Flight Operations Group -Aircraft Accident Report July 2014-October 2014

This report is derived from both UKFSC Skybrary, AAIB website and Aviation Herald (AH) too, covering mid July – early October 2014. *Comments thus are the author's opinion.*

Our first fatal accident was that to an MD83 which crashed in Mali, West Africa in mid July. Both engines flamed out as a result of the high level phenomenon called 'High Level Ice Crystal Engine Icing'. This is a micro-particle event that current weather radars cannot detect and occurs above convective weather cells. The flight was carrying out avoiding action for the cells they could see on their displays, but were not far enough upwind' to avoid the ingestion. There is a very full explanation of this in the Skybrary website.

The final report from the AAIB has now been issued about the Monarch training flight at Prestwick which had severe landing gear damage after rejecting take-off after very briefly becoming airborne. Eleven trainees were being processed during 24 'Touch and Go' details and confusion arose about a TOCW alert. The AAIB website has the full story and the function of 'Safety Pilot' is considered within this.

An ancient DC3 Dakota, still in active freight service, over-ran the runway at Talkeetna in Arkansas. The co-pilot was slightly injured but the aircraft was undamaged!

Cairo airport is a dangerous place at the best of times, with large parts of the place still in 'the dark ages'. I well recall a visit there on Tristars in which when we were preparing to depart, but before any passengers had rolled up, we witnessed a B737 arriving their gate opposite to our position and as they made the final turn at some 'serious speed' , one of their main landing gear wheels left its stub axle and 'kept going' across the apron and collided with a ULD box about 200 metres beyond. Our experience there was further 'enhanced' when an MEA B707 went past our nose and turned into park next to us; but the handling pilot had forgotten that swept wing aircraft wing-tips turn out against the direction. Our Captain visibly winced as the nearby wing-tip arced towards his knee caps and as the turn progressed, swiped the boarding steps hand-rail big time; fortunately unoccupied. I waited until they had shut down and then raced over to them to warn them of what had happened; to find the flight crew 'well bevied' on what used to called 'Brown Milks'. For this report today, it appears that a Captain vacating his aircraft via boarding steps fell off these and broke his ankle.

A BA A320 had the misfortune to encounter severe turbulence in their descent into Budapest, late in July. Two passengers and two cabin crew were injured, although the Seat Belt sign had been selected several minutes earlier. The aircraft landed safely.

Next event was that to Saudia Airlines A320 during their departure from Riyadh when smoky fumes were seen from one of the aft galley ovens. The cabin crew used fire extinguishers but then became overcome by the fumes, so an 'Air-Turn-Back' was made. These crew members were subsequently moved to hospital. The fire services isolated the source to this specific oven and the Saudi authorities are investigating.

The tragic accident to the ATR72 in Taiwan at Makung in late July was caused by the crew continuing their approach during a typhoon. They were using a VOR approach but became disorientated, colliding with trees and small buildings about 1000m before the threshold.

A somewhat confusing story is emerging about a 'Fumes' event on July 31st to an A320-200 flying from Munich to Bodrum but which diverted into Budapest. During the initial cruise, cabin crew became aware of some fumes and so donned smoke hoods, while passengers put damp towels over their faces. The flight crew were informed and elected to divert. One of the passengers observed that a fellow passenger had dropped a phial of nail varnish remover. The confusion arises when it was revealed that the subject aircraft had had two similar fumes events that were still being investigated. Cont'd.

In these earlier events,cabin crew had removed galley power, but despite this, the fumes had persisted.

USAirways had a curiously handled fumes event in that they diverted en-route from PHL-TLV into Gander while they knew that the fumes had commenced during initial climb-out from PHL; described as a 'burning plastic smell'. Several cabin crew became unwell and eventually sense prevailed and an overweight landing into Gander made. Nothing could be found by the maintenance team, so the aircraft was ferried to PHL and this defect has not recurred. There is some mischievous comment in AH about some reluctance to go to TLV while Hamas was sending rockets into Israel.

There is a follow-up detail about the China Airlines B744 freighter that landed in Atlanta with a section of Inbd Flap missing. The NTSB investigation showed that routine flap carriage and track inspections had not been carried out with due rigour. *BOAC had a similar event on the Classic B747 about 40 years' ago and for them it was a 'very close-run thing'.*

There was a degree of unnecessary risk when a Jetblue A321 rejected take-off following an engine failure with smoke seen by ATC, who initiated emergency services. The crew initiated an evacuation on the runway, despite the fire crew dowsing the fuel fire and in this evacuation, three passengers were injured. *Compare this event with QF32 Captain who elected to keep all on board as this was the safest place.*

An American Airlines MD82 had the misfortune to lose two main landing gear tyres, bursting during the take-off. Although both flaps and engines sustained damage, they made an immediate return safely. *I suffered a similar situation on Tristars when we felt a thump around V1 and thought it was a centre-line light being hit by a Nose wheel. Around 1500ft the flight deck is invaded by the mid galley purser to tell us about 'the thing that hit us under his seat'. We stopped pressuring and dumped about 40 tonnes (we were going to BDA). I went back and the noise from the distorted metal under the purser's seat was very alarming!*

The accident to the Let L410 that crashed in the Congo recently was very much an 'Africa Wins Every Time' event. Passengers not recorded, un-weighed baggage, no load sheet, hence suspect trim. Local observers claim that 'this is the way we do things around here'.

NOTAMS can be both a blessing and a curse, as a China Express CRJ 900 discovered during their take-off at night. Their NOTAM showed that their chosen runway would be closed after their departure and so they continued as planned, only to have to reject their T.O at 110kts when their lights showed them about to collide with WIP; which had commenced 30 minutes EARLY. Although badly damaged, they were able to return to the terminal, where the passengers promptly revolted!

The AAIB investigation into the Linksair Jetstream 31 that had had a partial gear collapse in the Isle of Man in August was a replication of a similar collapse to the subject aircraft in May 2012. The investigation was complicated by a series of Service Bulletins and Airworthiness Directives relating to maintenance practices to be applied to the landing gear 'yoke pintles'. See the AAIB website for more details.

An Iranian manufactured Antonov 140-100 turbo-prop with 42 passengers and 6 crew crashed following take-off from Tehran when one of the engines failed. There were 11 survivors and one was able to confirm to the investigators that the right-hand propeller 'had suddenly stopped'.

Alas there were no survivors from the crew of three on an F27 that crashed in the Serengeti National Park near the Kenyan border and still under investigation.

The US NTSB has released a sequence of reports about the UPS A300-600 freighter that crashed on approach to Birmingham, Ala. The most recent of these showed Crew Human factors are largely the cause, probably exacerbated by fatigue. There was a lapse in proper configuration of the aircraft for the approach, a failure to make standard call-outs when audible warnings initiated and the Pf didn't properly brief the Pnf about the change of runway.

The DHC 6 Twin Otter that crashed near Jumla in Nepal was a CFIT Human Factors event. It was caused by a combination of very poor weather – the airfield had earlier been closed due to this – together with poor CRM between the two pilots. It was apparent from the CVR that the Captain, who was Pf had become fixated on the weather and the potential for icing and ignored the co-pilot's calls of 'Do not descend' and 'Do not turn'. All on board died.

There was another DHC 6 accident in Puapua New Guinea near Port Moresby in mid September which crashed on to the side of a densely wooded hillside, shortly after T.O. However on this one, most of the 11 occupants, although injured, survived and three died. Poor weather has initially been cited but the PNG investigators have yet to submit any kind of report.

Tartarstan airlines in Russia had a crash at Kazan when their B737-500 became the victim of a miss-handled GA, with the loss of all lives. This accident took place in November 2013 and the UK AAIB were invited to participate in the investigation. The Approach progress on the ILS was automatic but the ILS capture was flawed and ATC advised them that they were not correctly aligned. When they reached 'minimums' they realised that they were not in the right place so the TOGA button was pressed and both engines spooled up as expected. In this very busy phase, landing gear and flap were also selected appropriately, but they disconnected the autopilot and thus relied on flight director guidance which was correctly replicating the sudden nose up pitch induced by the engine and flap transition 'moments'. So as the pitch had risen to 25° and the aircraft rapidly climbed to 700m/2300ft, with the speed rapidly bleeding off from 150-125 kts. Both pilots applied nose down pitch inputs and rapidly broke into EGPWS laws triggering 'Sink Rate' and 'Pull Up' calls. However there were no crew reactions to these and the aircraft dived into the ground at 75° Nose down and at approx 450kilometres/hr. *The sad but essential lesson from this accident is the significant distinction in handling a GA from altitude as opposed to one during a routinely trained 'touch and go' detail. From memory, the thing I recall most from the latter events was the sound of the Trim being furiously wound to a 'meaning-full value ' by the Training Capt and me being concerned lest, on the B707, it was a Runaway Stabiliser. Most Training Captains would reassure the F/E with a brief call 'Trimming' but some didn't.*

The Japan Transport Safety Board has now issued their final report on the B787 Lithium Ion Battery thermal runaway and fire Incidents that have been heavily evangelised in the media. From the JTSB investigation, the manufacturer's certification testing of these batteries has not accurately replicated the in-service conditions that the batteries are called upon to operate within. There is a very detailed sequence of various authorities' reports, including the AAIB and regulators too, to be found in Aviation Herald for September 25.

Way back in April of this year, a USAirways B757-200 en-route from Cancun to PHL suffered what can only be described as a 'severe weather encounter', in which 4 passengers and 2 Cabin crew were injured and the aircraft damaged too. The flight crew could see the weather ahead and had requested descent from FL390, but between Fl370 and Fl360 they suffered a 10 second burst of 'energy' that included a hail storm that damaged the radome. ATC knew about the weather situation but couldn't actually 'see it' directly.

Sichuan A320 climbing through FL230 felt a sudden 'jolt' throughout the aircraft, followed by a rapidly increasing smell of jet fuel. So the flight returned to departure airfield Kunming and they landed safely. On the ground, and from the AH picture on their website, it looks as if No1 engine was either going into reverse thrust or a cowling had cone undone. One passenger hospitalised for a 'heart condition'.

There was a runway excursion in Amsterdam a few days ago, when the KLM B744, after landing suddenly veered off to the right and the Nose wheel ended up in the grass. The crew had carried out an automatic landing and initial thoughts as to cause for excursion are focused on a dragging brake. From the AH comments, there is the possibility that the crew didn't disconnect the auto-brakes before disconnecting the autopilots as the speed reduced to taxy speed. *Some kind of 'Rudder Fine Steering input might have taken place?*

There was a tragic accident in Iran last week involving an IrAn 140-100 that crashed shortly after Take-Off, with few survivors. From the initial investigation, the crew had notified ATC that they had a engine problem and from the technical analysis it would appear that the Klimov TV3 engines had suffered water contamination in their FCUs. In addition, it seems that this engine doesn't like operating above +30°C and so this has now been included in the Operations Manual.

Small update to the search for MH377 now being refocused much closer to Western Australia and the three research vessels are now in position and scanning the ocean floor; a task planned to last a further 12 months. **Ends October 14th.**