



**Global
Cabin Air Quality Executive**
(GCAQE)

GCAQE Press Release

Immediate release

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‘High court victory for aircrew breathing contaminated aircraft air’

A major global legal precedent has been established with an Australian flight attendant winning damages for injury from exposure to aircraft air contaminated by oil fumes and smoke

The problem of aircraft cabin air becoming contaminated by synthetic jet engine oils containing organophosphates (such as Tricresyl Phosphate, TCP) and a wide range of chemicals has been ongoing since the 1950s.

The aviation industry has known about the potential for exposure to oil fumes in the cabin and flight deck during normal commercial flights for more than 50 years. Instead of mandating air contaminant filters and monitors, the industry denies the problem and allows aircrew and passengers to breathe oil fumes that contaminate the aircraft air supply.

On 3 September 2010 a former Australian flight attendant became the first person in the world to win a civil case resulting from breathing oil smoke and fumes in the aircraft cabin on a BAe 146 in Australia in 1992.

The legal precedent – Joanne Turner v. Eastwest Airlines -- was set in the High Court of Australia. Ms Turner a former flight attendant with Australia’s Ansett and Eastwest Airlines, was exposed to smoke and fumes resulting from a failed oil seal on a BAe 146 flight between Sydney and Brisbane on 4 March 1992, while 5 months pregnant.

The court found that Ms Turner was exposed to oil fumes and smoke generated from engine oil that had leaked into a component of the aircraft air supply system called the Auxiliary Power Unit (APU - engine).

The failure of the APU oil seal was found to be foreseeable, as was the risk that smoke from the leaking oil would enter the aircraft cabin.

Cabin smells from oil were noted to be an ongoing problem acknowledged by the defendant, with numerous complaints about the cabin air prior to the incident on 4 March 1992, including an entry 10 days prior to the incident stating: *‘APU AIR NOT FIT FOR HUMAN CONSUMPTION.’*

A global coalition of health and safety advocates committed to raising awareness and finding solutions to poor air quality in aircraft.

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Ms Turner was found to have been exposed to Mobil Jet Oil II on 4 March 1992 with the court finding that *'pyrolysed effects of Mobil Jet Oil II are harmful to the lungs.'* As such Ms Turner suffered from a pathological condition to the lungs caused by exposure to the smoke and that condition has continued for more than eighteen years and is expected to be life-long. As such Ms Turner was awarded \$138,757 Australian dollars.

The defendant appealed the decision to the New South Wales Court of Appeal and then the High Court of Australia, however subsequently lost both appeals on 1 April 2010 and 3 September 2010 respectively.

It is well documented that synthetic jet engine oil leaks into aircraft cabin air (as a feature of using air supplied through the engines) and that such exposures are a flight safety and health concern, for both aircrew and passengers. Contaminated air exposures are now known to be a normal regular occurrence, an expected occurrence and regrettably an accepted occurrence within the aviation industry.

This court verdict supports the long held GCAQE view that industry actions currently being undertaken to address the issue of exposure to aircraft bleed air are inadequate. The court verdict clearly demonstrates that the call by the industry for further research to determine what chemicals are present when engine oil leaks and how often this occurs is unwarranted. There is already enough evidence available to satisfy the duty of care requirements.

The benchmark has now been set supporting that exposure to oil leaking into the aircraft air supply is harmful to people, both aircrew and passengers.

The supply air for the cabin and flight deck is taken from either the engine or APU and is not filtered for engine oil fumes before people breathe it. Commercial aircraft are not equipped with detection equipment to alert the crew that the air is contaminated, creating an unacceptable flight safety and public health issue. The aviation industry inaction ignores the fact that aircrew and passengers are owed a duty of care and there is, without doubt, enough evidence to apply the precautionary principle and prevent oil contaminating the air supply with proactive maintenance and bleed air cleaners and monitors.

The GCAQE calls for all future aircraft to be designed using bleed free technology such as that used by the Boeing 787, for all current aircraft to be fitted with suitable filters and detection systems, and for airlines to service their fleets with less toxic oils. This court verdict supports that 60 years of unfiltered bleed air is no longer acceptable.

Commenting, Head of Research for the Global Cabin Air Quality Executive, former Australian airline pilot and PhD candidate, Captain Susan Michaelis, said:

'We have known oil leaks on a regular basis as a feature of the way jet engines work. It is no longer conscionable for the airline industry to knowingly allow crews and passengers to repeatedly breathe air contaminated by oil. We have known this for 60 years and the airline industry delays taking action calling for more research. This court verdict shows that the time has come to fix the problem.'

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Notes to Editors:

1. GCAQE comprises some 20 organisations in 3 continents and represents around 120,000 airline pilots, crew and engineers. In the UK, both the Independent Pilots Association (IPA) and Unite the Union are members of the GCAQE.
2. GCAQE researcher, former pilot and PhD student, Susan Michaelis published the 844 page *'Aviation Contaminated Air Reference Manual'* in 2007 documenting the history of the hazards associated with synthetic jet engine oils and hydraulic fluids leaking into aircraft cabin air supplies. www.susanmichaelis.com. The work was said to be 'ground-breaking and seminal work' by the Royal Australian Air Force.
3. All commercial jet aircraft supply breathing air for passengers and crews taken directly from the engines and supplied unfiltered to the passenger cabin. This air, known as 'bleed air' is known to become contaminated with hazardous chemicals present in synthetic jet engine oils and hydraulic fluids. These chemicals include the organophosphates 'tricresyl phosphate' and 'tributyl phosphate'.
4. The history of the hazards associated with synthetic jet engine oils and hydraulic fluids leaking into aircraft cabin air supplies have been a concern since the 1950's. Appropriate research, called for in 1977 following the documented incapacitation of a crew member, has never been undertaken.
5. Research at the University of Washington in Seattle is currently developing a blood test to detect biomarkers for TCP exposure, the additive used in most current engine oils used in turbine aircraft today. A recent paper titled 'Development of diagnostics in the search for an explanation of aerotoxic syndrome' <http://dx.doi.org/10.1016/j.ab.2010.04.032> provides details on this research. The paper states 'Exposure to TCP isomers through leaks of engine gases into the cabin area of aircraft is currently the leading scenario for the cause of aerotoxic syndrome.'
6. The US Federal Aviation Administration, the FAA has funded the development of a 'Guide for HealthCare Providers – Exposures to Aircraft Bleed Air Contaminants Among Airline Workers'. Refer: <http://www.gcaqe.org/documents/FAAmedicalprotocol.pdf>
7. The Legal documents available in this case to date include:
 - High Court of Australia Decision: 3 September 2010: High Court of Australia East West Airlines Ltd v Turner [2010] HCATrans 238 (3 September 2010) <http://www.austlii.edu.au/au/other/HCATrans/2010/238.html>
 - Court of Appeal, 1 April 2010 <http://www.austlii.edu.au/au/cases/nsw/NSWCA/2010/53.html>
 - Original Decision: 5 May 2009: Turner v Eastwest Airlines Limited [2009] NSWDDT 10 (5 May 2009) <http://www.austlii.edu.au/au/cases/nsw/NSWDDT/2009/10.html>
8. Aerotoxic Association was formed in 2007 by former airline training captain John Hoyte to assist crew and passengers concerned about exposure to contaminated air and what is being termed 'Aerotoxic Syndrome'. (www.aerotoxic.org) Tel: 01295-770808 (+4412957708080)