CHIRP – Confidential & Independent Reporting

CHIRP

Air Transport FEEDBACK

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CONTENTS

CHIRP 5 YEAR REVIEW

The independent Review of CHIRP reaffirmed the requirement for an independent and confidential reporting system for the UK and recommended that CHIRP should continue broadly in its current format for the benefit of the travelling public and the safety of the aviation community. The Review also recognised the importance of safeguarding CHIRP's reputation as a trustworthy, confidential, credible reporting system. (The complete list of recommendations is an annex to this edition of Air Transport FEEDBACK). In recognition of the developments in industry management and regulation (e.g. Safety Management Systems and Performance Based Oversight), the Review Committee recommended changes to the way CHIRP communicates with industry and the regulator. CHIRP has always sought to respond to reporters' concerns and use its data effectively. The changes will improve the timeliness and formatting of the data better to meet users' requirements without compromising either CHIRP's independence or the confidentiality of reporters. We have already begun to implement the recommendations and will continue to do so over the coming months.

Ian Dugmore - Chief Executive

ENGINEERING INTRODUCTION

Once again thanks to those of you who gave me feedback on the engineering section of the last edition of Air Transport FEEDBACK. We are into the summer season, though the peaks and troughs in our business are not as marked as they once were. Still, school holidays and high leave periods will inevitably put additional pressure on certifying engineers. Operational pressure is inevitable and it would be nearly impossible to remove it: however we can all make some adjustments that might help to cope with these demands.

We all risk-assess every day of our lives, when we drive a car, climb a ladder or mend something electrical around the house. Often this is a sub-conscious activity and we may not even be aware we are doing it.

Regarding working on or certifying on aircraft, just give it a few moments of your conscious time to ensure you have assessed the risks, read the necessary paperwork and understand the key points of any maintenance or associated task.

When undertaking any work (even if you think you know the pitfalls), just take a few moments to consider the risks (both to you and to the aircraft's safety) associated with what you are about to do. As an example, wheel spacers removed with the wheel. Despite many attempts to alleviate the issue through bulletins, labels on wheels, or during HF training we still see wheel spacers turning up in the wheel bay.

Finally several reporters have reminded me that they are not prepared to put their licence at risk by cutting corners and on occasions this had led to conflict. While I believe that conflict in the workplace is usually a negative thing, there are times when it is necessary to apply a brake. Good engineers endeavour to get everything right first time and are not afraid to say when they are unsure or to take a second opinion or to ask for advice. When certifying work it is your stamp, your licence and your responsibility so do not be afraid to say no if you did not do the work, or are in any doubt that the work has been done to the correct standard.

Bruce Hunter - Deputy Director (Engineering)

ENHANCED MODE S ALTITUDE ALERT AND STEP CLIMBS

Report Text: At [ ] we received a departure clearance of [ ], and cautioned over the step climb departure profile, I read back the clearance and the mandatory caution of the step climb profile.

I set up the FMS with the departure and confirmed the altitude restrictions in the FMS. From the UK AIP the [ ] states:

"Climb to 3000, passing 700 turn left and intcp [ ], cross [ ] at 3000; cross [ ] at 4000, then left on [ ]; cross [ ], then left on [ ], cross [ ] at 5000; then left on [ ] to [ ] VOR."

During the pre-flight brief, I briefed the departure and confirmed the altitude restrictions in the FMS with my first officer. I briefed the usage of VNAV and the selection of the final SID altitude of A5000. During the brief I cover Threat and Error Management, and discussed that due to increased light aircraft traffic we would engage the AP early and ensure adherence to SOPs with regards to call outs approaching levels, Flight Mode Annunciations, and close monitoring of the step altitudes. Particular attention was drawn to the possibility of short term tactical errors, specifically wrong flight mode selection.

After take-off we were passed to [ ] Departure and immediately told to stop climb A3000. We were passing through A2000 at the time. After reading back the clearance, we were rebuked for setting A5000 in our preselected altitude. We explained we were in VNAV and complying with the step climb departure profile, but told that in future we should select the first step climb altitude otherwise out step climb clearance will be cancelled and they will stop our climb at A3000.

I understand ATCs concerns, however VNAV is a useful tool, particularly with step climb profiles and speed restrictions at lower levels. With Enhance Mode S interrogation of pre-selected altitude, I haven't found particular reference to industry best practice or regulation concerning this. As I understand it, my clearance limit for the SID is a climb to A5000 in compliance with the altitude restrictions.

As I haven't found any specific regulation concerning setting pre-selected altitudes in conjunction with step-climb departures, my concern is how best to fit into the overall ATC system. I value VNAV as a tool, but if it is causing conflict in terms of the wider system, it seems a redundant system unless ATC understand how flight crew can use VNAV.

Any regulatory guidance would be gratefully received.

Lessons Learned - I hadn't considered the wider impact outside of the cockpit of using the clearance limit altitude in the pre-selected altitude. Whilst we thoroughly briefed the departure and system usage, my CRM focus was predominantly inside the cockpit.

CHIRP Comment: **:** This is an interesting report which highlights some limitations associated with Mode S and the ability of the controller to see the altitude the pilot has set in the autopilot control panel. Although it is not common practice in UK operators' SOPs, a FM(G)S (VNAV) controlled climb will ensure that in a busy environment the aircraft climbs in accordance with the SID requirements with a reduced pilot workload. However, the Mode S readout may not indicate the intermediate altitudes at which the aircraft,

under VNAV, will stop climbing, as was the case in this report. If any intermediate level off altitude is critical for separation, and Mode S shows only the final altitude, the potential for concern in the mind of the controller is evident and understandable.

It is also worth noting that while there are operational advantages for pilots with the FM(G)S controlling the altitude to the departure requirements, there are additional complications to beware of in the different ways that different aircraft handle mode reversion (such as selecting a heading) but this is something that should not affect the basic principles.

It is early days of Mode S integration and there is little consistency of policy or practice among operators and ASNPs regarding step climbs, VNAV and Mode S requirements. The issue is likely to arise more frequently as new airspace designs come into operation enabling aircraft to climb to higher altitudes on SIDs while requiring them to comply with altitude restrictions to separate from other 'systemised' traffic flows.

Ultimately the answer is for aircraft avionic systems and ATC equipment to be designed to be compatible with controllers' requirements for visibility of intended altitude compliance. In the interim the development of guidance, advice, and/or SOPs is required to enable flight crews to exploit the capabilities of modern autopilots to the fullest extent. CHIRP will ask the CAA to consider issuing interim guidance and to highlight the need for a fix to EASA.

NOT RESPONDING TO PANPAN

A recent report from an ATCO explained how he missed a Pan call in which the word 'Pan' was omitted from the start of the transmission but added to the end of what began as a routine non-emergency RT message. The controller accepted responsibility for not reacting to the word Pan but there was a lot going on in the control room at the time and he simply did not assimilate the word Pan. The lesson from this is to make the declaration of an emergency as clear as possible by using standard RT phraseology and, in this case, beginning the transmission with, 'PANPAN PANPAN PANPAN'.

MEDICAL EMERGENCIES

Report Text: Having been a commercial pilot for many years, and approaching retirement, I find myself reflecting on safety issues past and present. What particularly concerns me today is what I perceive is an increasing problem of a surge of older and, to put it bluntly, sick passengers flying on long haul aircraft causing significant problems for airlines, passengers and crew. In the past 5 years of long haul flying I have had 2 diversions, and many times more than that of "close shaves". A straw poll of colleagues reveals the vast majority have similar experiences. Many of these issues are foreseeable. For example, recently I had an elderly passenger flying a 14hr flight a week after open heart surgery - really?! He went straight onto oxygen and we spent much of the flight seeking medical advice. Is the position of the airline industry not primarily one of safety? In my view there is, no matter how small, ALWAYS an increased risk involved in diverting an aeroplane. The crew are likely going to airfields none of them have ever visited, that may have limited facilities, dubious weather and terrain issues, and are going to put a crew likely already tired into the seriously fatigued category. These situations cost the airlines financially and in terms of operational integrity.

CHIRP **Comment:** Most operators have systems in place for preparing for in-flight medical issues and for providing guidance to passengers. This includes passengers completing a Medical Information form (MEDIF) in advance of travelling to explain the nature of their medical condition; this is an ICAO form that can be downloaded from the CAA website: MEDIF. Completion of the form routinely leads to a dialogue between the passenger and the operator to ensure the conditions and risks associated with travelling are fully understood. Passengers who pre-notify their airline about a known medical condition are probably not the issue; it is passengers who do not pre-notify existing medical conditions and those who are taken ill during the flight who are likely to be the most problematic.

Information about the carriage of passengers with medical conditions is not widely available; different types of operation are likely to have different experiences of passenger medical problems but all operators are facing the impact of the demographic shift to an aging population. Some operators subscribe to services that provide in-flight medical advice but the number of times these services are used and the

nature of the medical conditions are also not widely available. It is not clear how often diversions occur due to medical emergencies but NATS deals with approximately 750 Medical PANPAN/Mayday calls each year. Advice from the CHIRP Cabin Crew Advisory Board is that using the ground-based medical advice in flight is just as likely to avoid a diversion as to recommend it. If a diversion becomes necessary, declaring an emergency should prevent undue delays but well-intentioned shortcuts or deviations from SOPs are likely to increase the hazards to the aircraft without significantly affecting the outcome for the patient.

MEDICALS WHILST DOWNROUTE

Report Text: It seems to be a regular event that in two different locations we operate to, the flight crew seek a full medical when on the trip. They say it's a pre-medical, so if there are any problems before they have their annual medical at home they can try and rectify them, therefore passing the annual one without being grounded etc.

My question is this what if they have extremely bad news? There is no support from the medical centre, family, friends etc. What state of mind might they be in? Whilst I can't see anyone stopping someone from having a full medical examination, is down route the correct place to be having this?

CHIRP Comment: Pilots are free to seek medical advice and have additional tests when and where they choose. If, however, the tests revealed something that brought into question their fitness, the individuals would be obliged to seek AME (Aero Medical Examiner) advice before exercising the privileges of their licence. If this occurred down route, flight crew members would not be able to pilot the aircraft back to base until they had consulted with an AME. That said, the likelihood of a problem being detected when down route that had not already produced symptoms is unlikely. Bottom line: if you think there might be something amiss with your personal hydraulics, electrical system or airframe, don't defer the defect - get it checked as soon as possible and before you next fly.

INTRODUCTION OF CLASS E AIRSPACE

Report Text: I am writing to express my safety concerns regarding the change of airspace classification in the area where I am a controller. I have 2 concerns: the change process and the suitability of the new airspace procedures.

At the time of my last shift before the implementation day I still had questions regarding separation under various flight rules and with various equipment (deemed mode aircraft squawks etc). I was informed that an e-mail would be sent on my days off to clarify details of deemed separation issues. Training for Class E airspace has consisted of 3 sim sessions which I had completed 2 months earlier, so not exactly fresh in the mind. With phraseology altering in between as new CAA edicts were introduced, it all seemed a little rushed and fudged to me.

Regarding the suitability of this Class of Airspace, it would appear that in order to appease European harmonisation we are being burdened with an illogical, overly complex set of rules to work within. Does anyone canvas and utilise ATCO opinions/recommendations with regard to airspace changes? It would appear not in this case as I can only conclude that such changes were rubber stamped by someone who doesn't work in my area of responsibility. We now have the bizarre situation of the introduction of Class E Airspace which is technically CAS but it isn't controlled airspace as most would understand the term, certainly not me as an ATCO of 15 years. VFR pilots can fly in Class E without a clearance and ATCOs are under no obligation to provide any form of separation between unknown VFR operating in Class E and IFR aircraft. All we need to do is pass relevant traffic information. How is this 'controlled' airspace? If you don't need a clearance to enter, it is not very well controlled but more importantly how many pilots will realise this? This is controlled airspace but not as we know it and certainly should be renamed to avoid misunderstanding. The project should also have been delayed until these peripheral separation issues were properly ironed out. Everyone should know in black and white what is expected of them and should have had the chance to practice this properly in the simulator, which in my opinion has not happened in this case.

CHIRP Comment: The imperative to change from Class F airspace was a driven by European regulations and it remains to be seen whether Class E airspace will prove to be a suitable solution. CHIRP understands that there has not been an increase in the number of safety reports as a result of the airspace changes but the volume of RT has increased. That the implementation went ahead without serious incidents is a

reflection of the professionalism of those at the coal face who had to absorb changes right up to the wire. Like many change processes reported to CHIRP, unforeseen delays and problems seem to be endemic in the aviation industry. Perhaps we see only the instances when things do not go according to plan but a common theme is the imperative to meet an implementation deadline. It would be nice to read about change management that demonstrates the options for delaying implementation when appropriate, all promulgated in a timely manner.

PERMANENT STAFF: CONTRACTOR RATIOS

The reporter raised a very detailed report containing a number of issues that have been summarised with the author's consent.

Report Text: The report starts by noting that the organisation had been increasingly relying on an increased number of contractors while the number of permanent staff was dwindling. The reporter felt that this increase in reliance on contractors had led to a decline in the numbers, experience and the quality level of the people being employed. This appeared to be most noticeable by a lack of experience on type, low trade skills and also skills that failed to match with the individual's CVs. For the permanent staff this meant an increased requirement for staff to be required to work at other stations. While this is allowable within the company policies the reporter felt this policy was being overused. Specifically one issue was highlighted where an apprentice had been asked to take responsibility for a team of contractors. This it was felt was putting huge pressure on a young and vulnerable individual lacking in the skills to manage a large diverse team.

The final point in the report stated that Certifying staff are often left in difficult positions where they have to get work carried out again and/or re-inspect items to satisfy themselves that all is as it should be. At best this is inefficient and could be unsafe if anything gets missed through inexperienced staff not carrying out work correctly or work not being supervised adequately.

The company took this issue very seriously and the MD instigated a thorough investigation which has been reported back by the safety management team. The issues raised were responded to in some detail. This information has been fed back to the reporter.

Company Comment: While the organisation recognised that the reporter was quite correct in identifying the issues relating to manpower they felt this is part of a wider industry issue and is indicative of the increased growth and traffic of both the economy and the airline maintenance industry specifically. Suitably qualified resources are scarce and competition for suitably qualified staff is high. The company recognised this has resulted in a much wider use of contract staff than has been normal in the past.

The company noted that contractors who have joined the organisation and who were identified with low skills or levels not matched to the CV's provided have been removed from the company. All certifying staff holding NAA part 66 licences and approvals have undertaken and been required to pass an English language assessment.

The company also recognises there has been an increased need to use flexibility at times to maintain staff levels at various locations. Where possible this has been done by seeking the support of staff and by using volunteers and feels it rarely instructs staff to work away from base but on occasion has needed to in order to support the business.

Regarding the inappropriate use of an apprentice the company took this issue very seriously and has conducted a detailed investigation into the matter. The results identified issues regarding how this situation was managed locally and steps have been taken to prevent a similar occurrence.

Regarding re-inspection by certifying engineers the company acknowledges this is less than satisfactory from an efficiency perspective but praises the professionalism of its certifying engineers in not compromising safety and ensuring they follow the correct procedures.

CHIRP Comment: As has been mentioned on numerous occasions, the industry is playing catch up in trying to get increased numbers of suitably qualified staff. Engineering apprenticeship schemes have dropped off considerably and while we are seeing a lot more apprenticeships becoming available it will take time to achieve the numbers needed across the industry going forward. Clearly contract labour will play a part to bridge the gap. Most contractors are competent skilled engineers with a good work and safety ethic.

However everyone has a part to play in rooting out the minority of rogue engineers who misrepresent the industry. The company involved has seen fit to undertake a full investigation overseen at the highest level. The root cause appears to be the increased pressure on the pool of suitable engineers and in particular those with the appropriate skills, knowledge and experience. Also of note, the local CAA office is aware of the situation and is monitoring closely.

SECURITY SEARCHES

Report Text: Passing through a security check area at [ ] Airport I placed a clear drawstring bag in the tray, containing a Leatherman Super Tool 300, an LED pocket torch, two small Snap-on screwdrivers and some coins. I was held momentarily before the archway for someone to be searched and I observed the two security staff discussing the contents of the bag. I was carrying a Tools of the Trade card that explains the tools I had on my person are needed to carry out my duties. The security operative opened the blade of the Leatherman tool to examine it which I felt was unnecessary. I asked to talk with the supervisor. There followed a protracted debate with security staff, a security manager and other parties. After a while the security manager disappeared, leaving the supervisor to stand with me. While I was waiting, about a dozen of my work colleagues passed through the same security post, with the same security detail that had challenged me, all carrying their own Leatherman multi-tools and not one of them was challenged! In my view this clearly shows an inconsistency with the standards of the security detail, especially with one of their supervisors in clear view. Eventually, three police officers appeared and intervened. One of them took my personal details in his notebook together with the details of my tools card and ID card. They finally agreed that I was allowed to carry it through security and carry it airside, but I could still be challenged by security at any time!

CHIRP Comment: We recognise and accept the necessity for security checks. In this instance the security operative was new in role and was exercising (as instructed during training) the right to check and examine items passing through a security checkpoint. The concern the reporter expresses is in regard to consistency and safety. There is no standard process for security staff when checking tools on how or where to effect a check and it is important to note that the Tools of the Trade card does not provide immunity from being searched. With some common sense and understanding on both sides this event might have been handled in a less confrontational manner.

MEMS MEDA REPORT

Incident

The aircraft in question had been in the hangar for a C Check. While performing the pre-flight checks the first officer noticed a significant pressure drop in the crew emergency oxygen system. The engineer who attended the aircraft checked the valve and found that the valve was "almost" in the fully closed position. The valve was opened in accordance with the AMM instructions and re wire sealed. The engineer raised a quality discrepancy report.

Investigation

The investigation involved the engineering crew (one certifying engineer and one mechanic) who had certified for the task of fitting and checking the crew emergency oxygen bottle. The certifying engineer identified that he had a very high workload (some 200 plus cabin interior defect cards) but that he was familiar with the AMM requirements of the task. He had instructed the mechanic to open the oxygen cylinder fully then back it off a quarter of a turn. He checked for pressure indication but not on the specifics of the valve position.

Analysis

While the workload for the engineer was high and there were some issues relating to hours worked in the previous reference period was slightly high the basic issue is of appropriate oversight of the task.

The organisation concerned (and some others) have suffered from the same issue and technical information has been distributed to advise staff of the risk involved.

It is suspected the mechanic closed the valve then cracked it open by a quarter of a turn rather than opening it fully and then closing it a quarter of a turn.

<u>Follow Up Action</u>

A further technical news sheet was issued to highlight the issue to engineering staff. The issue was used as a part of the HF training both within the airline and also the third party maintenance organisation involved. The company changed the requirements for the third party maintenance provider in respect of hours worked by staff.

In addition the company undertook a process review to link associated tasks aimed at reducing the engineers' requirement to manage multiple task cards.

CHIRP Comment: Another example of feeling stressed by the volume of work playing a part in poor decision making. The report also prompts questions about the prioritisation of tasks and whether safety issues had been correctly prioritised over other work. While the hours worked were high they were within the working time limitation guidelines. At the heart of the issue is the management of Risk. The engineer involved should have ensured the valve had been opened as per the AMM instruction. Reliance on the indication of pressure was not sufficient to ensure the valve was fully open. The learning for us all is, if you are going to sign it off make sure it is right.

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CHIRP INDEPENDENT 5-YEAR REVIEW RECOMMENDATIONS

The independent review was conducted between September and December 2014 by a panel of industry experts led by Mr Peter Hunt who was formerly a BEA/British Airways Captain, Head of Operating Standards Division at the CAA and latterly Director of the UK Airprox Board. The panel comprised Capt. Tim Cheal (Training Manager, Thomas Cook Airlines), Mr Neil Croxford (Head of Compliance & Safety Management, Monarch Airlines), Ms Mary Gooding (Cabin Safety Manager, Virgin Atlantic Airways), Mr Paul Jones (General Manager ATS, Gatwick Airport) and Mr Geoff Weighell (Chief Executive, British Microlight Association). The Review Panel consulted widely across industry before producing their report and the 13 recommendations below.

1.   The Review Committee strongly recommends that 'aviation CHIRP' should continue broadly in its current format for the benefit of the travelling public and the safety of the aviation community.

2.   Safeguard CHIRP's reputation as a trustworthy, confidential, credible reporting system.

3.   Maintain CHIRP's 'working methods' insofar as the handling of reports is concerned, responsive to the needs of reporters.

4.   Continue to progress IT developments especially as regards the ability readily to extract value from the stored dataset.

5.   Working with CAA, ensure that CHIRP data and information add value to the Performance Based Regulation methods.

6.   Working with CAA, ensure that suitably disidentified CHIRP reports are included in the national ECCAIRS database.

7.   Improve the flow of information between CHIRP and CAA such that communications are timely and effective as regards 'outcomes'.

8.   CHIRP must continue its policies and methods as regards membership of the Advisory Boards. It is important that Members of these Boards are representative and credible.

9.   Following the transition to electronic communications, CHIRP must continue to develop its internet presence: the website and email. CHIRP's visibility in the industry is particularly important: current CHIRP initiatives to reach practitioners and stakeholders alike should be continued, especially those that improve the distribution of newsletters.

10.   CHIRP should continue to host MEMS and continue to develop its potential in close liaison with CAA and the UK Operators Technical Group, UKOTG.

11.   CHIRP should bring 'aviation security', 'ground operations' and 'air displays' into the reporting fold.

12.   CHIRP should work with organisations such as BALPA further to promote the benefits of the Programme to practitioners.

13.   CHIRP should continue to positively review synergies and cost saving opportunities with other UK aviation safety organisations such as UKFSC and GASCo.