



# HUMAN FACTORS IN AIRCRAFT MAINTENANCE



## LESSONS LEARNT FROM RECENT INCIDENTS AND ACCIDENTS

**LONDON / 2 NOVEMBER 2017**

08:30 **Registration and Refreshments**

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09:15 **WELCOME & OPENING REMARKS**

**Speaker:** Daniel Olufisan MRAeS, Training Director & Principal Airworthiness Consultant, Wing Engineering Limited and Chairman Airworthiness & Maintenance Specialist Group, Royal Aeronautical Society

09:30 **KEYNOTE ADDRESS: THE IMPORTANCE OF INCIDENT & ACCIDENT INVESTIGATION REPORTS AS A LEARNING TOOL**

Accident and incident investigation reports are intended to eliminate or mitigate any recurrence of previous adverse events. However, they can be subject to biases when they focus, for instance, on human error rather than technical or organisational causes. They are also seldom written in a manner that can be directly used to support the training of personnel across a range of different technical areas. In this presentation, Chris will describe ways in which accident and incident reports have been used to support aviation maintenance. The aim is to increase awareness about safety concerns without scaring personnel so badly that they cannot complete their primary tasks.

**Speaker:** Prof. Chris Johnson, Head of Computing Science, University of Glasgow

10:00 **1) HELICOPTER FLYING CONTROL MAINTENANCE HF ACCIDENTS: A HUMAN CENTRED DESIGN OPPORTUNITY**

This presentation will show that poor design has long been recognised as creating the potential for human error. It will examine a series of three accidents on one helicopter type in 1999-2000 and one from 2015 on another helicopter type. This presentation will demonstrate that the current certification requirements for flying controls, unchanged since 1964, are weak and inconsistently applied, transferring risk unnecessarily to maintainers. It concludes by looking back at James Reason's book "Managing the Risks of Organizational Accidents", published 20 years ago and asks are we really making the same mistakes in error management?

**Speaker:** Andy Evans FRAeS, Director, Aerossurance Limited

10:30 **2) LOST TOOL AND THE BENEFITS OF USING THE FAIR SYSTEM**

Silas' presentation will be focusing on an incident involving a tool which was lost on an aircraft and was not found until the aircraft carried out some vigorous manoeuvres. The tradesman involved was under pressure and was working alone on a weekend. A proper SMS/MEDA type investigation was carried out and an Occurrence Review Group was convened to use the FAIR2 System (Baines Simmons).

**Speaker:** Silas Hays, Managing Director, THI-SMS

11:00 **Networking Refreshment Break**

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- 11:30 **3) HOW ATLANTIC AIRWAYS IS SUCCESSFULLY DEALING WITH HUMAN FACTORS IN AIRCRAFT MAINTENANCE**  
A short presentation with bullet points on how to get MEMS into the Part-145 , then a short film of the outcome.  
**Speaker:** William Smith, Maintenance Director, Atlantic Airways
- 12:00 **4) INADVERTENT EJECTION ON THE GROUND - THE RED ARROWS**  
The presentation analyses what went wrong, but it also describes how personal and team confidence was restored and how, under continued scrutiny from regulators, air accident investigators and the HSE, the team came to terms with why one of their own died in such tragic circumstances.  
**Speaker:** Ross Priday FRAeS, Aviation Safety Consultant & Expert Witness, Baines Simmons Limited
- 12:30 **5) FAILURE TO FOLLOW PROCEDURES. WHY DO MAINTAINERS DO IT? WHAT CAN THE REGULATOR DO ABOUT IT?**  
There has been a constant trend across all Military services of maintenance personnel failing to follow the authorised Aircraft Document Set (ADS). The results of this range from Aircraft serviceable with no issues, to serious damage to aircraft and injuries to personnel. As maintenance personnel do not enter work deciding to disregard the ADS, why do they sometimes do it and what can the regulator do to stop this?  
**Speaker:** Adam Lawley, SO3 Human Factors (Engineering), UK Military Aviation Authority
- 13:00 **Networking Lunch**
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- 14:00 **6) ARE TODAY'S LESSONS LEARNT DIFFERENT THAN PAST LESSONS?** Dr. Bill Johnson will close the meeting by summarizing all of the presentations of the day. He will pose a challenge asking if today's lesson learnt are helping us to evolve new approaches to traditional organizational and human behavior. What new solutions were proposed in today's presentations that have not been previously applied? What new tools, procedures, policies, regulations, and training have the highest potential to ensure continuing worker/flight safety and operational efficiency?  
**Speaker:** Dr Bill Johnson, Chief Scientific & Technical Advisor Maintenance Human Factors, Federal Aviation Administration
- 14:30 **INTERACTIVE PANEL SESSION**
- 15:30 **CLOSING REMARKS**  
**Speaker:** Daniel Olufisan MRAeS, Training Director & Principal Airworthiness Consultant, Wing Engineering Limited and Chairman Airworthiness & Maintenance Specialist Group