

CHIRP FEEDBACK

Issue No: 78

Spring 2006

EDITORIAL**LEVEL BUSTS - WHAT ARE THE UNDERLYING CAUSES?**

In spite of being the focus of attention for some time, level busts continue to be one of the principal causes of losses of separation in UK Controlled Airspace; moreover, the number of reported level bust incidents in UK airspace continues to rise. In February 2006, 53 level bust incidents were reported by NATS, the highest monthly figure recorded; the cumulative figure for Jan/Feb 2006 was 85 reported incidents compared with 54 in the same period in 2005; the rolling 12-month total now exceeds 400 incidents. Undoubtedly, some of the increase can be attributed to better reporting due to heightened awareness, but the number of incidents should be a cause for continuing concern.

The most frequent causal factors of the events in February attributed by NATS were;

- Altimeter setting errors (15 events);
- Correct pilot readback followed by incorrect action (11 events);
- Failure to follow an ATC instruction (10 events).

The large number of altimeter setting error incidents was attributed to a period of low pressure over the UK in early February. Whilst the low pressure would increase the size of the error, the number of incidents during that period is probably indicative of the overall error rate of failing to reset an altimeter, which in higher pressure conditions would result in a height error less than that required for a level bust and thus go unreported.

What are the underlying reasons for the above error groups, all of which are associated with human behaviour? Are there any preventative measures that might be taken? Reports submitted through this Programme have suggested some of the contributory causes for such errors, which are perhaps worth revisiting:

One of the underlying causes identified in reports is the poor standard of RTF phraseology used by pilots and occasionally ATCOs (See Pages 5 & 12). This contributes to communication errors, which represents the largest causal factor in level bust incidents. Poor/incorrect phraseology also

contributes to RTF congestion; this is perceived by some pilots to be another underlying cause, as it can lead to pilots' attention being diverted from other tasks, stepped-on transmissions and frustration. Reducing the opportunity for communication error has been recognised by both NATS and CAA (SRG) as an important safety initiative; as part of this, a NATS leaflet is being circulated with this issue of FEEDBACK to flight crew and ATCOs. Take a few moments to read it; it might save you a slight embarrassment or something much worse.

The progressive increase in the complexity of the structure of some UK Terminal Airspace and SID/STAR procedures is perceived by reporters as a second underlying cause. The multiple stop altitudes on some departure/arrival routings simply increases the opportunity for flight deck errors to occur. Also, the re-sectorisation in some TMAs, which was undertaken with the objective of increasing traffic capacity, considered the effect on ATCO's workload, but in a number of cases did not consider the effect the changes would have on flight crew workload; the increased number of RT frequency changes that are now required on some routes increases both the flight deck workload and the opportunity for a mishearing/mis-selection error to be made. These contributory factors have been acknowledged and more recent proposed routing changes have included an assessment using flight simulators; however, the fact remains that there is no short-term 'silver bullet' solution to the present situation.

A further aspect related to TMA structure/traffic capacity is the reported increased use of radar headings by some ATS Units, instead of a standard routing. One of the human factors safeguards in following a complex procedure is the predictability of the procedure; the use of radar headings removes this safeguard particularly when they are combined with non-standard 'stop' altitudes.

In the recent past there is anecdotal evidence from reports received that some roster patterns/sequences, whilst being in accordance with the relevant operator's Approved Flight Time Limitations schemes, are perceived to cause a level of tiredness in some individuals that leads to an increased risk of slips/lapses of the type that cause level bust incidents (See Pages 9/10). If level busts continue at a high rate, this possible cause might merit further investigation.

Peter TaitAIR TRANSPORT FEEDBACK is also available on the **CHIRP** website - www.chirp.co.uk

An Air Transport Safety Newsletter

from **CHIRP** the Confidential Human Factors Incident Reporting Programme

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Number of Reports Received Since the Last Issue:

ATC - 4

Report Topics Have Included:

Comments on conditional clearances
 Comments on Wake Encounters and RTF phraseology
 Flight with unaccompanied minors

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Flight Crew - 48

#### Report Topics Have Included:

RTF Communications – phraseology, congestion, and conditional clearances  
 Rostering – New Roster Pattern  
 ATC Procedures – Approach/ILS  
 Absence Management Policy  
 Alleged Effects of Fatigue

~~~~~

Engineer - 7

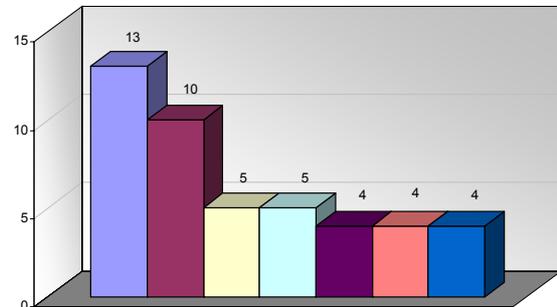
Report Topics Have Included:

Foreign Licensing Standards
 Foreign Airline Airworthiness Standards
 MOR Handling by Maintenance Organisations
 Potential Effects of Introduction of EASA Permit to Fly

ATC REPORTS

Most Frequent ATC Issues Received

12 Months to March 2006



- Communications - External**
(Pilots)
- Procedures**
(Use by Others, Adequacy, Use By Reporter)
- Handling/Operation**
(Operation of Equipment, Airmanship)
- Training**
(Technique, Adequacy, Examination/Assessment)
- Air Traffic Management**
(Separation)
- Airports**
(Runways/Taxiways)
- Communications - Internal**
(Managers)

TRAFFIC SEQUENCING AND SPEED CONTROL

Report Text: I had recently been on a customer awareness course, which was excellent and incredibly motivating; a major part was the need to be competitive, so high on the list was fuel. Most of what was said re-minimising costs was well received and understood by my colleagues and me. We all agreed that realistically the only thing of a higher priority was SAFETY.

I was operating as Final Director during single runway operations and continuing into dual runway operations and had been busy; at no stage during the period did I have less than 4-5 aircraft in the radar pattern from 20-30 mins before to 20-30 mins after the following event.

I was vectoring to maintain minimum vortex spacing, in this case 4nm, and was trying to establish aircraft 2 at minimum vortex spacing behind aircraft 1 (B757), but was struggling! Aircraft 1 was assigned/flying at 190kts. But aircraft 2 was still catching at 180kts!

Me: "Aircraft 2 reduce to 160kts to maintain to 4 DME" (Yes, I know you prefer 170kts clean, but you tend to complain if I screw-up the vortex wake spacing and I'm desperate to check aircraft 1's speed - so ... just reply quickly and we'll all be SAFE!)

Aircraft 2: "can we make that 170kts?"

Me: "Negative" - yes *that was curt and short, but you are catching the one ahead up and I need to speak to him!!*

Aircraft 2: "Oh that's great; we'll just lower the gear and flaps and WASTE some more fuel" - in a very sarcastic tone!

Would he prefer a loss of separation?

Me: "Aircraft 1 what is your speed?"

Aircraft 1: "we are just reducing to below 180kts"
(Assigned speed was 190kts - how far below 180kts I don't know but aircraft 2 is quickly catching-up)

Thanks lads - me thinks, as I transmit to aircraft 2.

Me: "Aircraft 2, that's why I reduced you to 160kts; the B757 ahead has reduced from his assigned speed and you are now 3nm miles behind him (min recommended 4 nm) if that's OK? And if you'd like to discuss it, could you ring in when you are down"

I am getting very distracted! - safety alert

Aircraft 2: "I don't need to talk to somebody but you do!"

Me very distracted (I've now forgotten to descend aircraft 2 from 4,000ft to 3,000ft and he is high at 9½ nm to touchdown "Aircraft 2, I have just been on a customer awareness course and am more than aware of the commercial points"

Aircraft 2: "Request descent" - with some other sarcastic comment I ignored.

Me: "Aircraft 2, descend to 2,500ft is that going to be OK for your range" attempting to try and help

Aircraft 2: "Well we are above the glidepath but we'll try and sort it out", plus some more acid comments!

Me: "Aircraft 2 - I guess its all to do with attitude - hope yours is OK ... with the glidepath - contact Tower ###.##"

I know I shouldn't have added such a comment here but the pilot was very provocative and I foolishly took his bait. I was boiling and the most distracted I have been in many years.

I tried to MOR this incident; it took my whole break to electronically produce it. Right at the end the computer "ate" it; so, I binned the MOR. I guess I would have been criticised, but I think that aircraft 2's Flight Ops Manager might have had a few stern words with him? So perhaps if he reads this, he may reflect on this incident - don't let commercialism compromise your attitude and safety.

My colleagues and I are well aware of commercial pressure (hence our company paying for us to attend customer awareness courses). We know that fuel burn is a growing pressure; similarly, you want us to maximise movements. Please play your part guys - we are a team and we are ALL on the SAME side!!

Recently many of my colleagues and I have noticed aircraft reducing below their assigned speed. You want high speed initially, then low speeds on the

approach (can we have 150kts to 4DME we hear!) well it's a fine act to juggle, so please play your part. Let us know when you need to slow! Respect our difficulties - I know you don't want to dangle your bits too early. But if I get the gap wrong, I get my bits chewed off!!

CHIRP Comment: In order to achieve the sequencing that is essential for high capacity runway operations at major airports, it is most important to fly at the speed specified by ATC. This report is a good example of the sequencing difficulties that can arise if you don't and invariably it will be the aircraft following you that may be forced to go around. If your SOPs require a different speed, even if by only a few knots, let ATC know as early as possible. Also, a reminder - Modes S permits ATC to monitor IAS.

The RTF discussions described in this report are examples of extremely poor RTF discipline and should not have been made. If from either a pilot or ATCO perspective you have a point to make, discuss it over the telephone after landing when safety is not an issue.

AN AVOIDABLE LEVEL BUST?

Report Text: In over 20 years of ATC I thought I'd seen and heard just about everything, but today I discovered that I was wrong. We've just had a level bust by an inbound aircraft which led to a loss of separation against a departing aircraft. The cause was nothing new; incorrect readback by the pilot, followed by an ATCO not spotting the error. So what has left me completely dumbfounded?

On discussion with the pilot of the level bust aircraft, I discovered that he already knew what mistakes had been made. How? The pilot of an aircraft from the same company, also inbound to us, had heard exactly what had happened and subsequently discussed the matter on the company frequency once they were both on the ground.

So what we have here is a pilot who knew that a colleague had made a potentially fatal error, which had not been spotted, and who then chose to not say a thing.

Why on earth did he not say something on the ATC frequency when he heard the mistake? Even if he was embarrassed to question ATC, an anonymous "Incorrect readback" broadcast would have got everyone thinking. Whatever happened to teamwork?

CHIRP Comment: The reporter assumes that the second pilot was clearly aware of the incorrect readback at the time of the incident; it is possible that this was not the case and the confirmation of the error might have been the result of the pilots' subsequent discussion of the incident.

In such a situation, it is often difficult to be absolutely sure that an intervention is justified, particularly when you are not directly involved in the RTF

exchange. If you decide that a situation does merit intervention, check-in using open questions rather than attempting to reconfirm what had been said previously, as this might lead to greater confusion.

EN ROUTE WAKE ENCOUNTERS (FB77)

Report Text: Your comment on Page 9 of FB77 regarding the above item is not wholly correct. In Oceanic airspace Standard Lateral Offset Procedures (SLOPs) allow aircraft to fly 1 or 2 nm to the right of the assigned track.

As your comment suggests, only 4% of traffic is using this procedure so thank you for bringing it to the attention of crews; maybe more aircraft will now adopt the procedure.

From experience we have noticed that aircraft flying 1,000ft below and up to 25-30nm behind may experience wake turbulence.

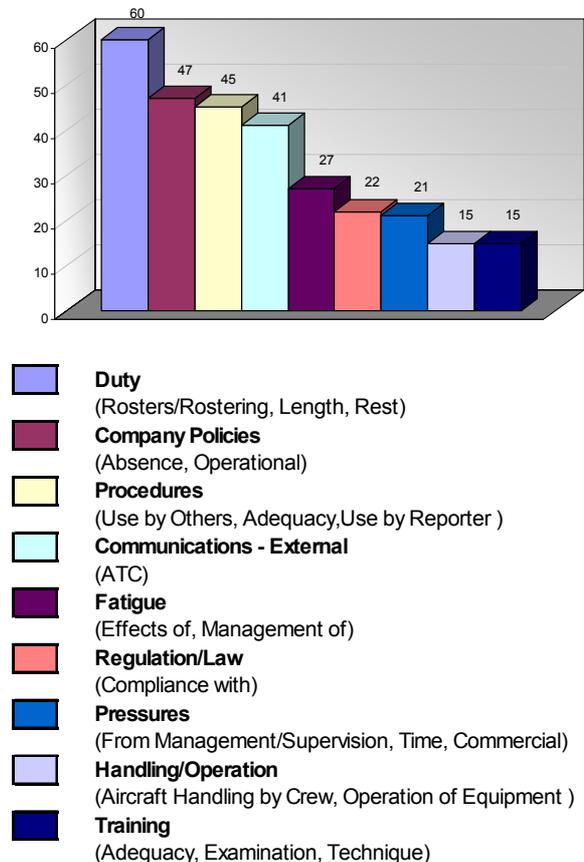
CHIRP Comment: The reporter is correct - The ICAO State Letter (AN13/11.6-04/85 dated 27 August 2004) permits 1nm or 2nm offsets to the right of track principally as a safety measure to reduce the risk of collision in the event of loss of vertical separation; an offset may also be used to mitigate the effects of wake vortices.

Offset procedures are authorised in North Atlantic (NAT) airspace. The procedures to be applied by pilots are published in FODCOM 26/2004 and in AIP Supplement S17/2004; they are to be incorporated into the UK AIP in the latest AIRAC amendment (4/2006) at ENR 2.2 Para 12.5.

See Page 6 for more comments on wake vortices.

FLIGHT CREW REPORTS

Most Frequent Flight Crew Issues Received:
12 Months to March 2006



CAA (SRG) ATSINS

The following CAA (SRG) ATS Standards Department ATSINS have been issued since January 2006:

Number 80 - Issued 24 January 2006

Flight Inspection Under Single European Sky

Number 81 - Issued 3 March 2006

Changes to Communication Procedures - VHF Channels

Number 82 - Issued 16 March 2006

Minimum Rest Period Following Completion of a Single Night Duty

Number 83 - Issued 20 March 2006

Handling of Aircraft in Emergency Where the Intended Flight Path Passes Over Densely Populated Areas

Number 84 - Issued on 1 April 2006

Introduction of Air Traffic Standards Department Electronic Notification System

CAA (SRG) ATS Information Notices are published on the CAA (SRG) website -

www.caa.co.uk/default.aspx?categoryid=33 and click on the link 'Search for a CAA Publication'

TOO MUCH TO HANDLE

Report Text: The initial climb is an extremely busy phase for any turboprop crew, what with all the configuration changes, no autopilot, and monitoring the PF (Pilot Flying) through the SID (Standard Instrument Departure).

Recently, and this is starting to happen more often, ATC have cleared us to a Flight Level and given us a heading change with a condition in a single instruction; usually, "Cleared climb to Flight Level ##, on passing #,### feet, radar heading ### degrees."

This normally proves just a bit too much for me to handle, and even a few of my colleagues have asked me to confirm the heading we've been given, purely because there is too much going on at the time without having conditional clearances to worry about.

All I ask is that ATCOs bear this in mind, and break it down into two separate transmissions, one for the climb and one for the heading.

Its only a matter of time before a clearance like this is misunderstood or executed in the wrong way, leading to a Level bust /Airprox at the very least.

CHIRP Comment: This report is a good reminder to both ATCOs and pilots of each other's problems during the departure phase.

The ATCO is under pressure to provide sufficient information in the departure instructions to ensure adequate separation from other traffic without recourse to another RTF transmission, whereas the flight crew workload may be already quite high during the initial departure, particularly if an autopilot is not available.

The Manual of Air Traffic Services - Part 1 permits a maximum of three instructions in a single RTF transmission, but best practice would suggest that whenever possible a maximum of two is probably better.

BUSY FREQUENCIES & RTF DISCIPLINE

Report Text: I noted the comments from ATC controllers in Issue No.77 and I wish to add something to the discussion which I believe affects our collective safety.

All of my flying is now done in and out of the London TMA and there are several frequencies which are clearly extremely heavy work for the individuals concerned, pilots and controllers alike. As a pilot, on many occasions I find it hard to get a word in edgeways on certain transition sectors near the south coast (we all know where I mean), so I am very conscious of the need to follow my old police training of "ABC" when using the radio - i.e. accuracy, brevity and speed.

But, as a captain, I am now constantly frustrated and often embarrassed by the way my co-pilots treat the radio. To bring it up at a company level would maybe solve part of the problem, but it's not just us, it seems the entire industry is full of people who want to chat informally on the airwaves. I am not saying that, say at midnight, coming in over the coast when there are no other souls up there, we shouldn't take the opportunity for a little exchange, but it's a case of knowing that there's a "time and a place".

Because of the high standards of ATC here, and the fact that most of us still speak a common language, it isn't often a problem. But the number of times that non-standard words have led to dangerous misunderstandings abroad make me compelled to air my views.

I think the solution is easy. Better training for a start. Then a degree of awareness by training departments that radio-discipline is one of the things that keeps us all safe. Finally, how about some enforcement?

I hope that you will print this letter, because even if that's all that happens, maybe the word will spread. Chat is for the pub. Using correct phraseology in radio communications saves lives.

RTF CONGESTION & EMERGENCIES

Report Text: (1) A couple of recent short-haul trips to/from Europe stood out due to how busy some of the London ATC frequencies were. The controllers (God bless 'em, I wouldn't want THEIR jobs) were talking continuously between A/C responses. This must have safety implications:

(a) Controller workload will lead to errors.

(b) no 'free' airtime to get in unexpected RT calls - God forbid if there had been a mayday/pan call. I agree with one of the contributors in CHIRP FEEDBACK 77 - traffic capacity is often at critical levels in UK airspace - the consequences of a continued status quo do not bear thinking about!

(2) I find the quality of some foreign ATC worrying. When I get my roster, some destinations create less than warm/cosy feelings due to the standard of ATC I/we will have to endure - late runway changes, ridiculous shortcuts, incomprehensible transmissions/instructions, increasingly aware of the need to be quite assertive in refusing routings/levels etc., which will lead to energy management problems - if only all ATC were of the standard of our beloved UK controllers - they are the best in Europe without doubt. Am contemplating submitting an ASR next time I encounter ATC of such a poor quality that safety is compromised.

CHIRP Comment: If you should have an emergency on a busy R/T frequency, the ATC advice is to squawk the emergency code; this will immediately alert the controller visually and also other ATCOs working adjacent/lower sectors. Also, for similar reasons it is good practice if you experience an emergency to select the emergency code as soon as practicable.

For those of you who remember the advice not to select the transponder code to emergency until instructed to do so by ATC, this is no longer the case in the UK; current ATC radar displays automatically retain the aircraft callsign identifier on the screen when the transponder code is changed.

MORE ON ATIS

Report Text: In Issue 77 (page 3) a controller pointed out some of the difficulties with the way that ATIS currently works.

His tone was unfortunate, but should not be allowed to mask the point. My own point, simply, is that the current ATIS set-up is broken.

At least four factors conspire to ensure that, on checking in with the Approach Controller, we will have an out-of-date letter:

- The codes can change frequently; driven I guess by automated systems, it is not uncommon for a letter to be valid for only a few minutes.
- The reports are getting longer and longer. Stuff that should be in NOTAMS is often included in the

report. (To keep this note short and snappy I have deleted my many examples.)

- The loading on current frequencies in the UK airways system leaves few opportunities for one pilot to leave the frequency for weather gathering. With level bursts, in particular, in mind, we need both sets of ears for most of the cruise and always when climbing or descending
- Descents seem to be starting further and further out.

There may have been a time when the cruise part of the flight was quiet enough for one pilot to get the latest weather & then brief just before contacting Approach. If so, that time is now long gone.

Thus, faced with an out-of-date letter that neither controller nor pilots have the capacity to update, what is to be done?

Neither your correspondent nor I have an answer at the moment - the system is broken.

My own suspicion is that, given the automated systems now in use, it would not be impossible to include a display for our controller that lists the changes with each letter.

and:

1. Prune the NOTAM stuff out of these broadcasts.
2. Limit the changes that trigger fresh letter codes.

The responses I have received from controllers when asking for updates show that they do not have this at their fingertips

CHIRP Comment: The reporter's comments have been passed to CAA (SRG) for consideration by the Working Group that has been set up to review ATIS broadcasts; the results of the review will be known later this year.

MORE ON WAKE TURBULENCE

CHIRP Narrative: Following the report 'En Route Wake Encounters' in FB77, we received a number of related reports/comments; several concerned the range at which a significant encounter had occurred:

(1)

Report Text: Reference the report on en route wake turbulence; I feel you are leading pilots into a false sense of security by implying a 10nm limit to wake turbulence. I have had many experiences of light to moderate wake turbulence up to 25-35NMs behind other heavy jets. In my experience it occurs about 20NMs and 1,000ft below. From which I assume the sink rate of the wake is in the order of 400fpm.

However, the most severe has been when the other aircraft has been climbing/descending through my level. A B747-400 descended through my level of 37,000ft into TYO - a rapid 30° roll, full opposite control input did not pick up the wing for about 10 secs. (Note - this aircraft was landing at TYO, so not

at max AUW). Another B747 about 12 miles in front climbing through 10,000ft caused similar effects. Similarly, crossing a B747 wake in Taipei airspace, roll in the order of 20° and nose pitch down followed by pitch up. As in all cases I was in a B747 myself, I assume it might be worse in a smaller aircraft

CHIRP Comment: Several other reporters detailed en route wake encounters at ranges up to 30nm behind a large aircraft. It should be noted that very little data exists on wake encounters during the cruise; if you should experience a significant encounter, submit an MOR.

The second contribution is from a helicopter pilot:

(2)

Report Text: I was asked to hold north of the R04 approach at AAA (Mediterranean) due to landing traffic. I was asked to identify the landing a/c, which I could clearly see. The instruction from Tower required that I cross the threshold north of RWY 04 after the twinjet had landed.

This I complied with, but to my surprise the wake turbulence from the landing aircraft was highly visible on the sea surface and stretched several hundred metres along the approach and some 1-2 minutes after the twinjet had landed.

This incident highlighted the degree to which wake turbulence from a B737 forms and the slowness of its dispersal.

CHIRP Comment: A good reminder of the effects of wake turbulence from a different perspective.

INAPPROPRIATE USE OF GUARD FREQUENCY

Report Text: This is an occurrence I have noticed is increasing and although I have included the time, date and airline I have heard it from several other airlines.

Pilots use guard frequency to notify other flights to contact them on another frequency; when subsequently listening in on that frequency, often 123.45, their chat is not in any way related to flight safety.

CHIRP Comment: The available evidence suggests that inappropriate use of guard frequency for 'chatter' between commercial pilots has increased significantly in the recent past.

Such use is both unprofessional and unacceptable.

CABIN CREW REPORTS

TURBULENCE ENCOUNTER

Report Text: I was at the rear of the aircraft about to commence the drinks service. Having set up the trolley we hit significant turbulence which led us to dismantle the trolley and strap into our seats. We

informed the In Charge that we would wait until turbulence subsided before continuing. The In Charge told the Captain that we were strapped in and asked if he wanted to switch the seat belt signs on. He said, "No, he didn't think it was necessary".

Things seemed to calm down so we again tried to set up the trolley only to hit turbulence again. The In Charge asked the Captain a further two times to switch the signs on as in their opinion it was very bumpy at the rear and they were concerned about the safety of crew and passengers. The Captain refused. We used our common sense and stayed strapped-in until we deemed it safe to continue.

Once we had landed the In Charge calmly asked the Captain why he hadn't switched the seat belt signs on when they had voiced their concerns to him. He stated that he was the Captain and he didn't think the level of turbulence was significant enough to warrant the signs being on. He called it MODERATE turbulence. He said that he travelled at the back of the aircraft enough times to judge when the seat belt signs needed to be switched on.

CHIRP Comment: JAR-OPS 1.1000 (b) permits the In Charge to act in conditions of turbulence as follows: "During turbulence, in the absence of any instructions from the flight crew, the senior cabin crew member shall be entitled to discontinue non-safety related duties and advise the flight crew of the level of turbulence being experienced and the need for the fasten seat belt signs to be switched on. This should be followed by the cabin crew securing the passenger cabin and other applicable areas."

It is unusual for an aircraft commander not to accept the advice of the In Charge regarding turbulence, since not to do so could result in the aircraft commander/operator incurring a potential liability for a subsequent passenger accident/injury, as in the situation described passengers may be reluctant to remain seated without the Seat Belts sign being ON.

LACK OF COMMUNICATION/EMERGENCY BRIEFING

Report Text: Coming in to land we had taken our seats. The landing gear came down and then went up and we aborted the landing. The In Charge made an announcement to the pax as the Captain was busy and said he would speak to them when he could and that the reason for the aborted landing might have been another aircraft on the runway. The Captain then called the In Charge after approx 10 min and said there was a landing gear indication problem but did not say what and that he was sure we would be landing normally. After landing the Captain made an announcement to the pax and said not to worry about us being surrounded by fire trucks as the indication for the nose wheel being locked had malfunctioned (light was not working) and the fire trucks were a precaution.

On this aircraft you can't see anything out of the door window so this announcement was the first we knew of the actual nature of the problem. I feel that in this situation a briefing should have been given, thereby putting the cabin crew in the loop. When the In Charge discussed the matter with the Captain he said that he had not wanted to panic anyone. The In Charge replied that the crew were not going to panic (after all this is their job) but rather would have been prepared if the nose wheel had in fact collapsed. Not telling the pax is one thing but not telling the crew who would have to manage an evacuation is quite another.

CHIRP Comment: The reporter's concern that the cabin crew should have been informed is valid; in the situation described, more information from the flight deck would have been helpful.

Some operators have SOPs for precautionary landings that reflect 'best practice'; the SOPs include a NITS (Nature of emergency, Intention of Captain, Time Remaining and Special Instructions) or similar briefing for the benefit of cabin crew members.

CAA (SRG) FODCOMs

The following CAA (SRG) FODCOMs were omitted from the last issue of FEEDBACK:

33/2005 - Published 22 December 2005

1. Collision Avoidance During the Taxiing of Aeroplanes - Flight Crew Responsibility

34/2005 - Published 22 December 2005

1. The Meaning of 'Radar Control' Within Class D Airspace

The following CAA (SRG) FODCOMs have been issued since 20 January 2006:

2/2006

1. Consultation by the Department for Transport on the Proposal by the European Commission to Amend EC Regulation 1592/2002, Including the Extension of Its Scope to the Regulation of Pilot Licensing, Air Operations and Third Country Aircraft

3/2006

1. Minimum Space for Seated Passengers and Access to and Opening of Type III and Type IV Emergency Exits

4/2006

1. Terrain Avoidance and Warning System (TAWS) Requirements

5/2006

1. Operations Manual Requirements for the British Formula 1 Grand Prix Event, Silverstone 11 June 2006.

6/2006

1. Safety Regulation Group - Re-organisation of Operations and Airworthiness Regulatory Structure

CAA (SRG) Flight Operations Department Communications are published on the CAA (SRG) website - www.caa.co.uk/default.aspx?categoryid=33 and click on the link 'Search for a CAA Publication'

Flight Time Limitations – Analysis of CHIRP FTL reports received during 2005

Introduction

During 2005, we received a total of 66 flight crew reports relating to Flight Time Limitations(FTL)/duty issues. Where a report detailed a specific issue/situation related to FTLs/rosters, which could be brought to the attention of the operator concerned without the reporter's identity being inferred, this course of action was followed with the reporter's consent. In other cases where this was not possible, the issue was reviewed by the CHIRP Air Transport Advisory Board and, when deemed to be appropriate, represented to the Civil Aviation Authority (Safety Regulation Group).

With more general concerns related to an operator's Approved FTL scheme, we elected not to publish individual reports but to monitor those reports received in order to assess what trends if any emerged over a period of time. In January 2006, we conducted a review of the FTL related reports received between January and December 2005; the results of the review are summarised below together with extracts from typical reports.

Sources

Chart 1 shows the numbers of reports received, categorised by operator. When these numbers are normalised in relation to the size of each operator, using Available Tonne Kilometres (ATK), a slightly different picture emerges in relation to those UK operators identified in 3 or more reports - Chart 2 refers:

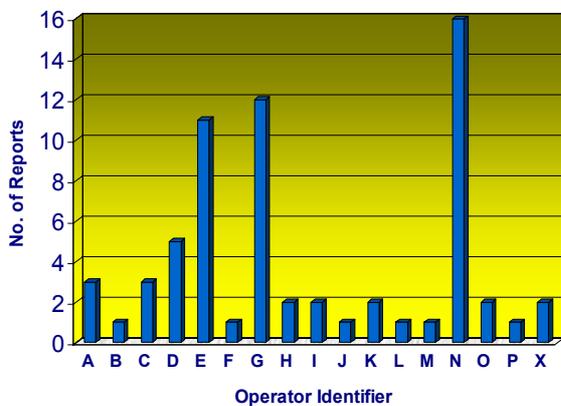


Chart 1 - Flight Crew Duty Issues Reports Received per Operator

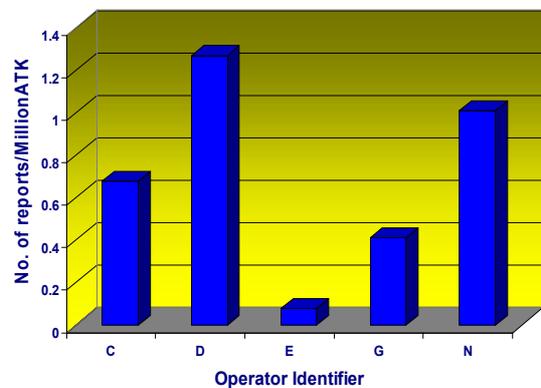


Chart 2 - Flight Crew Duty Issues Reports Normalised for Size of Operator (ATK)

Assessment of Issues/Trends

As stated above, where a report detailed a specific issue, these were dealt with on an individual basis; however, some trends were apparent. Chart 3 shows the report issues in relation to all of the flight crew duty-related issues reported upon in 2005.

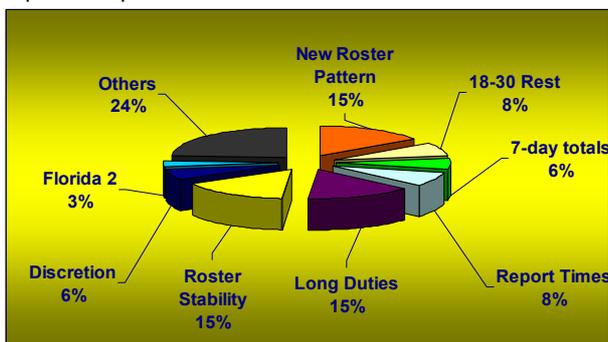


Chart 3 - Analysis of Flight Crew Duty Issues Reported

- All of the reports classified as 'New Roster Pattern', originated from one operator (Operator G).
- Similarly, it is interesting to note that 60% of 'Roster Stability' reports and 80% of '18-30 Rest' reports originated from a single operator (Operator N)
- 75% of 'Discretion' related reports originated from Operator E.
- Reports originating from Operator D encompassed a range of FTL related concerns.
- The small number of reports involving Operator C showed no discernable trend.

Note: "Roster Stability" includes such issues as poor crewing practices, disturbance of rest, requests to ignore previous standby.

Extracts from Example Reports (Disidentified)

New Roster Pattern

"Recently I have noted that I have made several small errors whilst flying the line. Worryingly these have frequently also been missed by the captain of the aircraft. I have also picked up on more errors by the captains than was previously the case, and I have no doubt that I have also missed a number of errors. My conclusion is that there is a significant fatigue related problem within the company and I cannot overlook the fact that the number of errors has increased since the introduction of the new rostering scheme."

"Personally, my problem is that my body gets used to waking up at 3-4 o'clock in the morning, and into the two days off, then the lates. Therefore, I am starting the late pattern still waking up at 3-4 in the morning. This is a problem many of us are facing and the tiredness level is building-up and reaching crucial levels. I am missing call signs, forgetting checklists, becoming irritable and have great difficulty staying awake on my journey home sometimes. Professionally, it is only my innate sense of airmanship and strict adherence to SOPs that has prevented a more serious occurrence,"

"This is not one event. PNF falling asleep in descent into London TMA. Another occasion PNF falling asleep southbound into AAA, transiting London TMA). It goes on - level busts, no autopilot connection etc. We fly too often in frequently bad weather into airports where aids and ATC are often below par. We get tired. After giving this new rostering system a good try (6 months plus), I am writing to you, to try and get help in obtaining a working system of rostering that mitigates fatigue, not adds to it!"

Roster Stability

"On the above date I was rostered for a 0800-1400 standby duty, following a day off the previous day. At 0420 I received a phone call from my crewing department asking if I would come into work early to operate a 0700 flight. As I had only gone to sleep at around 0100, I declined. I made clear my disapproval at being called at such an hour of the night, and was told that my standby would be pushed back a few hours. Unfortunately, I was unable to get back to sleep, so I rang crewing back, and informed them that I would be unavailable for work for twelve hours. I was told "this should be okay, but will have to be logged". Perhaps it was my tired and emotional state, but I took this statement as a veiled threat. I was told by crewing that they appreciated it was inconvenient to be called, but they were desperate and were calling all captains on days off. Crewing levels at my base and fleet are inadequately low, and are permanently supplemented by crew from other bases. There is often little or no standby cover which leads to poor roster stability, poor rostering practices and events such as that above."

"On Day 1, I was changed by e-mail from a 1220 standby to operate a 1530 UK-Med-UK departing from another UK base (AAA). This meant a 1245 taxi from my base, so I was on duty at 1230. I phoned crewing to tell them I would make my own way there. I checked the delay line before I left home and there was nothing on it. When I phoned through the fuel at AAA, I was told the aircraft was 3 hours late. Crewing told me they forgot to call but I was still in hours. I was off duty at 0245 on Day 2, but was not changed from my roster to operate a 0600 UK-Med-UK on Day 3. This meant that I operated two late flights (I did a UK-Canary Islands-UK before the flight on Day1) followed by an early. I felt forced to operate the early flight as we are so short of crews at the moment. Crewing are operating day by day at the moment and we are all under considerable pressure."

"I was rostered to be on standby from 0800Z to 1400Z. At 14.30Z I received a telephone call from our crewing department asking me to forget that I have been on standby in the morning and to position to AAA at 1900Z to operate a night flight from UK - Med - UK, arriving back into AAA at about 0600Z. I refused to accede to their request as it would be a flagrant breach of their FTLs. I did however offer to do anything which was legal, but crewing admitted that there was no flight that I could operate legally for them that day! In conversation with other pilots in the crew room, it would appear that this type of request is becoming more frequent. I suspect that less senior crew would accept this type of illegal roster changing, which is why the requests are being made by the company."

Long Duties

"The UK - Africa then re-position Africa - UK sequence was given to me as a plot change. The actual departure/arrival times are 0830z-2135z. They are always late as the scheduled 1hr turnaround is not achievable. After such a ridiculously long duty you're so tired you get up late the next day, which means you're unable to sleep for the night flight. I became fatigued and unwell during the days off but soldiered on until finally going sick - I wasn't brought-up to do this but had no choice."

"A common work block on this fleet is a run of five early starts, with one of them being at 08:00, requiring a report at 07:00. If the 07:00 report were 06:59, the whole block of work would be illegal. However, we have a car park that is several minutes bus ride away, so that time and the wait for the bus has to be allowed for. Also, the company "expects" us to be at work earlier than the published STD -60, being made clear by the fact that it pays us allowances from STD -75 and that some captains take a very dim view of their first officers not being in the office at that time. If a complaint is made about this roster pattern, crewing will change it. Then it appears on my roster

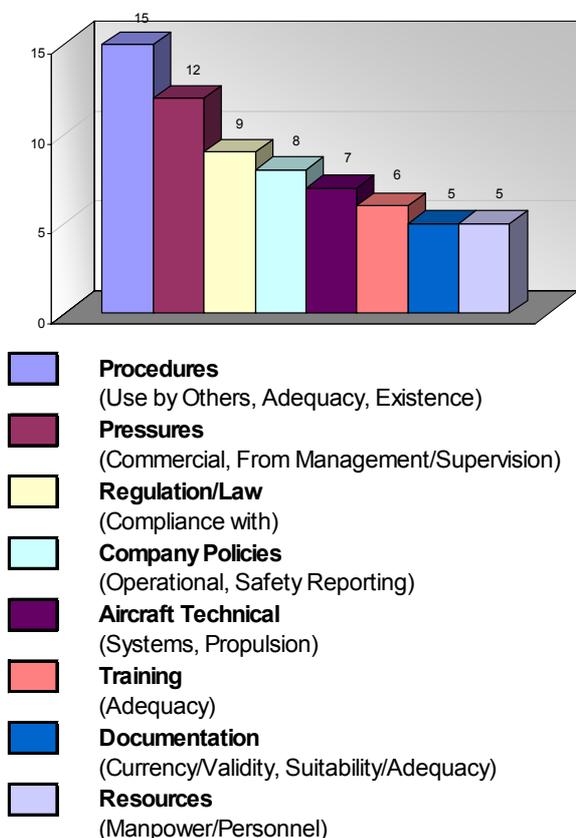
again. I would suggest that, rather than being legal by one minute, this roster block, because of the "expected" early report and the car-parking situation, is outside the regulations by 35 minutes. It is certainly fatiguing and many people comment on their poor performance and frequent errors on the fifth day."

"I recently started flying longhaul and I have found the block times for some of the longhaul sectors unrealistic. As a result, I have been unable to complete some of the flights within the scheduled times and found it necessary to operate into discretion. Upon further investigation I was disappointed to find the scheduled block times fit within the FDP (allowable) but the actual block times do not. This type flies at Mach .80 and there are published seasonal winds for our routes. However, when we fly a 'bullet' ,which suffers an unacclimatised multi-sector FDP penalty, somehow the aircraft adopts a Mach .88 cruise with 50 knot tailwinds. My company should either carry the required extra crew member or rest crew down route, so that we can comfortably fly the required FDP."

This analysis has been submitted to CAA (SRG) Flight Operations Department, along with the text of disidentified reports. A similar assessment of trends will be conducted for 2006.

ENGINEER REPORTS

**Most Frequent Engineering Issues Received:
12 Months to March 2006**



(1)

Report Text: In the period since I highlighted the incident involving the non-recording of a dispatch critical status message by the flight crew in the technical log of a customer airline that my company is contracted to maintain, other similar and potentially serious technical problems have occurred.

Aircraft often arrive with obvious damage/defects not recorded as Hold Items (ADDs) or Tech Log entries. E.g. panels speed taped over. When the maintenance organisation has taken action to deactivate systems, e.g. water drain masts due heater u/s, these have subsequently been reactivated by the operator, without the defect being rectified. On one occasion large quantities of ice formed within false work in the belly due to frozen drains, having been re-instated without fixing the heater.

Flight crews appear unwilling to record defects, except when there is obvious evidence and they don't want to be blamed for damage. E.g mud on tyres indicating the aircraft may have left the paved surface somewhere en route. The relationship is generally good with flight deck crews, who accept engineering decisions; however, the operator's local engineers will often put pressure on the maintenance organisation to release unserviceable aircraft.

(2)

Report Text: I am employed as an LAE by a maintenance organisation. While carrying out a transit check on a customer's aircraft, I located a hydraulic leak from one of the engines. On further investigation, I then traced the leak to a thrust reverser actuator. Functional checks proved this leak was beyond AMM limits. No spare was available so I applied the MEL for the aircraft, which involved locking the reverser sleeve in the forward position and isolating the hydraulic supply to the reverser.

On completion of this procedure I was approached by two of the operator's locally employed engineers and asked to 'reinstate' the thrust reverser. They would then certify the aircraft to operate the flight to North America, return to UK and then on to their base,

AIRWORTHINESS STANDARDS - NON UK OPERATOR

CHIRP Narrative: We have received a number of reports submitted by licensed engineers expressing concerns about the airworthiness control procedures of a non-UK operator, on whose aircraft they are required to work regularly.

The following two summaries reflect the concerns expressed:

where the leak would be rectified. This request was repeated two or three times with the explanation that the weather at the destination might prevent a landing. I refused, stating that, as the certifying engineer, I would only release the aircraft with either the thrust reverser locked out or the actuator replaced. I was supported on this decision by my duty engineer, but was not all happy with the pressure these two individuals attempted to exert on me.

CHIRP Comment: We advised the CAA (SRG) of the nature of these events, and whilst the operator is a foreign carrier, over which the UK CAA has no jurisdiction, the information was passed to the Department for Transport, which is responsible for licensing foreign carriers operating into the UK.

The CAA has offered the following advice to licensed engineers and maintenance organisations, who might find themselves in this situation:

CAA (SRG) Comment: The contract arrangements for engineering support will define the relationship between the two parties and their responsibilities. The engineer who made the report, but more particularly his employer, can only continue to do what is expected of them in accordance with normal practice. Defects should be recorded and rectified or deferred, if the latter is possible. To do otherwise creates the potential for an unsafe condition to exist.

In the meantime, where anomalies are noted, e.g. dispatch critical status messages, the information should be reported up through the UK organisation's reporting system. This will allow the maintenance organisation to consider its liability should anything untoward occur.

We would also remind engineers and maintenance organisations of the requirement in Part 145.A.60 (a) Occurrence Reporting, which states:

The organisation shall report to the competent authority, the state of registry and the organisation responsible for the design of the aircraft or component any condition of the aircraft or component identified by the organisation that has resulted or may result in an unsafe condition that hazards seriously the flight safety.

AIRWORTHINESS NOTICES

The following Airworthiness Notices (CAP 455) have been re-issued or revised with effect from 28 March 2006:

**No.1; No.3; No.4; No.6; No.7; No.9; No.10;
No.11; No.12; No.13; No.14; No.17; No.21;
No.26; No.28; No.29; No.32; No.46; No.48;
No.52; No.74; No.78; No.98; No.98A**

You may register for e-mail notification of amendments at www.caa.co.uk

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CHANGE OF ADDRESS

If you receive FEEDBACK as a licensed pilot/ATCO/maintenance engineer you will need to notify the department that issues your licence of your change of address and not CHIRP. Please write (including your licence number) to Personnel Licensing, CAA (SRG), Aviation House, Gatwick Airport South, West Sussex RH6 OYR:

Flight Crew	Post - as above
	Fax: + 44 (0) 1293 573996
	E-mail: fclweb@srg.caa.co.uk
ATCO	Post - as above
	Fax: + 44 (0) 1293 573974
	E-mail: maggie.marshall@srg.caa.co.uk
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A FINAL WORD ON RTF STANDARDS

CHIRP Narrative: The following article was first published in BALPA's Log magazine and is reproduced below with the kind permission of the Association and the author Captain Andy Bradshaw

RTF Standards - A Grumpy Old Man's View

Is it me, or have standards of R/T become much sloppier recently? You know the sort of thing:- "Speedwell XYZ, clear for take off Runway 26L", answered by a chirpy "Roger, rolling!" "Roger rolling" indeed! No callsign, no runway identifier and no proper acknowledgment of the actual clearance. You might think this is an exaggerated example but take a listen next time you are flying and see what you think.

Read-backs are often either inadequate, as above, or verbose. "FatBird 2, cleared for takeoff, runway 26, wind 270 degrees one-four knots, landing traffic three miles" – "Ah, FatBird 2, roger, cleared for takeoff, wind 270 14, we have the landing traffic on TCAS" Simple rule number one. Use your callsign. Read back CLEARANCES. Use runway identifiers. Do not read back items of INFORMATION.

Frequency changes are also often done poorly. I followed a flight from NCL one day and I swear the guy in front never once gave his call sign in response to a frequency change. How was the controller supposed to verify that the correct aircraft had taken the call? Search me. Some guys even just say 'Goodbye'. Very helpful. And we have all heard someone read back the wrong frequency then disappear before the controller can correct him. Simple Rule number two. Read back the frequency and give your callsign, and then WAIT a moment in case you have got it wrong. You know it makes sense.

The other way of making a horlicks of the RT is by saying too much, as in "London, good morning, this is TopCat 21 turning left through 240 degrees on to a radar heading of 200 degrees climbing through Flight level 180 cleared 240 requesting FL280 and as we are very light today we could give you a high rate if it will help us get an early turn towards Brum", accompanied by a muffled squeal as he steps on another transmission. Simple rule number three is keep your initial call as short as possible. Callsign and actual or cleared level are all that is normally required. And be aware of how busy the controller is. On a quiet night a bit of pleasantries relieves the boredom – if he is working his socks off it is downright rude to take up air-time with gratuitous requests or long-winded greetings "London, a very good morning to you, this is the DooDah twenty-onehundred...."

Talking of gratuitous requests, I was intrigued the other night to hear a young lady in BritBag something or other say "As we are running very late tonight, we would appreciate any direct routings". So, if they were on time they would eschew short cuts, eh? Or did she think a bit of sympathy for their plight would magically close a military area? I believe controllers KNOW we want short cuts and will give them where possible. Asking is usually unnecessary, and to do so on initial call as some people do is pushy and bordering on offensive. I heard a magnificently optimistic pilot the other night asked the Glasgow tower controller if instead of doing the standard Turnberry SID off runway 05, he could negotiate a right turn direct to Germinghausen! I wondered why he didn't go the whole hog and ask for direct the centre fix at Kos.

The general rule concerning short initial calls is rather spoilt, I will admit, by the requirements of ATIS to give callsign, type, ATIS letter and QNH on contacting some approach frequencies – especially as they invariably tell you the current ATIS and the QNH even though you have just told them. I am also rather amused by the instruction we get to 'Call approach on one twenty-one twenty-one using call sign only.' It takes so long to say that the benefit of the subsequent short call must be somewhat negated. I am tempted to call approach with "Approach, this is BritFlot 271 calling, using callsign only as requested by the previous frequency, Over!"

And why will people insist on using non-standard RT with linguistically-challenged foreign controllers? If you want to ask something a bit recherché, surely it makes sense to use the simplest possible language. Thus, "Atheni, would you by any chance happen to have the Samos weather to hand?" recently elicited the response "Confirm you need to turn to avoid weather", whereas, "Atheni, Tristar 241 request", followed after getting his attention by a subsequent "Request actual weather for LGSM" would probably have resulted in the same churlish refusal but without the confusion. Yes, I know you don't do it, but someone out there has forgotten how to suck eggs.

More confusion is caused by trying to anticipate things. Taxiing out at Lisbon, given a perfectly valid clearance via taxiway XY and Z was read back as "Taxiway X,Y and Z to holding point M, runway 04, and what's the Aerostar on our left doing - is he giving way to us?" The Aerostar in question was on a temporary stand, was just starting engines, and had not even requested taxi clearance, let alone been given it. Not only was it an entirely unnecessary enquiry, it also confused the controller, who was only anticipating a read-back of his clearance. Let the controller do the controlling unless you can see an unsafe situation developing. When TCAS was first introduced, many pilots became instant controllers, demanding to know about all this traffic they could now see for the first time. Luckily, that seems to have died out a bit now.

I don't think that everything in CAP413 is perfectly sensible - quite why a complete read-back of assigned speeds is necessary I don't know. I was severely told off recently for not reading back in full an assigned speed given as one number in amongst a string of heights, headings and frequencies. I do think, however, that a small refresh of some of the salient points from time to time would be a good idea. In fact, it would make a much better subject for annual refresher courses than some of the things that get thrown at us. If you want to glance at the document, it is available in full on the internet as a .pdf file at <http://www.caa.co.uk/docs/33/CAP413.PDF>