



UK CAA - Fire Task Force

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UK CAA - Fire Task Force

Introduction

- Context – the UK CAA as a Regulator
- Why was this Task Force formed?
- Who has been involved?
- Why am I presenting this to you?



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Context of the UK CAA

- **The UK as ICAO Contracting State – responsibilities for aviation safety in the UK – state laws apply.**
- **The UK as a member of European Union – European law “trumps” state law as of effect Dec 2003.**
- **European Aviation Safety Agency (EASA) – is the government’s agent for the fulfilment of specified State of Design and State of Manufacture obligations under ICAO Annex 8.**



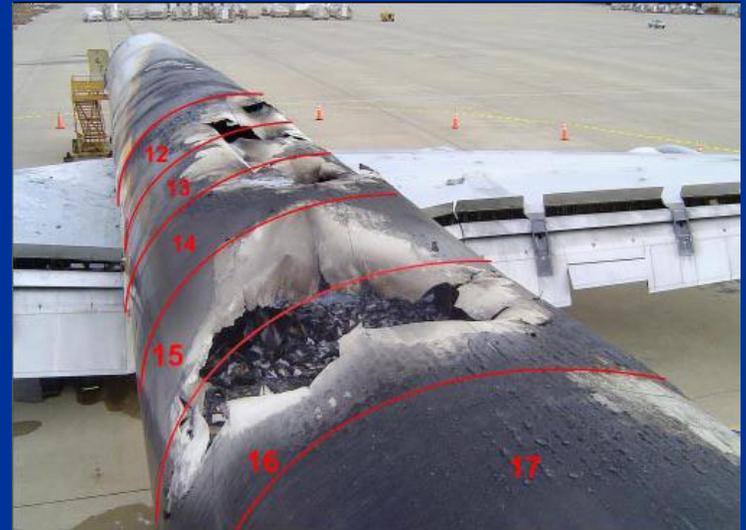
European Aviation Safety Agency (EASA)

- Ultimately Responsible for European rulemaking
- National Aviation Authorities responsible for safety oversight

CAA Safety Data

Mandatory Occurrence Reporting

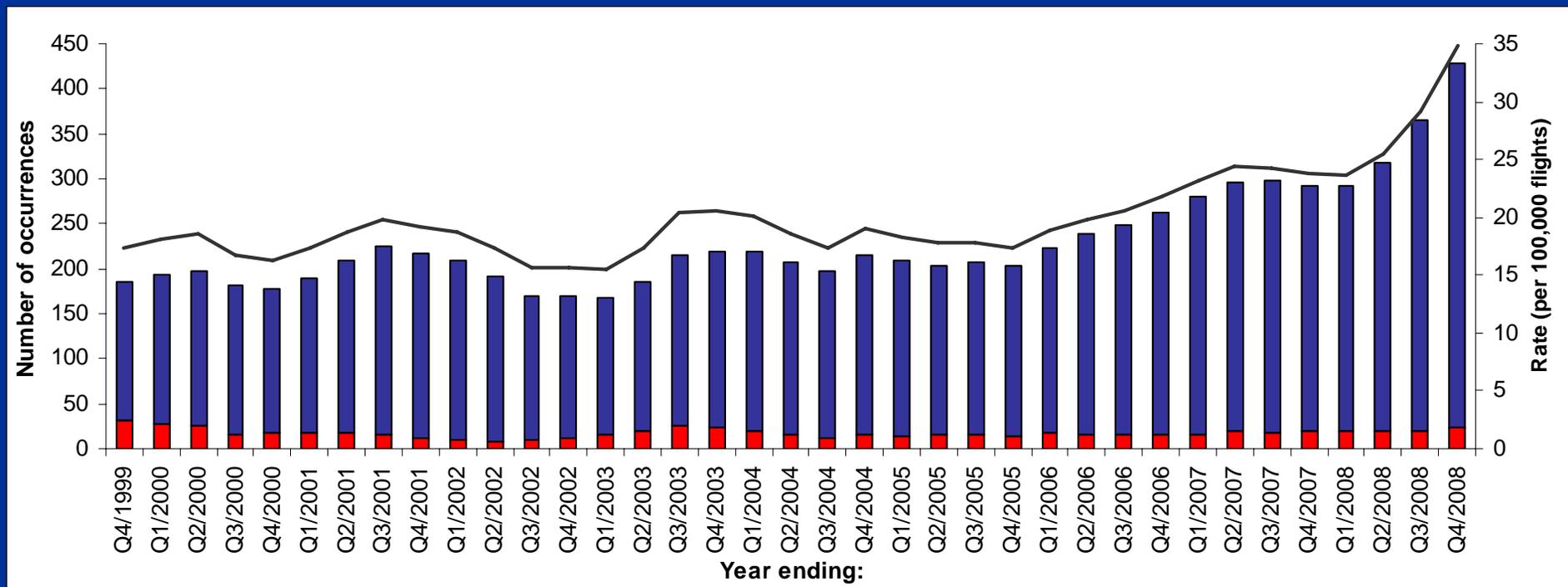
- Established 1976
- Over 14,000 reports per year entered on database
- Strategic Analysis team investigate trends



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Why was the task force formed?

Rate of public transport occurrences 1999-2008



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Seven Task Forces were formed to review the negative safety trend

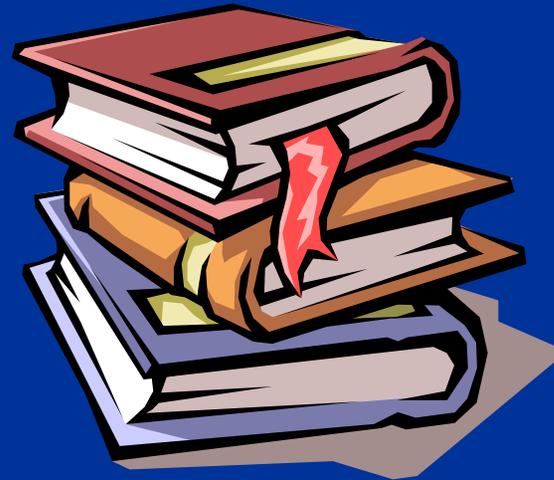
- Airborne and Post Crash Fires
- Controlled Flight into Terrain
- Runway Incursion
- Runway Overrun and Excursion
- Loss of Control
- Airborne Conflict
- Ground Handling Operations



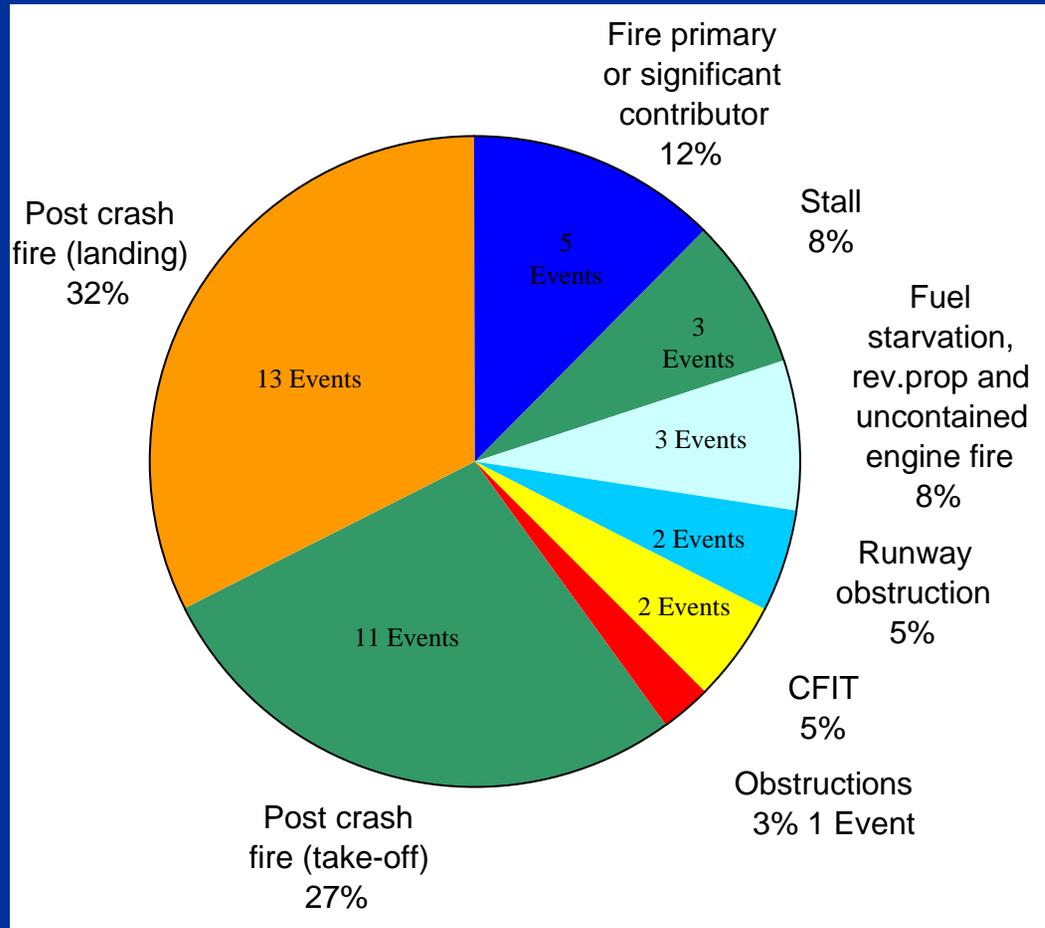
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Main body of Work

- What have we been doing?
- What have we found?
- What's next?



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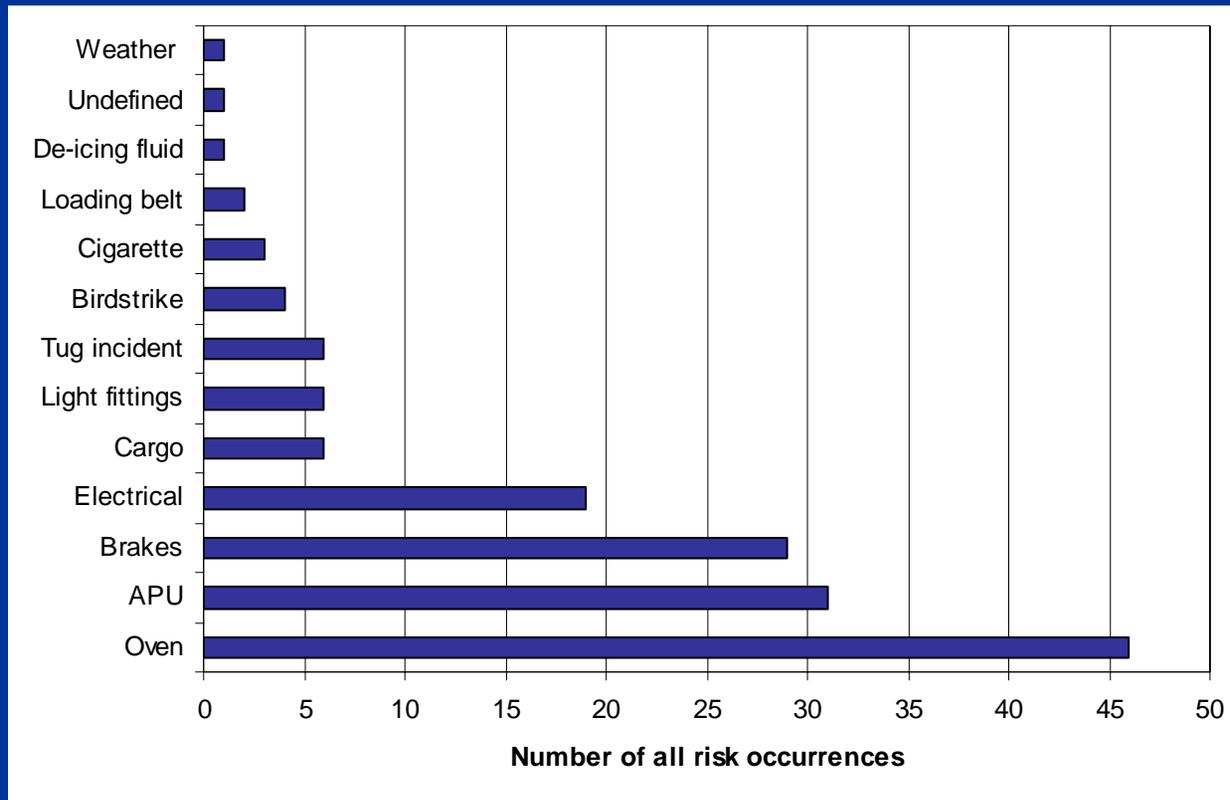
What have we found?

- Focus needs to be on hidden fires, although relatively infrequent have the greatest potential for a catastrophic outcome.



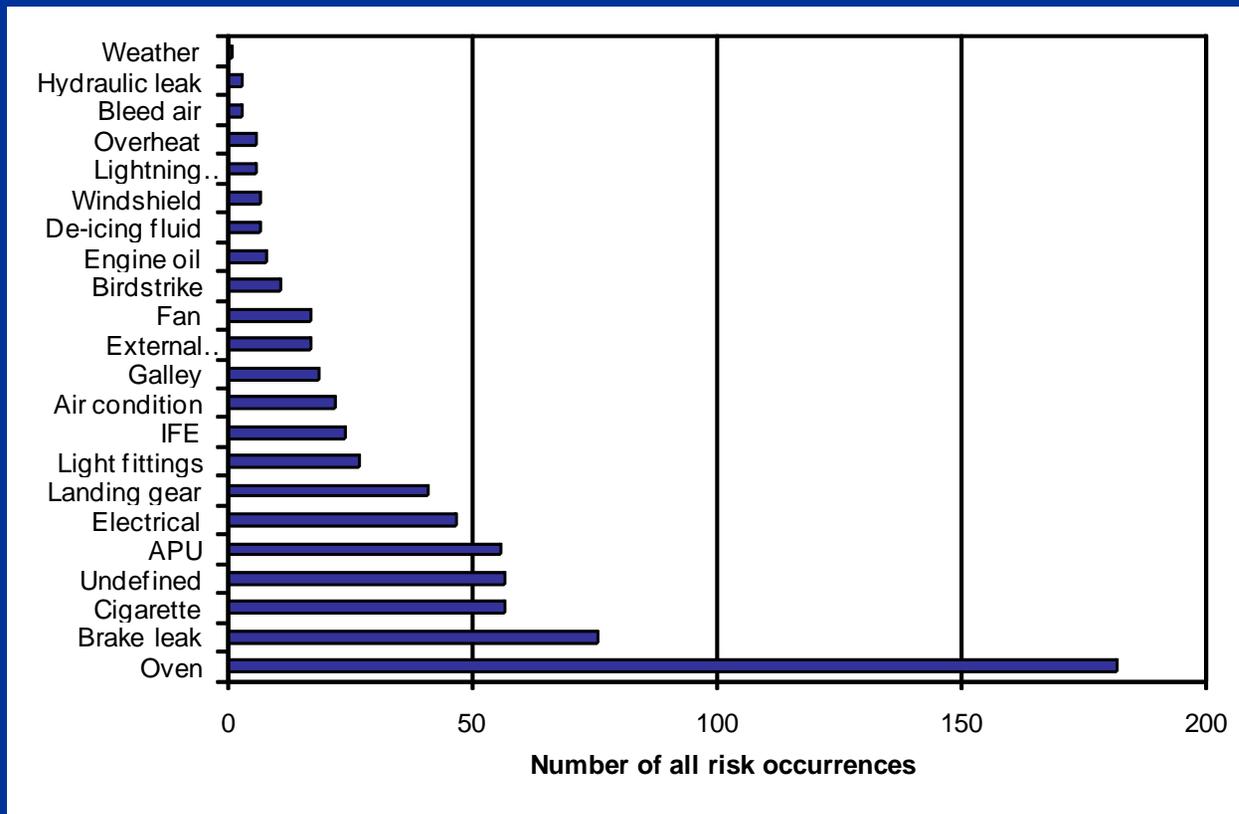
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What have we found – Fire (2005 – 2010)



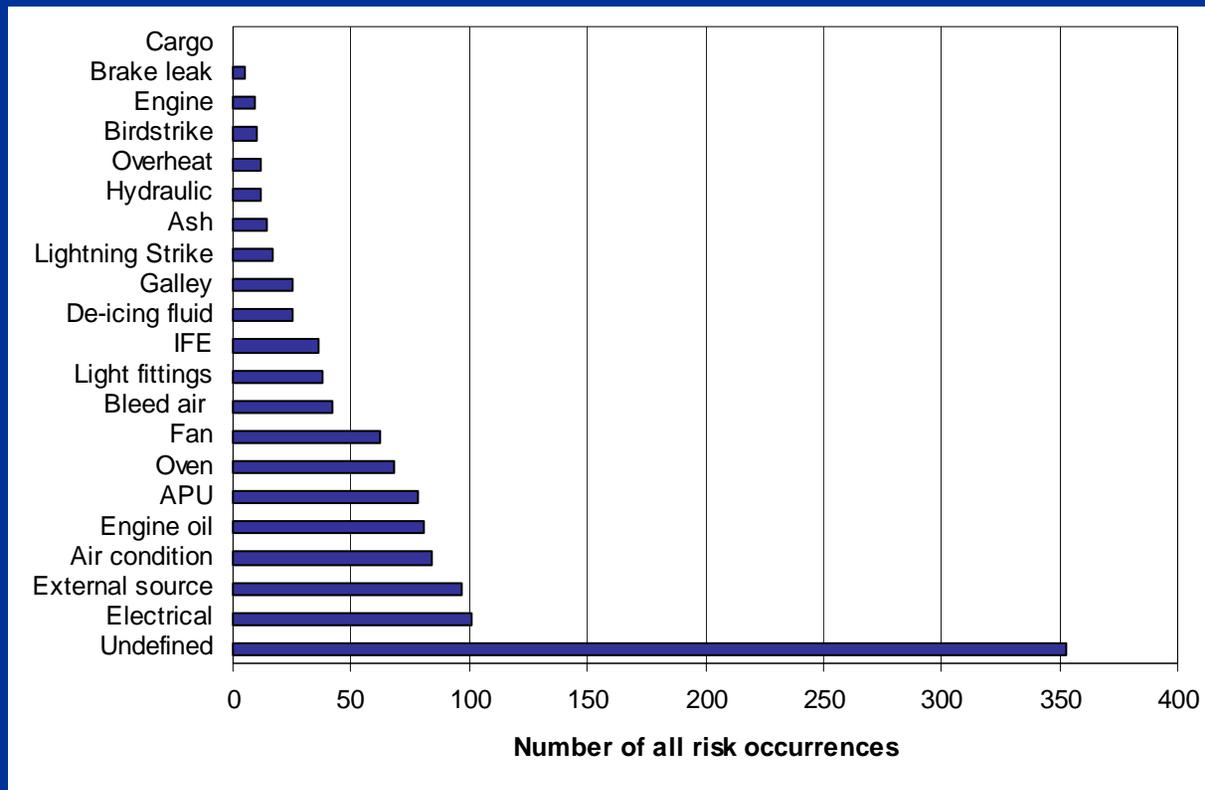
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What have we found – Smoke (2005 – 2010)



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What have we found - Fumes (2005 – 2010)



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What have we found?

- Analysis of all MORs involving fires 1999 to 2008.
 - Cabin
 - Galley - Ovens
 - Toilets – Light units, cigarettes
 - Electrical - IFE, Windshield, Light units.
 - Main landing gear,
 - Brake fires
 - Engines – Main and APU.

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What's next?

- Fire task force recommendations or key desired outcomes,
 1. Significant improvement in the ability to detect hidden fires
 2. Reduce the risk of hidden fires occurring
 3. UK CAA maintains knowledge of Fire Safety Initiatives

- CAA / Industry initiatives
 - Reduce the number of smoke events caused by ovens
 - Reduce the number of toilet compartment fires

UK CAA - Fire Task Force - *Recommendation*

1. Significant improvement in the ability to detect and extinguish hidden area fires, including the identification of the source of fumes that could be precursors to such fires.
 - Investigate the occurrence rate and cause of hidden area fires (S)
 - To investigate options for low cost hidden area fire detection (M)
 - Investigate the effectiveness of extinguisher ports into some hidden areas. (L)
 - Review cabin and define tools for cabin panel removal that cannot be misused. (S)
 - Consider benefit of identifying differing smells, fumes and smoke in the cabin. (S)
 - Review if sensing equipment is likely to be operationally effective in identifying differing sources of fumes. (S)
 - Continued participation in the European Aviation Research Partnership Group (EARPG), which coordinates research within EASA and Member States. (L)

UK CAA - Fire Task Force - *Recommendation*

2. Reduce the risk of hidden area fires occurring
 - Collaborate with other interested parties in defining acceptable levels of contamination in hidden areas. (S)
 - Raise fire safety awareness through a DVD / Internet training campaign to engineering and associated groups on the effects of fire /smoke events on aircraft caused by poor quality control / workmanship. (S)

UK CAA - Fire Task Force - *Recommendation*

3. UK CAA maintains knowledge of fire safety initiatives
 - Develop a CAA Fire Safety Web (S)
 - Continued support of Transport Canada on research into cabin crew communications (M)
 - Continued support on the development of more effective ground based fire fighting foams, (M)
 - Continued involvement in international fire / smoke working groups to ensure UK fire safety concerns are considered. (L)
 - Continued participation in the European Aviation Research Partnership Group (EARPG), which coordinates research within EASA and Member States. (L)

UK CAA - Fire Task Force - *Summary*

- Negative trend in aircraft incidents involving Fire/Smoke and Fumes
- Most cases, fire is the result of an aircraft crash, focus on accident prevention. (CFIT – Runway Incursion and Excursion etc)
- Ovens fire most common but hidden fires have the greatest potential for a catastrophic failure
- Causal factors seem to be on the rise, fumes – unidentified
- Recommendations –
 - To improve ability to detect and extinguish hidden fires
 - Reduce the risk of hidden fire occurring
 - UK CAA to maintains knowledge of fire safety initiatives

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