

EPISODE 197

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[0:00:07] IP: Hello and welcome to episode 197 of AvTalk. I am Ian Petchenik, here in the new year, as always with –

[0:00:17] JR: Jason Rabinowitz. Happy New Year to everyone, especially you, Ian. Hopefully, you got some well-deserved downtime.

[0:00:25] IP: Sure. I think, like 12 hours, maybe 24.

[0:00:29] JR: That's higher than average for you, so I'll take that.

[0:00:31] IP: That's true. That's true. Yeah. No, it was an odd break. The kids were sick for a bit and lots of shuttling back and forth to the in-laws for variety of things. We made it work. We had a nice holidays, a very Merry Christmas and a Happy New Year. How was your time away?

[0:00:50] JR: Good. Without any of the kids, or really, illness. Already doing better than you. I don't think either of us had any air travel in the past few weeks, so I'll chalk that up as a win.

[0:01:02] IP: No, no. I did not. If I had, I probably would have canceled it, unless it was life or death. Because as we talked about on our special episode that we did a few weeks ago now, that was not the time to be traveling. We focused on Southwest because of their complete and total operational meltdown. Throughout this system, as far as airlines, generally speaking, as well as dealing with all types of weather, inclement weather and things like that, it just wasn't a great time to be flying. Though, certainly, Southwest was the outlier in just how terrible things were.

[0:01:41] JR: Yeah, happy to have had no part in any of that. Though, I do have some trouble coming up. Wow, I hope not trouble. I do have some travel coming up at the end of this month. I was happy to sit this holiday season out.

[0:01:54] IP: Yeah, a smart play, I think. I guess, we'll take the show notes out of order, because I guess we can talk about Southwest jump on the episode that we did last week and talk about Southwest's recovery a little bit. They canceled thousands of flights per day, basically two-thirds of their schedule per day, for almost an entire week. Then by Friday, made it down to having just canceled 40 flights. An impressive rebound. That number ticked back up over the New Year weekend, but that was less of a Southwest issue and more of a dealing with other concerns, including weather in various places.

[0:02:35] JR: Did FCC, - FAA outage out in Florida as well.

[0:02:39] IP: Yes, exactly. A system issue, not necessarily a Southwest issue, but they seem to have gotten things back in order for the time being. Hopefully, they're going to dig a bit deeper this time into their bag of tricks and perhaps, think about making some serious changes to their back of house technology that powers the airline, so that these things don't happen again. That's what they've said they're going to do. How much they actually do in the short term versus the long, long, long-term will be interesting to see.

In the immediate sense, Southwest, initially was very slow to tell customers what they should be doing, how they should be doing it and what's going to happen to their airfare and any incidentals that they need to spend money on. Their bags were lost, or just basically being held at the airport and the passengers couldn't get them. Or if they had to book hotels, or booked cars to get home instead of flying, or things like that. That process has since become much more clear with Southwest saying if it's a reasonable expense, and that's up to Southwest to decide, we'll reimburse you for it. It seems anecdotally at least at the moment, Southwest is liberally reimbursing people for what I think everyone would consider reasonable expenses. Different airline tickets to get where they originally booked on Southwest, hotels, car rentals, meals, things like that. That seems to be going well.

[0:04:13] JR: Yeah. Not explicitly stating what exactly is reasonable. But when you go to the forum to submit your expenses, they do let you break it out individually. From top to bottom, it is hotel expense, including Airbnb, total ground transportation, total meal, beverage, food, total non-Southwest Airlines ticket, total miles, points utilized for airfare hotel stay and rental car, so that's interesting. They're going to have to figure out how to compute reimbursement if you used

miles, or points for alternative travel, which that's a whole can of worms on redemption value for that.

Total delayed baggage, interim expenses delayed, baggage interim expenses for clothing and toiletries, medications, other expenses and description of other expenses. Yeah, they really want passengers to itemize out every little bit, just like you would for U261. Though, I'm really interested to see what happens with that miles and points to dollars reimbursement.

[0:05:15] IP: I wonder if they just buy you miles? If they just go to the other airlines website and just –

[0:05:19] JR: That's an extremely expensive proposition.

[0:05:21] IP: Buy miles.

[0:05:22] JR: Yeah. Because buying miles through airlines is a terrible deal. I looked into this recently and it is highly inadvisable to do that. I'm not sure what Southwest is going to do here. I'm very interested to see how they do that. Because I'm sure there were people, many people who use points and miles to book hotels and alternate transportation, because usually at the last minute, buying airfare is much better deal with points, or miles, than a walk-up ticket. Good on Southwest.

[0:05:51] IP: Yeah. That'll be interesting to see.

[0:05:53] JR: Yeah, good on Southwest or even prompting that. I probably wouldn't even have thought of that. It's going to take them a long, long time to go through these, every one of these individual expense reimbursement requests. Good luck to whomever at Southwest's back office has to do this, because it's going to take a long time.

[0:06:13] IP: For the miles and points. Yeah, but people have already started receiving reimbursements, so that's good. Southwest said that they're going to give everyone who is impacted 25,000 rapid rewards points. I think that's, what is it? Roughly, I think, valued at 300 and somewhat dollars.

[0:06:30] JR: There was some misunderstanding, or maybe backpedaling on the part of Southwest at first, where if you cancel your flight with Southwest, you would get that 25,000 points. If you stuck with them and actually took your delayed, or very later rebooked flight, you would not get those points. But it seems like that has changed and everyone who was impacted, I guess, even if it was just a couple hours, will get that 25,000 rapid rewards points, which apparently, you can deposit into anyone's account. That's interesting.

[0:07:02] IP: Oh, that is interesting. Huh, that's even more generous than I would think. Because if I'm the airline and I'm letting anyone deposit that into anyone's account, one, if you don't fly Southwest, very often, you can give it to whoever. But if you do fly Southwest very often and you are traveling with an extended family, it seems to me to make sense to deposit all those miles into one account, and then use that to dole out travel.

[0:07:28] JR: Yeah, interesting approach.

[0:07:30] IP: Interesting. Good.

[0:07:31] JR: Yeah. Good on Southwest for doing the best they can to make things right, although it took far too long to get to the point where they actually started doing that. It's really going to be an interesting case study in the rebooting of an airline operation. It happened far too late at days later than it should have. Once they actually pulled that ripcord, they went from 70-plus percent of flights canceled to the next day where there were zero, basically a rounding error number of flights canceled. Really successful in that regard, but it just took too long.

[0:08:04] IP: Yeah. Everything that happened, it seemed that Southwest leadership was two, or three steps behind. Not that they made the wrong decisions once they finally made them. It was just, they were so far behind and it took them so long to make any decision that it just compounded things for multiple days, when they could have hit the reset button much sooner.

[0:08:30] JR: Yeah. Things are better now, but let's wait and see which airline is next to have an operational meltdown, because these are uncommon these days. It is certainly uncommon to see one of that nature, or of that widespread impact.

[0:08:47] IP: Yeah. We'll leave the Southwest story there for now, and we'll see how things go with making passengers whole and resolving the issues inside the airline. I'm sure we'll be talking more about that in the future as Southwest moves forward with new technology, shall we say.

While we were on break, the final report on the crash of Ethiopian Airlines flight 302, was released by the Ethiopian Air Accident Investigation Board. Their final report was released and is a very detailed report that lists the probable cause of the accident. I'm going to quote the report in full here, under the section 3.2. "The probable cause of the accident was repetitive and uncommanded airplane nose down inputs from the MCAS, due to erroneous AOA input and its unrecoverable activation system, which made the airplane dive with the rate of minus 3 3,000 feet per minute close to the ground, was the most probable cause of the accident."

I want to back up and say, MCAS is the Maneuver Characteristics Augmentation System that we've talked about at length. AOA input being the angle of attack input of which the flight through to suffered from erroneous inputs, because of the loss, or damage to the left AOA vane, which was the single sensor supplying the angle of attack information on that particular flight.

Nothing truly surprising in the pointing to MCAS as the probable cause of the accident. But that's the only probable cause of the accident listed in the Ethiopian investigators final report. Then comes the US NTSB and the French BEA, both with a very unusual step of issuing comments on the final report. Go ahead, Jason.

[0:10:56] JR: I was just going to read out the comment. This was put out by the NTSB on December 27th. Not exactly a time of the year you expect anything to come out from any federal agency. I'm quoting here. "The NTSB took the unusual step of publishing the comments on its website after Ethiopia's Aircraft Accident Investigation Bureau failed to include the NTSB's comments in its final report and its investigation into the March 10th, 2019 Crash of Ethiopian flight 302, Boeing 737 MAX. The NTSB has received the EAIB final accident report on December 27th." It goes on to state that in accordance with ICO annex 13, countries participating in the investigation are given the opportunity to review the draft report and then provide comments to the authority investigating the crash, in this case, Ethiopia.

They go on to say if the investigating authority disagrees with the comments, or declines to integrate them into the accident report, the participating countries are entitled to request that their comments be appended to the final report. However, when the NTSB was provided with its first draft of the report last year, the NTSB reviewed it, provided comments and none of that made it into the final report, apparently, which is not great.

The NTSB says, it was provided a revised draft from the EAIB. The NTSB determined the report. The revised report failed to sufficiently address its comments, really unusual reading this, that there's usually not much dissent at all between investigating authorities here. You can read the full comments from the NTSB. We'll link that in the show notes. It is quite clear that the NTSB thinks that the final investigation put out by Ethiopia was incomplete in nature.

[0:12:41] IP: Yeah. I'm not going to read the entire comments, but I do want to close in on the adjustments to the probable cause that the NTSB and the BEA wished had been included in the final report issued by Ethiopian authorities. The NTSB is involved, because it is the investigative authority in the state of manufacture. The BEA is involved because it is both the investigative authority in the state of manufacture for the engines, but also because the Ethiopians requested that the BEA be the investigative authority and the place of analysis for the flight data recorder and the cockpit voice recorder. That's why the French BEA in the US NTSB are involved in this at all.

The NTSB on its part says, in addition to the probable cause pointing to MCAS, which they agree with, they also say, "We propose that the following contributing factors be included. The operators' failure to ensure that its flight crews were prepared to properly respond to uncommanded stabilizer trim movement in the manner outlined in Boeing's flight crew operating manual bulletin and the FAA's emergency airworthiness directive." They put in parentheses here, "Both issued four months before the accident." Then there's a second bullet point. "The airplane's impact with a foreign object which damaged the AOA sensor and caused the erroneous AOA values."

There's an interesting divergence between the Ethiopian report and the NTSB's analysis of the situation. The Ethiopian report and we'll link to the full Ethiopian report, obviously, in the show

notes as well. But the report issued by the Ethiopian investigators destresses the possibility of a physical impact to the AOA vane. The NTSB and the BEA, both are leaning towards, or firmly believe really, that something, most likely a bird impacted the AOA vane on the left side of the aircraft which led to the erroneous AOA values for the flight.

The Ethiopian report spends a good few paragraphs discussing alternative theories about how the erroneous input values for the AOA could occur. They talk about electrical issues. They talk about physical failure, but not necessarily from an external source, things like that. The NTSB, having read a draft version of this report said, Collins Aerospace, who's the manufacturer of the AOA vane, did a significant analysis and they looked at this from both what the possibilities were through a fault tree analysis, what the FDR tells us, and what history tells us about when we know a bird hit the airway vane and what happens. Really, the only conclusion is that this was very likely due to a bird strike.

[0:15:56] JR: Yeah, something that is quite common. The NTSB goes on to say that the Ethiopian investigation did mention that there is bird activity around Addis Ababa airport, but it does not really go into detail about potentially what have happened with the aircraft. It says, the draft report provides some details regarding the runway area search after the accident, but inappropriately suggest that the lack of bird remains, or AOA vane remnants indicates that the airplane was not impacted by a foreign object.

The EAIB report fails to state that the search occurred eight days after the accident and that the search did not include the area surrounding taxiway D, even though the flight data recorder indicated that the airplane would have been positioned above the taxiway when the left AOA sensor data became erroneous. That is not great. It seems very intentional that that part was left out, that the search wasn't for another eight days and that where they actually searched wasn't where the actual impact of a bird, versus the vane could have actually happened. Very strange to leave that part out. The NTSB definitely wants to call attention to that.

[0:17:03] IP: Yeah. They go into some depth of discussion on that particular point. The NTSB has some disagreements with the lack of discussion about the crews' role in the crash of the aircraft. Switching over to the BEA, they also feel strongly that their comments were not heard, that their comments were not included, that their analysis was not listened to. They also

published a separate set of notes. They go into different qualifications as regards to the various sequence of events, not necessarily correcting the Ethiopian investigators report. But saying, these are certain things that we would have also mentioned, if we were writing the report, or if our comments had been included in the report.

Moving down to the probable cause, where they say, yes, we agree that MCAS contributed to this crash. However, and I'll quote the BEA's comments right now, "The BEA believes that the crews' inadequate actions and the insufficient cockpit resource management played a role in the chain of events that led to the accident. In particular, during the first phase of the flight before the first MCAS activation."

Both the NTSB and the BEA's comments indicate and say that there was a period of time, from the time the aircraft lifted off the runway and encountered whatever it encountered, bird strike, alien spaceships searing off the AOA vane, whatever it may be, and the time of the first MCAS activation that pushed the nose down, when the crew did not respond properly to the situation it was faced with. There were things that the crew could and should have done to limit the impact of the AOA vane's erroneous values and the aircraft would have been recoverable.

The BEA goes on to break things out as far as the contributing factors. They say, the flight crews' failure to apply immediately after takeoff and bullhorn the first MCAS activation, the approach to stall, or stall recovery maneuver and the airspeed, unreliable non-normal checklist, the captain's insistence on engaging the autopilot, contrary to the approach to stall, or stall recovery maneuver procedure. Insufficient use of the electric trim to relieve high control column forces after the MCAS nose down orders. The captain's lack of thrust reduction when the speed became excessive, when in combination with insufficient trim caused an increase of the force to become unmanageable on both the control column and the manual trim wheel.

Then the final thing that the BEA list isn't a flight issue, but is rather an airline issue, where the use of the logipad system by the airline is the sole means to disseminate information on new systems and procedures, which doesn't allow the evaluation of the crews' understanding and knowledge acquisition on new systems and procedure. This was the system that was used to disseminate the information related to MCAS system following the previous 737 MAX accident,

and did not allow the airline to ensure that the crews had read and correctly understood this information.

[0:20:33] JR: Yeah. A lot to take in there from this investigation. What are we three, four years later, at this point? Very unusual to see all this dissent and disagreement and what seemed like such a cut and dry accident. We all know what happened, but there's so much disagreement about how exactly happened and the human factors involved. I guess, that's that at this point. There's nothing really left to say, or wait for is there?

[0:20:59] IP: I mean, as far as the accident goes, no. I mean, we, I guess now know all that we're ever going to know. What I don't want to have happen is the insistence by the Ethiopian investigators to say that MCAS was the only problem here. The very public pushback by the NTSB and the BEA to somehow let Boeing off the hook. Do you know what I'm saying?

[0:21:27] JR: Yeah, I do. That would not be great, since we know very well in this space that there's never just a single attributing cause to an incident, or a crash. It's just not the case, and to ignore the human factors is just outlandish. We know better than that. This industry knows how to investigate a crash. In this case, I don't want to say it's intentionally being overlooked to save face, but it sure comes off like that from the French and the NTSB updates, which just unprecedented. You don't see that. That's not something that's done. There's usually such tight agreement between these investigatory bodies that there isn't dissent like this. This is highly unusual. I hope we don't see something like that again.

[0:22:11] IP: Absolutely. Absolutely. We'll have everything in the show notes. We'll have all the links to the reports and the comments by the NTSB and the BEA, so that if you want to read those yourself, I encourage you to do so. It's a very interesting read to see how these agencies are working together or not, in the sense.

[0:22:31] JR: Almost felt more like a Supreme Court ruling and issuing dissents from other justices. Very strange.

[0:22:38] IP: Yeah. Yeah. That's exactly how it felt. Okay, let's move on from there. An interesting thing happened in the Philippines over the new year. That was that their air traffic control system stopped functioning, because they lost power.

[0:22:54] JR: Oh, not great.

[0:22:55] IP: This was a very – No, not great, and a very strange thing. What happened was, and we're still not sure exactly how this happened, but power was lost at the main air traffic control center in the Philippines. The Manila FIR lost access to its secondary surveillance radars, so ADSB and Mode-S tracking were out. A whole host of radio frequencies were down. There was the CPDLC was down. Basically, the text messaging system that allows controllers to text information to pilots and pilots to text information back to controllers, that was down, so they cleared the airspace. There were no flights for a good long while in the middle of FIR. No flights to and from airports in the Philippines. No overflights for nearly two days, until they get power back and then eventually, restarted all sorts of flying. It was just a bizarre thing.

[0:24:02] JR: Two days is pretty incredible. I don't think we've seen something like that in a very long time, usually when things at least here in the US go down there. It's for a matter of minutes, or hours. For an entire FIR to be out for days because of a power issue, that must have been one big power issue.

[0:24:19] IP: Well, and what's interesting to me, and I hope we learn more about this soon, because there are multiple secondary surveillance radars throughout the Philippines. This was a big point of pride for them just a few years ago, when they installed these new SSRs. They threw a party. They're spaced out in multiple locations. Somehow a power outage in a single location took these offline as well?

[0:24:45] JR: I guess, they all feed their data back to somewhere and it's probably that somewhere that went offline.

[0:24:51] IP: Yeah. But I feel like, maybe they're missing some redundancy there.

[0:24:54] JR: I mean, you never know. These things, these systems are obviously extremely complex and when something goes wrong, it might take a long time to identify it. I mean, to normalize this a bit last year, maybe it was in 2020, we had an extremely brief power surge, or brown out here in New York. You don't really notice it if you happen to be looking at a streetlight, or your own interior lighting for a few seconds. Not even a few seconds, a fraction of a second. That was long enough to trip the backup power at the MTA's headquarters. All of their train tracking and surveillance systems flipped over to backup power. But nobody knew that. There was a glitch with the system. Nobody was alerted. Nobody was looking at the light or something and no one knew they were on backup battery power, until those batteries died and the whole system went dark. No one knew why.

It took a whole state-led investigation to figure out, oh, that the system never recovered from battery power to grid power. When the batteries ran out, no one was paying attention to the alert and the whole thing just shut off. You'd be surprised how easily backup protocols and systems just, they don't work properly. I suspect, we'll see something that come out in this report where something, some failover system just didn't work as expected and it took a long time to bring a complex system backup.

[0:26:14] IP: Fair enough. Jason, I'm disappointed that you're the voice of reason. I have to admit when you're being the voice of reason, and you're probably right.

[0:26:22] JR: But we'll probably never know for sure.

[0:26:24] IP: That's true. We'll probably never know for sure. Let's see, where do we go next? Let's stay in Asia and go with China, which is dropping its quarantine requirements for arriving passengers beginning early next week, the 8th of January.

[0:26:37] JR: Hey, that's great news. I didn't think we'd be seeing China open up to tourism without quarantine and testing and all that for a very long time. I can't possibly see any bad news coming out of this, Ian. What's next?

[0:26:51] IP: Well, the US will begin requiring negative COVID tests beginning in the 5th of January for passengers arriving from China.

[0:26:58] JR: Oh, that turned quickly.

[0:27:00] IP: It sure did.

[0:27:01] JR: Wow. Wow. Hate to be doing this again. This is not great. But some of the reports on flights coming in from China have been truly flashbacks to 2020, where you'd have 50 people taking COVID tests on arrival on a flight from China and 49, or 50 of them testing positive as China is having an absolutely bonkers degree of COVID breakout right now, after throwing in the towel on COVID zero and just saying, "Ah, screw it. We're going full US south here. We're going full Florida." You should never go full Florida, and they just got rid of everything. They just reopened everything at this point. It is not going well. Really hate to see the re-application of COVID testing, because it doesn't work. Has been proven to just not do anything. Really getting some awful flashbacks here.

[0:28:00] IP: Yeah, so that's happening. In the aviation sense of things, we're expecting to see a lot more capacity in and out of China over the next few weeks as airlines figure out what they're going to do and how they're going to do it. Part of that is up to bilateral treaties between the US and China.

[0:28:16] JR: Remember that China never really canceled most of its flights, at least domestically, so we can just stop canceling flights and they're already there and ticketed.

[0:28:25] IP: Yes, that's true. There were never any – What Jason's basically referring to is that since 2020, Chinese airlines have basically been canceling flights each day. Instead of saying, we're only going to operate 30% of whatever we had scheduled in March of 2020, or February of 2020 at this point. They've kept their schedules and have just been canceling a massive number of flights every day.

[0:28:47] JR: They've been hoping for the best for years.

[0:28:51] IP: For nearly three years. That's coming. It'll be interesting to see which airlines restart flights, if they go full in, or if they start small. It'll be interesting to see what happens. Let's

go across the Pacific over down to San Diego. Jason, tell me why flying out of San Diego right now is a hassle, especially if you go on long haul?

[0:29:10] JR: Yeah. Did you know that airplanes need fuel to fly? If you work for CNN, you might not know that. I know. People here listening to this podcast know that you need fuel inside the airplane to make the whirly parts turn.

[0:29:21] IP: That's a deep cut. Dig it, CNN. It was a deep cut.

[0:29:24] JR: Yea. It felt like the right thing to do.

[0:29:27] IP: It was there. It was there.

[0:29:27] JR: Yeah. Apparently, there has been a fuel pipeline issue in the San Diego area, directly impacting the fuel supply to the San Diego airport, which we've seen this happen a number of times recently. What was it? There was an airport in the US South that – there was DFW. They had a fire at their fuel farm recently and they were having issues, but this seems to be much more prolonged, where there is extremely limited fuel supply at San Diego, to the point where most flights are fine, even flights out over the Pacific over to Hawaii have been operating nonstop. In particular, some long-haul flights to Europe, which I think there's really only one isn't? Just BA to London. That flight has been particularly impacted and they've actually been routing on the way back through LAX, of all places, which I thought was quite interesting to basically, gas and go on their way since there isn't enough in San Diego to get them all the way back to London.

[0:30:19] IP: Yeah. We had a big deal as far as AV geeks are concerned. Captain Dave Wallsworth and First Officer Scott Bateman, who Scott was formerly on the 747, moved over to the A350. Dave Wallsworth was on the 380, is now on the 350. They were flying together. That's why I think this flight got so much attention, because they're both active on social media, and so people were excited to see them flying together and get a behind the scenes look and they were like, "Oh, by the way, we're going to fly up from San Diego to LAX and just pick up some gas."

[0:30:52] JR: Yeah, no big deal. This has been going on for a while now, at least December 30th, I think JAL is another long-haul carrier out in San Diego and they have also been doing the short hop, 28-minute flying time typically, give or take, from LAX, up to LAX and then from LAX over to Narita. That's interesting. I just thought, I mean, I understand for JAL, but I thought for BA, it was a little strange to pop into LAX, which is a historically just chaotic, busy, congested airport. It struck me as an odd place to do a quick gas and go, but they – I questioned them on Twitter and basically, they said, I assumed there was a correct reason, or totally reasonable explanation. Yeah, it's just at that hour, totally fine to pop in and get gas and leave, especially since that's already an airport served by BA A350s. I figured that Phoenix would be a better choice because it's a bit of an a less congested airport.

LAX, they want to just do a very quick flight from San Diego to up to LAX, gas up and then head out for the long haul. Not great. Hopefully, San Diego finds whatever it needs to find to get its fuel back in the coming days. This has been quite an extended outage, which is atypical.

[0:32:05] IP: Yeah. That's been going on for quite some time. Hopefully, they get that –

[0:32:10] JR: Spanning multiple years.

[0:32:12] IP: I wonder if gas would be cheaper in Tijuana.

[0:32:14] JR: Maybe.

[0:32:14] IP: I wonder how long that flight would be? I mean, then you're dealing with cost – and things like that. San Diego to Tijuana, I wonder how long that flight would be. Probably longer to prepare to get off the ground, and then land again, than it is to stay in the air.

[0:32:30] JR: Yeah. I've done a search for anything San Diego to Tijuana. Turns out, that has no recent history, so I couldn't tell you.

[0:32:37] IP: Yeah. I doubt there are many, many flights, if any. Here's an interesting story. This is not a new thing, but I think the first time that it's happened with four airplanes all at once. There were four aircraft previously operated by Turkish Airlines, A340-300s, that flew down to

South Africa for long-term storage. They sat there for a few years. Then last week, they were flying from South Africa to Uzbekistan, but somehow miraculously, decided to get to his Pakistan the long way through Iran. Then all four of them, Jason, suffered in-flight emergencies and had to land in Tehran.

[0:33:27] JR: Wow. This seems to happen quite frequently with these “delivery flights.” It's quite miraculous. Yeah. This is not a unique, not a new thing. It hasn't happened a ton of times, but we have seen this before, I think, also with A340s, they're particularly popular in Iran, just because I guess, they're cheap and easy to obtain. Basically, what's happening here is that everyone's got sanctions on Iran. Nobody is allowed to sell, or lease aircraft to any of the Iranian carriers. Basically, they just take them. They make arrangements for the aircraft to fly from one place to another over Iran. Then as you said, Ian, they declare in flight emergencies over Iran. They land and now they're Iranian aircraft. Magic.

[0:34:14] IP: Magic.

[0:34:15] JR: Magic. I think Mahan Air has a whole bunch of A340-600s as well. I don't know if we've seen this with Iran Air, but we've seen it with the other carriers in the country for sure.

[0:34:27] IP: Yeah. Generally speaking, I don't think we've seen this particular activity with Iran Air, but it's definitely happened with Mahan before. There is also some speculation that these aircraft aren't necessarily destined for Iranian airlines, but are actually making a stop in Iran before being distributed to other airlines that may also have difficulty acquiring aircraft. Conviasa and what's the other airline that I'm thinking of that could be in the market?

[0:35:00] JR: Cubana, possibly.

[0:35:01] IP: Not Cubana. Possibly, but no, because they don't really have a 340.

[0:35:07] JR: Or money.

[0:35:08] IP: Or money. Well, there's that. But there's a second airline that I'm just having so much trouble thinking of.

[0:35:14] JR: We'll have to come back to it.

[0:35:15] IP: Anyway. Moral of the story is that these aircraft suffered an “emergency” and landed in Iran. Hopefully – Syrian Air. Thank you.

[0:35:25] JR: Ah, there you go.

[0:35:26] IP: It only took me 20 minutes to get there, but I got there, which is also a current A340 operator.

[0:35:31] JR: Really, really sneaky way. I think you said, these aircraft, or the flight numbers were MAN3808, 09, 11. What do you have in the notes here?

[0:35:40] IP: 10, 10 and 11. The call signs of the aircraft were MAN3808, 3809, 3810 and 3811. Those were the call signs of the aircraft. Do with that information what you will, but they never made it to Uzbekistan.

[0:35:56] JR: No. They never did. Uzbekistan can buy aircraft on their own. They don't need any help. I'm sure, people will be keeping their eyes on these particular aircraft to see where and when they end up.

[0:36:07] IP: Yes. They traveled in basically, a stripped-down Turkish livery. They covered, or covered. Just painted over the Turkish name on the fuselage and stripped out the white, the Turkish logo, so they basically, white A340s with a red tail. If anybody spots those anywhere, you know where they came from. Keeping with the magic of aircraft movements, let's talk about what's happening with 10 777-300ERs that Aeroflot has bought.

[0:36:39] JR: How did they do that?

[0:36:41] IP: In an interesting way. This is one of those things where Aeroflot had the aircraft unleased from a lessor based in Europe. There were sanctions put in place. Then, we don't know what happened, or what was said behind closed doors. Then after the initial round of

sanctions was put into place, the European Union came back and in April of this year said, "Here's the thing. You can continue to take money from the Russians, if you made the deal before we put the initial sanctions in place."

If you made the deal for these aircraft for the lease of these aircraft before February 26, 2022, you can continue to take their money on a finance lease. Then when the finance lease is paid off, they can take the aircraft. They can buy the aircraft. That sounds tailor made to me, to just be rid of these aircraft and get as much money as you can if you're in fact, a European lessor.

[0:37:52] JR: Yeah. I would say, VEB is only a European lessor based in Ireland, only by name.

[0:37:59] IP: Yeah, a legal fiction.

[0:38:00] JR: Yeah, it's a legal fiction. It's a flag of convenience for VEB. Anytime another company talks about VEB, whether it's CFM, or Airbus, or Boeing, there's always the description about the company about VEB leasing. At the very end, it goes on to say, the company was founded in 2003, based in Moscow, Russia. Joint stock company VEB leasing is a subsidiary of state corporation, Bank for Development and foreign economic affairs. Really, this is a Russia state owned company doing business outside of Russia as VEB leasing. This one is a really sticky situation, where more or less Russia owns these aircraft, or leases it to Aeroflot from the EU and Ireland and now, Aeroflot has paid, or bought, we don't know the specifics. VEB, they basically paid the state of Russia to acquire these aircraft. It's a very strange situation. We will never know how much if anything, Aeroflot actually paid for these aircraft from VEB.

There are a few more aircraft actually owned by a different leasing company. Same scheme. Same almost probable state ownership by Russia. GTLK is quoting Irish-based company, but it is actually typically called Russia's state transport leasing company. There are a few more 777s that I wouldn't be surprised to see outright owned by Aeroflot in the coming future. But really weird situation. Not the case for all of Aeroflot's aircraft, but very strange loophole and tactics used to now outright and I'm air quoting, "own these aircraft."

[0:39:42] IP: I'm confused whether or not this was a method to ensure that certain lessors got their money and were made as whole as possible. Or if this was just a way to make things go away.

[0:39:57] JR: Probably both.

[0:39:57] IP: I mean, yeah. Entirely possible.

[0:40:00] JR: Probably both. In this case, all it's done is have Aeroflot ostensibly pay Russia to get their own aircraft officially. At this point, I don't think any of these aircraft are marketable outside of Russia. No other airline outside of Russia will probably ever operate these aircraft. It's more of a paperwork thing. I think this lifting of that restriction was probably put in place to help other actual European, or elsewhere based lessors recoup their losses by just selling these aircraft, which I don't think we're going to see happen.

[0:40:35] IP: Yeah. I think it's about getting as much money as you can out of them, instead of saying, "No, you can't do business anymore with them at all." It's, they can continue paying you for the aircraft and then they're going to be gone anyway.

[0:40:47] JR: It's not like these stores are selling anything new to the Russian airlines. They're not going to take a new aircraft from Airbus, or Boeing or Bombardier. Wow. No. Embraer and move it over to –

[0:40:58] IP: Sure. Why not?

[0:40:59] JR: - a Russian airline. At this point, they're just hoping to that any Russian airline will buy these aircraft from GE, or whomever. It's just not, not going to happen. Why would they do that? There's no need for them to do that.

[0:41:11] IP: Let's talk about something that unfortunately happened to a planeload of Jetstar passengers. They were on their way from Melbourne to Bali, when they made it to the northwest Australian coast, and the aircraft turned around.

[0:41:25] JR: But why?

[0:41:26] IP: Not because there was anything wrong with the aircraft.

[0:41:28] JR: Was there weather?

[0:41:29] IP: There was weather, but not at the airport. The weather was great when they turned around. They made a U-turn and it was bumpy. But what happened was, is the aircraft that they normally use is not a 787. The aircraft that they were using on this particular flight, because they wanted to accommodate more customers was a 787. As it turns out, the airline forgot to tell the air traffic control and airport authorities in Bali that they were going to use a 787. The available runways could not accommodate the 787 when the aircraft is due to land. They turned around and went back to Melbourne.

[0:42:15] JR: Oof. That's not great.

[0:42:17] IP: I would be so mad.

[0:42:19] JR: Not great. How long were they on that aircraft for?

[0:42:23] IP: Oh, it was like over eight hours.

[0:42:26] JR: Oh, that's bad.

[0:42:26] IP: Let's see. It was close to 10 hours total.

[0:42:28] JR: Do you have to remember the flight number for this one, so people can look it up?

[0:42:32] IP: I'll put a link in the show notes, but it's JQ35.

[0:42:36] JR: JQ35. Okay.

[0:42:37] IP: When we say we'll put things in the show notes, what we mean is there's a set of notes, depending on where you listen to the podcast, it's often titled either show notes, or just notes, or description. When you click on that, whatever podcast catcher you're listening to, platform, you can see a rundown of what we're talking about, when we're talking about it and any links and things like that. If you're having trouble viewing that in whatever you're listening to the podcast on, whether it's Apple podcast, or Amazon, or Spotify, or what have you, if you go to the flightradar24 blog, so flightradar24.com/blog and click on the podcast, that's the truest form of the show notes. Everything will work there. All the links, all the photos, anything that we post there, that will be easily visible there. Just as a housekeeping, bit of info as we start the new year.

[0:43:27] JR: Ouch. Yeah, that is a cautionary tale for airlines to always dot your I's and cross your T's, because this flight occasionally does get swapped out to a 787. On this date, December 27th, the incident date, it was swapped out again. I guess, they didn't tell everyone they needed to tell. The flight was how long did you say the total flight was? Because it looks like, it was about 10 hours, nine hours?

[0:43:51] IP: Yeah. Yeah, a little under 10 hours.

[0:43:54] JR: Ouch. That's not unprecedented, but also pretty impressive that they were able to fly three quarters of the way there and then fly all the way back and didn't need to pick up any more fuel. They got that going for him.

[0:44:09] IP: The 787 is a very fuel-efficient aircraft, I guess, is the moral of this story. Oh, I would be so mad. Normally, at the end of the year, or the beginning of the following year, we talk about airlines that we lost. Airlines that went bankrupt, or were dissolved, or merged and the brand is gone and things like that. There weren't a lot this year. Normally, there's a long list and Brett Snyder over Cranky Flier does a fantastic job every year, as complete a list is possible as anyone around here does. This year, it's very short and not many that I think a lot of people will have flown.

[0:44:53] JR: Yeah. As he notes, 2020 and 2021 really knocked out any of the weak contenders. Anyone who made it beyond that, it's probably somewhat financially sound. But at

this point, a few airlines did not make the cut this year. I'll read the list real quick. Top of the list, Air Leap, Norway and Sweden. There's a whole complex history here, which I don't quite understand.

[0:45:16] IP: It's all legal fiction.

[0:45:18] JR: Nobody apparently does. Royal Flight in Russia, I believe they were a 777-300ER operator, actually. Turns out, the long-haul ledger market out of Russia has dried up, and so has Royal Flight's financing and they are no more. The big one of the year, I think, what was Comair Kulula in South Africa, who famously had the flying 101 livery, where it broke down on the livery, all the parts of the aircraft, which is really cool. Comair was the British Airways franchisee, so those aircraft weren't in Comair livery. They were in a ever so slightly modified British Airways livery, which is pretty interesting. Eswatini Airlink is gone. Air Bonn never started.

[0:46:01] IP: Never got off the ground.

[0:46:02] JR: Never got off the ground, so they're gone. Commute Air in the US, different Commute Air than you might be thinking. We'll get to that in a second. How do I even pronounce this one? I didn't even know –

[0:46:12] IP: Tchadia.

[0:46:12] JR: Tchadia Airlines. I didn't even know Tchad had an airline. They don't anymore. They're gone. The next big one, probably. ExpressJet. ExpressJet was dropped by its sole mainline airline, which was United. It was operating as United Express. When that was dropped, they tried doing their own thing called AHA!, with an exclamation point at the end. Very important, as Brett noticed. They are gone. It turns out, operating weekly flights to secondary, tertiary cities out of Reno didn't work out. Who could have saw that coming?

Blue Air in Romania is gone. They even had some MAX 8s for a little while, too. The last major one is Elite Airways and an oddball airline operating CRJ7 and 900s along the east coast of the US. I don't know anyone that's ever flown them, but they do weird things, like Cranky noted. Vero Beach to Smyrna. I don't even know where that is. Doesn't matter. They're not here

anymore. There are a couple other much smaller airlines to round out the year. Not all that much. Hopefully, that trend continues next year.

[0:47:19] IP: As Brett noted at the beginning of this post, and as he mentioned, 2020 and 2021 really, really took a bite out of all of the airlines that were maybe on the cusp of not making it. This year is just a hodgepodge of airlines that, for various reasons, are no more.

[0:47:40] JR: Yeah. These were not healthy airlines.

[0:47:44] IP: Exactly. We'll put a link to the full list and you can click through some of those. Some of the **[inaudible 0:47:51]** the unknown airlines. Some of those, I had to look up to see where and when they even operated. We'll link to that. To close out the show, Jason, I've got a fun little quiz for you. How many total flights did we track in 2022?

[0:48:10] JR: Total flights. Total flights, total flight. Is it in the hundreds of thousands?

[0:48:17] IP: I mean, no.

[0:48:18] JR: Is it in the millions?

[0:48:20] IP: Many millions.

[0:48:20] JR: Many millions. Let's go with 72 million.

[0:48:23] IP: Close. Very close.

[0:48:24] JR: Oh, okay.

[0:48:26] IP: 70,744,552 total flights tracked in 2022. That was a 102.5% of our 2019 totals.

[0:48:38] JR: Yeah. It's really all asking the stupid question first, which I knew was correct.

[0:48:41] IP: You did.

[0:48:42] JR: 70 million. That's impressive.

[0:48:45] IP: Yeah. 102.5% of 2019 flights. That's total flight, so that includes commercial flights, gliders, private planes, helicopters, what have you, all sorts of other things.

[0:48:56] JR: Rockets. I think you even track some rockets, right?

[0:48:59] IP: No.

[0:49:00] JR: No? Don't you? I mean, technically –

[0:49:02] IP: Did we?

[0:49:02] JR: - isn't the Virgin Orbit one – Not Virgin Orbit, Virgin Galactic. You track that, right? It's kind of, sort of a rocket.

[0:49:08] IP: Not the rocket. The plane, not the rocket.

[0:49:12] JR: Oh, I thought you tracked both.

[0:49:12] IP: The rocket doesn't have ADSB. That'd be cool, but I don't think it would work.

[0:49:15] JR: We should work on that.

[0:49:17] IP: I'll call Richard Branson. Okay, commercial flights. You already know the percentage, because we talk about the percentage all the time. The percentage of 2019 flights was how many?

[0:49:28] JR: What do you say? Like a 102%?

[0:49:30] IP: Well, that was total flights. Commercial flights.

[0:49:33] JR: Oh, commercial. The magic number, 85%?

[0:49:36] IP: 85%. 85.4% of 2019 flights. 35,874,450 commercial flights in 2022. We've reached that until we break through that ceiling of 85%. That seems to be where we're stuck.

[0:49:54] JR: Yeah. EASA's warning this week that 2023 summer is going to be probably as painful as 2022 summer. Does not provide much hope that we'll get to a 100% anytime soon.

[0:50:07] IP: No. Also, I don't want to deal with, how could it possibly be as bad?

[0:50:12] JR: It's coming. Because airspace restrictions are still in place. Staffing is still a mess. Equipment's still broken. All sorts of fun, terrible reasons.

[0:50:22] IP: Here, I was hoping end the show on a happy note.

[0:50:26] JR: Aah.

[0:50:27] IP: Oh, well.

[0:50:27] JR: Yeah, we'll try next time.

[0:50:30] IP: We'll try next time. All right. Well, an expansion of flight tracking over the past year, obviously, both an increase in our coverage, as well as an increase in the actual number of flights, especially with general aviation picking up a bulk of that, as those flights become much more, much more trackable. I'm pleased in those regards that our network continues to increase. That's my happy note to close the show. This has been episode 197 of AvTalk. Our first new episode of 2023. Jason here, you and I were at the beginning of the show going, "I hope we have enough to talk about."

[0:51:06] JR: Yeah, we hit one hour on the dot. Well done.

[0:51:10] IP: There you go. I am Ian Petchenik, here, as always with –

[0:51:13] JR: Jason Rabinowitz. Thanks for listening.

[END]