

**EXECUTIVE SUMMARY – 430th UKFSC SIE MEETING – 24 MAY 2016**

1. **Drone Airprox at Cowdray Park with arriving helicopter, drone in close formation only a few feet beyond rotor disk. US citizen unaware of UK regulations, conducting aerial work. (4.3)**
2. **E-3D Sentry smoke and fumes in the cabin, smoke detectors also operated. Source not identified, smoke dissipated after drills but re-appeared. Hot TRU in avionics bay. Limited performance of emergency oxygen system traced to faulty aircraft LOX converter. (5.1)**
3. **Severe vibration during AS350BB mountain landing and fire. Aircraft destroyed. Accident investigation looking at 6 possible causes of damage to main drive shaft; sloping ground limitations temporarily increased. (5.1)**
4. **Puma precautionary field landing following engine fire indication and fire bottle discharge. (5.3)**
5. **60% of reports received by CHIRP over the summer period were fatigue-related. Pre-EASA FTL experience being ignored? (5.4)**
6. **Engine fire warning during Barcelona departure traced to cleaning rag left between engine and fire wire. (5.7)**
7. **Pegasus FMC (B767) dumping data when standard Oceanic offsets entered. (5.7)**
8. **Incidents of asymmetric thrust on take-off. Crews not waiting for stable N1, possible SOP issue. (5.8)**
9. **Early flap retraction during Config 3 departure following PF comment “Climbing well at Flap 3”, PM started flap retraction. Fatigue? (5.8)**
10. **2L Milton vacuum jug came apart during service, badly scalding an infant who required hospital treatment. Spot check found 3 other jugs with similar fault. Accident or not? (5.9)**
11. **A330 contact with incompletely stowed airbridge at Las Vegas. Docking system in standby, wing walkers being used but white ground markings on white concrete were almost invisible. (5.9)**
12. **Battery packs overheating when charged from IFE USB port. (5.9)**
13. **‘White van man’ runway incursion to RTO at 80 knots; driver on a different frequency. (5.10)**
14. **Captain entered 51.7 tons instead of 57.1 into the FMC, not picked up on cross-check. Airborne 6 knots slow for weight. (5.10)**
15. **Hot and high operations causing problems with tyre limiting speeds. (5.10)**
16. **Twin Otter: rudder restriction on landing caused by interference between pedal and incorrectly installed demister hose. (5.11)**

- 17. Seneca unsafe gear, incorrectly fitted trunnion. (5.12)**
- 18. B787 at LHR, RUNWAY DISAGREE warning on take-off, captain elected to continue. Late runway change. (5.15)**
- 19. B757 moved after arrival on stand at Leeds Bradford. ECAM indicated brake set but FDM showed otherwise. Cable fouling. (5.16)**

**Dai Whittingham  
Chief Executive  
21 September 2016**

**MINUTES OF THE 432<sup>nd</sup> MEETING OF THE UK FLIGHT SAFETY COMMITTEE  
HELD ON 7 SEPTEMBER 2016 AT COMPASS CENTRE, HEATHROW AIRPORT**

**Those present were reminded of the following Confidential Warning which applies to these minutes and to the contents discussed therein:**

**These Minutes record the proceedings of matters discussed under the Rule of Confidentiality. Circulation to non-UKFSC members, either in whole or part, is to respect the Rule of Confidentiality which states:**

**“Details of accidents, serious incidents and incidents which may be discussed at this meeting are to be regarded as confidential. You are entitled to make use of the information within your own organisation but please use it with discretion and do not quote anyone by name or organisation without their prior authority.”**

**ITEM 4    Chief Executive’s Report**

4.1     There had been little activity since the previous meeting because of the summer break for most organisations. Progress with laser legislation had been slow but there was still optimism that a dedicated laser bill would be developed and that this would provide the police powers necessary to tackle the aviation problem. Timing of any legislation was unclear. It was accepted that a position statement would help maintain reporting levels, as it would indicate that reporting was not a waste of time.

4.2     The new ANO went live on 25 August. Whilst there did not appear to be any major changes from the 2009 version, there had been some significant re-ordering, which meant most of the prohibited behaviours now had a new Article numbers; this might need reflecting in pax warning notices etc. There had been little warning from either DfT or the CAA of the new ANO going live; guidance during the consultation phase had suggested the Order was likely to be issued in the Autumn. (CE afternote: the early implementation may have been driven by the requirements of Part-NCC and Part-NCO, which went live on 26 August.)

4.3     The regulations for small UAVs were unchanged bar the Article numbers. Drones continue to present a significant hazard. A recent Cat A Airprox (subject to formal assessment) occurred at Cowdray Park when an arriving helicopter crew saw a drone in close formation only a few feet beyond the rotor disk. The drone operator was identified and spoken to; he was a US citizen who professed himself unaware of any UK regulations and who was conducting aerial work on behalf of the event managers. Another helicopter operator had agreed to be filmed but the drone pilot got the wrong aircraft. The CAA had been informed and was considering enforcement action against the individuals concerned.

**ITEM 5    Information Exchange and Extracts from MORs**

(5.1)

- An E-3D Sentry was on task at FL320 when the crew reported smoke and fumes in the cabin; this was followed by smoke detector warnings from the Forward Lower Lobe (an avionics bay) and the Forward Forced Air Cooling System (FFACS). The crew went immediately to 100% oxygen but the fire-fighting team could not identify the source.

The FFACS CB was pulled and the smoke began to dissipate. The crew came off oxygen and prepared for landing but then there was a second report of thick white smoke coming from the Fwd Lower Lobe. A Mayday was declared and the crew went back onto oxygen. One of the TRUs was found to be smoking and hot to touch; it was isolated by pulling CBs, whereon the smoke began to clear. 3 minutes later more smoke emerged from the TRU because the busbar had re-engaged.

- The crew believed they had two separate incidents as they had been taught the FFACS was a closed-loop independent system. The checklists were not in a logical sequence and only the experience of certain crew members allowed for timely diagnosis of the fault. The oxygen system could not keep up with the demand for refilling portable bottles for the fire-fighting team; a practice emergency by the same crew on the same aircraft some days later identified a similar problem which was traced to a faulty LOX converter.
- A Griffin (AS350BB) was conducting a mountain landing to pick up a passenger when severe vibration was experienced. The captain elected to land and shut down; the passenger, who was yet to board, indicated with standard hand signals that there was a fire, prompting a rapid egress by the crew. The aircraft was destroyed by the fire.
- All Griffin flying is suspended until the cause of the accident becomes clear. The initial investigation found evidence of a break-up of the forward end of the Main Drive Shaft (MDS) between the combining and main gearboxes but this is thought to be consequential not causal. The technical investigation has identified 6 possible causes: MDS failure, MDS misalignment, tail rotor drive shaft failure, quill drive failure, FOD impact on the MDS, or vibration from failure in the rotors or rotorhead leading to structural failure and excessive loads on the MDS.
- Sloping ground limitations have been temporarily restricted to reduce potential rotor mast stresses. Guidance has been provided to pilots on avoidance of, and recovery from, excessive or rapid use of forward cyclic on sloping ground. Though there was no heavy landing during the accident flight, these are a potential cause of airframe deformation and subsequent MDS misalignment; the importance of reporting and subsequent engineering recovery actions has been reinforced.

### 5.3

- A Puma conducted a precautionary field landing following an engine fire indication that led to the fire bottle being discharged. There were no external signs of fire. The same aircraft had 2 further incidents before the problem was rectified. **Discussion.** Pilots should always treat fire indications as genuine, only engineering investigations could determine whether a warning was spurious.

### 5.4

- Approximately 60% of all the reports received by CHIRP over the summer period were fatigue-related. Operators appeared to be ignoring the rostering guidelines developed prior to the EASA FTL and some routes were now proving to be very challenging. One pilot had commented that in 20 years of working for the same company he had “never had a month like it”. Were operators pressing too hard?
- **Discussion.** Crews who declared themselves as fatigued often ended up in a formal fatigue management process, and there were understandable concerns about becoming stigmatised. Fatigue reporting needed to be encouraged because data would be required to drive any change. XXX was using Karolinska Sleepiness Scale data constructively
- Flight crew reports about the welfare of cabin crew following disruptive passenger (DP) incidents were becoming more common. It was possible the DP risk was being

normalised. Crew members needed to know that they would be supported by their operator.

- **Discussion.** There were significant CRM and other HF issues regarding a decision to divert in response to a DP event. Handling agents appeared to be reluctant to deny boarding; there was a report of an intoxicated passenger being delivered to the aircraft in a wheelchair as they were unable to walk. A [DP Code of Conduct](#) for the UK aviation industry had been published by BATA, AOA and the Airport Police Commanders Group.

#### 5.5

- There had been 9 fatal GA accidents YTD, of which 2 had been ditchings. No common causal threads had been identified other than HF; LOC featured in 38% of all accidents.
- The MOR system was proving difficult to use; this was likely to reduce reporting.
- **Discussion.** There was some anecdotal evidence of light aircraft operating below 500ft which is not only contrary to the ANO but also increases the MAC risk with military low-flying.

#### 5.7

- A crew departing Barcelona experienced an engine fire warning and completed the relevant checklist; it was not a spurious warning. The fire was traced to a cleaning rag that had been left lodged between the engine and the fire wire.
- The windscreen of an aircraft climbing out of New York cracked. The crew elected to continue to destination, their decision being based on advice contained in an article in the company safety magazine.
- The B767 fleet was experiencing problems with the Pegasus FMC dumping all data when standard offsets were being entered at the start of an Oceanic route. Boeing advice was to separate any data entries by 5 mins, but this was still causing data loss. Discussion would be welcome with any other B767 (or Pegasus FMC) operators having similar problems.

#### 5.8

- FDM had showed instances of asymmetric thrust during take-off caused by non-compliance with the SOP to allow the engines to stabilise at mid-power prior to selecting scheduled thrust. The move to Airbus SOPs had removed the 'stable' callout contained in the earlier company version. Airbus advice was being sought.
- An incident of early flap retraction had occurred during a Config 3 departure. The PF had commented "Climbing well at Flap 3" which had prompted the PM to start flap retraction. There were potential fatigue factors involved.
- **Discussion.** There had been other incidents where verbalised numbers had prompted inappropriate actions, for example "N1" being interpreted as "Flaps 1".

#### 5.9

- A passenger injury occurred when a 2L Milton vacuum jug came apart, the contents badly scalding an infant who required hospital treatment; the jug was within its expected service life. A spot check found 3 other jugs in use that had a similar fault. A replacement product (also Milton) failed 3 days later due to a manufacturing defect.
- **Discussion.** Burns involving more than 5% of body area meet the ICAO definition of serious injury and this event might therefore be technically an accident. A discussion with AAIB is always prudent when incidents of this nature occur. There was an argument for items such as vacuum jugs to be given some airworthiness consideration as they are effectively on-aircraft equipment.

- Bags were routinely being loaded above the limit line on the A321 fleet at several UK airports; the issue had been passed to GHOST.
- An A330 was being marshalled onto stand at Las Vegas when it made light contact with an incompletely stowed airbridge. Wing walkers were present, the parking system was in standby and the white ground markings on white concrete were almost invisible to the crew.
- The A330 fleet had a new IFE system that included a USB charging port. There had been 2 instances of extension battery packs overheating. PA announcements were advising passengers not to attempt to recharge battery packs in flight.

#### 5.10

- Recruitment of new pilots was proving challenging; of 16 newly licensed candidates assessed recently in a fixed-base simulator, only 4 reached the required standard.
- FOs (especially the more inexperienced) were moving too quickly to engage reverse thrust after the flare.
- A 'white van man' runway incursion occurred at an Italian destination leading to an RTO at 80 knots. The crew had just selected take-off thrust when the van was seen on the runway, heading towards them; the driver was on a different frequency. The location of the ATC tapes is apparently a mystery to all concerned.
- DP incidents were normally associated with destinations in Spain. The main problem was smoking (2 out of 3); Italian police have refused to respond to smoking events. Many DPs did not understand that any bans were effective for life.
- A senior captain entered 51.7 tons instead of 57.1 into the FMC, which was not picked up by the FOs cross-check. The aircraft was airborne 6 knots below the correct speed for the weight.
- Hot and high operations at destinations such as Madrid had put a number of aircraft close to tyre limiting speeds. Two sets of tyres had been changed following overspeeds.

#### 5.11

- A Twin Otter pilot encountered a rudder restriction on landing caused by interference between the pedal and an incorrectly installed demister hose – this is a known issue. A new MP had been approved which uses a different hose.
- There had been several recent reports of issues with the Beta back-up system (which prevents selection of reverse pitch range when airborne). Transport Canada was expected to issue a safety bulletin authorising removal of the system.

#### 5.12

- A Seneca crew experienced an unsafe gear indication. Completion of the drill produced 3 greens and the aircraft landed safely. Investigation revealed an incorrectly fitted trunnion (a Murphy).

#### 5.13

- Lasham was a Cat B airfield for B737 flights to/from the MRO due to the airspace and the volume of gliders and GA operating in the area. A conversation with local ATC had proved very useful in deciding the best service level (Basic/Traffic etc) and this was feeding back into the risk management process.

#### 5.14

- XXX was concerned about the scope and complexity of recent airspace changes and the resulting high traffic levels. There were suggestions that satisfying commercial

requirements could be leading to a reduction in safety levels as resilience deteriorated in response to lower controller numbers and increased fatigue. A meeting with the CAA was planned.

5.15

- Lithium battery fire containment bags were being trialled. E-cigarettes are a serious threat; the bags will also deal with EFB fires.
- A B787 crew at their home base of LHR received a Master Caution and RUNWAY DISAGREE warning on take-off. The captain elected to continue and selected TOGA thrust. The caution was generated because the performance had been calculated for 27L but LHR had switched to 27R between data entry and taxi. Pilot recency was a potential issue. The captain's decision was based on his experience that the data for 27L and 27R were very similar.
- A crew on an ILS approach received a TCAS RA 'Descend, descend'. There was no guidance on the best response in such circumstances. TCAS events on approach to Las Vegas RWY19 were frequent because of the helicopter route beneath the approach path.
- DP incidents were often luggage-related.

5.16

- A ME carrier was following up on comments made by one analyst on an FDM report. "This pilot is dead." All involved with FDM need to be cautious about the comments they make when reporting events.

5.16

- A B757 had arrived on stand at Leeds Bradford. The captain thought he had applied the park brake and carried on with the shutdown checklist but then heard a rumbling noise which turned out to be from the NLG chock the ground crew had thrown under the wheel as the aircraft started to roll forwards. The aircraft hit a sign. The crew had seen an ECAM message indicating the brake was set but the FDM showed otherwise. The investigation showed cable fouling which meant that although the ECAM thought the brake was set, this was not actually the case.

Signed.....  
Chief Executive  
UKFSC  
21 September 2016

Signed.....  
Chairman