FEEDBACK

Issue No: 61 **January 2002**

EDITORIAL

TRANSITION ALTITUDES

Following an exchange of correspondence between the Trust and the Directorate of Airspace Policy on the subject of standardising Transition Altitudes (TAs) in the UK FIR, both to assist in reducing the risk of a level bust and to raise the TA above the national minimum safe altitude to reduce the risk of en route CFIT incidents, the Director of Airspace Policy (DAP) agreed to meet with the Director and representatives of the CHIRP Advisory Board on 12 December 2001.

DAP was receptive to the concern expressed that correspondence between both parties had not resulted in a clear appreciation of the Directorate's policies for addressing the recommendations published in CAP 710 - Level Bust Working Group 'On The Level' Project Final Report - relating to (a) a higher Transition Altitude and (b) arranging for all Standard Instrument Departures to terminate at an altitude.

The CHIRP representatives were briefed on both what had been achieved and where the problems lay, and were given to understand that DAP now expected a common TA of 6,000 ft to be implemented as soon as operationally feasible, which should enable item (b) to be implemented. DAP also explained why the implementation of item (a) would have to be a long-term project, as among other issues, a change of this nature would need to be coordinated across neighbouring FIRs.

The following item has been included at the request of the CAA Medical Department:

HEALTH SURVEY OF AIRCREW AND ATCOS

Last year London University (School of Hygiene and Tropical Medicine) embarked on a three-year study of the health of professional aircrew and air traffic control officers. Its purpose is to compare the health of both groups with each other and with the general population, particularly with respect to the incidence of cancer and causes of death.

In order to assess the effects of different variables not already known to the CAA, such as diet, exercise, exposure to cosmic radiation and sunlight, licence holders are being asked to complete a questionnaire mailed to them by the CAA. The questionnaire takes about half an hour to complete and is then forwarded direct to London University.

Unless licence holders receiving a questionnaire object, investigators (who must keep all records confidential) at London University will be provided with the relevant aspects of the medical record held by the CAA Medical Division. Those who have not objected will then be identified on the UK population databases for cancer and mortality so that if one should develop cancer, or die, the investigators will be informed, together with the diagnosis. Rates of different types of cancer and causes of death in the different occupational groups can then be determined and compared.

CAA is funding the study but will not see the information on completed questionnaires and there will be no effect on licence medical certification. Pilot and ATCO organisations have been involved with the study design and support has been received from BALPA, GATCO and IPMS.

Little is known about the long-term health of aircrew and ATCOs and whether they are at increased risk of certain diseases. This major investigation will help to answer these questions and may result in changes to risk exposure and better advice about maintaining good health.

Change of Address? See Page 2.

Confidential **H**uman **F**actors **I**ncident **R**eporting **P**rogramme

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CHANGE OF ADDRESS?

If you receive FEEDBACK as a licensed pilot/ATCO/maintenance engineer or medical examiner you will need to notify the relevant department of the CAA of your change of address and not CHIRP, details as follows - [*Relevant Department*], CAA (SRG), Aviation House, Gatwick Airport South, West Sussex RH6 0YR

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REPRODUCTION OF FEEDBACK

FEEDBACK is published quarterly and is circulated to UK licensed pilots, air traffic control officers and maintenance engineers, if you are not already on our circulation, and would like to be, please send your application in writing to Kirsty at the above address.

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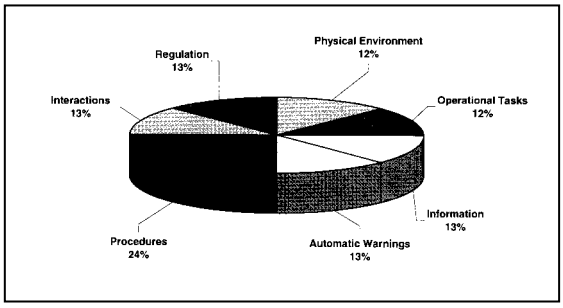
ATC REPORTS

ATC Reports received in Period: 4

Key Areas:



TRIAL BY TCAS?

Hopefully the Captain who originally submitted an Airprox on the following incident will express his concerns to CHIRP himself but, if not, I thought I would apprise you of the details, as it might help to inform other aircrew who find themselves in a similar situation.

The scenario was that a jet, outbound from a UK regional airport on airway ###, was initially given climb to FL230 against opposite direction traffic expected into the sector at FL240. After this traffic came onto the sector frequency and was identified, the sector controller, seeing that the outbound jet was climbing well (at about 2,000 fpm), co-ordinated a higher level and cleared the jet to climb to FL330. The Captain subsequently filed an Airprox, I believe on the grounds that he was concerned that, according to his TCAS, he had come within 6nm of the traffic through which he was being climbed, with no notification of it being given to him and with no speed, heading or altitude restraints.

The radar recording showed that the jet had actually passed 1,000 feet above the traffic at FL240 when still 10nm away from it when the required minimum radar separation was 5nm. I could perhaps understand the Captain's concern if separation had only just been maintained or some form of intervention had been necessary but on this occasion the controller correctly assessed that the jet's rate of climb would achieve vertical separation above the traffic well before the minimum required lateral separation would be reached. It would obviously have been nice for the pilots to have been told about each other and, if they had come much closer, this probably would have been done. In fact, the outbound pilot didn't actually require to be told about the traffic as he was obviously aware of it from his TCAS and, from this, he should have realised that, if the same rate of climb was maintained, he was going to be 1,000 feet above it in plenty of time. Had the aircraft not been fitted with TCAS, the pilots would probably not even have known about each other.

This should never have been submitted as an Airprox, the definition of which states that " .... in the opinion of the pilot ... the safety of the aircraft involved was or may have been compromised." There is something wrong if a pilot considers that safety has been compromised when standard radar separation has been maintained without the requirement for any remedial action having to be taken. If he had concerns about the situation, the best thing to have done would have been to telephone the Centre as soon as possible after landing when he could have discussed it with the ATC Watch Manager, if not the controller himself. By submitting an Airprox, it was necessary to conduct an unnecessary full investigation into the circumstances, the first time that I can remember where an instance of standard controlling had undoubtedly maintained separation.

In my opinion, TCAS should be used exactly as its title says it should and that is to avoid collisions. It should not be used for other purposes such as expressing concerns at the competency of controllers in situations when separation is adequately provided. Can you imagine the number of reports that could be filed if TCAS was similarly used in the London TMA?

TCAS generates Traffic Advisories (TAs) and Resolution Advisories (RAs) on predicted flight paths and on time to the associated Closest Point of Approach, but takes no account of 'legal' separation criteria.

In consequence, although pilots may sometimes think when they receive a TA or an RA that the clearance they were given was unsafe, this is rarely the case. In normal circumstances, pilots will probably not file an AIRPROX report unless they visually acquire the conflicting aircraft: to do so solely on the basis of information displayed by TCAS is unusual. RAs should always be reported as specific incidents, regardless of whether or not the conflicting aircraft is seen.

An AIRPROX report should be made whenever a pilot or controller considers that the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved was or may have been compromised.

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TAXI CLEARANCES

It seems remarkable that there appears to be no standardisation in the area of crossing intermediate runways while taxying to the holding point of the runway-in-use. Manual of Air Traffic Services (MATS) Part 1 states that if clearance is given all the way to the holding point of the runway-in-use, this authorises the pilot to cross any intermediate runway(s) - however, from the flight safety aspect, this is extremely unhelpful. Is the MATS advocating this as a method of ground control or stating it as a warning?

In my view, as a standard procedure, ATC should be obliged to include "cross runway xx" in any taxi instruction if that is what is intended, so that when ATC makes an error by implying a crossing when none was intended (e.g. incorrect alphanumeric holding point), the pilot should be so used to receiving a specific instruction that he would query it on such an occasion and perhaps prevent an incident. The point is proved anyway by the fact that pilots with any concern for safety will query crossing clearance, as they approach an intermediate runway, if such an instruction has NOT been specified.

This report was passed to CAA (SRG) ATSSD, who provided the following response:

"It has been acknowledged that the current procedure and phraseology would permit a taxy clearance to be given that allowed crossing of intermediate runways. The current procedures contained within the Manual of Air Traffic Services (MATS) Part 1 reflect those published by ICAO.

However, your reporter's concerns are shared by the Civil Aviation Authority and the matter is currently under consideration by the Safety Regulation Group's ATC Procedures Working Group and has been drawn to the attention of ICAO. Any changes introduced as a result of this work will be notified by ATSIN and MATS Part 1 will be amended with appropriate examples of the phraseology to be used."

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MORE INFORMATION, PLEASE

I was informed by Area Control that an aircraft was diverting following a PAN call due to a suspected un-latched First Officer D/V window. The aircraft was transferred to me and re-stated PAN due to the window problem. The aircraft was vectored for an ILS to an uneventful landing.

Only after the aircraft had landed did I discover that the First Officer had been holding on to the window and the Captain had been flying effectively single pilot. I think there were clues to this on the R/T but I didn't think to ask and it was not directly referred to.

Only with proper information from flight deck crews can we offer the best service to pilots in an abnormal situation. This isn't the first situation that I have been involved in, where some more details from the flight deck would have been useful.

AIC 131/99, although addressed primarily at situations in which an immediate landing appears necessary, reminds pilots of the importance of letting controllers

know the full nature of an abnormal or emergency situation if they wish ATC to provide the best possible response and assistance.

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TEMPORARY NIGHT PROCEDURES

sometimes has night runway repair work. This entails temporary closure of, then reduced distance operations on, the runway. My problem relates to the utilisation of the Distance Measuring Equipment (DME). We are provided with a remote DME control panel that contains no less than six buttons and three switches for control and monitoring functions. A simple ON/ OFF switch with an alarm to indicate failure would suffice for ATC purposes.

The CAA requires that the DME be turned OFF, since the distance indicated does not show zero at the displaced touchdown point. The Airport Authority requires the DME ON for departure guidance for noise abatement purposes.

Bear in mind that night duties are work "days" 5/6 & 6/7 of the work cycle and take place when the mind is not functioning as clearly as might be desired. I found that all this turning the DME on and off was both distracting (to the task of providing an ATC service - usually alone) and also confusing. In fact I think that I might not have selected the DME on when required, since when I tried turning it off it dawned on me that the DME was in fact already off!

Why can't we simply leave the DME on and state (via ATIS and NOTAM) that the DME is radiating for departure guidance and does not indicate zero at touchdown? I'm sure that from a pilot's point of view having the DME variously on and then off cannot be helpful.

Night shifts should be as simple as possible for all concerned. It troubles me that someone who is tucked safely asleep in bed decrees procedures that are, to say the least, less than satisfactory.

I hope that the infrequent nature of such night runway work does not mean that this matter is dismissed by other parties as insignificant. To reiterate, night shifts are difficult enough without extra complications for all involved.

CAA (SRG) ATSSD has been invited to review this aspect of the temporary procedure.

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INTERSECTION LINE-UP CLEARANCES

A concern that I have is on the subject of intersection line-ups - it seems to me that given the wrong circumstances, we could easily see a repeat of the accident involving the Shorts 360 and the MD80 at Paris (CDG) in May 2000. For whatever reason, the Air controller was under the impression that they were both departing from the threshold and therefore did not issue a conditional line-up instruction to the second aircraft, the Shorts 360.

I would suggest that it ought to be standard practice for ATC always to specify the intersection, whenever giving an unconditional line-up instruction from any intersection other than that at the threshold, e.g. "(c/s) - line-up and wait runway 27 via Bravo".

The safety net would be that, given familiarity with the procedure, a pilot should then query any such line-up instruction if the intersection were not specified.

This report was passed to CAA (SRG) ATSSD. The following response has been received:

An ad hoc working group within SRG comprising representatives from Air Traffic Services Standards Department, Flight Operations Department, Flight Crew Licensing and General Aviation Department reviewed this issue on 18 July 2001. This was prior to receiving the CHIRP report. It was decided at the meeting that the MATS Part 1 instructions (Reference Page 2-7 paragraph 12) cover the situation satisfactorily and, therefore, these have not been changed, however, an example of the phraseology to be used was added to the MATS Part 1 Phraseology appendix as follows:

> "Hold at (holding position), (number) aircraft to depart before you from (holding position)/runway (designation)."

This phraseology was incorporated in MATS Part 1 with Amendment 52 on 28 December 2001.

ATC COMMENTS

ENGINE INDUCED UPSETS

In reply to your request in FEEDBACK 60, regarding the item - Engine Induced Upset, I have long been aware and concerned about similar incidents. When I anticipate possible 'jet' wash turbulence, particularly with a "Land after the departing..." clearance, I do warn the approaching pilot.

The last time I filed an MOR concerning this in 1997 it was considered by SRG to fall outside the reporting scheme requirements.

I have felt disinclined to file a report on similar incidents since.

CAA (SRG) has advised that since the beginning of 2000 all reports submitted under the MOR scheme are entered on the MOR database.

The safety related issues arising from engine induced upset encounters have been raised with CAA (SRG).

CAA (SRG) FLIGHT OPERATIONS DEPARTMENT COMMUNICATIONS (FODCOMS)

The following CAA (SRG) FODCOMS have been issued since October 2001:

CAA (SRG) Flight Operations Department Communications are published on the CAA (SRG) website - www.srg.caa.co.uk

16/2001

1. Laptop Computers and the Technical Log

17/2001

1. De/Anti-icing of Aircraft
2. Slush Covered Runways and Friction Reports

18/2001

1. Letter of Intent: Proposal to Amend the Air Navigation Order 2000 and Civil Aviation Publications 360 and 371
   (Proposal to amend Articles 20, 45, 62, 129, Schedule 4 and Schedule 10 of the Air Navigation Order 2000 and the Civil Aviation Publications 360 and 371 for the purpose of introducing changes to operational standards and equipment requirements following the International Civil Aviation Organisation audit of the safety oversight provided by the United Kingdom)

19/2001

1. Guidance Concerning the Use of Portable Electronic Devices (PEDS) on Board Aircraft

20/2001

1. Accident Prevention and Flight Safety Programme
2. Flight Operations Department Communications (FODCOMs)

21/2001

1. CRM Instructor Accreditation

22/2001

1. Briefing of Passengers at Type III Emergency Exits

1/2002

1. Letter of Consultation: Proposal to Amend the Air Navigation Order 2000
   (Proposal to amend Schedule 4 of the Air Navigation Order 2000 for the purpose of introducing changes to operational equipment requirements for the carriage of a means of indicating outside air temperature and for the carriage of an emergency locator transmitter)

2/2002

1. AAIB Recommendations
2. Disruptive Passenger Incident Reports

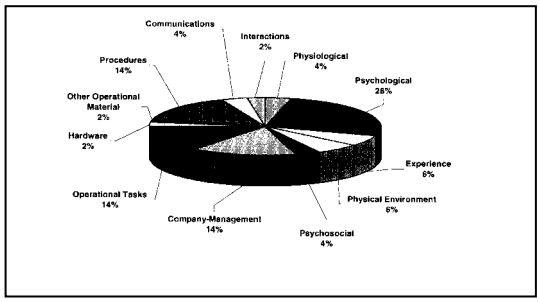
3/2002

1. Minimum Equipment List (MEL) Approval/Permission Procedure

FLIGHT CREW REPORTS

Flight Crew Reports received in Period: 31

Key Areas:



There is an increasing tendency at some airport locations for the direction of the active runway to be influenced by factors other than simply the wind direction. In some cases, the over-riding considerations can have the effect of reducing take off/landing performance margins that would otherwise be available.

HOBSON'S CHOICE?

(1)

I enclose this report for information, as the incident I witnessed was similar to that which occurred at Puerto Plata, and for similar reasons.

On our first call to ATC for our scheduled departure from ### (a Caribbean airport) the easterly runway was in use and the wind was 140° /09kts. After a short delay, approaching the time when the aircraft was ready to depart, we noticed that the trees were indicating that the wind had changed direction and asked ATC for the latest Surface Wind. This had come round to between 210° & 230°/15kts gusting 25kts. (A hurricane was passing south of the airport), however, the easterly runway remained in use.

A twin turboprop called for start up, asked the surface wind and requested the westerly runway for departure. ATC informed him that the easterly runway remained in use, as there were 3 inbound aircraft. As we were ready to taxi the second inbound, a twinjet, missed the normal high-speed exit, cleared at the last exit and reported wind shear on short finals.

After he was clear, we pushed back and taxied out to the holding point for the westerly runway behind the twin turboprop. As we approached the holding point a twinjet passed downwind in a circling procedure for the westerly runway at about 400ft agl and very close to the runway, turned left onto base leg and started to descend. He went through the centreline on a northerly heading, continuing the left turn to a south westerly heading (with about 30° bank) descending and then turned right

coming onto the centreline at about 150ft. During this manoeuvre he was pointed directly at the twin turboprop and ourselves. At the time both the First Officer and I felt that we were about to witness an accident, or indeed become part of one.

There is no doubt in my mind that the initial link in the chain of this "incident" was that there is no Instrument Approach published for the westerly runway, although there are suitable VOR and NDB beacons located on the airfield. I can understand that such an approach would only be used for a couple of days a year, however, when these conditions prevail, the requirement to make a circling approach - the only way to land on the westerly runway - encourages flight crews and ATC to continue using the easterly runway for both take off and landing, in marginal conditions that would normally justify changing the runway in use.

This is an anomaly that needs to be resolved before there is an accident.

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(2)

I am writing this report because of the fact that crews are becoming increasingly concerned about tower controllers at some airports in Southern Europe not providing crews with accurate wind information on final approach when cleared to land.

Recently, we were operating the first of a multi-sector day to ###. When we checked in with ### tower at about 11 miles on the ILS the wind was then reported to be northeasterly at 15kts with gusts to 28kts. Landing on the northeasterly runway should not have been a problem. We then reported three miles short final, requested a wind check and were told the same as earlier. At 200' the airspeed suddenly rose 15kts, I reported the deviation to the Pilot Handling who said he was correcting. A split second later the aircraft just fell on the runway making an extremely hard landing. We taxied into the stand while discussing what had happened and came to the conclusion that there was about 20kts windshear just over the threshold, which we reported to the tower. At the time there were some four other aircraft on the apron, which had undoubtedly reported the same windshear on final but this report had not been passed on to us.

A few minutes later another aircraft came in to land and was given the same wind as we had been given, no mention of the windshear report was made. As they taxied in, they also reported the windshear.

Several days prior to the above incident, I had been en route to the same destination. Several other aircraft had diverted because the wind was southwesterly and landing on the southwesterly runway is prohibited at night. We had planned on a possible Go Around and diversion. On final approach we were given the surface wind as 270° at 10kts. An earlier check of the performance manual had shown we could land on the northeasterly runway at that weight with up to 8kts of tailwind, so we carried on with the approach and landed. The airplane felt very slippery on final but the landing was uneventful. Ten minutes later, as we left the airplane, we discovered that the surface wind was more like westerly at 20kts, which meant we had landed with more than 10kts tailwind.

I understand the need to have aircraft on the apron and make money for the airport, but eventually this situation will lead to a serious accident unless the problem is addressed.

On the advice of the Advisory Board, both reports are being represented to the relevant National Regulatory Authority

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TAXI ROUTINGS

I no longer work regularly out of ###, but recently was required to operate into this UK airport.

After clearing the active runway, the taxi routing given was something like: "Left on Hotel, hold abeam Hotel Lima, when cleared, it will be Hotel to Hotel Quebec, right onto Charlie east for forty three left"!

Now say that lot in five or six seconds, expect me to "know it" and read it all back, as well as steer the plane onto the first Hotel. All the controller didn't say was don't pass "GO" and collect 200 pounds!

I had been up at four in the morning and was running out of steam as well as enthusiasm and to listen to that sequence a second time and miss a bit of the clearance rankled to say the least.

ICAO may well be a big organisation with a lot of clout. However, it is difficult to understand who within that organisation thought that all airfields could be treated the same and that there wouldn't be any conflicts when it comes to specific airfield orientations.

All that was needed to really upset the apple cart was Low Visibility and a few other pilots in a similar situation, then what?

A very similar incident occurred to me at another UK regional airport during last winter. I was given a clearance to enter the apron via Echo to stand two. In this particular incident the visibility was very poor, 550m.

Previously, Echo was the Eastern entry and the only reason I didn't get round to mucking that one up was because I was taxiing slowly and saw the marker first. It turns out that Echo is now the Western entry. Now I'm

sure you'll agree with me, that kind of rationale really takes the biscuit!

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CHART ERRORS

Some time ago I submitted a company report on a 10° track error in a Standard Instrument Departure plate published for a UK airport. How is it that the incorrect track took nearly three months from the date that the chart was published for the error to be noted?

1. The correct and incorrect tracks look similar.

2. Crews have just been ignoring the error

3. Crews find reporting the error too tedious

I think this is a real Human Factors incident.

The SID referenced in the report had been introduced as a trial procedure, and the track had been incorrectly interpreted by the chart manufacturer when preparing the SID plate. The chart manufacturer received no reports highlighting this error, including the company report mentioned above. The error was noted and corrected when the plate was re-issued at the end of the trial.

The chart manufacturer encourages pilots to raise chart queries directly with them.

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FLIGHT BRIEFING FACILITIES

As a line pilot and Training Captain I am continually frustrated by the lack of access to the Air Pilot and supplements at many large UK airports. Since briefing rooms were stripped of those wonderful, helpful, knowledgeable ops people, most airports have removed these basic tools of the trade and placed them in the tower at the far side of the airport.

Computerised NOTAMS invariably state "refer to supplements for details" - an hour before departure there is generally little chance of locating the relevant information, so on a daily basis I see crews getting airborne with only partial knowledge of what could be an important NOTAM.

It is a requirement for all AOC holders to make available all documents needed before flight. It is generally accepted that the AIP and other relevant information should be available in a briefing room. However, in locations where a briefing room is not accessible to a pilot, then the Operator is required to make other appropriate arrangements.

The lack of access to well equipped flight planning/briefing room facilities can be a serious problem for transient crews and smaller operators, who may lack support such as the large operators provide, and the availability of easily accessible facilities is highly desirable. In cases where the facilities are assessed as not being suitable, the matter should be raised with the airport authority.

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PART-TIME FLYING INSTRUCTORS - FTLS

There have been a number of reports recently of managements pushing the FTLs of commercial pilots to the limits and the effects of this pressure.

It is common knowledge that some airline pilots are also employed freelance by flying training organisations to instruct student pilots for their PPL and other flying qualifications. Commercial airline managements often frown on this behaviour but seem generally powerless to control it. Time off from busy airline flying duties, particularly with its often unsocial hours, is supposed to refresh aircrew, yet a few abuse the system by instructing for lengthy periods and this can show in their performance.

Recently I had to intervene to stop a student detail, which had been authorised by an experienced airline pilot/instructor. This authorisation was an error of judgement by that person, possibly due to prior lengthy unsocial duty hours in that person's professional occupation.

A flying instructor can be on duty from dawn until dusk or later. The majority of aircrew who instruct part-time act responsibly but a few seem to flaunt their duty of care.

UK holders of an Air Operator's Certificate are required to roster crews only in accordance with their flight time limitations scheme, which must first be approved by the CAA.

This scheme will include the provision of CAP 371, Section A Para 1.4, which requires that flight crew members who undertake additional flying in the form of aerial work – and this includes flying instruction for which the pilot is remunerated or receives valuable consideration - must inform the AOC holder of all flying times and flying duty periods undertaken.

Some organisations require all freelance pilots to submit a letter of authorisation from their principal employer.

FLIGHT CREW COMMENTS

WAKE VORTEX INCIDENTS

In the last issue of FEEDBACK we published a comment that the NATS wake vortex incident database contained no reports involving B757s on departure.

Subsequently, we received a number of reports detailing wake encounters following B757s that had been reported, of which the following is an example:

In the FB60 article on wake vortex separation you state that "the UK wake vortex incident database contains no reports involving B757s on departure".

Earlier this year I was the Captain of a regional twinjet departing Manchester approximately 1 minute behind a B757. At approximately 1000ft, whilst in a 20° AOB left turn, we were rapidly rolled to approx 45° right AOB, then 45° left AOB (probably as we exited the left wing vortex of the 757). I filed an ASR with the company at the time, unfortunately I cannot remember the date this occurred.

I am surprised that this incident has not made it to the database.

The CHIRP comment was based on information provided to us, which proved to be incorrect. The following reflects more accurately the present situation.

NATS has been running a UK Wake Vortex Reporting Scheme since 1972. Information on reported wake vortex encounters is held on a database, which at the end of 2001 contained approximately 3,100 reports. Information on wake vortex encounters is received from a number of sources:

- ATC file a report if a pilot reports a wake vortex encounter on the RTF.
- A number of major airlines forward wake vortex ASRs to NATS.
- SRG forward suitably disidentified Wake Vortex MORS to NATS for entry into the database.

In addition, once a report is filed the Wake Vortex team will request a retrospective met report from the met office and where possible will review radar data to see if appropriate separation standards were applied.

Each year an annual report is produced analysing the data for the previous year and this is reviewed by a team including NATS, SRG and major airlines.

In the light of comments received following the publication of the last edition of FEEDBACK (FB60), NATS reviewed the Wake Vortex Database and found that there have been a number of reports involving the B757 on departure. The majority of these encounters occurred at Heathrow, therefore, further analysis was restricted to Heathrow departures only.

For 2000 and 2001 the number of encounters involving B757s was compared with the number of B757 departures at Heathrow. The proportion of encounters with a B757 leader was found to be consistent with the proportion of B757s operating at Heathrow overall. The severity of encounters was also investigated and found to be consistent with the underlying rate.

The analysis suggests that the number and severity of wake vortex encounters on departure at Heathrow occur at a similar rate for B757s as for other aircraft types.

Please continue to report wake vortex encounters.

If you encounter wake turbulence, report it to ATC on R/T in the first instance, to permit ATC to record and report the relevant details.

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WINTER OPERATIONS (FB60)

I passed the items on Winter Operations published in FEEDBACK 60 to our de-/anti-icing experts for comment and thought you might wish to consider their comments for publication:-

While we applaud all efforts to raise the profile of this important subject, there are areas covered in the first Winter Ops. report, (1) ANTI-ICING PROCEDURES, which, in our opinion, might send out the wrong message. While we appreciate the reports merely reflect the views of the writer, it is possible that some individuals will store the incorrect/dubious information away in the back of their minds and at some stage in the future believe it to be fact. In view of this, we would suggest that the following points be made, in order of importance.

Quote: "**It is my understanding that in the case of most aircraft it is impractical for pilots to physically check the flying surfaces prior to take off and the use of de-icing fluids and the departure of an aircraft within the holdover time is considered a suitable alternative.**" There are two major issues here:

If by referring to a 'physical check' the writer actually means a 'tactile check', we would agree that this would not be required, unless the presence of clear ice was suspected. However, if the writer meant a 'visual check' (which we suspect he does) his understanding is incorrect. Section 9 in CAP 512, Ground De-icing of Aircraft, currently defines the requirements for a visual 'Pre-takeoff Inspection'.

Due to the many variables that can affect holdover (40 plus at the last count), the published holdover-time tables are offered as guidance material only. Apart from the frost column, which only provides one time for each temperature band/weather condition, a time span is published, with the longer time relating to anticipated holdover under, for example, light snow and the shorter of the two times related to holdover under moderate snowfall. It follows that where the holdover time is about to run out, or where the rate of snowfall is approaching, at, or in excess of 'moderate', or where

there is otherwise any doubt that the surfaces have remained free of contamination, a 'pre-takeoff' check will most certainly be required.

Quote: "**.....AIC99/2000 gives a definition of freezing conditions as 'an OAT below +3°C and visible moisture in any form or standing water slush ice or snow on the runway'. As an observer I would suggest that icing conditions existed and all aircraft should have been preventively de-iced.**"

This definition is too general. Quite simply, are frozen deposits, other than those allowed by the aircraft manufacturer, present on the surfaces of the aircraft or are they likely to form or accumulate, before the start of the takeoff roll? If the answer is YES, the aircraft will need to be de-iced, anti-iced or de-/anti-iced, depending on the prevailing conditions. If the answer is NO, no action need be taken. It should be noted that due to long wave radiation on a still clear Winter night, the aircraft wing skin temperature can fall to 0°C or below and frost form on the upper surface of the wing, with the OAT at +4°C. At the other end of the scale both the OAT and skin temperature may be below 0°C with no frost present. Significant environmental and cost implications would result from Flight Crews requiring unnecessary de-/anti-icing on a regular basis.

From the writer's last sentence (above) where he mentions "...preventively de-iced" (anti-icing is the preventative treatment), it is a possible that he felt the aircraft surfaces were free of contamination prior to departure but that precipitation might have occurred prior to takeoff.

Quote: "**AIC99/2000 gives no guidance on anti-icing and the use of fluids for the same.....**"

We believe AIC99/2000 was issued mainly to highlight the revised holdover time charts for last winter. In the absence of company information, although possibly not as up to date as it could/should be, information on Anti-icing techniques/fluids may be found in CAP 512.

Quote: "**The FAA's AC135-16 is more specific with the 'Clean Aircraft' concept and its instructions that "...no person may takeoff an airplane when frost, ice or snow is adhering to the wings, control surfaces or propellers of the airplane.**"

AC135-16 could be potentially unsafe if taken at face value. Should an aircraft wing be totally covered with say 1" of dry snow that was not adhering to the surface, the aircraft could legally attempt a takeoff without de-icing. There is of course no way of knowing whether part of the snow has started to melt then subsequently re-frozen (e.g. dry snow on aircraft, aircraft taken into warm hanger for short period then returned to ramp where further dry snow falls for a period of time then stops prior to departure) and that the contaminant has in fact adhered in places.

With regard to Winter Ops. report (2), DE-ICED ALL OVER, it is worth noting that, during periods of severe weather, ramp areas will inadvertently become contaminated with de-/anti-icing fluid and where an aircraft is parked on a self manoeuvring stand, crew and passengers may have no alternative, other than to walk across a fluid soaked area.

As stated above, Paragraph 9 of CAP512 provides guidance as to how a pre-take off inspection might be accomplished. However, it is not possible in some cases, such as a high wing high/tail configuration, to confirm visually that all the surfaces are clear. In such a case, a sound knowledge of the ground de-icing process used and a sensible interpretation of the holdover time span in relation to the prevailing weather conditions, in combination with a check that the surfaces that are visible, should provide the basis for a sound decision.

If there is any doubt as to whether the aircraft is clean, a take-off should not be attempted.

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ENGINE INDUCED UPSET (FB 60)

Reference the letter 'Engine Induced Upset' in FB60, I also experienced this phenomenon almost to the letter in 1998. We were inbound to a major UK airport from Germany and were informed "late landing clearance due departure ahead". It was night and the preceding aircraft rotated as we were below 200'.

Again, the approach had been utterly smooth when at around 50' and all through the flare, all hell broke loose! I was Pilot Not Flying and the Captain had almost full control deflection to hold the aircraft! It certainly woke us up after a long day! We were in a twin turboprop and the departure was a laden MD-11. The Captain chose not to file an ASR - it was late and time to go home.

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NIGHT STANDBY DUTY (FB60)

Reference the report titled 'Night Standby Duty' in FEEDBACK 60 (Page 5), the writer stated 'using radar/NDB/GPS for non-precision approaches we can descend to 300ft and 0.75 mile to an installation . . .'

As a Training Captain conducting North Sea operations, I am concerned at the implication in this statement. AIC 113/1998 (paragraph 6.3) and AIC 13/2001 (paragraph 3.3) make it quite clear that GPS is not approved for non-precision approaches in the UK and that it is only approved for offshore en-route operations. Further, any instrument approach to an offshore installation requires manual input, which again is not authorised.

Is it possible for you to clarify the position to your readers who may have read this article and taken it as tacit acceptance of GPS-based approaches offshore?

The CAA (SRG) advises that AIC 13/2001 has been withdrawn, but that AIC 113/1998 is still extant. This states that only GPS approaches that have been notified can be authorised for use, and that, to date, no such approaches have been notified in the UK. (This is still the case as at January 2002.) Anybody who wishes to learn more about the circumstances under which GPS can be used for other purposes should refer to this AIC (Pink 177 dated 6 October 1998).

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RT DISCIPLINE

I am writing as feedback for various items in recent editions of CHIRP regarding the subject of RT discipline.

I am continually amazed and appalled at the standard of RT I hear, not infrequently, from both pilots and controllers. We are all aware how poor RT discipline has the potential to result in, at best, confusion and, at worst, a serious incident or accident. Yet the poor practices continue to be heard almost on a daily basis.

It is not acceptable to abbreviate callsigns by missing off the Company identification. Nor is it acceptable to abbreviate the read back when acknowledging an instruction from ATC. For example (and I use the following Companies purely as examples - no disrespect or insinuation is implied)

ATC: "Company one-two-alpha descend flight level seven zero". A/C: "Descend seven zero, one-two-alpha".

It should be "Descend FLIGHT LEVEL seven zero, COMPANY one-two-alpha".

ATC: "Company seven-five-charlie turn left heading zero eight five". A/C: "Left zero eight five, seven-five-charlie".

It should be "Turn left HEADING zero eight five, COMPANY seven-five-charlie".

Similarly speed changes should contain "SPEED" and altitude changes should contain "ALTITUDE" in the read back.

I also continually hear the old chestnuts:

"Descend to three thousand feet", "Passing two thousand for five zero", "Climbing to six zero" etc etc.

I firmly believe that the phrases "to" and "for" should NEVER be spoken on RT instructions or acknowledgements. However, if they are retained then at least let's try to stop mistakes by making the phrases "Descend to ALTITUDE three thousand feet", "Passing ALTITUDE two thousand climbing to FLIGHT LEVEL five zero", "Climbing to FLIGHT LEVEL six zero" etc etc.

How many close calls or accidents do we need to experience before we all find substandard RT unacceptable?

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FTLS (FB 60)

No incident here! Just a reflection on the article in October FEEDBACK regarding long duty times.

I recently stopped flying for a Southern European airline after several months of incredible rostering. We were allowed 17 hours as a two pilot crew, and 24 hours with a 'heavy' crew member, who was not required to be current on type, with some individuals, not even fluent in English.

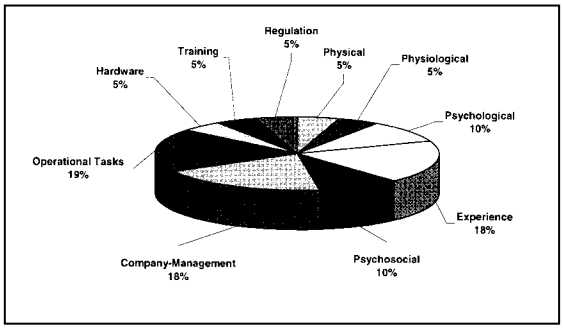
As an example, I flew from Europe to a Far East destination - where passengers all disembarked for immigration - then flew two internal sectors - finally doing 23 ¾ hours duty with a totally useless third crew member. And this is regular and quite normal!

You are working in the same environment as these people.

ENGINEERING REPORTS

Engineering Reports received in Period: 8

Key Areas:



ARE YOU REPORTING?

The number of Engineering reports received by CHIRP has, over the last six quarters, averaged 11. In the previous six quarters the average was 17. Some of the reduction may be accounted for by the increase in the number of internal company Human Factors related reports being generated by the Maintenance Error Management System, MEMS, that is increasingly being adopted by many companies. If so, this is to be commended. However, the Air Accidents Investigation Branch's experience has been that the number of reports being generated through company schemes and this Programme does not reflect the frequency of significant Human Factors lapses by engineers that the AAIB identify during their investigations.

Statistically, for every major accident, it has been shown that up to 600 minor precursor events occur, most of which are unreported. If not identified and corrected, these minor errors can provide one or more links in a causal chain leading to a major incident or an accident. It is information on these seemingly unimportant minor occurrences that we would like to have knowledge of through your reports, since it is by resolving what appear to be trivial events that can break the link in the chain.

It is also apparent that the less secure business and employment situation that has resulted from recent events, referenced in two of the engineering reports that follow, may have brought about a reluctance to report problems for fear of possible recriminations. The first priority of this Programme is to protect the identity of all reporters, to the point where we will not represent a concern on a particular issue if, by doing so, the reporter's confidentiality might be at risk of being compromised. For this reason, before any action is taken, we always agree with reporters the action we propose to take to ensure that they are comfortable with it.

Human Factors continues to be the most frequent causal factor in air accidents; it should be the aim of each and every one of us to make our Industry ever safer. Your experience, no matter how minor you may think it to be, if it reflects a lapse or slip or any other Human Factors issue related to the aircraft maintenance and engineering environment, is important. Please take the time to submit a report either to this Programme or through your company's reporting scheme, if one exists, so that others might have the opportunity to learn from your experience and possibly break that link!

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SIGNS OF THE TIMES?

(1)

I am a Shift Supervisor. The Company has reduced the ramp manpower at our main operating base by 20% citing the New York terrorist incident as the causal factor.

Our night-stop aircraft have gone UP on average by one!! All have the same workloads of Carried Forwards, top sheets etc.

The daytime flight plan has been lowered/shortened, however, there has been little reduction during the high traffic periods of early am - midday - late pm.

To all intents and purposes it would appear that the company is trying to pressure its engineering staff into working faster!!

Please bear in mind that for a given amount of movements, management have set limits on manpower levels per shift to work aircraft safely. The limits prior to Ground Zero have now been erased causing staff to work faster and therefore less safely.

We also have staff signing aircraft inspections who have been told that they will be made redundant in three months! Would you like to fly on an aircraft knowing these staff did not have their minds 100% on the job?

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(2)

Over a recent weekend there was a severe shortfall of avionics staff able to sign for work both on the Ramp and in the Hangar.

On the Saturday, one man only was available to cover a 'C' check on a twin jet aircraft in the hangar and a second aircraft on 'casualty clean-up' and also to cover ramp operations. On the Sunday, there was no cover at all.

One avionics qualified engineer left some two months or so ago and has not been replaced. There can be up to three twin jet aircraft in the hangar overnight for defect rectification.

There is a line of aircraft planned into the hangar for 'C' checks until the Spring. There is no scheduled maintenance planned after that. There will then be a Ramp only operation from then on. Most of the staff are to be made redundant.

The job prospects locally are not good with heavy cutbacks by other operators.

When operations are reduced, it can be difficult to manage staff skills complements. However, it is essential that neither safety nor the longer-term viability of the organisation to perform work for which it is Approved, is compromised and all work required is properly planned, staffed and completed. It is also a fact that staff can expect productivity to be under constant review in an ever increasingly competitive Industry.

It is understood that later this year NPA 145-12 will come into force. This will require an Approved organisation to ensure that adequate skilled manpower is available at the start of a shift to cover the planned work. It can be anticipated that CAA (SRG) will audit staffing levels against the NPA requirement.

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FIRE IN THE HOLD?

The aircraft arrived in the hangar, rear and front cargo hold doors opened and the sidewall panels etc. were to be removed. What shocked me was the appalling amount of debris and litter on the floors of the cargo holds, especially the rear one. It took me over three hours to clean it all out. This is a definite FIRE HAZARD and proves the ramp check procedures are not being carried out at each night stop, although they are being "penned off". I believe this is a main base aircraft and it would be a good idea to check all Company aircraft at base to ensure our cargo holds are not potential fire hazards.

When approached, the company replied they had experienced the problem earlier and had introduced a check to prevent the accumulation of such debris. Any recurrence of the problem should be reported.

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ENGINEERING COMMENTS

BASIC TRAINING (FB 60)

I would like to comment on a point raised in a couple of articles in October's issue of CHIRP (issue 60). This is the first time I have read CHIRP and am not sure if this point has already been raised in previous editions.

The articles stated that there is a lack of engineering staff. While I feel that overall this is true I would like to note that the operating/maintenance companies are not helping themselves in this problem due to the lack of interest in A+C licensed engineers who have recently finished a college A+C licence course and require a further 12 months experience before their licences become active. I realise that this would mean hiring less experienced personnel but they have been trained to the level expected by the CAA for a LAE, have at least eight months operational experience and at least one day a week hands-on in a hanger or workshop during the two-year course. Post the 12-month exclusion there is no reason these engineers cannot use the experience built up during the twelve months to gain a type rating or approval and become CRS signing. If these people do not receive the experience required then they might never become CRS signing or leave the industry altogether adding to the problem. It may seem that this may only effect a small number of organisations; the year which I passed only eight of us did so and out of those, three are in steady jobs and the remaining five are starting to give up on the industry entirely. I wish to point out that I am not asking the CAA to change the rules on college trained engineers because more operational experience is required but I feel the operators and maintenance organisations must be made aware of the benefits of hiring such people.

While there is undoubtedly a downturn in the Industry at present, which has resulted in staff reductions, this is a cyclic industry and there continues to be an underlying shortage of trained engineers. A recently published study, commissioned by the Aviation Training Association, quantifies the problem. This has been recognised by the aerospace industry at large and a group of companies, manufacturers, maintainers and others, have formed the 'aero skills alliance' to run for a trial period to help in the long-term solution to this problem.

In the next review of JAR-147 it is understood that a proposal to require two year's training, of which 50% will be devoted to basic skills training, followed by a further two years practical experience in order to satisfy the basic training requirement to be able to then qualify for a licence, is to be considered. If adopted, this would formalise what is already current practice for basic training in some European countries.

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The following report was received from a cabin crew member, but is worthy of note by both flight crew and engineers:

FUEL FUMES - THE SAFE OPTION?

On boarding the aircraft, fuel fumes could be smelt in the main cabin. This was reported to the ground engineer, who dismissed the report by saying it would soon clear. The fumes got worse and it was becoming unbearable. The engineer was informed again, and again was dismissive.

The Captain was also informed and told that there was now a smoky hue in the cabin. The Captain ordered everyone off the aircraft, twenty minutes after boarding. The fumes were now so bad they could be smelt at the top of the jet way.

Medical advice was sought, as both cabin crew and flight crew reported symptoms of headaches, nausea, sore throats and tight chests in varying degrees. Initial diagnosis was suspected carbon monoxide poisoning. Advice was to seek medical attention. Whole crew were examined and all were diagnosed with jet fuel fume exposure. The cause - a fuel line in the APU had released kerosene and this entered the cabin through the air conditioning. The crew had been breathing in burnt kerosene for 20 minutes.

This report is a timely reminder that transient cabin air conditioning odours that sometimes occur when an aircraft is powered up after being parked overnight can lead to a false assumption that no health/safety problem is likely to exist.

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