

CABIN AIR QUALITY

Background: APFA has been concerned about the potential health effects of fume events as far back as 1983, when Congress shared this concern by holding hearings to try to determine the impact of contaminated air in the aircraft cabin. An early study completed by the National Academy of Sciences concluded that much more data needed to be collected for the broader issue, while simultaneously recommending that cigarette smoking be banned on aircraft. Throughout the 1990s, relatively small studies were conducted by the DOT, the CDC and NIOSH (a predecessor of OSHA). Their early studies all found that contamination levels, while concerning, were low compared to existing health standards.

But there remained unsolved issues, an increasing number of health complaints from Flight Attendants and pilots, which led to repeated calls for new, independent studies. These studies resulted in a series of new reports conducted in the early 2000s. The studies focused on the use of “bleed air” and contaminants from engine oil and hydraulic fluid leakage. The bottom line is that while there have been numerous “studies,” the sample sizes have been small and the results inconclusive, yet concerning incidents continue. The issue is complex and the science has been changing.

How Air is Filtered on an Airplane: Most commercial aircraft (except the Boeing 787) draw fresh air from outside and then channel it via the engines into the cabin. The air is then distributed and recirculated throughout the cabin. The air can become contaminated as it passes through the engine if it comes in contact with heated oils and hydraulic fluids from overfills or leaking or worn seals. It can also be contaminated by outside sources when the aircraft is on the ground. Protective measures to prevent the contamination are limited and contaminated aircraft are often deemed airworthy. The APFA database shows that last month, Flight Attendants at American Airlines experienced air quality events on a variety of different fleet types.

The reason the Boeing 787 is different is because it uses a different air filtering system which avoids drawing air through the engines. This system uses a technical process called gas phase adsorption that removes bio-effluents and fuel by-products. This shows us that the answer to the problem has already been discovered and that regulating the way cabin air is filtered can lessen or even halt cabin fume events.

The Problem: The FAA recognizes that toxic fumes jeopardize flight safety, but the agency has no standard process to collect reports from crew about fume events and has no fixed procedures to investigate such incidents. This means that the true extent of toxic fume contamination remains largely unknown and unreported. Commercial carriers have no mandate to install carbon monoxide detectors on their planes to alert the crew to toxic air, meaning that crews have little more than their sense of smell to alert them to toxic fumes. A lack of training, sensors, and data leaves pilots, Flight Attendants, and passengers with little recourse beyond word-of-mouth to protect themselves.

At APFA: Since July 2018 we have had over 1500 fume events reported and nearly 800 so far this year. One of many reports in 2017 involved seven crewmembers on an American Airlines A330 flight who ended up

hospitalized after landing due to symptoms caused by fumes. It was the *third* incident of toxic fume contamination aboard the very same A330 in months.

Devastating Effects: As Flight Attendants, we know there is an issue as our members have been hospitalized and have suffered chronic and even permanent neurological damage by these fumes. We believe it is long overdue to tackle the issue in a systematic, large scale, scientific manner. We should never have to question the air we breathe in our workplace.

APFA supports the Cabin Air Safety Act (S.1112 & H.R.2208) which makes air on the plane safer by:

- installing Carbon Monoxide fume sensors aboard aircraft
- mandating training regarding toxic fumes on aircraft
- requiring the FAA to record and monitor reports of fume events
- ensuring investigations occur in cooperation with air carriers and labor groups