



**U.S. SENATE COMMITTEE ON  
COMMERCE, SCIENCE & TRANSPORTATION**  
*Senator Maria Cantwell, Chair*

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**U.S. Senator Maria Cantwell**

**U.S. Senate Committee on Commerce, Science, and Transportation  
Hearing on FAA Oversight of Aviation Manufacturing**

**June 13, 2024**

**Opening Remarks**

**[\[AUDIO\]](#) [\[VIDEO\]](#)**

**Sen. Cantwell:** We are having a hearing this morning with FAA Administrator Michael Whitaker to discuss the FAA's oversight of aviation manufacturing, including the FAA's plans to ensure that Boeing follows through on the commitments made in its 90-day action plan.

What this Committee and the flying public wants to know is, what is the FAA doing to strengthen its oversight on the planes that we fly on every day and to make sure that they are safely built.

We need to know what change under your watch, Administrator Whitaker, will restore the proper oversight to manufacturing to achieve the excellence that we want to see at Boeing and other manufacturers, and ensure the FAA is setting the gold standard for safety oversight.

A week after the door plug incident, I sent the FAA a letter reiterating my request from a previous FAA Administrator a year before for the FAA to conduct a special audit to determine if Boeing was in compliance with FAA safety requirements for aircraft production.

The next day, Mr. Whitaker, you did start a process. The FAA conducted 100 plus audits in January and February of things like employee training, quality control procedures, records retention both at Boeing and its suppliers. [This] is what we are here to discuss.

I have to say, Mr. Whitaker, the results are major safety concerns and are very concerning to me and I think to the flying public.

You've identified according to news reports, 97 instances at Boeing and 21 instances at Spirit of where the products didn't meet FAA standards. We will get into this in the Q&A. Also, in part of the information, is that the engineers themselves had trouble responding to most basic questions about quality control policies and quality management systems.

We find these challenges frustrating. We need to have an FAA who is going to implement the very recommendations we heard from the ODA Expert Review Panel, who testified before this committee in April.

The panel's report observed a disconnect between senior leadership and frontline employees on building a safety culture and found that the overall system didn't demonstrate a foundational commitment to safety.

To your credit, Administrator Whitaker, you told Boeing that they needed to give you a plan to reform its production quality and you gave them 90 days to do so.

Boeing has now delivered that plan to you. We want to ask questions and get comments from you on where we are.

I am struck by a sense of, is this deja vu? Are we just back here? Or, can we really have a new day in creating a safety culture that is so critical for the United States to be the leaders in manufacturing?

In 2022 and 2023 as part of individualized FAA conducted audits of Boeing and Spirit AeroSystems, production lines required Boeing to correct any identified problems.

Yet, your new special audit still found problems.

It begs the question about the audit process itself at the FAA. I know that is a past Administrator, but still, what do we need to fix in our audit process if we did in 2022 and 2023 298 individualized audits?

When I sent the letter to the previous Acting Administrator, he said, "we don't need to do an audit because we have specialized audits."

And yet, we did this audit and found out that the specialized audits didn't help us correct the problems that we see today.

The FAA settled an agreement requiring Boeing to adopt a safety management system, yet they are still not quite they are still not quite there on that commitment.

This same settlement agreement required Boeing to create a regulatory compliance plan to correct all safety failings, and yet we know that we have this plug door incident.

The question is, what can you do to change this culture?

You were overwhelmingly confirmed to be the agent in charge of the FAA in the system. We know that you had an overwhelming vote in the United States senate, so we are counting on you to be that agent of change. We know that this begins by taking a hard look at the agency itself.

In January of 2024, the former NTSB Chairman wrote in an op-ed to The Seattle times, titled "The FAA's safety culture hasn't changed either." He wrote, "while both Boeing and the FAA issued words of assurances that they would use investigations to find and

correct flaws and the assurances of those industries, past pronouncements we have heard about changing their safety culture appear to have been lip service. ”

Administrator Whitaker, we must prove Mr. Hall wrong. We must demonstrate the FAA is a strong oversight regulator, and that the agency can ensure that manufacturers implement safety management systems.

Both Boeing and the FAA need a strong safety management system, not just in name only, but one that saves lives.

That is why Section 102 of the Aircraft Certification, Safety and Accountability Act demanded that the FAA develop a real SMS standard for manufacturers. We will have more to ask about that one we get to the Q&A.

In our recently signed FAA bill by President Biden, we have given your agency clear direction, clear resources, and new tools to carry out that mission.

I look forward to questioning you about how we are going to achieve that. I thank you for being here today.

## First Q&A with FAA Administrator Michael Whitaker

[\[AUDIO\]](#) [\[VIDEO\]](#)

**Sen. Cantwell:** Thank you, Administrator. And I should also thank you for your hard work on the FAA bill and helping us get the technical questions answered so we could get this over the goal line and implemented.

ACSAA was about safety implementations, so was this FAA reauthorization. So I appreciate your characterization that there is more work to be done because clearly there is.

I want to dive into Safety Management Systems in general, and in specific about what we are doing here.

In ACSAA, we required the FAA to issue a final rule on airplane manufacturers for an SMS system. And in April of this year you did that, requiring manufacturers to submit an implementation plan in six months, and to fully implement SMS within 36 months.

Boeing, as a manufacturer, has had a voluntary SMS in place for years. The ODA Expert Panel identified serious deficiencies in that system. I don't want to say that it is SMS in name only, but clearly there are a variety of reporting structures there, and confusion, and let's just say, I'm not sure that there is an SMS lifeblood in the system that everyone understands and is acting by.

In response to your recent audit, Boeing identified several action plans to take to address deficiencies in the current system, including better integrating the quality management system in SMS.

We are all here to talk about the safety culture, so we are drilling down here in a way that I'm sure is a lot of details for maybe someone listening at home, but these are the tools by which we establish a safety culture, that all the employees know that, that you oversee it, that you hold them accountable. So having the system and having it work effectively for everyone, including on the factory floor, is critical.

I am curious what you think of their compliance with the FAA's rule, and whether -- I am concerned that where we are is your oversight is merely -- you are just looking at that and verifying the plan, as opposed to -- what I'm saying is a checklist. "Oh, they said they were going to do these five things. Yes, they did those five things." As opposed to really guaranteeing to the public that it is a true Safety Management System, that they are adhering to it.

Now why does someone not want to adhere to a Safety Management System? I'll tell you why: because at some point in time, you have to say "we are stopping the line and fixing this problem." Or, "safety requires us to have documentation. We are going to get documentation." So it is a continuous cultural issue.

So I am very concerned that your oversight is not strong enough. So how does this comply, how does your rule now comply with both ACSAA and with what the expert panel is saying, which is a regular oversight of the Safety Management System by the FAA?

**Administrator Whitaker:** Thank you. I think that question hits at the core of safety. The Safety Management Systems really are what drive the safe outcomes that we get.

The airlines have had these systems, and they're very mature, and I think it has been a journey for airlines to maybe initially reluctantly accept these systems, and over time really grow to appreciate how effective they are in finding all risks in the system, and being able to mitigate those risks.

One of the things that's happened over the last six months is, at our encouragement, the airlines have spent a lot of time with Boeing to discuss their Safety Management Systems and why it is the secret sauce to having a safe outcome, and I view it as the core of these changes that are coming.

Now that the system is mandatory, it requires it to be more robust. So we will now have regulatory standards by which to judge the mandatory system, whereas when it was voluntary, we didn't have any compulsory standards to impose.

So we know it will be broader, it will go down to suppliers, and it will also go deeper and really get at what the audit, what the Section 103 panel found, which is that disconnect you mentioned between leadership and employees.

The Safety Management Systems have to have a culture where employees are free to speak up, identify risks, and have those risks taken seriously.

The reason Safety Management Systems work is because they are a risk analysis tool, and it allows you to find risks that might not be obvious. And one way you get that is by hearing from your employees who are on the front lines.

So that is going to be a focus. We will be reviewing that implementation very closely, our inspectors who are on the ground will be focused on watching that implementation roll out. And I would say it is a centerpiece of what needs to happen.

**Sen. Cantwell:** So, voluntary, unacceptable?

**Administrator Whitaker:** Well, it is now mandatory, but it certainly gives us more leverage to ensure that it's a very robust system.

**Sen. Cantwell:** I need to know that the FAA Administrator believes that SMS is not a voluntary system for us to have a safe flying system.

**Administrator Whitaker:** That is correct.

**Sen. Cantwell:** Thank you.

Do you believe that the FAA should have its own Safety Management System?

**Administrator Whitaker:** Absolutely. And we have an umbrella system, which is required by ICAO, and the Air Traffic Organization has an SMS system, and our flight operations have SMS systems.

But we are taking a fresh look at that, and how to make sure those systems are integrated, and hold our own system to the same standards that we hold the rest of the industry.

**Sen. Cantwell:** Do you believe the FAA needs an overall SMS system?

**Administrator Whitaker:** Well, we have an overall system now, but it's maybe not as fully integrated as needs to be, and we're looking at that.

**Sen. Cantwell:** I'm not sure what to make of that answer. My time is up, but we will come back to this discussion.

## Second Q&A with FAA Administrator Michael Whitaker

[\[AUDIO\]](#) [\[VIDEO\]](#)

**Sen. Cantwell:** Thank you, Senator Moran, for your leadership on the subcommittee.

I know we are expecting several members, but while we're waiting for them I'm going to go back to SMS and the question -- I want to go back to the FAA, but I also want to ask about another part of this system for manufacturers, which is the employee and the employee reporting system.

The Expert Review Panel recommended that Boeing implement the Aviation Safety Action Program at all production sites. Unlike the current reporting system "Speak Up," this system is a tri-party process for the FAA, Boeing, and union representatives to jointly file reports and address problems early. So it is kind of an identification system.

"Speak Up" lacks that role for the FAA and union to review the concerns employees are submitting. So we have obviously talked to the workforce about these issues, and I want to hear from you what you believe on this Expert Review Panel, and the input employees, and your visibility into this. You talked about more data and information.

**Administrator Whitaker:** Yes, I think the ASAP program is a very robust tool for hearing from the employees, and as you indicated the FAA is part of that process. So we are supportive of that, and we would like to see that extended throughout the workforce with that same transparency and participation by FAA. We need to have visibility into the reporting coming from the employees.

**Sen. Cantwell:** Do you have that now, currently, in other manufacturers?

**Administrator Whitaker:** I can respond separately with some more detail about the other manufacturers actions. The information about their programs.

**Sen. Cantwell:** I think, again, some people may not understand or think this may be an over-requirement, when in reality you think it should be part of a basic system that you have.

**Administrator Whitaker:** It does, and we have our own redundancy by having an FAA hotline, and we have requested to Boeing's CEO that they communicate our hotline information to their employees, which they have done, and we had hotline reports come in through FAA.

**Sen. Cantwell:** So you don't think there is anything deleterious here about having FAA having some insight to this?

**Administrator Whitaker:** No, I think it is quite necessary.

**Sen. Cantwell:** What can the FAA do to ensure that actually happens?

**Administrator Whitaker:** Well, as part of this plan, part of the SMS rollout under the comprehensive plan will include a robust system for employee reporting, so that will be one of the things we are monitoring and make sure that is transparent.

**Sen. Cantwell:** Okay. Appreciate that, if you could help lean into that. I think your point about data, whether it is SDRs or whether it is we and ACSAA put this risk report that's required every year, because we want to see what we think are the developing top risks.

And I think it was effective when NTSB called out that one of the number one risks they were seeing was near-miss and lack of implementation of technology, and shortly thereafter the administrator at that time, the Acting Administrator, quickly said let's get a rule and get something done. So those are the kinds of system improvements that we would like to see.

A large part of the FAA's oversight is making sure there are enough safety inspectors. And we recognize the importance that the safety workforce is, and that's why enacting the recent law, we basically authorized \$66.7 billion over five years to help boost the FAA's workforce and to make sure that we have an increase in the number of aviation safety inspectors. This is to be done across all shifts, obviously, at manufacturing sites.

How does the FAA know what the right number of safety inspectors are? How do we use metrics to measure their success?

**Administrator Whitaker:** Well, the interaction between what the inspectors are finding and what the staffing needs are is sort of a continuous feedback loop. So with respect to Boeing, as we do the audit and we find gaps in the production process, that gives us insight into where we need the inspectors and they continue to deploy and continue their audits and inspections and we redeploy assets as needed.

For example, there are a lot of issues around tool management and part management, and we would expect as Boeing deploys newer state-of-the-art technologies to manage their tools and parts, once we see that successful, we won't need as many inspectors there and they might be redeployed to some other aspect of production.

So it is designed to be a flexible system based on feedback. We initially deployed 24 inspectors, I think we are up in the low 30s now to Boeing and Spirit, and our target is 55, so we are continuing to increase, train and increase inspectors to deploy.

**Sen. Cantwell:** How do you know that 55 is the right number?

**Administrator Whitaker:** That is our best estimate at this point based on where we think we need to deploy them, but that number could change over time. And I think a key to how we want to do oversight going forward is to have flexibility to make sure we are putting our assets where they need to be, and removing them from less-risk areas to deploy them more effectively.

**Sen. Cantwell:** Thank you.



## Third Q&A with FAA Administrator Michael Whitaker

[\[AUDIO\]](#) [\[VIDEO\]](#)

**Sen. Cantwell:** Thank you, Senator Tester, for those important questions.

As has been brought up by some of the witnesses here, there's a big distinction between our past work on certification oversight, which is a lot of what ACSAA covered, and now this production problem. And so the Administrator is outlining what that production requirement oversight needs to look at. But we need both the certification oversight and the production oversight. We need both. But I thank you for illuminating that, Senator Tester, very much.

I was going to go here anyway, so, you called these Aviation Safety Inspectors, correct?

**Administrator Whitaker:** Yes.

**Sen. Cantwell:** And Aviation Safety Inspectors, do we have them well defined and trained and both on the education side and do we have enough, even, people to educate them at our community colleges and other places? And are we paying them enough?

**Administrator Whitaker:** The teams I met with at the factory were senior inspectors with a lot of experience, decades of experience. So we had a very senior team there.

We are continuing to hire engineers and inspectors. We have created an augmented training program, just because the workforce is a little bit thin on experienced folks, to give them augmented training and work with more senior folks to bring them on board. The ones who have been on board have been very experienced, but some of the ones we are bringing in our less so.

**Sen. Cantwell:** What do you think the standard is we should be adhering to, as it relates to an ASI, an aviation safety inspector? What level of training and experience should they have in aviation, specifically, to do that job?

**Administrator Whitaker:** Well, we often draw from qualified certified mechanics who have experience working on aircraft. That is one of the richest veins we can tap and train them into the inspection protocols. We want people who understand how these airplanes are put together and what the purposes of the quality checks and that they can verify these checks are taking place.

**Sen. Cantwell:** Do you think, again, that we have enough education programs? The reason I'm bringing this up is I'm hearing something different than what you are saying today. I'm definitely hearing we don't have enough aviation inspectors, that we don't have enough qualified aviation inspectors, and we don't even have enough qualified instructors at schools to train the aviation inspectors.

One story I heard was that they said, yes, I have safety experience, but it is in the dairy industry. We need an inspector on the floor who has aviation experience, not just safety experience.

**Administrator Whitaker:** Well I think, with respect to Boeing, we are certainly putting our most experienced and best people on this. It's the most important issue that we are dealing with right now.

I think it is true writ large that there is, across the board, a lack of experience, and many fewer qualified people to pull from. So we are competing with the rest of the industry for those folks.

**Sen. Cantwell:** And so, you're saying you've moved people around.

**Administrator Whitaker:** We have, absolutely.

**Sen. Cantwell:** In this instance of a door plug issue, you would have had a safety inspector from the FAA on the ground that would have been monitoring these processes?

I just want to get a little bit granular here about what the safety inspector is. They would be verifying compliance to the specifications of what someone on production should be doing? They are not doing the production work, but they are verifying something has been done the way it was supposed to be done, and that it meets the requirements of design and certification. Is that correct?

**Administrator Whitaker:** That is correct. And in the case of the door plug, it would be identified as a critical safety component, so the inspectors would focus on those more critical aspects of production to make sure that those are being done properly.

**Sen. Cantwell:** If Boeing is saying we don't have documentation and we don't know who removed it, where was the aviation safety inspector?

**Administrator Whitaker:** Well we wouldn't have had them on the ground at that point.

**Sen. Cantwell:** And why not?

**Administrator Whitaker:** Because at that point, the agency was focusing on auditing the internal quality programs at Boeing.

**Sen. Cantwell:** So, what role did FAA having a lighter touch do to create this kind of system with a lack of safety culture?

**Administrator Whitaker:** I think this has been a long evolution at Boeing. Not having been there, I can only speculate. But I think it's been a long evolution, and I think it was exacerbated by the workforce challenges of COVID. But we clearly didn't have enough folks on the ground to see what was going on in that factory.

**Sen. Cantwell:** So, an aviation inspector on the ground, now, just, again, to go back to the clarity would be, in this case, in this exact case, certifying that the door removal

process and reinstallation was done correctly to the specifications of the manufacturing requirements? Is that right? They wouldn't have been doing the work, but they would have been double-checking?

**Administrator Whitaker:** They would have a process in place, it might be spot inspections, it might be a systematic inspection of certain parts, based on the importance of that particular part. And then randomly watching assembly process and ensuring that the proper instructions are there, the proper steps are being followed, the proper tools are being used, really quality assurance oversight.

**Sen. Cantwell:** And I so appreciate my colleagues showing up today and asking these questions, because you are hearing the same theme. We want to know that the workforce is being listened to and that they are backed up. And so, when you have enough FAA oversight and they are there and communicating and double checking that, it's a reinforcement. They become even a redundancy to the system, even though their job is to make sure that there is true compliance.

**Administrator Whitaker:** That's correct.

**Sen. Cantwell:** And so, I look forward to hearing how many people you actually think you need for the future to make sure this culture gets it right. And so, I don't know if that is 55. I don't know what the number is, that's why I asked earlier in the hearing, what is the exact number.

I also want to understand what the pay is for these individuals and I want to understand the education requirements, and again, what gap you think that we have so that we can accurately fill this.

I see my colleague is here and I want to give her a chance to ask questions since I've had a couple of rounds, here.

But I'm very excited about the world demand of aviation, 40,000 planes [over the next 20 years]. Very excited about thermoplastics, and next-generation manufacturing that could put the United States in even a more competitive, aggressive position for getting the next-generation technology right.

So there's lots of great things we can do for the United States to be world leaders here and grow manufacturing jobs, but we have to get the safety right.

**Administrator Whitaker:** Absolutely.

**Sen. Cantwell:** A NASA participant in our ODA panel, I think she said it best, she said "safety isn't the mission, but it's what makes the mission work."

And that's what we have to do here. There's lots of things to do to be competitive in aviation and grow jobs, but safety is what allows us to actually achieve that.

## Fourth Q&A with FAA Administrator Michael Whitaker

[\[AUDIO\]](#) [\[VIDEO\]](#)

**Sen. Cantwell:** Thank you. I have one more question before - I don't know if anyone else is coming - one more question. It is more on the certification side.

Section 343 and 344 of the reauthorization bill that we just passed changes making sure we have accountability and transparency in the certification process, requires that applicants certify their design compliance when they submit data for the FAA approval. What are your plans for implementing these reforms, and how are you going to make sure that they actually are meeting these standards?

**Administrator Whitaker:** On Section 343, we have begun a gap analysis to see if our current procedures are sufficient, and if not, where do we need to make changes in those procedures to be compliant with that new provision. And on the changed product rule, the plan is to meet that 18-month timeframe, to have a notice of proposed rulemaking on that.

**Sen. Cantwell:** What about, in recent years, there were a lot of certification submissions that just had a first-pass quality, meaning the FAA approved them without revision.

**Administrator Whitaker:** That is something I will have to inquire about and respond to your office.

**Sen. Cantwell:** How do you think we hold the applicant accountable?

I know you are saying you are working on the larger rule.

I mean, how do you make sure you are receiving data for compliance, as opposed to, again, just the process of, just a check mark, you got this, you got that, you got that.

How are you making sure that the data for submission actually meets the compliance?

**Administrator Whitaker:** Well, I think certification, and having responsible individuals sign off on that and certify that is an important step. But other than that, I think we need to look at the process and see what our options are.

**Sen. Cantwell:** Having individuals, you mean at the FAA?

**Administrator Whitaker:** No, the applicant.

**Sen. Cantwell:** No, this is what we are trying to get away from. We're trying to get away from you having the applicant just check, check, check, and then you just say, yes check, check, check.

We are trying to make sure that you get the accountability from the data in certification that it complies with the standard that has been set, and that you know that it actually

meets that standard. We don't have to revisit MCAS, but this is the example of where that didn't happen.

**Administrator Whitaker:** Let me look into that and I'll come back to you with a response.

**Sen. Cantwell:** This is something we will want to review with you and make sure we get right.

Back to this SMS for the FAA. I want an answer from you. You don't have to give it today if you don't want, but the point is, first of all, most importantly, we need you to hold them accountable on a real SMS, whether that's Spirit, or Boeing, or any other manufacturer.

This is the international standard. We all know it works. We all know that it means you have to continue to improve the process. But most importantly make those safety culture improvements so the whole culture is robust and continues to thrive around that.

So I want to hear what the FAA is going to do to make sure that you are doing that as well.

**Administrator Whitaker:** I will come back to you with a plan. I know you and I have spoken about this in the past. We do have SMS programs in place, but we need to verify that they are as robust as they need to be, so we are looking at possible revisions and we will report that back.

**Sen. Cantwell:** If we had had a mandatory instead of voluntary program, there might be some people alive, is the bottom line. So, we need an SMS that is - we have the workforce asking for it, we have safety experts asking for it, we now have ODA people asking for it, so let's get it done. It's the gold standard. A voluntary system does not get it done.

I have a statement I'm going to enter into the record since Senator Duckworth wasn't able to be with us today, and I think we just need a closing statement. Let's see here.

Administrator Whitaker, we much appreciate you being here today. We know there's a lot to implement, there's a lot to do in aviation safety, but we are confident that you will continue to lead a major transformation here, so thank you for today.

The record will be open for four weeks until July 11, and any senators wishing to submit their questions for the record should do so before January 27, and we ask that the responses be to the committee by July 11. With that, that concludes our hearing today. Thank you.

**Administrator Whitaker:** Thank you.