

The pressures on safety

As airlines recover and seek to keep costs down there's a trade-off — at some point greater efficiencies can have a negative impact on safety

The last 12 months saw massive changes in the aviation industry as travel restrictions started to ease and the first steps towards commercial aviation recovery were made.

The next 12 months will hopefully see that recovery accelerate if economic pressures don't get in the

way and, during that time, it will be vital that attention is paid to change management and the need to ensure that safety management systems are effective in the face of many pressures. This will be the case not just for those directly involved in aviation but also for all those 3rd-party organisations that support aviation in all its aspects.



Director Aviation:
STEVE FORWARD

CONTENTS

EDITORIAL

COMMENTS ON PREVIOUS FEEDBACKS

REPORTS

- No.1 FC5106 – Basic UPRT flight school training
- No.2 FC5107 – Approach Ban
- No.3 ENG711 – Fuel selector incorrectly installed
- No.4 Fatigue from Rostering
- No.5 FC5109 – Enforced part-time

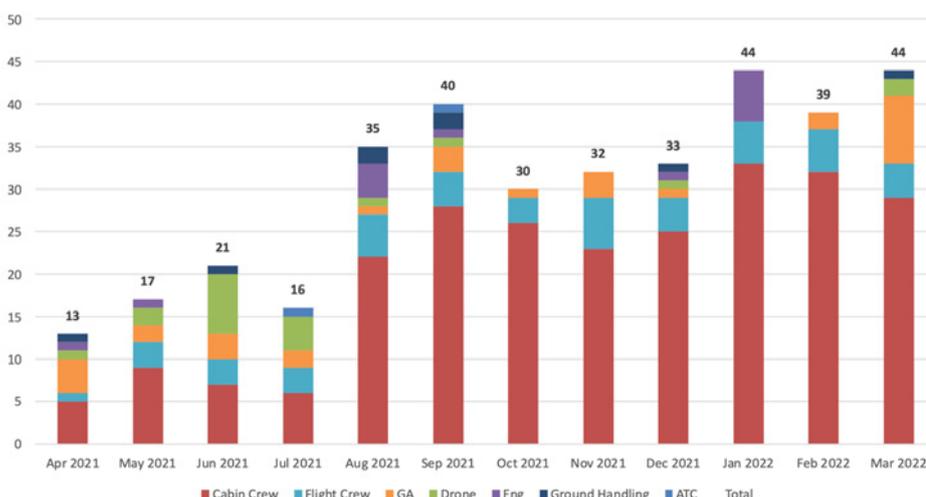
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Reports by Type – April 2021 to March 2022





With that in mind, I thought it might be instructive to look back on the last 12 months of reports to CHIRP to see if there are any themes that might be useful indicators for the immediate future.

Statistically, CHIRP received 364 reports over the last 12 months, about 50% of our historic pre-COVID reporting rate. This is not surprising,

aviation did not really get going again until October 2021 when the frustrations of the amber traffic-light international restrictions were finally removed and countries on the 'red list' were much reduced.

In seasonal terms, CHIRP is now seeing reporting at about 75-80% of winter period norms and so efforts to encourage reporting are paying off – it

is only by reporting concerns and issues that any change will be made, and CHIRP plays its role in this by providing the confidential conduit for reports by those who do not feel able to use their company systems. But pure numbers of reports is a fairly meaningless measure in itself, it is the content and value of these reports which make the difference between simply counting activity versus influencing events.





More specifically, in the last few months CHIRP has received a number of reports about fatigue and FTL management that are indicative of companies trying to maximise schedules with reduced crewing levels and availability. Although we can't publish many of these reports due to confidentiality issues, we do progress those that we can with the appropriate agencies and, in many cases, we have been able to pass on our concerns to the CAA Flight Operations Team to review the circumstances reported.

Whilst these individual reports have presented important issues that have attracted specific actions, it's the aggregated statistics that reveal some key trends of concern. A few words of caution though, the reports that CHIRP receives represent a fairly small statistical sample and so we should be careful about reading too much into them.

Also, CHIRP obviously receives reports that are generally critical of things that have gone wrong and so there is a bias towards negativity that might not reflect the majority experience.

Nevertheless, the sun-dial graph shows the top-15 key issues reported to CHIRP by Flight Crew over the last 12 months, with Company Policies and Culture; Duties and Rosters; Commercial/Management Pressures; and Management Relations well to the fore.

Concerns have focused on FTL/FDP limits being regularly approached; rosters containing successive long-haul duties with minimum rest at destinations or after return to the UK; reduced resources (crew availability); pressures to operate to time schedules despite the additional constraints of COVID procedures; late rosters; and many reports of crews who feel fatigued but do not feel they can report as such due to fear of reprisals.

All of which indicates that some organisations appear to be running their systems at the red line at the moment

as they try to meet increasing schedules with fewer resources than they had before due to COVID redundancies and the need for greater 'efficiencies' in order to remain viable.

Increased efficiency is a laudable notion that has obvious managerial attraction in keeping down costs as some airlines struggle to survive but there's a trade-off: as James Reason identified in his 'Safety Space' concept; at some point, reducing costs has a negative impact on safety and this needs to be at the forefront of any change management risk assessment – as the old saw goes, 'if you think safety is expensive, try having an accident...'

CHIRP will continue to engage with the CAA and organisations where it can to ensure that your concerns are aired in a confidential, independent and impartial manner. The first option should always be to use the formal ASR/MOR/VOR reporting systems where you feel able to because this will hopefully gain the quickest and most complete response to any concerns. But CHIRP stands ready to assist as best we can those who do not feel able to do so or wish to report concerns about things that 'nearly happened' and might not meet the threshold for formal reporting elsewhere.

Steve Forward, Director Aviation

This raises the need for extra vigilance in the 'Receiving of Components' process

Engineering Editorial

We're all aware that a large number of aircraft have been sent for scrap due to the pandemic decimating the air travel market. Also, the global shortage of silicon chips, although not specifically caused by the pandemic

but exacerbated by it, has led to stocks of incomplete components that would be serviceable but for the installation of a silicon chip thereby leading to a potential increase in counterfeit components to replace them.

This all raises the need for extra vigilance in the 'Receiving of Components' process. Components from an aircraft permanently withdrawn from service can be reused and even issued with an Authorised Release Certificate if they are removed serviceable by a Part 145 Approved Aircraft Maintenance Organisation carrying out dismantling and are subject to inspection in accordance with the Component Maintenance Manual (CMM) by a Part 145 Approved Maintenance Organisation with the appropriate 'C' Rating.

This applies to the sale of numerous items (for example Flight Deck Doors - see GHS51 in CHIRP Feedback 138, Apr 21, where CHIRP came to the conclusion that the sale of the doors were not a security risk but possibly remained a Bogus/Unapproved Parts risk).

The same risk applies to a comprehensive report recently received by CHIRP in reference to scrapped aircraft components being sold on a popular auction website: the components did not show evidence of mutilation to avoid them re-entering the aviation supply chain.

The report was relayed to the CAA with the reporter's permission, and the CAA fed back that the concerns were investigated and that the products had had their part number ID plates removed by the Maintenance Organisation, which is deemed sufficient to prevent them from being put back in the Supply Chain.

CAP 562 Leaflet B-210 4.2, does allow this for items in cases where mutilation would detract from the reason to purchase the component (e.g. training aids or ornamental use). This is an area where one could use some imagination, dependant on resources available, to





prevent the component re-entering the supply chain - an engineer would have little difficulty with oversize drilling of the tapped holes securing a data plate for example to prevent another data plate being attached. Whether an individual in the supply chain would be in a position to apply such protection is questionable, which is why the tool of choice in Stores is often a sledgehammer.

The best defence against Bogus Parts (CAA), also known as Suspected Unapproved Parts (FAA), is the vigilance of supply chain staff and the engineer certifying the replacement. Certifying the replacement of a component includes the Condition, Assembly and Functioning of the component (CAP 562 Leaflet H20 1.3), but also assumes the certifying engineer has carried out due diligence in respect of the component's legitimacy. Sadly, some organisations retain the Approved Release Certificate at Goods-In, meaning the second line of defence by the engineer (and third if you do not include your mechanic) is massively reduced in the process. Refer: CAP 562 Leaflet B-210 5, j).

No one wants to fit an unapproved part, and confidence in performing a thorough examination of an Authorised Release Certificate can only be built up over a matter of months, if not years. Never assume that the Goods-In Inspector catches everything every day and, by the same token, never think the supply chain is secondary to air safety.

Do not work on the basis that they are nothing to do with you in a distant shed far from the hangar. Ask yourself, what are the most common areas that give you clues to a bogus part, and what are the most common areas on an Approved Release Certificate? The Part Number and Serial Number are the least likely to be a giveaway; most of the time, dishonest people are not so stupid as to get those wrong.



Phil Young,
Engineering Programme
Manager

COMMENTS FROM PREVIOUS FEEDBACKS

Comment No 1 – MOR Handling

With regard to FEEDBACK Ed 141 Report No.2 and the insidious effects of fatigue (FC5105). I was very concerned that a major flight safety hazard detailed in the above report seems to have been completely overlooked.

Whilst the report on the effects of cumulative fatigue and the rostering practices that led to it was shocking itself, even more concerning was the fact that the reporter was pressured by a manager to withdraw the MOR. Surely this behaviour goes against all the principles of open and just flight safety reporting and should, at the very least, be commented upon by yourselves, if not investigated and the airline challenged over this?

I'm on the managed-exit pathway with [a major UK Airline] (early retirement basically) but I still keep in touch with a lot of the those left behind and it would seem there are similar management issues there - with any debate on internal forums about fatigue concerns getting shut down.

“CHIRP Response”

We agree, managers inappropriately pressuring reporters to withdraw MORs is absolutely not what we would wish for and goes against Just Culture ideals. We deliberately retained it in the reporter's text to highlight the issue but, because we're also somewhat constrained by what reporters agree that we can do with their reports due to confidentiality concerns, in this case it was not possible to go back to the company because that would have immediately identified the reporter and would have likely had serious repercussions for them.

But we did include it in our conversations with the CAA who, more generically, are able to review the culture at airlines when they conduct their oversight audits.

We focused on the fatiguing aspects of the report because they were the most pressing issue at the time but, as the commentator says, we should probably have at least put in a sentence or two about just culture and the handling of reports. We don't always get it right and, in our defence, we did make the point obliquely in the editorial, but not as overtly as we might have done in our 'CHIRP Comment'.

Comment No 2 – Maintenance Practices

I've just read the latest edition of CHIRP (Ed 141) and I have a question regarding Report No.3 (ENG709). The reporter says that the charging of the crew/portable oxygen bottles was removed from the AMM many years ago. Even with a C15 dispensation from their NAA, how would the engineer sign off the task, assuming it's performed on the aircraft, if not approved in the Aircraft Maintenance Manual (AMM)?

“CHIRP Response”

The associated Tech Log would carry the following entry; “O2 bottle removed and refitted IAW 35-??-?? P/N On/Off S/N On/Off”. The bottle is charged whilst cradled on top of the oxygen trolley and the “Certification” of the oxygen is by an internal company document that covers the physical work and its inspection. This document also acts as a Certificate of Compliance (CofC) for the actual gas and its traceability.

This is all permissible practice, provided it is in the Maintenance Organisation Exposition (MOE) and Company Procedures. If an Engineer were to change a bottle with a new or overhauled one, he or she would of course expect a 'Form 1' and would use the word “Replaced” in the Tech Log. The CofC for the gas in this instance would have been received and retained by the Original Equipment Manufacturer (OEM) or overhaul facility, with the cast iron bottle coming from British Oxygen, for example.





I LEARNT ABOUT FLYING FROM THIS (ILAFFT)

Experience gradient

May 1990, after only a few months on line, I was flying back from Palma to Glasgow at stupid o'clock in the morning. Though we were in brilliant blue sunshine, fog covered the airport and we were instructed to hold at the 'AC' (beacon formerly residing at about a 5-mile final from what is now RWY 05).

NDB holds were bad at the best of times. Flying a hold involved raw data as there was no other way, and on our 737-200s the only autopilot heading control was on the Captain's RDMI so we FOs either asked for turns, or flew in 'Control Wheel Steering'. In the simulator we had to demonstrate our abilities every six months by hand-flying NDB holds with a 15kt crosswind component as standard. Fortunately on this leg I was PNF [Pilot Non-Flying], as we called it back then.

Approaching the airport as a greenhorn who had never seen a real holding pattern flown in anger, I was bricking it. I hope I was of some use to the Captain; I'll never know. He clearly wasn't bothered. He shoved his seat back three notches, lit up a

Hamlet (small cigar, whose advertising showed calmness under stress), and flew us several times around the hold using his foot to turn the heading bug on the appropriate timing. I don't recall, but he must have used his other foot to start and stop the clock.

We now call it an "experience gradient" but as I grew older, and hopefully wiser, I remained aware of how the view differed out of the two front windows.

CHIRP Thoughts

Although a tale from 'different times', the comment about 'experience gradient' is as relevant today as it ever was. One would hope that modern CRM training and task-focus would preclude such a laissez faire approach to flying but good crew performance relies on everyone working from the same song-sheet and understanding each other's perception and perspective of what they are trying to achieve.

In the post-pandemic context, crews may have a very different expectation, appreciation and ability to deal with the complexities of a particular task as a result of perhaps vastly differing currency or experience as flying returns to more intense levels.

It's often assumed that the Captain of an aircraft will be more familiar and experienced than the FO but this might not be the case. Although perhaps more experienced overall, a Captain could easily be new to a particular aircraft type if they have recently achieved command for example, and so the 'experience gradient' might be in the reverse direction whereby an experienced FO might be very comfortable in conducting tasks that might not be wholly second-nature to the Captain, particularly if a change from long-haul to short-haul operations (and vice-versa) is involved.

As a result, a Captain's comfort levels, judgements and confidence in what might be achievable might not be as well-tuned as those of an experienced FO who really knows what is going on due to their perhaps better familiarity with the aircraft type and/or route.

Ultimately, it's good to talk, and every member of the crew should be up-front about their potential weak areas or lack of familiarity so that the others can take that into account and guard against potential errors or misunderstandings.



Reports

Report No.1 –FC5106 – Basic UPRT flight school training

Report Text: I am writing as I wish to voice my views on the new UPRT courses which are now mandatory for new pilots and I'm interested to hear your thoughts.

I am a TRI on [xxxx] and I regularly fly and instruct on light-aircraft. As you are aware, student pilots who complete their initial training now require to do a 3-hour UPRT course before they can

apply to airlines. As part of a type rating we do a 4-hour simulator session on UPRT manoeuvres. I have found many students are struggling with this part of the course because it is very different technique to what is taught during the UPRT basic course at flight school.

For example, in a light-aircraft in a high-nose upset, you will recognise the situation, APPLY power, lower the nose and roll wings level. However in a jet transport aircraft you may have to initially REDUCE the thrust, lower the nose and roll wings level. The same applies for stall techniques, in a swept-wing with pod-mounted engines the most important thing to do is lower the nose and, to do this, a reduction in thrust may be required.

I see lots of students on their type-rating course struggling with this due to being taught the UPRT recoveries for light-aircraft during the UPRT basic flight school course. Personally I feel that the possibility exists of airline pilots who may find themselves in an upset situation in a jet transport may revert to these previously taught techniques during UPRT, which may in turn make things worse. Pilots often revert to how they were first taught when under stress and dealing with situations. I would therefore ask, is the UPRT course really achieving the aim it was set out to do?

I strongly feel that simulating stalls and upsets that mimic incidents like AF447 is far more beneficial in a Level-D simulator than learning light-aircraft techniques





which essentially would make the situation worse if these were applied to a swept-wing jet transport airplane. I feel part of the issue is the instructors teaching these UPRT courses at flight school often have no experience with jet transport UPRT recoveries and are unaware of the differences.

CAA Comment: The CAA have recently audited UPRT at training schools to ensure that they met with the regulator's requirements for those focused on delivering commercial pilot training as opposed to aerobatic training. Such training for commercial pilots is very different from the UPRT syllabus necessary for a pilot about to undergo aerobatic training to achieve an aerobatic rating on a single-engine piston aircraft.

“CHIRP Comment”

UPRT conducted at flight training schools may or may not assist the large-aircraft Commercial Airline pilot in the actual recovery of their aircraft but the same could be said for many aspects of basic training – many principles learned in a Cessna 152 for example may or may not be relevant to a large-aircraft operator, but we all have to start somewhere.

By starting simple and moving to more advanced exercise(s) we increase our competence, and our resilience. Differences required with large-aircraft (e.g. inertia, engine handling, and numerous other items) are covered as part of the advanced MCC or Type Rating Courses. UPRT training (as approved by the CAA for large-aircraft operators) includes specific standardised ground-school requirements that emphasise the differences between the light-aircraft used for such training and the large-aircraft case, and only those providers who have been approved by the CAA for this activity can deliver the associated UPRT training, which is quite different from UPRT training delivered by other organisations for aerobatic purposes for example.

There are a couple of aspects of UPRT that may also be relevant to the UPRT training requirements. Whilst Level-D simulators provide excellent training facilities, they do lack in a couple of areas:

the inability to provide G-loading and the lack of disorientation effects spring to mind (especially with regard to UPRT).

The opportunity to experience “G” is a vital element in the UPRT training so that pilots will not be surprised when they encounter levels of G when commencing a recovery. Even the 2.5G that an Airbus limits to might startle a pilot during a recovery, and the opportunity to experience it in a light-aircraft will probably be invaluable.

Furthermore, a Boeing could pull a lot more G than this and the ability to experience “G” in the UPRT training prior to CPL issue is most worthwhile. The regulatory requirements for UPRT are now extensive (and covered under [ORO.FC.220 & 230 and their associated Guidance Material](#), and [EASA Part FCL Appendix 9](#)), but operators are at liberty to increase the training beyond the regulatory levels.

We would all agree that prevention is better than recovery, and a lot of the regulatory requirements focus on this. But we must not overlook the number of aircraft that have ended up in an “Unusual Position” from which the flight crew were unable to recover.

CHIRP suggests that the core issue in these was probably not whether they closed the thrust levers or not, but the very basics of recognition and recovery (e.g. rolling to wings level before pulling for the nose-low recovery case).

Level-D flight simulators have improved recently with the implementation of CS-FSTD 2 (which ensures the simulators should adequately reflect the handling of the actual aircraft more realistically), and airlines and training organisations now have the ability to increase the amount of training of stalls and other upsets that mimic incidents.

There does, however, remain a regulatory requirement for Upset Recovery, as well as prevention. The basic training provided in the light-aircraft training may assist in this regard, even though it may not be as specific as one

would like, and it's also important for airlines to make sure that their trainers (who may not all be experienced light-aircraft pilots) are nevertheless aware of the importance of emphasising the techniques and differences in large-aircraft UPRT handling.

Background Information:

Commission [Regulation \(EU\) 2018/1974](#) entered into force on 20 December 2018. This Regulation amended Commission Regulation (EU) No 1178/2011 by introducing new requirements for upset prevention and recovery training (UPRT) for pilots in its Annex I (Part-FCL).

Effectively, on-aircraft Advanced UPRT (FCL.745.A) became mandatory from 20th December 2019; all pilots studying for new ATPLs and pilots undergoing their first type rating course in multi-pilot operations, are now required to undergo the Advanced UPRT course. The training requirement under FCL.745.A is 3hrs of actual UPRT (i.e. not including time spent conducting taxi, transit, circuits, approaches etc).

It is not a regulatory requirement for existing commercial pilots (ATPL/CPL/MPL) to undergo the Advanced UPRT course but all commercial airlines are required to include recurrent Flight Simulator UPRT over the normal 3 year Simulator Programme. There is no requirement for in-aircraft recurrency.

With respect to the timing of the Advanced UPRT course within the ATPL syllabus, there is no prescribed schedule and it may be flown at any stage. Typically UPRT can be flown at the foundation flight training stage or at the advanced flight training stage; most training organisations choose to fly the Advanced UPRT course at the end of the IR phase prior to the MCC/JOC (Multi-Crew Cooperation/Jet Orientation Course) stage.

ICAO Doc10011 [Manual on Aeroplane Upset Prevention and Recovery Training](#) also refers, and Boeing's article [Aerodynamic Principles of Large-Airplane Upsets](#) provides useful background to UPRT concepts and recovery procedures.





Report No.2 –FC5107 – Approach Ban

Report Text: In my base there seems to be a different understanding of the approach ban. In my opinion you cannot continue the approach below 1000ft if the reported RVR is below the minima for that approach. I've seen people land with as little as 400m RVR on a LOCDME approach with minimum RVR of 1100m because they saw the runway from 20nm out. Please clarify; if you have enough visual references before 1000ft, but RVR reported is below minima; can you continue?

CHIRP Comment: The applicable rules are contained in [Regulation \(EU\) 965/2012](#) CAT.OP.MPA.305 which is specific in that if RVR is below limits and you are above 1000ft then you should not continue an approach below 1000ft even if you can see the runway.

There are very good reasons for this because pilots have in the past been caught out by losing sight of the runway in the very last stages of an approach when poorer visibility near the ground can suddenly mean that visual references may be lost. The pragmatic caveat being that for occasions when the reported RVR reduces below limits but you are already below 1000ft, then it is permitted to continue the approach. The applicable rules in [Regulation \(EU\) 965/2012](#) CAT.OP.MPA.305 state:

Commencement and continuation of approach:

(a) The commander or the pilot to whom conduct of the flight has been delegated may commence an instrument approach regardless of the reported RVR/VIS.

(b) If the reported RVR/VIS is less than the applicable minimum the approach shall not be continued:

(1) below 1000ft above the aerodrome; or

(2) into the final approach segment in the case where the DA/H or MDA/H is more than 1000ft above the aerodrome.

(c) Where the RVR is not available, RVR values may be derived by converting the reported visibility.

(d) If, after passing 1000ft above the aerodrome, the reported RVR/VIS falls below the applicable minimum, the approach may be continued to DA/H or MDA/H.

(e) The approach may be continued below DA/H or MDA/H and the landing may be completed provided that the visual reference adequate for the type of approach operation and for the intended runway is established at the DA/H or MDA/H and is maintained.

(f) The touchdown zone RVR shall always be controlling. If reported and relevant, the midpoint and stopend RVR shall also be controlling. The minimum RVR value for the midpoint shall be 125m or the RVR required for the touchdown zone if less, and 75m for the stopend. For aircraft equipped with a rollout guidance or control system, the minimum RVR value for the midpoint shall be 75m.

the fuel selector valve was closed. If both bolts had been fitted it would not have been possible to fit the selector handle incorrectly.

Following completion of repairs to the undercarriage and a taxi test by the Approved Maintenance Organisation (AMO), the aircraft was released for flight. The same afternoon I planned to undertake a short local check flight. The engine first started ok but only ran for a short time. Thereafter it would start when primed but would not run for more than a few seconds.

I called one of the AMO engineers to look at the problem; he discovered that the fuel-selector handle had been fitted incorrectly and one of the fixing bolts was missing. At first, he thought the handle had been installed in reverse and, indeed, with the selector set to the off position the engine ran. However, following further checking he realised it had been installed at 90° to the correct position.

I was lucky that the left wing-tank had all but run dry during the taxiing runs in the morning, otherwise it would have done so shortly after I took off. With the fuel selector set to the main rear-tank (which was full) but in fact pulling fuel from the left wing-tank, when that tank ran dry the engine would have stopped and I would have tried to select the right tank as an alternative, but this would have resulted in turning the fuel off and a forced landing.

CAA Comment: The CAA Safety Intelligence team were able to identify that the incident resulted from several Human Factor elements, including unclear information contained within the Aircraft Maintenance Manual (AMM) and the failure of the engineer to seek advice from a more experienced member of the maintenance team. Additionally, there were issues relating to non-recording of work, supervision failures and rushed testing post maintenance. Remedial Actions have since been implemented as required.

“ CHIRP Comment ”

This report was filed to CHIRP as a GA report but it is also worthy of publication

‘I was lucky that the left wing-tank had all but run dry during the taxiing runs in the morning’

Report No.3 –ENG711 – Fuel selector incorrectly installed

Report Text: Following work to the undercarriage, the fuel selector handle was refitted incorrectly. It was fitted 90° out of position and with one bolt missing. When the selector handle was set to the main rear tank it was in fact drawing fuel from the left-wing tank, when the selector was set to the right-wing tank,





in the Air Transport FEEDBACK. The Human Factors issues in this report all lined up to create an extremely dangerous situation.

Fortunately, the left wing-tank running dry on taxi saved the day. The pilot filed an MOR but the AMO did not. Refitting or replacing components in the incorrect orientation is not new of course, and there is a danger that good aircraft design to make installation foolproof is making us lower our guard against such errors.

The overriding question is, even if the component was orientated correctly and a bolt was left over, why did that not raise a big red warning flag? We all know of situations away from work where the odd fastener is left over after carefully erecting Swedish flat-pack furniture, but this was a component critical to the safe and correct operation of the aircraft.

In commercial air transport, would this issue be less likely because larger organisations are able to provide sophisticated risk mitigation, large training budgets and a permanent Quality/Safety presence?

Large organisations benefit from a Human Factors advantage: that of mentoring, coaching and advising - what one might call "Good" Peer Pressure. If you are a certifying engineer with thirty licenced colleagues, then you have thirty people to ask for assistance if needed. Equally thirty people can say "you are wrong" before you make the mistake.

GA should be using the latest revision of the AMM and recording the ATA Chapter and Section reference, just as Air Transport have done for a number of years. One difficulty in GA though is that the AMM is often not as sophisticated as that of an Air Transport aircraft. Dimensions, limits, fit and tolerances will be there, but how to change a component may be left to the experience and judgement of the engineer.

In GA and some corporate jets in Air Transport, there is no Structural Repair Manual (SRM). The OEM provides this information at a considerable cost, on an aircraft-by-aircraft (Serial Number) basis.

Those trained in Maintenance Error Investigation know not to assume anything. Considering maintenance error in a different section of the industry than our own may be full of assumptions until we consider the working environment of the person who made the error.

Perhaps some Human Factors are more common in one part of the industry compared with another. An Aircraft Maintenance Licence often leads to supervisory status but there is no exam module for man-management. Now that HF training has largely moved to Computer Based Training, is our knowledge really being refreshed? Has Safety Culture become stale?

Safety Culture should be more than something only the Authority and Training focuses on - it is for all of us to support and aim to improve. Human Factors is for all of us to consider all and every day, not just on recurrent training day or on quiet days when there is time, but also on the busy days when operational, management, time and adverse peer pressures plus distractions and multi-tasking all present competing challenges.

In the latter case, the previous practice in some airlines of scheduling 3 Flight Crew members for such duties also seems to have been superseded by the use of only 2 Flight Crew members for some routes. The combination of these changes is claimed by reporters to be leaving crews chronically fatigued such that errors are being made due to weariness and loss of attention.

It is accepted that these reports represent only one side of the story but, due to their sensitive nature, we are limited in our ability to engage directly with the airlines concerned, even generically, in order to gain their perspective. The reports include specifics which cannot be disidentified for CHIRP publication, and the identifiable details meant that reporters fear that they could be at risk of sanctions from their companies as a result.

Although receipt of one or two reports on this issue might be put down to individuals' discontent with new rostering policies, the scale of the reporting that we are seeing indicates systemic problems with resourcing and rostering practices at some airlines that we felt should be urgently reviewed.

As a result, CHIRP engaged with the CAA to pass on our concerns. The CAA's response was that resourcing and rostering form part of their normal oversight of companies. They commented that resourcing has recently been a challenge for all parts of the industry, especially in the fast changing environment of the last few months.

In response to CHIRP's input, the CAA conducted targeted audits of subject airlines but, although they recognised areas of greatly increased tempo, resourcing challenges and rosters that could have been better planned, the oversight teams confirmed that the rosters they reviewed were all legal.

Notwithstanding, the CAA informed us that, in all cases, rostering and fatigue were being kept under close and continuous review so that they could act if necessary. Following on from their reviews, the CAA commented that it had been acknowledged by some of the

The scale of the reporting we are seeing indicates systemic problems

Report No.4 – Fatigue from Rostering

Report Text: CHIRP has received a number of reports in recent months from crews in multiple airlines who tell us that they are regularly being rostered with fatiguing duties. Examples are short-haul rosters with multiple sectors on multiple successive days, or long-haul routes to West Coast USA or Far Eastern destinations with only one day's stopover before return to UK, repeated 2-3 days later.





companies that their communications around changes to rostering practises could have been better.

Although technically legal, it is CHIRP's view that regularly rostering close to the maximum allowable FDP/FTL rules is not a sensible long-term approach to sustainable operations. CHIRP previously represented this view to the CAA in 2020 (pre-pandemic), stating our concern even then that 'Commercial pressure will continue to drive operators to regard EASA FTL numerical limits as an acceptable baseline for rostering...' and also our concern about '...the reactive nature of FRM and operators' apparent unwillingness to measure the adverse effects of their rostering...'

Notwithstanding, and although clearly frustrating for those engaging in air travel, it is to be applauded that some operators have recently chosen to cancel parts of their schedules rather than attempt to maintain output in the face of too few resources and a consequent risk to safety.

CHIRP is also aware that some of the companies concerned have since modified their rosters and scheduling parameters in response to analysis of the reports of fatigue that they have received.

This demonstrates the value of fatigue reporting, and also that companies can be responsive to considered and reasoned arguments within.

CHIRP is not the only organisation concerned about the potential risks from fatigue as resources potentially mismatch demand during post-pandemic recovery; BALPA's Fatigue & Scheduling Group has recently launched a study into the prevalence of fatigue in the industry and have instigated a survey based on Karolinksa Sleepiness Scale (KSS) scores to which crews can contribute by searching for and downloading the Jeppesen 'CrewAlert TOD' app from their relevant app provider.

'I make mistakes that I wouldn't have made before when I was flying more often and my capacity is often much reduced'

Report No.5 –FC5109 – Enforced part-time

Report Text: Having not flown much for the past two years due to COVID, my company continues to put first officers on enforced seasonal part-time contracts after two years' service, working two weeks on/two weeks off in winter. This is damaging to crew morale when the company are recruiting cadets on full time contracts with a higher base salary.

But, most importantly, having flown so little over the past two years, I feel anxious and lacking recency when I am flying at most 4 days a month at the moment. I make mistakes that I wouldn't have made before when I was flying more often and my capacity is often much reduced. This is detrimental to safety and my career in my opinion.

The issue stems back to [Airline] wanting seasonal flexibility with pilots. The compromise was that cadets now get directly employed full-time from day one of their [Airline] career but go onto never-ending seasonal part time contracts after two years. With cadet recruitment ongoing and new cadets taking any additional winter FTE, I feel I'm being replaced by recruitment.





Company Comment: The pandemic situation was unprecedented and every organisation has had to perform safety cases in order to be able to deliver a safe performance both during low periods of flying as well as during sharp ramp-ups.

Our organisation reviewed the return to work training which identified crews who would require a larger footprint when returning to flying as well as more restrictive recency requirements for certain crews. This supporting programme looked at both crew experience as well as other criteria such as performance observed in the simulator and whether crew had any other issues online. Equally, crew members who themselves feel need further support can reach out to their line managers and are able to be given these additional measures to assist in delivering a safe operation.

The organisation created campaigns that support both flight- and cabin-crew in ensuring they are empowered to prioritise a safe operation from any other pressures. Leading into the 2021 summer season in particular, we ran

safety campaigns for both communities which recognised the challenges faced as crew members returned to operating in the still non-normal aviation environment. This was driven by messaging from the top of the organisation to support individuals in these circumstances. These campaigns continue with regular review and refinement to reflect the current challenges.

Lastly, our safety analysis has also been adapted to ensure it specifically tracks the performance of crews during line operation, which demonstrated the effectiveness of our mitigations. A suite of extra analysis reports were developed to help identify any trends or issues and any that were identified were fed back to the management teams much earlier than we would have done pre-pandemic to support early action and/or intervention. These analyses, however, were not designed to report on an individual's performance.

“CHIRP Comment”

CHIRP cannot comment on terms of service or employment contracts and so concern over enforced part-time is

not a subject on which we can make observations per se. However, the issue of reduced currency over the winter period for seasonal airlines is a perennial potential safety concern that has been exacerbated in recent years by the overall greatly reduced schedules that some airlines have had to adopt due to COVID restrictions.

The company comment indicates that they are alive to the issue and have put mitigations in place through support programmes and measures that encourage crews to seek assistance from their line managers if they feel they need further support.

It is to be hoped that the culture within the company is such that crew members feel that they can avail themselves of such support without fear of compromising their careers. On a practical level, if you are concerned about your levels of currency due to reduced amounts of flying then it's vitally important that you share that with the other crew members pre-flight so that they can factor that in to their expectations and TEM assessments of overall crew competency.

The CHIRP Aviation Programme also provides a facility for confidential reporting of **Bullying, Harassment, Discrimination and Victimisation (BHDV)** where there is an identifiable safety-related concern. CHIRP has no specific expertise or resources to investigate BHDV reports. CHIRP's role is to aggregate data to build a picture of the prevalence of BHDV in the aviation sector. See our [BHDV page](#) on the CHIRP website for further information. Initially, BHDV reporting will be rolled out as a 6-month pilot-programme for **Flight Crew and Cabin Crew only**. The remaining sectors of aviation (ATC, Engineering, Ground Handling etc) will be included once the pilot-programme has been reviewed and any lessons incorporated (likely to be in April 2022).

CHIRP

Aviation and Maritime Confidential Incident Reporting

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