

FEEDBACK

Issue No: 54

April 2000

EDITORIAL

AAIB - REQUEST FOR INFORMATION

The Chief Inspector of Air Accidents is seeking information on any unreported occurrences involving the inadvertent operation of the roof-mounted Battery Switches on the Agusta 109 helicopter.

Any such information may be reported directly to AAIB, Berkshire Copse Road, Aldershot, Hampshire GU11 2HH (Tel: 01252 510300) or alternatively direct to CHIRP.

AIRPORT SECURITY

Over the past six months or so, we have received 24 reports commenting on Airport Security Procedures. This issue contains two further reports on different aspects of the problem.

During the next two months we plan to discuss the principal areas of difficulty with a number of operators and other interested groups, before presenting a summary of the reported problems for consideration by the National Aviation Security Committee.

If you have experienced a problem with airport security and wish it to be included in our discussions, please forward it by the most convenient means.

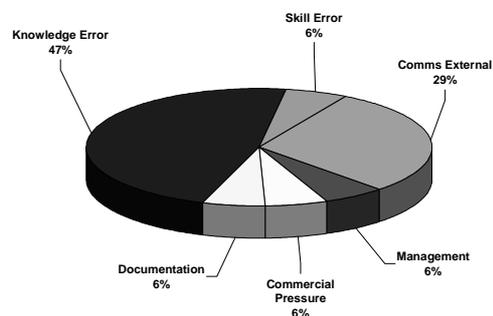
DECOMPRESSION & HYPOXIA EXPERIENCE

In the last issue of FEEDBACK a correspondent noted that commercial pilots no longer have the opportunity to experience a demonstration (training) rapid decompression and hypoxia.

We have been asked to point out that training is available to commercial pilots at the Centre for Human Sciences (CHS), DERA, Farnborough. (For details contact Giles Ridout Tel. No. 01252 394475).

ATC REPORTS

ATC Reports received in Period: 10



Key Areas:

PRESSURE TO ARRIVE

I am becoming increasingly concerned at the number of potential incidents at my home airfield, because of the very stringent closing time imposed by the airport authority. This incident is merely a further example of commercial pressure, or possibly 'get home ite-is' as a result.

I had received an Estimated Time of Arrival (ETA) on an inbound twin turboprop aircraft from a foreign departure point some 20 minutes after we closed. It would have been possible for the aircraft to land at this time, but this would have resulted in a large excess charge being applied to the landing fee. The company, who are not locally based, were contacted, and Operations advised that they did not wish their aircraft to land, but instead to proceed to the next nearest open airfield, some 70 miles away.

Approximately half an hour later the centre again contacted me saying that the aircraft had notified his ETA as one minute prior to our closing time and he was "fairly confident" that he could make this ETA.

FEEDBACK can also be accessed on the internet at www.chirp.dircon.co.uk

Confidential Human Factors Incident Reporting Programme

INSIDE THIS ISSUE:

ATC REPORTS	P1
FLIGHT DECK REPORTS	P4
ENGINEERING REPORTS	P9

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CHANGE OF ADDRESS?

We are only able to accept a change of address in writing stating your licence number to the address above.

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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After some little discussion the aircraft was transferred to me, with the intention of positioning it on to a short visual approach. The aircraft was then vectored direct to the airfield and a descent commenced, at an obviously higher than normal speed!

Approximately 10 miles from touchdown he advised me that he had the field in sight and was then transferred to the tower. I monitored the tower frequency and then heard the pilot asking for the runway lights to be turned up. Looking at my radar the aircraft was now on a two and a half mile right base and was turning AWAY from the field - at the same time I heard him tell the tower that he did NOT have the runway in sight. He quickly regained sight of the airfield with a 360-degree turn at two mile final, landing 10 seconds before we 'technically' closed.

This had been yet another example of an inflexible closing time pushing pilots to rush themselves and their aircraft. I know we have to have a cut-off point somewhere but this sort of pressure to beat a deadline is surely not conducive to safety?

Incidents that occur as a result of misinterpretation of an RT instruction are relatively few in the UK. However, the opportunity sometimes presents itself as the two following reports indicate:

(1) CONDITIONAL CLEARANCES

This is a light-hearted plea to that small but increasing minority of pilots who read back line-up clearances incorrectly by saying 'Line up after the landing (type)' instead of 'After the landing (type) line up'.

Having issued a conditional clearance and to hear the fateful word 'Line-up' first is guaranteed to cause a controller instant fright until the rest of the clearance is read back!

(2) WHO AM I TALKING TO?

Growing older, one should perhaps get more tolerant, but working in an increasingly busy TMA environment with hardly any time to think, I am getting tired and irritated of reminding pilots to answer executive instructions I give them with their callsigns. My colleagues and I frequently have many flights on our frequency and when someone doesn't answer an instruction with a callsign, how are we to know whether the message has been received, and acted upon, by the right crew?

A couple of years ago I was returning across Europe on a familiarisation flight following another major British carrier. At each stage when the preceding flight was

instructed by the ATC Centre to change frequency, all that was said was 'Roger, good-day'.

Do some pilots think that their callsign lights up on the radar when they transmit or that we have a video link that allows us to see their lips move? I can assure them we don't. With a plea from the heart I ask all of them, PLEASE USE YOUR CALLSIGN WHEN ANSWERING ANY ATC EXECUTIVE INSTRUCTION (as you're supposed to do!). It will save all of us stretched ATCO's a lot of time and allow our blood pressure to go down a little!

Good RT discipline remains a basic principle of safe aviation practice, but it can be compromised by congested RT frequencies, or the understandable temptation to shorten a response, such as one containing a six-digit frequency and a four-figure callsign. A verbatim repeat of the original instruction, as is required in some countries, provides a solution to most, if not all of these types of problem.

ANOTHER CASE OF HIGH PRESSURE

Ten minutes before the aircraft came under my control, the ATCC phoned for an acceptance level. The pressure was unusually high. (QNH 1042 mb) the transition level was FL25. I therefore allocated FL35 to the inbound aircraft.

When the aircraft called on frequency, he reported 12nm inbound, level at altitude 3500ft QNH 1042. The Minimum Safe Altitude (MSA) for that sector is 3000ft (within 10nm) and 3800ft (within 25nm). I immediately climbed the aircraft back to 3800ft to remain terrain safe.

I telephoned the ATCC co-ordinator, he confirmed that I had allocated FL35 and that they were aware that 3500ft was not terrain safe; he said he would speak to the controller concerned.

My concern is that with such a high pressure, I was able to allocate an unusually low flight level, but did the ATCC controller assume that I had meant to say altitude? And, if so, was he not aware of the MSAs in that sector? Also, the MSAs are published on the approach plates, so why didn't the crew query the altitude given?

The aircraft was never in any real danger in this incident, but when the pressure is high in future, I will always double check the ATCC knows what I want.

ATC COMMENTS

COMMENTS ON FB53

The purpose of this letter is not to report a specific incident but merely to state my appreciation of the work that goes into producing FEEDBACK for the industry. I have been an ATCO for over 25 years now, and am currently a manager at a ATS unit. Many of the topics raised in FEEDBACK are discussed between controllers and the latest issue, No 53, contained several which we found especially interesting

The matter of "Commercial Interest vs Safety" on Page 3 is one with which we have knowledge, having been placed in a similar situation, when the flight-deck crew queried the need for the RFFS (Rescue & Fire Fighting Services) to attend what they considered to be a routine engine shut-down, yet which ATC determined was worthy of a Full Emergency call-out, as a precaution, as per our SOPs. Again, the emphasis placed by the airline upon public/passenger perception troubled us greatly.

"Class F Airspace" on Pages 6 and 7 was interesting to read, for again it shows how little some pilots understand the nature of the airspace in which they are flying. To land or depart from our airport, it is necessary to fly in Class G "open FIR" for anything up to 25 track miles, yet I am absolutely certain that few pilots truly appreciate that this is completely uncontrolled airspace, even though they are invariably given a Radar Advisory Service. Most concerning is the fact that the Arrival/Departure Charts used by some major European carriers do not show the boundaries of controlled airspace, and merely show a straight-line from an airways intersection to/from the terminal NDB on the airport, along with DME distances and tracks. I accept that ATC should advise a pilot when he/she leaves controlled airspace but, from my experience, that has almost no impact at all on most pilots, nor do I believe the significance and potential for avoiding action against unknown traffic is appreciated.

The item "Speed Pressure" on Page 9 and the "Go-Around" reprint from "Flywise" on Pages 15 and 16 provoked a lot of comment from my ATCO colleagues and not a little incredulity. If a pilot feels that ATC are asking him/her to do something which he/she feels is operationally unwise, uncomfortable or downright dangerous, then he/she MUST, repeat MUST, make the controller aware of the fact and refuse the instruction. ATCOs are not mind readers, nor do we have detailed knowledge of optimum operating procedures, speeds, flap settings etc.

I must admit that the comment "... and then allow ATC to tell us what they want (and indeed need) to fit in with their plans - not ours" made me see red: Pilots/controllers surely work as a partnership, to attain

one goal - safe and expeditious flight. Resentment by one half of that partnership and ignorance of a problem by the other is a recipe for disaster, for certain.

I would also extend that idea to cover another situation with which I was recently presented. An aircraft under my control requested a visual approach at night, then lost sight of the airport, flew into cloud and certainly appeared to be lower than I would have anticipated, when visual contact was regained. After landing, I questioned the flight crew as to what happened and they confirmed the events above. Perhaps I, as the radar controller, was remiss in not picking up the fact that something was not right, but that's a lesson I'll learn for the future. What does concern me however was that the fairly inexperienced flight crew did not see fit to tell me that they'd lost sight of the airport and had encountered low cloud. Had they done so, I would have climbed the aircraft and continued with radar vectors. **Moral of story, pilot-people: if in doubt, or if things are going wrong, for God's sake tell ATC! We're here to help.**

R/T COMMUNICATIONS (FB53)

A letter close to my heart! About the quality of R/T communications.

Aircrew may not be aware that controllers are issued with a new headset at the start of their career and it is planned to last for life. There is no regular replacement or maintenance programme. If it breaks, it can be exchanged for a repaired headset - probably even older.

We did have a headset tester at this Unit some years ago, but no one has seen it for a long time.

Please speak up if you think we have an R/T problem, but I can't guarantee that we'll hear you.

As for the controller sounding like a one-armed paperhanger - controllers are human too - and we like to go home early. One way to do this is to join two sectors together, and then join those with another two: this is called "band-boxing"; and when the relevant sector frequencies are cross-coupled together - HEY PRESTO - head-in-a-bucket sound!

Whenever the controller sounds busy in the evening have a good listen, he/she may be controlling traffic hundreds of miles away from you. Sectors are band-boxed at almost the same times as many years ago - taking little account of the continuous growth in traffic and the ever-lengthening demand period.

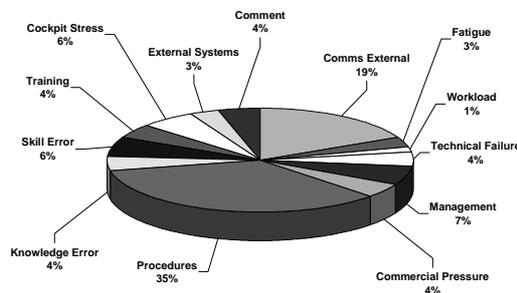
I know - we do it all the time - Sounds very impressive though!

Communications is two-way. If the quality of a transmission is poor, let the pilot/controller know

FLIGHT DECK REPORTS

Flight Deck Reports received in Period: 39

Key Areas:



ATC WORKLOAD

I operate regularly into and out of London City Airport (LCY). Whilst I appreciate that the London TMA is busy, last night my First Officer and I were concerned at the workload shown by the controller in one of the TMA sectors. After departure we were handed to Thames Radar, who gave us a clearance to climb to 6000ft on the QNH. This we did and then we were transferred to London. At this point we were some 4nm from ### cruising at 240kts. We tried in vain to contact the London controller and, despite inadvertently stepping on others, we travelled for five minutes until we were 16 nms past ### before contact was established.

The controller was issuing directions in a constant stream to a multitude of aircraft and no doubt was aware of our presence. Our track and altitude were safe but we were very concerned at the controller's workload. In no way are we levelling any criticism at the controller but sympathise over his obviously high workload.

We discussed the matter on completing the sector and assessed that a CHIRP report was appropriate.

In the particular case of LCY, every departure requires a release from the TMA controller. If the TMA controller is too busy, a release will not be issued. Consequently, the controller will be fully aware of the traffic on departure and its route.

APPROACH CHECKS

A route training multi-sector flight with relatively low hour co-pilot. Blue skies alternating with heavy snow showers. 10-minute sector into wind. Make contact with destination, get the weather (eight miles visibility, overcast at 2000ft), order fuel, check onward load.

Weather radar suggests shower over destination, so brief for Airborne Radar Approach. Commander to fly

approach, Co-pilot to provide talk down. Co-pilot out of practice, so brief drags on. At final point, commence final checks and start descent. Half way through, it becomes apparent that initial approach checks have not been done. Co-pilot now has two sets of checks and the talk down to complete. Slow down to minimum approach speed, and one eye on the Radar to make sure we are not getting too close to hard bits.

Checks complete, concentrate on instruments. They show an airspeed of 40 knots, rate of descent 800 fpm passing 400 ft. S**t! Stick forward, maintain power. Airspeed increasing, raise lever to stabilise at 250 ft, 80 knots. Talk-down resumes and we land on rig.

What were my mistakes?

1. The start of the approach should have been delayed, by slowing down or orbiting to ensure adequate time for brief and checks.
2. The Co-pilot should have been handling. It was his landing and transition to visual handling is easier from talk-down and lookout than from instruments; the latter is possible but with a double handover.
3. Discovering the lack of approach checks should have prompted an immediate go-around.
4. Recovery from low speed should have been to a go-around, not to continuation.

What was the result? Our combined pulse rates were about 400 and we were in no state to deal with any other problem.

Line Training can be an extremely challenging instructing experience. In spite of this, some operators offer relatively little training or guidance on how to conduct line training and how far should you allow a trainee to continue.

Food for thought?

WHICH WAY TO GO?

On stand at a UK regional airport. Neither pilot familiar with the departures, or airport for that matter. Anticipated a 'Cowley 2E' departure and briefed accordingly.

A 'Compton 2E' clearance was issued. I 'heard' 'Cowley 2E'. F/O read back 'Compton 2E' without question. A minute later he looked a little puzzled and when pressed, he said he thought we'd been issued with wrong SID. Now confused, we asked ATC for confirmation and they DID want us to do 'Compton 2E'!

I feel we only just avoided a mistake of flying a different SID to that expected by ATC.

I heard what I wanted to hear, but is it wise to have two SID's in same(ish) direction, both starting with 'C', having two syllables and both ending in '2E'?

Has anyone else experienced a similar problem?

WAKE TURBULENCE

I am concerned about an apparent increase in wake turbulence encounters. The latest event occurred at night departing Heathrow Runway 27R with very light northerly winds. We were cleared take-off as a B757 was seen to be just airborne. Doing my bit at this busy evening time for 'Minimum Runway Occupancy', we commenced a rolling take-off approximately 30 seconds later. At 1500ft the aircraft rolled smoothly and rapidly 30° right. With both pilots applying left control wheel inputs the roll rate was arrested, and as the aircraft flew through the wake, a normal climb-out was regained. Seeing from peripheral vision the stars above and the city lights below appear in each side window adds to the W*** i* h*** i* happening!

I enquired within minutes through the interphone from my still seated cabin crew if there was any concern from them, but they said they didn't notice anything; which just shows the insidious smoothness of the lateral rotation. I told ATC of the wake event but I'm fed up with filing company ASR's, as these are inevitably assessed as medium/low risk.

On another occasion on a calm day, again departing Runway 27R, I had my control column stick shaker activated just after rotate (100ft) as the wake vortex from the previous B757 flicked the stall warning vane on my aircraft; (stick shaker system satisfactory, prior to and subsequent to this event). Another six grey hairs!

These are just two of the more memorable of many wake events I have had departing LHR.

At least two non-UK carriers operating the same type (B737) always insist on a two-minute wait following a B757. It must be their Company SOP's. With our company as a major slot holder at Heathrow, my colleagues and I have persevered, (admittedly not filing an ASR for every event) as we know that if we are given a two-minute wait behind B757's, as well, it will only aggravate ATC movements even further, as we always try to always help ATC. However my experience over many years on this aircraft suggests that the non-UK carriers have got it right.

Given the declining number of B737s at LHR as a percentage of total movements, would it really aggravate LHR movements if given two minutes separation behind a B757 in light wind conditions, say 10 knots and below?

The NATS Air Traffic Management Development Centre maintains a comprehensive database on wake turbulence incidents. Pilots are encouraged to notify ATC of any significant encounters, irrespective of whether they submit an MOR/company report. It is also important that all events resulting in a significant handling difficulty are reported by MORs to provide the justification for a change such as that proposed above.

We would be interested to learn of any previously unreported incidents, which resulted in a significant aircraft manoeuvre.

FUEL PRESSURE

Over the years there has been a desire by airline managers to reduce operating costs by reducing the amount of excess fuel carried over the legal minimum required to be carried at the planning stage. That this is broadly reasonable cannot be denied, after all, loading an extra hours fuel for holding after a 12-hour flight is a pretty large cost penalty, not to be taken lightly, however, for short haul operations the penalty on a one hour sector is very much smaller as a percentage of the excess loaded. On my type, a mere 50kgs per tonne per hour at most.

Our fleet is recording an average excess of a mere 250kgs or just over 12kgs per sector of extra burn-off (an approximate cost of less than £2 per sector!) Given that many of our sectors are into LHR where the airline agreed landing rates DEPEND on a ten-minute hold for all flights to keep the stacks "topped-up", this is pretty good by any measure.

However, I am becoming increasingly concerned that in some kind of misguided management game over cost saving targets, regardless of circumstances, crews are being pressured into a 'zero' excess regardless of conditions. This is particularly concerning when applied to less experienced captains.

The following is a good example. Strong winds reduce the landing rates at LHR and on this occasion they were actually over 25 to 30 kts gusting 40+ at the surface and forecast to stay so. Operations control sent a telex to all stations advising of 30 minutes holding to be expected in these conditions, we had fuel for the JAR Ops Requirements i.e. taxi, route, diversion, hold and the minimum of 15 minutes contingency. The message received had the immediate effect of turning a forecast 1hr 45 min flight into one of 1hr 45 + 30 mins for the route. Thus extra fuel was loaded to cover the forecast 30 min hold and thus meet the JAR Ops Planning Requirements. The First Officer; whose leg it was calculated the new fuel quantity.

After the flight, I was questioned as to whether my decision to load extra was necessary, after all it was stated, we could have dispensed with the alternate and use that fuel for holding. Even after I pointed out that this was NOT an option at the planning stage there was pressure applied to induce me into believing I was wrong, with examples of "Well if you are short, just declare a PAN rather than divert to somewhere able to offer an expeditious approach!" I pointed out that planning to start a flight with the intention of declaring a PAN to achieve a planned commercial arrival was not really acceptable! I think I know fairly well what the response by ATC would be to such a suggestion.

I am now becoming increasingly concerned that cost saving measures have become such a dominant item for our managers that common sense and airmanship, let alone compliance with more rules of JAR-Ops, Advisory Information Circulars on fuel to be loaded when operating into LHR and even the good old ANO's edicts regarding a Commander's responsibilities, are all being disregarded. To encourage crews not to carry fuel above legal planning requirements, unless for a good reason, is correct. However, the situation at many large hubs is similar to LHR, with holding for capacity maximisation being the norm, even if it is in the form of a long radar vectored approach. To continually suggest that contingency fuel be used for this, a known increase in flight time, at the planning stage is at best a liberal interpretation.

After all, if I were given a re-routed flight plan with a 10-minute longer sector time, I would be expected to load the revised fuel.

The impact of even simple and common failures on flight time whilst dealing with check-lists seems to be ignored. I realise all possibilities cannot be covered, but encouraging routine 'to-the-wire' operations is surely courting disaster.

Whereas the airline policy for the calculation of 'sector fuel' is probably correct as specified in the operations manual (which presumably satisfies either CAP 360 or JAR-Ops), the interpretation reportedly given by the person who queried the carriage of 'extra' fuel was disingenuous at best and potentially misleading at worst, particularly for less experienced commanders.

Where the capacity exists to carry 'extra' fuel without infringing the maximum permitted landing weight/mass limitation or needlessly causing payload to be offloaded, and when circumstances arise in which the carriage of 'extra' fuel will avoid having to divert early - as seems to have been the case here (or why else would operations control send the telex as described?) - no operator who has sound planning policies and a viable safety culture would criticise a commander's decision to uplift a sensible amount of 'extra' fuel.

MORE ON 8.33 KHZ SPACING

The following suggestions have been offered as in relation to the difficulties reported in remembering the new 8.33 kHz frequencies:

(1)

It could well be my age and reduced computing power but I also seem to have trouble remembering the new channel frequencies when given a frequency change. It certainly seems to require more concentration than the previous number sequences, so how about dispensing with the opening digit? I can't remember the last time it was anything but "one".

Also, might we dump the somewhat unnecessary "Channel" and "Decimal" for brevity's sake? I do not suggest that we go as far as the 'States where "Ground, point eight" represents the limit of tower's adieus, but I do think we could move on a little in that direction.

(2)

Regarding new 8.33 kHz radios, I find it easier to remember the new numbers not as a whole string (most confusing like 128.880....!) but as a 'number' and a 'string'.

i.e. 128.880 becomes "Twenty eight point eight eight zero" not "One two eight point eight eight zero"

The second example has too many digits and not enough breaks and differences.

KEYPAD LOCK-OUT

I have read with interest the sentiments expressed in several issues of FEEDBACK regarding security procedures at some UK airports and realise I am not alone in feeling that somewhere along the line we have 'lost the plot'. However, ### surely must win the prize for the most outrageous piece of so-called security measures.

As many readers are aware, in their wisdom, ### decided to fit keypad/swipe card locks to all pier/apron access doors. These serve no purpose other than to hinder the movement of everyone associated with an aircraft turnaround. I recently had an even greater curse on these locks when I was unable to gain urgent access to the apron. Having been passed a 'final' zero fuel mass we decided on a fuel load and passed it to our engineer who was at that time on the flight deck. About 10 minutes later Load Control called again telling us they had passed an incorrect weight which meant we needed to reduce our final fuel by a small amount.

Our engineer was somewhere on the apron and wasn't answering his radio and the dispatcher was up in the departure lounge sorting out a passenger problem, so having fought my way past the boarding passengers, I arrived at the locked pier/apron access door. Now, with the First Officer, the cabin crew, and myself all being non-### based, none of us could gain access to the apron ... with the fuel still being pumped aboard! For about five minutes I was completely stuck until a caterer coming up the steps from the outside was able to let me out! Thankfully no embarrassment was caused with our fuel load.

This may be an isolated incident but I can see no reason or benefit for these locks. If restricting the access to aircraft in the interest of security is the reason, then they have failed in that, on many occasions, we have rear steps, or are they soon to be banned or fitted with padlocked gates! Then there are many places totally accessible outside the aircraft such as holds, gear bays, E&E bays, toilet servicing panels, etc., or are barbed wire fences going to be erected around every stand. Call me cynical but where do we draw the line?

We all want and need certain levels of security, but lets get the balance right. Please.

FLIGHT DECK COMMENTS

COMMERCIAL VS SAFETY (FB53)

Following the publication of the report detailing an extremely irate call from an airline manager to an ATCO regarding the deployment of Rescue and Fire-Fighting Services (RFFS), we received a considerable number of comments. The following is representative of several offering an airline perspective.

I have just read the 53rd Issue, and would like to make a couple of comments:

Leaving aside how pleasant or unpleasant the airline manager was when he complained to ATC that they should not have called out RFFS when his diverting aircraft landed, I must say that I have a great deal of sympathy for his point of view.

There is no middle road as far as RFFS are concerned, and the result is that commercial and public relations aspects are ignored. It may surprise some people, such as those in RFFS, ATC and the Services, that commercial aviation relies on good commercial and public relations aspects. These factors lead to their employment.

Whilst safety is generally of paramount importance, the importance of commercial aspects should not be ignored, as they usually are. There is an arrogance here that requires a rethink,

I remember a situation, not too long ago when an aircraft returned to this airport with one engine shut down. It had been shut down as a precautionary

measure, but flying on one engine in this type is absolutely no problem at all, and the weather was CAVOK.

The Captain had explained to the passengers (about 20 of them) that he was closing down the right engine purely for precautionary reasons, that they were returning to ### and there were absolutely no reasons to be in the slightest bit concerned. The cabin staff were cheerful, the pilots seemed happy, so the passengers relaxed. Inconvenient, but no big deal

Unfortunately, on landing, the aircraft was surrounded by fire engines, firemen rushed out with Darth Vader suits and helmets, and pointed fire hoses at the aircraft, some of the passengers freaked out, and panic started to ensue.

This was a most damaging action by the RFFS, who were not needed, and ATC had been told that they were not needed. Nor were the ambulances that charged up from the hospital in the local town, but that is a different (but closely related) matter. Some passengers suffered serious psychological injury, and the airline lost several passengers. It made the local paper as a "major emergency", so maybe it lost more than "several" passengers.

Safety must be regarded always as paramount in this matter. Given the possible consequences of a delay in RFFS attending an incident, it is not unreasonable for an ATCO to err on the side of caution in ensuring that RFFS are available in a non-normal situation, particularly as he/she rarely has all the information or the relevant expertise to assess the risk.

If time and opportunity permit, notifying a crew of the RFFS alert state might be beneficial. Notwithstanding this, an appropriate briefing to passengers, when possible in advance, of the possibility that RFFS will attend as a precaution, should minimise adverse passenger reaction.

As to notifying the airline management, is it not reasonable for the Aircraft Commander to undertake this task as soon as practicable?

RAMP SAFETY

Could I add a personal concern to your editorial in Issue 53 - Ramp Safety?

I have noticed, especially in the UK, that a member of our handling agents' ground crew stands very close to where the nose wheel comes to rest on the parking stand, The reasons are obvious - to insert chocks and to connect the headset, both of which are plausible and understandable. My concern is that my a/c type has a 'blind spot' of about 40 feet directly ahead of the nose into which the ground crew disappears, as the a/c

approaches the stand. As most of the parking manoeuvre is now by automated guidance (AGNIS etc.), I am told where I am in relation to the stand centre line and where to stop, but not if I am about to run over any obstructions that have moved into this blind spot.. Is it not a possibility that the ground crew could trip, fall over, or faint and end up under the nose wheel?

For the sake of a few seconds and a few steps, wouldn't it be safer for the individuals to stand well back? Some may feel that my concern is extreme. Well, every six months for the last 20 years, I've been practising engine failures and I have yet to shut down an engine in anger! If and when I get an engine failure, I feel confident enough to cope - I don't know how I would cope if I ran over someone.

FMC INITIALISATION & LOADING

The following suggestion has been offered to prevent the type of FMC initialisation error reported in the last issue (53).

As we all know, but sometimes overlook, INS/IRS can only tell you where you are after being fed a starting point, if this is wrong then all else is wrong also, as your correspondent was honest in reporting.

This initial position may be protected from gross error by the software programme. However, a simple and sure protection is the crew procedure used by at least two major airlines. The pilot inserting the initial position calls it out aloud, "ABC N54.32.1 W001 23.4" while the other crew member(s) confirm the numbers from the Jeppesen/Aerad chart, or gate identifier. This last can be a small trap for airmen however, because the FMC understands degrees/minutes and decimals of a minute, as do most airport gates, while a minority use degrees/minutes and seconds, which the FMC does not like to digest. So check the Jepp!

ADVICE ON SPECTACLES (FB53)

We received many comments regarding the use of varifocal lenses on the flightdeck. Those of us, who have reached, or are reaching, the point that their arms are no longer long enough, may find the following to be of interest.

(1)

I take issue most strongly with the remark that varifocal spectacles "should never leave the ground". As a commercial pilot who has achieved that "Certain Age" I found the transition from near perfect vision to one requiring corrective lenses for both near and distant vision a very trying experience. I struggled with bi-focal lenses for many years but found the distinct and fixed

division between the near and far vision segments of my glasses very limiting. What worked for one flight deck did not for another due to the varying distances of instrument panels and overhead panels from one's seating position.

However, I eventually tried my wife's varifocal lenses for a trial period and found the flexibility they gave me a total transformation of my visual capability. Just a small change in the angle of one's head and previously out-of-focus instruments came back into focus. Dire warnings of poor vision were quite unfounded and I have found no shortcomings to these marvels of optical enhancement. So I fear that the esteemed medical expert's unfounded damnation of these spectacles may dissuade other sufferers from finding the solution to their problems. Varifocals work for me and are far superior in overall visual flexibility to bi- and tri-focal lenses which to me are stone-age technology in comparison. So, fellow sufferers, do not be put off by the experts - varifocals do work!

(2)

As a very contented wearer of varifocals, I should like to take exception to the sweeping and misleading comment in FB53, to the effect that "varifocals should never leave the ground". Does he, I wonder, actually wear varifocals? I doubt it. I have seen colleagues wearing bi- or trifocals peering awkwardly to try to focus, but I can honestly say that because of the blending of the lenses I can instinctively position my head to focus with no difficulty at all, quite automatically. I also find that having a second pair with lenses whose tint increases from the top downwards is very useful in today's modern, bright, flightdecks (I fly Airbuses), since the long distance part is darkened for looking out, whilst the lower part is less so, making it easier to view the CRT's, particularly as these tend to get dimmer with age. There are those I know who do not get on with varifocals, but I consider it quite wrong for an "expert" to make such statements, as it may well put off those who, like me, benefit greatly from their use.

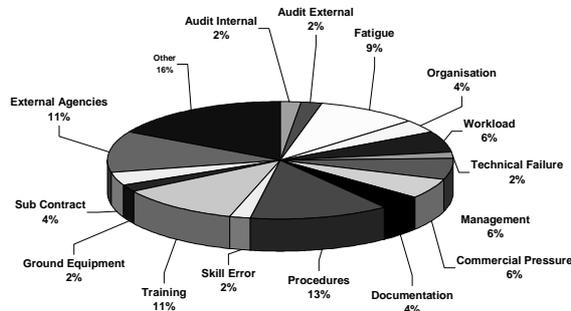
Several individuals noted that tri-focal blank lenses are becoming increasingly difficult to obtain and sought information on the Civil Aviation Authority's latest thinking on varifocals. Dr Simon Janvrin, Chief Medical Officer, has provided the following:

Although AIC 135/1997 suggests that varifocals lenses are "not generally advised", if a pilot has adapted to them and finds them suitable for flying then the CAA Medical Division is happy for him/her to wear them on the flight deck.

ENGINEERING REPORTS

Engineering Reports received in Period: 19

Key Areas:



SIGN-OUT OF WORK

(1) APPROVALS AND EXTENSIONS

I am an A, C and X electrical Licensed Aircraft Engineer, currently working on a contract basis. After being happily employed by a UK regional airline, I joined a smaller UK operator.

I left this operator due to concerns regarding certification and abuses of privileges, hence this report.

During my short time with them, I became increasingly concerned with the fact that A&C engineers with "black box extensions" were, in my opinion, certifying tasks outside their authorisation privileges.

For example:

The airline took delivery of a "used" aircraft. During C of A "acceptance", I was tasked with performing an electrical modification to the aircraft, involving the separation of a single power supply to some cabin services. This involved de-pinning a Raychem connector, de-pinning a cannon plug, splicing a small number of cables, tying back a number of cables and re-pinning the plugs. A new switch panel completed the modification.

Having not been authorised for the aircraft, I could not certify my work, and told the senior engineer this. He certified it. I should mention that this engineer holds only A&C! When I questioned the validity, he replied "They (CAA?) didn't notice the last one".

The above aircraft is now flying with a UK C of A.

In addition, on the same aircraft, I changed a fan, the original having been robbed to service a line aircraft. The replacement fan arrives from the supplier with bare ends on the two power cables. At the factory, during build, the fan was fitted with jiffy connectors. I asked how I should connect it, to be told that the AMM allows a splice. It does allow a splice, but when I asked for

splices I was told to use a commercial splice (i.e the Halfords variety). I stuck my ground and managed to get the proper pins, crimp them on and plug them into the original jiffy plugs. Again, an A&C certified this task.

On another aircraft, I had to reconnect a transmitter. The plug had been de-pinned, so I had to use an electrical insertion tool to re-pin the plug, connect it and test the unit. Certified then by an A&C.

I was also involved with a "C" check. This check was staffed by A&C engineers and fitters only. I witnessed the de-pinning (using electrical extractor tools of the type for "jiffy" connectors) and re-pinning of various system connectors but I am unsure of the validity of A&C certification of these tasks. Indeed, I suspect one of the tasks was not even documented.

As you might imagine, when voiced, my concerns were met with derision and strong disagreement.

During the "C" check, I had a conversation with a manager, mentioning to him that I wasn't happy with the working practices. His response was pointed and that he wasn't happy with the way I worked. I resigned!

To summarise, my concerns chiefly lie with the fact that I am convinced that this company is allowing A&C engineers to certify tasks for which they are not qualified, and therefore allowing a certain level of "devil may care" attitude with scant regard for the safety of the passengers.

That is the reason, and the only reason, I submit this report - to how much risk are their passengers being exposed due to an attitude that allows certification beyond, in my opinion, the qualification of an A&C engineer?

It is pertinent to note that engineers licensed to Section L of British Civil Airworthiness Requirements (BCARs) are not qualified to certificate this type of work. This calls into question the legality of the operation. Engineers in the equivalent disciplines, licensed to the full JAR 66 standards, are qualified to certify this type of work, providing the appropriate tooling has been used.

(2) COMMERCIAL PRESSURE

An incident has been reported which allegedly involved a senior Aircraft Maintenance Manager, abusing his powers of position within his Company and his powers as a Licensed Aircraft Maintenance Engineer.

Due to a number of circumstances the aircraft 'D' check ran late. Extensive corrosion was found in the aft cargo compartment and as a result many structural repairs were undertaken. The technician supervising the aft cargo bay was an engineer with many years of experience, and despite huge amounts of management pressure, he stood

his ground and refused to be pushed into cutting corners.

At this stage, it should be mentioned that the Accountable Manager was reported to have been with the customer awaiting arrival of the aircraft and it filtered through the grapevine that he had verbally threatened to replace both senior managers, if the aircraft was not finished within a given time.

The immediate Manager (of the two seniors involved) bypassed the technician running the aft cargo bay and ordered the remaining bilge repairs to be over-sealed, followed by installation of insulation and fitment of floorboards before the final inspections of the repairs were carried out.

As a result the technician refused to certify the job cards for the repairs, and during the technician's days off, this Manager signed off a substantial number of job cards, which were all for jobs which he had not even inspected.

The aircraft was then released for a test flight with several duplicate inspections completed but left unsigned; this was done after the test flight.

The Quality Department of the organisation involved was apprised of this report, without risk to the reporter's identity, and conducted an investigation into the reported circumstances.

The company concluded that the aircraft was airworthy and the issue was one of administration in the close out of task cards. The report identified a number of shortcomings. A backlog of cards had built up as the end of the check approached and the zone supervisor had departed on holiday. The senior maintenance manager took charge of the particular zone in order to get it closed. Working on information that the inspections had been done but not certified, he cleared the cards. Under pressure to get the specific aircraft zone/area inspections completed and the aircraft cleared for flight, he relied too much on second hand information and made too many assumptions about the aircraft status. This resulted in poor decision-making.

Stemming from these investigations there have been a number of actions: prevention of build up of open cards through modified procedures; review of certification rights of senior managers, with a refocus of the responsibilities of aircraft managers and for aircraft progress reporting; modified QA audit activity to focus on documentary issues.

As with the previous report, the question remains, however, as to the legality of the aircraft flying when certified in this manner.

FALSE CLAIM TO LICENCES

The following report was received by telephone from a UK Contracting Agency:

This agency was in the process of placing a contractor who claimed to have an A&P licence. On checking it was found that this was not true.

This is the fourth occasion recently that this has happened.

The Agency advised both the FAA/UK office and the CAA.

The penalties for this offence are up to £2000 fine and/or two years in prison.

ENGINEERING COMMENTS

SHIFT PATTERNS

(1)

With reference to FEEDBACK Issue 52 editorial, concerning the debate over four by four shifts being non-conducive to safe and healthy working practices, I would like to make the following points, under the auspices of CHIRP for obvious reasons.

1. 4x4 12-hour shifts are not a new phenomenon, the debate over cost effectiveness versus safety has been raised on and off within the airlines for more than 20 years. I believe the reasons that it has persisted is that there has never been any proof that it caused unsafe conditions or practices. I for one would like to ask if there is any significant new data to prove otherwise?
2. I have worked, managed or otherwise been associated with 4x4 shifts for most of the past 22 years in both a line and hangar environment, I therefore have heard most of the argument both for and against 4x4 working. It has always been my experience that the people employed on such shifts were so employed, of their own free will. Their and my reasons for doing so were many and varied but chiefly, that the work pattern was adequately balanced by the rest periods, even if overtime was involved.
3. To achieve the same continuous working afforded by a 4x4 pattern, (an operator), has recently introduced a 7-on 3-off followed by 7-on 4-off (4 early/3 late) pattern. There are several major concerns with this type of pattern as follows:
 - 3a. Manpower levels have not been increased from those needed to cover the original double day shift pattern, however, an extra 100 days (weekends) per annum now have to be covered. This has caused the manpower level to be stretched to the point where many tasks cannot be manned continuously or at correct levels. This is putting individuals' safety at

risk and interfering with the logic and safe flow of the maintenance tasks undertaken. There will inevitably be an increase in maintenance downtime because of this, which will be blamed on the workforce causing even more stress.

- 3b. The elongated on-duty period (before a day off) and the variation moving from early's to late's is causing the workforce stress, such that by the time the late shift is commenced many are not as efficient or as alert as they should be. The ratio of time on, to time off, is imbalanced, although the pattern is similar in make up to double day shift, the pattern actually requires a balance similar to 4x4 i.e. equal time off. With present employment practice this would be impossible to achieve.
- 3c. This shift pattern means that only one weekend in three is not worked and although the pattern has been introduced such that this is a long weekend, it is insufficient quality time for those with families or other social commitments. This is causing the workforce to be further stressed, such that when they return to duty there are yet more affects on safe working practices, and thus adding to the problem in 3b above. (Even on a 4x4 pattern there are more weekend days off).

Summary

The fact that so many countries and companies, both within and without the EU, have adopted 4x4 working and for such a long period without any proven detriment to safety speaks for itself.

If the CAA are to have any credibility left with those few, and getting fewer, engineers left in the industry they need to take action now to stop the rot getting worse.

Regulation of engineers' hours is long overdue, as are periods without adequate rest within the working day, it can be done even allowing for 4x4 patterns and still remain within EU requirements.

The reduction in licence standards caused by the relaxation of penalty marking may have been a step too far, many less experienced engineers are being "thrown in at the deep end". The Safety net of experienced engineers and responsible managers to pull them out is no longer on the side of the pool, they are all too busy swimming to safety themselves.

The status of engineers has always been an issue, it is time to raise their profile not reduce it, if we want to maintain a safe standard within the UK and beyond.

The correspondent (FEEDBACK issue 52 Page 11 Experience and Engineers status) may well be considered by the CAA as having a viewpoint that is "a little dated".

The CAA and our industry appears to have totally missed the point.

A considerable number of my more experienced colleagues and associates, which you will appreciate after 30 years in the industry are many and varied, have already left or are considering leaving the industry or entering the contract market abroad.

Can we really afford to lose such resources? Of course we can't, but what are we going to do about it? Carrying on as we are at present is not an option!

A key point from this extended commentary is the need to balance shift patterns with staff and workload, as highlighted in Para. 3a. Companies are required to demonstrate this under their JAR 145 Approval.

(2)

The author asks the question as to what it is like to work a seven-day 8-hour shift with three or four days off. Well, having had experience of this pattern I can inform him that it is extremely draining, and does nothing to promote flight or health safety. Usually by day five of rising at 5 am the accumulated fatigue is a lot greater than that incurred during a 12-hour shift of four days (only two of which are earlies). I now work the 12-hour shift of two earlies/two lates, and although tired at the end of the four days, I have four days off to recover, which is adequate. On the seven-day shift, days six and seven were sometimes just a blur, with the added stress of trying to maintain professional and personal standards of engineering while at the same time wanting to get the last two days over with to have a short rest.

Luckily the company has now dropped the seven-day shift, not for the reasons I mention, but to fit in with an ever-expanding flying programme that requires a more constant manpower availability than just "peak periods".

If the CAA is carrying out a survey of shift and work patterns, they certainly haven't asked me or any other LAE that I know for the view "from the coalface". Surely it would not be too hard to enclose a questionnaire in with AWN updates or the "newsletter". Even the CAA inspectors at each major airport could conduct a "straw poll" during their visits to a company.

A Human Factors specialist at the CAA has been conducting an investigation into the fatiguing effects of shift patterns and working hours on Engineers using in part, some of the information reported to CHIRP. An initial report is scheduled for later this year.

SECURITY CHECKS - MORE COMPLICATIONS

Following an incident at a UK airport involving a national newspaper, a change to the temporary pass system was implemented that, whilst possibly solving the

situation which allowed the newspaper access too freely, has caused us some problems.

The temporary pass rules have been changed as follows. If you apply for a temporary pass for someone, you cannot get a full pass for 30 days after the expiry of the temporary pass.

So if you employ someone and the references for their ID take some time to arrive, you are faced with the following problem; obtain a temporary pass and lose one month's use of that person, or wait until the references arrive and lose an unknown amount of time.

Surely, this rule can be changed in a case where there is proof that an application for a full pass has been made, so that the 30-day ban only applies in cases where a full pass has NOT been applied for. This simple change will prevent the situation, as in the case of the newspaper, and allow companies to get staff onto the airport to do the job for which they were employed.

It would be great if whilst considering how to change rules at airports, the people involved would remember that the airlines are the customers of the airports and not just a nuisance that must be tolerated in order to get the people into the shopping arcades. A point that one Airport Authority seems to have forgotten.

**CAA (SRG) FLIGHT OPERATIONS DEPARTMENT
COMMUNICATIONS**

The latest CAA (SRG) Flight Operations Department Communications have been issued since January 2000:

4/2000

1. Use of Portable Telephones in Aircraft
2. Inclusion of RVSM Approval Status in ATC Flight Plans
3. RNAV Approaches
4. Delay of Implementation of JAR-Ops 1.820 (Aeroplane Automatic Emergency Locator Transmitter Requirements)
5. Relocation of the Edinburgh Regional Office
6. Head of Flight Operations Department

5/2000

1. Aircraft Certificated for Single Pilot Operation But Operated Multi-pilot Under JAR-Ops
2. Circling Approaches
3. Crew Training in Respect of Human Factor Activities Relating to Loss of Control
4. Renewal of Expired Aircraft Type Ratings
5. Transfer of Flight Deck Crew and Cabin Crew Practical Safety and Survival Training - JAR-Ops 1 and 3 Subparts N and O
6. Information Update

6/2000

1. Implementation of JAR-Ops 1.820 and 3.820 Emergency Locator Transmitter Requirements for Aeroplanes and Helicopters