The Global Voice of Pilots
IFALPA

POSITION PAPER

23POS19
11 October 2023

Cabin Fumes

NOTE

This paper supersedes 18POS04, of the same name. More information on Cabin Fume events can be found in IFALPA Briefing Leaflet 23HUPBL01 – Cabin Fumes.

BACKGROUND

For most modern commercial jet aircraft, cabin air is taken directly from compressors in the engine compartments without filtering. Under certain circumstances oil fumes from the hot section of the engine and/or APU may leak into this air in two fundamental ways: small amounts of oil may enter the compressor on a routine basis because seals minimize leakage but do not prevent it in certain transient phases. This especially occurs during both low-pressure phases and during transient engine/air supply changes.

Less frequently, larger volumes of oil can enter the compressor, either as a result of a worn or failed bearing seal, or due to a maintenance irregularity (e.g., oil over-filling), resulting in what is more widely recognized as a fume event.

These facts have been recognized by regulatory authorities, safety agencies, scientists, airlines, occupational doctors, airframe, engine and oil manufacturers, and crew unions. A fume event may result in the impairment or incapacitation of crew members which jeopardizes flight safety. There is an increasing concern that exposure to fumes may also result in longer-term health effects.

POSITION

- IFALPA is calling for better regulatory enforcement in relation to bleed air contamination.

- Crewmembers should be given basic and recurrent training to recognize and respond to fume events.

- Standardized reporting of fume events is paramount.

- A comprehensive, standardized, and appropriate medical protocol after a fume event should be implemented for affected crewmembers.

- more medical and scientific research is needed on the long-term health effects of fume events.
- installation of enhanced new bleed air filters when available
- real time detection systems should be developed and installed.
- engine manufacturers should expedite and prioritize the certification of TCP-free oils
- industrywide implementation of TCP-free oils