), published new Part 121 flight crew duty and rest requirements, and is working on similar new requirements for Part 135 operators. Essentially, the FAA's approach to reducing fatigue in the cockpit is to advise pilots to get enough good sleep.



But [avionics manufacturers and other human-factors experts](#) have long understood that another type of fatigue associated with flying has less to do with how much sleep a pilot received the night before than with the mental tasks involved in aviating, navigating, and communicating.

All pilots can experience acute mental fatigue, from the private pilot hand-flying an aircraft on instruments in turbulence to the airline pilot continuously scanning and deciphering information from multiple systems, according to Paul Novacek, Ph.D., former human-factors investigator at NASA's Langley Research Center and current Pilatus PC-12 instructor pilot at Salt Lake City-based Guardian Flight. Novacek says that [good cockpit and avionic design can reduce this type of acute fatigue](#), especially during critical portions of the flight.

"It takes concentration to use various tools to figure out where you are correlated to the map, what's ahead of you, and how to avoid terrain or traffic, and that can be extremely fatiguing," said Novacek. "A well-designed synthetic-vision display with audible terrain and traffic reporting callouts [severely reduces pilot fatigue](#) because all of the information is in front of you.

Using voice callouts also pushes through any fatigue by not requiring the pilot to remember what a certain beep or tone means.”

Honeywell’s Primus Epic cockpit system—touted as “the industry’s first system to simultaneously display traffic, terrain, airspace, airways, airports, and navigation aids”—reduces pilot stress and fatigue [by increasing situational awareness both on the ground and in the air.](#)

“Today’s pilots get most of the information they need to fly the aircraft on a few sharp and clear liquid crystal displays,” wrote Mike Ingram, v-p of Honeywell Aerospace Cockpit Systems, in a recent blog post. “They control every aspect of flight with flight management systems, navigate with GPS and inertial technologies, file flight plans on tablets, and send and receive messages and data with satellite communications systems.”

In addition to standard flight management system features found on most of today’s advanced cockpits, Honeywell’s Primus Epic provides a choice of 2D or 3D airport moving maps to increase situational awareness on the ground. The 2D moving map shows runways, taxiways, airport structures, and signs at many airports on navigation displays. The 3D moving map integrates Honeywell’s SmartView Synthetic Vision System for an “out the window” view of the airport on the Primary Flight Display (PFD) that transitions to a synthetic view of the terrain after takeoff.

Adding Honeywell’s SmartRunway and SmartLanding options for Enhanced Ground Proximity Warning Systems (EGPWS) increases situational awareness through aural and visual alerts during taxi, take-off, approach, and landing phases of flight. Designed to prevent runway incursions, SmartRunway provides advisories when approaching or crossing a runway. Conversely, SmartLanding is designed to prevent runway excursions—essentially long landings—and alerts the crew when the aircraft is approaching the runway too fast or too high.

“Avionics have changed dramatically over the years,” wrote Ingram. “What hasn’t changed is the fact that avionics boost the performance of civilian and military aircraft [and the people who fly them.](#)”

The latest innovations set new standards for safety, efficiency and situational awareness. They perform hundreds of tasks automatically so pilots can concentrate on their main job – [flying the airplane.](#)”

Communications between the pilot and air traffic control can also be a source of pilot fatigue, especially when the workload is already high, such as when a flight is being rerouted due to weather. To reduce communication errors and traffic congestion due to controllers needing to provide new instructions to each aircraft verbally and wait for a correct read back of those instructions, the FAA established [the text-based Controller Pilot Data Link Communications \(CPDLC\) system](#)—also known simply as “Data Comm”—as a visual supplement to voice communication.

Essentially text messaging between pilots and controllers, Data Comm lowers the communications workload. Flight plans, clearances, instructions, advisories, flight crew requests, reports, and other essential messages flow visually between pilots and ATC at certain airports. Not only does the recipient receive the message nearly instantaneously, but both parties can review and refer to the data at a later time to ensure it was correctly transmitted and understood. According to figures released by the Harris Corporation, CPDLC usage [saved more than 641,000 minutes of communication time between U.S. pilots and controllers in 2018](#), avoiding an estimated 33,800 read-back errors and reducing weather and congestion re-routing delays by 531,000 minutes.

Honeywell’s Protected Mode-CPDLC system integrates with the Primus Epic and other Honeywell FMSs to allow controllers to send clearances and amendments directly to the aircraft. Upon accepting the clearance through the FMS, the crew simply updates the departure runway and SID in the flight plan if cleared as filed.

As of August 2019, more than 60 air traffic control towers across the United States are using Data Comm to quickly relay messages between controllers and pilots. According to the FAA’s Data Comm Fact Sheet, its rollout of tower services at the original 55 airports was under budget and more than two and a half years ahead of schedule, which enabled the FAA to deploy Data Comm at seven more airports than originally planned at no additional cost. The FAA is also in the process of implementing Data Comm in high-altitude airspace; it is currently testing the technology at two Air Route Traffic Control Centers.

## Testing Testing 1..2..3..Recreational Drone Flyer Test is One Step Closer

We love that the drone community is growing so quickly. The Federal Aviation Administration's (FAA) recreational drone flyer test will be an important opportunity to [educate recreational flyers](#) about the rules of the sky as we continue to safely integrate drones into our nation's airspace.

A law passed in 2018 requires that recreational drone flyers pass an online aeronautical knowledge and safety test and carry proof that they have passed the test with them while operating a drone.

In September, the FAA posted a request for information (RFI) [asking for you](#), the drone community, to submit suggestions on how best to administer the new recreational knowledge test.

Based on responses to the RFI, the organizations below have been invited to make recommendations on the administration of the test. These recommendations will assist the agency in developing requirements that potential test administrators must meet. [These requirements](#), and any associated selection criteria for test administrators will be announced on FAA.gov.

- Embry Riddle Aeronautical University
- Drone Launch Academy Southeastern University
- Science Applications International Corporation
- DJI
- Horizon Hobby, LLC.
- Unmanned Aerial Vehicle Coach
- King Schools
- Unmanned Safety Institute
- First Person View Freedom Coalition



- Aircraft Owners and Pilots Association
- Academy of Model Aeronautics; and
- Drone Racing League.

The FAA has great safety information and tips on [FAA.gov](http://FAA.gov).

Questions? Email [socialmedia@faa.gov](mailto:socialmedia@faa.gov).

<https://lnks.gd//>

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## Boeing hit with \$3.9 million fine for alleged safety lapses

The planemaker installed [substandard parts](#) on 133 aircraft and [didn't properly oversee its suppliers](#), the FAA contends.

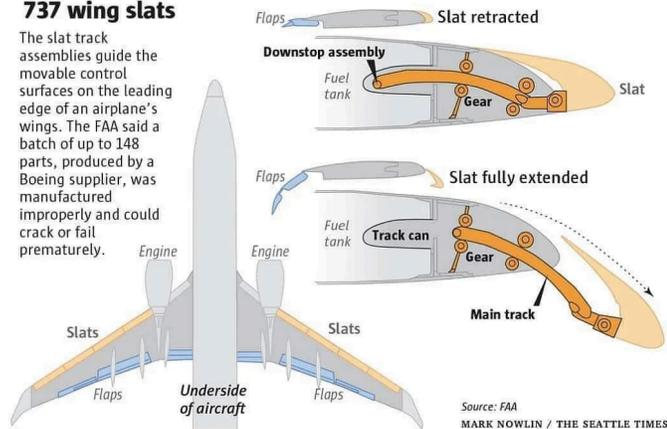
The U.S. government hit Boeing Co. with a proposed \$3.9 million fine on Friday, saying the planemaker installed substandard parts on 133 aircraft and didn't properly oversee its suppliers. The Federal Aviation Administration said the parts in question were installed on the wings of Boeing 737 jets to allow devices known as slats to move back and forth.

### Boeing Service Bulletin on 737 Slat Tracks

JUNE 5, 2019

#### 737 wing slats

The slat track assemblies guide the movable control surfaces on the leading edge of an airplane's wings. The FAA said a batch of up to 148 parts, produced by a Boeing supplier, was manufactured improperly and could crack or fail prematurely.



Source: FAA  
MARK NOWLIN / THE SEATTLE TIMES

Image credit: [Seattle Times](#)

The civil penalty comes as the company has been embroiled in controversy over how it designed its 737 Max, which was involved in two fatal crashes that killed 346 people and has been grounded since March 13.

Friday's proposed fines aren't related to those accidents.

On Friday, the FAA alleged Boeing ["knowingly"](#) sought FAA certification of aircraft that had the faulty parts installed, after determining that the devices had failed a strength test.

The so-called slat tracks, which were supplied by subcontractors, had become [brittle during a process to add a cadmium-titanium plating](#), the FAA said.

Boeing has 30 days to respond to the FAA and may dispute the allegations. The regulator often negotiates to lower penalties, particularly if companies agree to take steps to address the issue under review.

The planemaker said in an emailed statement that it's aware of the FAA allegations and is working closely with its customers to address the issue. [No planes currently in service have any of the faulty parts](#), the company said.

"Safety and quality are Boeing's top priorities, and Boeing has made a number of significant changes to our organization and processes in recent months that will reinforce and enhance this commitment," Boeing said.

The company in 2015 agreed to pay a \$12 million fine and to take steps to improve its internal compliance methods to settle multiple cases under investigation by the FAA.

The FAA had charged in that instance that Boeing [was too slow](#) to produce fuel-tank safety devices that were ordered by the government, according to a press release by the agency. [A second case](#) alleged that the company failed to maintain quality control and allowed the use of unauthorized fasteners on its 777 aircraft.

In the latest action, the faulty parts were installed on 737 NG planes as well as its successor, the Max family. The issue prompted FAA to order urgent inspections of more than 300 planes in June.

Slat tracks allow a device at the front of the wing to move forward to expand the size of the wing and improve lift for landing and takeoff. The FAA last June said a failure in flight of a slat track wouldn't automatically cause a crash, but would cause damage and could lead to an emergency.

The FAA charges [involve several Boeing subcontractors](#). Spirit AeroSystems Inc. was contracted to supply the slat tracks to Boeing. It hired Kencoa Aerospace Co. to supply them, and Kencoa turned to Southwest United Industries Inc. to process the devices.

The three companies didn't immediately respond to messages requesting comment.

Even after being notified by Spirit that the parts were brittle and prone to premature cracking, [Boeing continued installing them](#) and certified that the planes met FAA standards, the agency said.

In addition to being substandard, [the parts weren't marked properly](#); as a result, the serial numbers identifying them were either obscured or became unreadable, the agency said.

## **Former FAA inspector gets 6 years for bribery, fraud scheme**

A former FAA inspector who claims he was “promoting aviation” has been sentenced to six years in jail [for a string of corruption and theft charges](#) that even involved his mother. The [Miami Herald is reporting](#) that Manuel Fernandez, a senior FAA safety inspector in South Florida, stole expensive repair manuals and resold them, took bribes from some of the companies he audited and arranged to have his mother hired by one of the companies so the bribes could be passed through her. He also moonlighted for AVCOM Avionics and [let them know when the FAA was planning to do spot inspections of its facilities](#). The company owners Rolando and Patricia Suarez earlier pleaded guilty to several charges and Rolando spent two years in jail. The company is still in business under new management. At his sentencing hearing Fernandez said his actions were a net gain for the industry. “I was promoting aviation,” he told U.S. District Court Judge Marcia Cooke. His lawyer Ron Gainor was even more effusive. “This man furthered aviation safety, and he did it with a passion,” he said. [Cooke wasn't buying it](#). “He wanted to play both ends against the middle,” Cooke said, “and that's wrong.”



<https://www.miamiherald.com/news/local/community/miami-dade/doral/article238004019.html>

## Industry Forces Congressional Action On Maintenance Training Standards

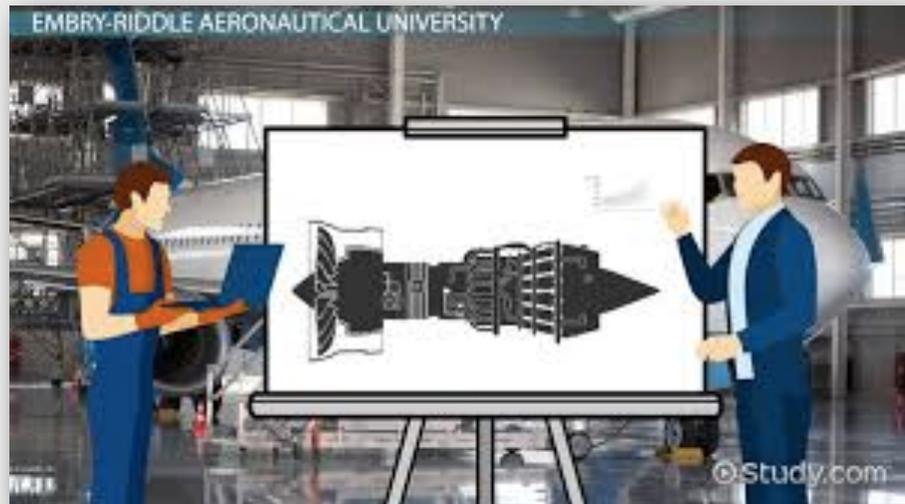
Industry has long advocated for an update to regulations that govern aviation maintenance training schools (AMTS).

Title 14 Code of Federal Regulations (CFR) part 147 was originally established under the Civil Aeronautics

Administration, circa 1958, and re-codified into 14 CFR in 1962. Since that time, neither the regulation nor the subject areas it mandates schools to teach have significantly changed.

Given the technological advances the aviation industry has made since then, 1950s teaching standards for would-be maintenance personnel are grossly inadequate. While schools have and do provide training above and beyond what is required for a mechanic airframe and/or powerplant (A&P) program, the part 147, 1,900-hr. seat-time mandate limits how much "extra" content a school can incorporate and remain marketable.

FAA-certificated schools that offer the A&P as part of a degree program have the **added challenge** of competing with other occupational pathway programs. Common educational standards set the minimum number of credits required for an associate's degree at 60 semester hours-or 1,800 clock hours-making it difficult for an AMTS to justify adding more coursework **to an already credit-heavy AMT degree**.



[Regulatory relief has been slow in coming.](#) A 2015 notice of proposed rulemaking (NPRM) came eight years after an Aviation Rulemaking Advisory Committee submitted a formal recommendation to revise the rule. [It took another four years](#) for the FAA to publish a supplemental proposal, an extra step to make adjustments to the NPRM in response to industry feedback. FAA officials have said they are still two years away from issuing the final rule, targeting publication in 2022.

Adding insult to the glacial pace, industry has serious concerns with the FAA's proposed revisions to the rule. Comments submitted by the Aviation Technician Education Council (ATEC)-and supported by a coalition of trade groups including the Aeronautical Repair Station Association, Airlines for America and the Regional Airline Association-beseech the agency to adopt a performance-based approach that defers to U.S. Education Department oversight for all matters concerning [quality of education](#). ATEC says the FAA's proposed rule is too restrictive, overly prescriptive and would stifle an already inadequate pipeline of workforce personnel.

Given the anticipated timeline and the high-stakes need for the new rule to withstand another 50 years of innovative technological advances, industry has [asked Congress to step in](#).

The Promoting Aviation Regulations for Technical Training (PARTT) 147 Act-a bipartisan and bicameral bill championed by Sens. Jim Inhofe (R-Okla.) and Tommy Duckworth (D-Ill.) and Reps. Don Young (R-Alaska) and Cheri Bustos (D-Ill.)-would direct the FAA to replace the current part 147 with a new, community-draft rule.

Language in the PARTT 147 Act is largely derived from regulatory text offered by ATEC in its comments to the original and supplemental FAA proposals. If it goes into effect, the law would give the FAA oversight responsibility for a program's facilities, equipment and instructor qualifications. Accredited institutions could rely on the quality systems approved under Education Department regulations, [without having to go through duplicative FAA approvals](#) that exist under today's regulations and in the agency's proposed revisions.

The draft language would also implement a community request for the FAA to change the way it approaches dual enrollment programs and allow AMTS to provide A&P content away from their primary locations (at a high school, for instance). Many aviation technical schools are prevented from expanding their programs through off-site offerings under the current regulatory structure, a problem the community says is easily remedied through utilization of additional fixed locations, something not currently available to part 147 certificate holders.

The direct rule language relies heavily on imminent FAA airman certification standards (ACS) as a check on quality. The new testing standard-being developed by an industry-FAA working group and slated for publication [in the summer of 2020](#)-will set forth the knowledge and skills required to safely and adequately perform work on aircraft and components and to act as the basis for the FAA written, oral, and practical mechanic tests.

Under the proposed framework, schools would use the testing standard as the basis for their curriculum, which would ensure training and FAA testing are correlated and that A&P programs [continue to evolve](#) as the FAA continually revises the testing standards in line with industry needs. The agency would use FAA mechanic testing results to assess a school's mechanic program and set a 70% target passage rate for all AMTS students taking the FAA mechanic test.

The PARTT 147 Act has been referred to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Transportation and Infrastructure. Those bodies [will ultimately decide](#) whether the legislation goes to the House and Senate floors for a vote.

## **Authorities Charge Captain in Crash of Aeroflot Superjet**

The Investigative Committee of Russia (RIC) has formally charged commanding pilot Denis Evdokimov with wrongdoing for his role in the May 5 crash of an Aeroflot Sukhoi SSJ100 at Moscow Sheremetyevo Airport.

The authorities have accused the captain of [infringement of flight procedures and manuals](#), resulting in excessive vertical speeds during final approach and too high of an angle of attack at touchdown and the initial portion of the ground run, causing the airplane



to bounce as it decelerated along Sheremetyevo's main runway. The investigating team, led by Ivan Sibul, concluded the pilot's [lack of professionalism](#) led to the airplane catching fire, resulting in property loss of 1.5 billion rubles (\$23 million, not including the value of the passenger baggage). Most of the 41 people on board who died fell victim to fire and fumes.

Earlier this month the RIC called Evdokimov to its offices to read him the charges, which name him as the only person guilty of causing suffering to the other 77 people onboard, including copilot Maxim Kuznetsov. Evdokimov, who has logged 6,800 flight hours including 1,400 hours in the Superjet, [refuses to acknowledge guilt](#). During lightning strikes, the Superjet developed various technical malfunctions, including those involving avionics and fly-by-wire flight controls, causing a switch to direct control mode. The pilot further maintains the airplane became unstable in flight and difficult to control, [responding incorrectly to sidestick movements](#). As for the fire inside the fuselage, he has taken the position that the flames erupted after the cabin crew opened the airplane's doors for evacuation.

Reacting to the new developments, Moscow media note the rather short period of time in which the RIC put together the factual basis for accusations and moved the case to judgment; similar cases took years, not months to reach such a stage. Reports also note that the RIC invited the pilot to read the charges against him even ahead of official publication of a final crash report by the Interstate Aviation Committee. That document has yet to come out.

Lawyer Pavel Gerasimov, who represents families of deceased passengers, told journalists they will not demand financial compensation from the pilot, but rather from Aeroflot if the court finds the airline guilty.

