Explainer: The reasons for Boeing's string of safety lapses, and how S'pore's aviation sector could be affected



The Boeing logo is seen at the Farnborough International Airshow, in Farnborough, Britain, July 20, 2022.

- Boeing's safety woes, which emerged in 2019, resurfaced in January this year, when an emergency door plug blew off an Alaska Airlines 737 MAX 9
- This led the Federal Aviation Administration (FAA) to bar Boeing from increasing its 737 aircraft production
- Then on Monday (March 25), the firm announced that chief executive Mike Calhoun would step down at the end of 2024
- Experts say that a greater emphasis on profit-making in recent years has led to concerns that Boeing may have lowered its standards on safety
- Local airline companies will still need to depend on Boeing planes to operate as it difficult to make a fast pivot away from them, the experts say
- The airlines have assured customers that safety is their "top priority"

Boeing's safety record has run into turbulence of late, culminating on Monday (March 25) when the aircraft maker's chief executive officer, Mr Dave Calhoun, announced that he would step down at the end of 2024.

Boeing's safety woes, which date back to 2019, resurfaced in January this year, when an emergency door plug blew off an Alaska Airlines 737 MAX 9.

After that, the Federal Aviation Administration (FAA) in the United States barred Boeing from increasing its 737 production until FAA was satisfied with its quality controls.

In the meantime, several Boeing planes ran into safety issues, including a Boeing 777 losing a tire while taking off from San Francisco, while a Boeing 737 MAX operating in the US suffered a gear collapse after landing.

Perhaps the most dramatic incident was a Boeing 787 plane which plunged during a flight from Australia to New Zealand, injuring 50 passengers.

In early March, former Boeing engineer John Barnett was found dead with a self-inflicted gunshot wound.

The case stirred controversy as Barnett was a whistleblower who raised concerns about the company's safety and production standards. Then came the news of Boeing CEO Calhoun's imminent departure.

With the spotlight on Boeing for all the wrong reasons, TODAY talked to experts about why the airline maker has found itself mired in a safety crisis.

The experts also look at the possible impact on Singapore's aviation industry, given that the three local airlines here all have Boeing planes in their fleet.

HOW DID A COMPANY KNOWN FOR FLIGHT SAFETY RUN INTO TURBULENCE?

Serious questions about Boeing's safety standards first emerged in March 2019 when all Boeing 737 MAX planes were grounded globally for nearly two years after two crashes involving the Boeing 737 MAX 8 within five months, causing 346 deaths.

Transport analyst Terence Fan of the Singapore Management University (SMU) said that the crisis over Boeing's narrow body aircraft comes only a few years after the one it faced in 2019.

He said this sequence of events could be symptomatic of "a deeper malaise".

Assistant Professor Fan said that while Boeing had traditionally featured engineers in its leadership, this approach had changed recently.

"In the last few decades, there has been increasing focus on the bottom-line — to an extent where fundamental engineering risks might have been downplayed or not fully appreciated or mitigated," said Asst Prof Fan.

Indeed, in a recent interview with the Financial Times, Emirates Airlines' chief Sir Tim Clark said that "to fix Boeing's issues the company needs a strong engineering lead as its head coupled to a governance model which prioritises safety and quality".

Supply chain issues have also plagued Boeing ever since the start of the pandemic in 2020, said Asst Prof Fan.

These setbacks could have compromised maintenance standards, which indirectly might have resulted in errors that led to the emergency door plug of Alaska Airlines coming off.

According to media site The Conversation, Boeing faced a high staff turnover rate during the pandemic, which led to a shortage in qualified maintenance engineers and pilots.

In response to queries from TODAY, a Boeing spokesperson said that it is focused on improving its processes.

"We are squarely focused on implementing changes to strengthen quality across our production system and taking the necessary time to deliver high quality airplanes that meet all regulatory requirements," said the spokesperson.

The company added that it also remains in close contact with its customers, including Singapore airline companies, about these issues and their actions to address them.

HOW COULD SINGAPORE AIRLINE COMPANIES BE IMPACTED?

The only local airline with the Boeing 737 in its fleet is Singapore Airlines (SIA), with 16 Boeing 737 MAX 8s. Scoot and Jetstar do not have the Boeing 737 MAX in their fleet, but fly the Boeing 787 Dreamliner, according to their websites.

According to SIA's financial statement released in February, as of Dec 31 last year, the airline has ordered 13 more 737 MAX 8s. These are slated to replace the ageing 737-800s, another narrow body model.

The FAA order barring Boeing from increasing its 737 production could lead to delays in the delivery of the 13 737 MAX 8's, said Mr Alfred Chua, Asia air transport editor at trade publication FlightGlobal.

"The new 737 MAX 8s are supposed to replace older aircraft, but if they can't come in on time, then SIA may have to delay the retirement of the older aircraft," he said.

If deals have already been made to lease the older airplanes to another airline, for example, Mr Chua said that there could simply be fewer planes in SIAs fleet than planned, and this could mean fewer flights a month for certain destinations.

Experts earlier said that the latest Alaska Airline incident should not be a cause for concern as the door plug that flew off the Boeing 737 MAX 9 is "not ordinarily offered" on the 737 MAX 8.

None of the Singapore airline companies has the MAX 9 in their fleet, they added.

But the ongoing safety troubles at Boeing could mean that some customers will prefer to avoid taking Boeing planes altogether.

Even if this is the case, airline companies cannot just switch over to Boeing's competitors on a whim, given how much these companies have already invested in flying Boeing planes, say experts.

For instance, SIA has 68 Boeing planes in its 143 passenger aircraft fleet.

It would also not be feasible to shift aircraft orders to Boeing's competitors, the experts said.

Mr Chua said that this is mainly due to supply chain limitations, meaning that other aircraft manufacturers, such as Europe's Airbus, cannot produce the extra planes needed to make up for what Boeing had produced in the past.

"Even if there are alternatives, it's also a case of fastest fingers first, as the delivery slot for an Airbus narrow body plane (that is similar to the 737 MAX) is filling fast," said Mr Chua.

"If (airline companies) don't lock in a slot fast, they might only get new aircraft 10 years later."

He added that other administrative matters such as training the pilots and flight crew to operate a new plane model, will also take up valuable time and resources.

HOW ARE AIRLINES REASSURING CUSTOMERS THAT IT IS SAFE TO FLY ON THEIR BOEING PLANES?

Local airlines say that amid Boeing's current woes, the safety of its customers will come first.

An SIA spokesperson said that the safety of its customers and staff is "the top priority".

"We follow all necessary maintenance and regulatory procedures when operating our aircraft," the spokesperson added.

Similarly, a Scoot spokesperson said: "Our operations are anchored on strict compliance to maintenance and regulatory protocols... The safety of our customers and crew is the top priority for Scoot."

Scoot is a budget carrier owned by SIA.

Both SIA and Scoot also said that they are unable to provide information on commercial matters such as whether the demand for its flights using Boeing aircraft has changed, or whether it is looking to order more Boeing planes.

Both cited business confidentiality as the reason for being unable to provide this information.

SIA has also put out a web page assuring passengers on the safety of the 737 MAX 8 fleet.

On the webpage, SIA assures passengers that the Boeing 737 MAX 8, which was involved in the two crashes in 2018 and 2019, are "safer than ever before".

It said that Boeing has implemented additional safeguards such as additional training for pilots and independent flight safety certifications.

SIA is also ensuring that its 737 MAX 8s are completely fit to fly, such as conducting rigorous pilot training, and testing the planes independently through its team of engineers before commencing the first passenger flight.

The website also provides a list of destinations that the 737 MAX 8 flies to, and provides passengers with instructions should they prefer not to fly on a 737 MAX 8.

The Times newspaper in England noted on Monday that Boeing's newer aircraft no longer include the word "MAX", and are referred to simply as "737-8", for example.

Experts also noted that SIA has followed suit by marketing the 737 MAX 8 as "737-8" on its website and promotional material.

Experts say the bottom line is that there needs to be changes to Boeing's overall approach so that safety lapses become a thing of the past.

Mr Chua from FlightGlobal said that Boeing can correct itself but it would take a lot of time, and a radical change in management.

"There has been a lot of talk about appointing engineers to helm the company, but I feel it goes beyond that," said Mr Chua.

"It will require an overhaul of the management style — less about the bottom line and more about engineering quality — and company culture."