

FEEDBACK

Issue No: 52

October 1999

EDITORIAL

12-HOUR SHIFT PATTERNS

Throughout 1997, 1998 and again this year we have received reports, either directly or indirectly, detailing the potentially fatiguing effects of 12-hour shift patterns worked by Licensed engineers. It remains open to question whether this work schedule, usually employed on a 'four-on, four-off' day/night alternating pattern, together with the occasional working of additional overtime on rest days, is conducive to safe working or to an individual's health.

Other European operators have adopted similar types of shift working, with the associated high levels of remuneration that can result. These conditions have attracted some skilled engineers - a relatively scarce resource in the UK - to work in Europe. In turn, this has led to calls from within the UK industry for closer regulation of engineers working time. CAA (SRG) is currently consulting with other JAA members with a view to determining the best way to deal with the present situation, either by providing advice on best practice or, in the final analysis, by regulation. Mr Tony Ingham Chief Surveyor CAA (SRG) has provided a detailed response to a further report on this subject in the Engineering Section of this issue of FEEDBACK (Page 8).

NASA ASRS ALERT BULLETIN 99:47/8-6

CANADIAN HOLD SHORT REGULATION

A recent ASRS Alert Bulletin detailed a runway incursion incident in which a US-registered aircraft taxied within 200 ft of an active runway at Hamilton, Ontario Airport. ASRS research revealed that Canadian Air Regulations specify that " ...Authorization must be obtained before ... proceeding closer than 200 feet from the edge of the runway in use."

GENERAL AVIATION CHIRP

In the UK over the last 10 years or so, between 30 and 40 pilots/passengers have been killed each year in accidents involving General Aviation aircraft. A significant proportion of these fatal accidents involve cases in which GA pilots have failed to execute a forced landing safely or have lost control/crashed after being unable to continue a flight in Visual Meteorological Conditions. Many of the accidents have similar causal/circumstantial factors. Less serious incidents show a corresponding trend of similar Human Factors related causes.

Recent discussions with CAA (SRG) and representatives of the GA communities have led to CHIRP being extended to GA pilots and engineering personnel. GA CHIRP reports will be published in a separate newsletter and will be distributed with each issue of the GASCo Flight Safety Bulletin and directly to as many clubs/associations as possible.

One of the important contributions that we can make is to publish reports of 'lessons learned' so that others might gain the benefit of 'hindsight' without experiencing the accident/incident. Many professionally licensed pilots, ATCOs and engineers also participate in GA activities and, I am sure, can recount incidents/experiences from which other less experienced - or perhaps more experienced colleagues - might benefit.

If you are able to contribute to this initiative, please send us an account of your 'lesson to be learned' on a CHIRP report form or by the most convenient means. Our process for reviewing and publishing GA reports is similar to the Air Transport Programme, as is our policy of confidentiality.

RESPONSES TO CHIRP REPORTS

Our policy is to provide a response to every report/letter that we receive, as soon as practicable. In some cases this will initially be in the form of an acknowledgement of receipt. If you have sent in a report and have not received a reply or an acknowledgement within 10 days, please let us know.

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

Confidential Human Factors Incident Reporting Programme

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CHANGE OF ADDRESS?

We are only able to accept a change of address in writing to the address above and not by telephone.

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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REPRODUCTION OF FEEDBACK

Requests for reproduction, in whole or in part should be made in writing to the Director at the above address.

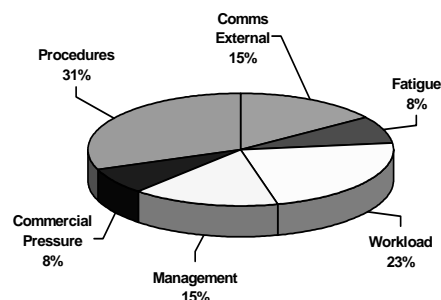
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ATC REPORTS

ATC Reports received in Period: 6

Key Areas:



CALLSIGN CONFUSION

With our skies becoming increasingly busy, so does the RTF loading. Whilst working ### Sector, there were several inbound aircraft including ABC 202, DEF 202, PQR 402, STU 402 and XYZ 902, all arriving within a short time period.

Although this may be an extreme case, similar callsigns are all too common for today's busy skies.

Another problem that we face is that we regularly get ### (UK operator) callsigns that have the same or similar four-figure numbers. In the past we have told one aircraft to use his registration to avoid confusion.

Several CA 1261 reports have been filed but it seems to no avail!

In the past two weeks I have had two occurrences of pilots taking someone else's call and the callsigns were not similar (but same company).

I know pilots have to fly the aircraft etc, as well as listen to us but it only takes one mistake to have an accident!

Luckily on both occasions I heard both replies, but these can get blocked out and the first time we know a pilot has taken a wrong call is when we see it on radar.

As our skies do get busier, no matter what you're doing in the flight deck - please listen carefully!

CHIRP Comment: The year-by-year increase in traffic levels within the UK FIR produces a corresponding increase in RTF transmissions. Increased sectorisation within TMAs offers the potential advantage from an ATC perspective of managing the level of traffic and hence the RTF transmissions within a particular sector.

It should be noted that from a flight-deck perspective there is no

Continued from Page 2

corresponding benefit of increased sectorisation, conversely, there is an inherent disadvantage in that the flight-deck workload is increased as a result of the increased number of frequency changes and greater number of RTF transmissions that are required over a given distance/time. This may actually increase the opportunity for human error, particularly when the situation is further complicated by similar callsigns.

The problem of callsign confusion has been the subject of a number of studies over the last twenty-five years. In spite of these, the problem remains essentially the same. The most recent study was commissioned by NATS in 1998 and gathered information over a one-year period. This study has been completed, but is yet to be published. The findings of the study and the NATS response to the study's recommendations are anticipated to be available by the end of December 1999.

Good RTF discipline will continue to provide the best defence against possible confusion.

FREQUENCY TERMINOLOGY

I am becoming increasingly concerned at the amount of (often valuable) RTF time being required to pass frequency changes, because of incorrect readbacks. As an enthusiast as well as an ATCO at a major UK aerodrome I listen to the RTF quite a lot (Area and Aerodrome).

In my opinion the frequency is often correctly and audibly given out but for whatever reason is often read back incorrectly.

I have experimented at work, using a wide variety of nationalities, and the "American Format" seems to work in the majority of cases. As much as some might be against it I think that it is probably time for ATC to trial the "American Format" ie "Contact London on thirty four twelve", to see what effect this has. I think many will be pleasantly surprised at the reduction of incorrect read-backs obtained, especially on the saturated sectors and busy aerodromes.

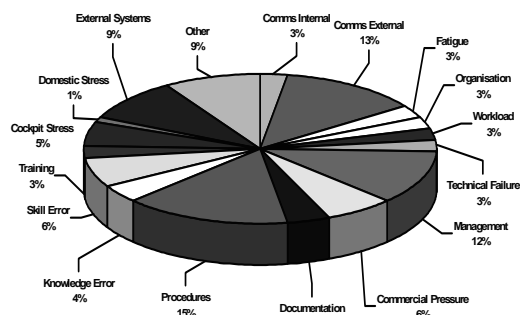
CHIRP Comment: The so-called "American format" is in relatively common use, although it is not thought to be ICAO approved. Whilst perhaps clearer for some frequencies, it does not eliminate potential areas of confusion, for example "Fifteen" and "Fifty". Moreover, it is difficult to see how this format might be applied following the introduction of 8.33kHz frequency spacing.

Notwithstanding the above, the use of this format to discriminate between four-letter callsigns would appear to offer some potential benefits and thus may be worthy of further consideration.

FLIGHT DECK REPORTS

Flight Deck Reports received in Period: 33

Key Areas:



Another source of frustration in relation to RTF communications is the apparent failure of crews to maintain a continuous listening watch on the ATC frequency. The following two reports offer different perspectives of this problem.

MISSED CALLS - NOT MY FAULT!

We were asked during climb which level we requested; we asked for FL 370 "if it is not turbulent". ABC 123 was called, and asked if it was smooth. He said it was, and we were cleared to that level.

In the next five minutes, ABC 123 was called about six times, as Maastricht wanted to start his descent. There was no response. I eventually offered a relay, but Maastricht commented that he probably wouldn't hear. I called anyway, and immediately, ABC 123 called back, requesting descent. Clearance was given, and the controller commented that he had been calling for four minutes. The pilot said he had been on frequency the whole time, and the controller said that he should listen more carefully. Again, the pilot insisted that he had been, and suggested that there had been an open microphone. I had heard all transmissions on the frequency in that time, both from the controller and other aircraft.

I have heard other reports of similar incidents with pilots, and have myself heard similar dialogues on previous occasions.

What concerns me is the complete refusal of this pilot to accept that he could possibly be wrong - that the fault must lie somewhere else. Perceived infallibility is not a desirable trait in aviation. In this case, the pilot had missed transmissions over several minutes, which both the controller and myself (and presumably, other aircraft) could witness to. We've all done that, but normally we accept that it COULD have been our fault.

MISSED CALLS - A MYSTERY

I was flying the aircraft; the Captain was doing radio, paperwork etc. Also on the flightdeck was a jump-seater (not a pilot).

We were talking to Area Control inbound to ### VOR and told to expect 15-20 min delays. The last transmission to our aircraft that I recall was "Direct ###, descend FL160". The Captain acknowledged this. We levelled at 160 and navigated direct ###. The Captain and I discussed hold speeds and holding leg lengths above FL140 and I checked the En Route Supplement to confirm. After some minutes, the Captain and I mentioned how quiet the frequency was considering the apparent volume of traffic as indicated by TCAS and the frequency of previous R/T transmissions. It crossed my mind to request a radio check but I waited until the Captain made a position report on entering the hold (about 30 seconds later). Once the report was made, Area Control responded very curtly that he'd been trying to contact us for "the past 10 minutes" and admonished us.

It came as a total surprise to the Captain and me and we were quite unsettled by it. We were then handed off to another Area Control frequency and the flight progressed without incident.

I cannot recall missing any ATC instructions. Although I was flying aircraft, I was very conscious of the possible distraction of a jump-seater on board and at all times kept both ears covered by the headset. Also I'd had to monitor the ATC frequency prior to the incident on a couple of occasions while the Captain addressed passengers and obtained weather. I do not know what caused this temporary loss of communications.

CHIRP Comment: As both reporters note, it is very easy to miss an RTF call particularly on a busy frequency. However, there are several aircraft technical defects that can impair VHF RTF reception in particular circumstances. So, if there doesn't appear to be a good reason for the loss of communication, report the problem and perhaps save someone else from a similar or worse embarrassment.

SPEED PRESSURE

The last two issues of FEEDBACK highlighted the increasing concern among flight crews about ATC instructions at some major UK airports that require crews to maintain higher speeds than those recommended for the aircraft type until a late stage on the approach in order to facilitate traffic sequencing. The following report is yet another example of this problem:

I was PF (Pilot Flying) operating a ### (heavy twinjet) on a scheduled flight into ### (a major UK destination). We were instructed to "Maintain 180 to four miles". I had expected "160 to four miles" and had briefed for it

because it requires a non-standard procedure to achieve it! However, being instructed to maintain 180 knots to four miles is another matter. It indicates that the ATCO has no idea what he is asking the crew to do or the safety implications.

It is an incontrovertible fact that stabilised approaches are a fundamental requirement for consistently good and therefore safer landings. Unstabilised approaches often lead to heavy or bounced landings and their inherent risks.

The consensus is that an approach should be stabilised not later than 1,000 feet above the touchdown point. I have noticed that the speeds requested by ATC have been creeping up and to positions closer to the runway. "160 to four miles" - ### (major UK airport), and now "180 to four miles". The majority of these speeds/positions are not compatible with establishing a stabilised approach by 1,000 feet above touchdown.

This is an insidious process that needs to be addressed by the Industry or the safety regulators, not "passing the buck" onto individual commanders who are all subject to the innumerable human and commercial factors of which you are aware.

High-speed approaches are yet another subtle erosion of safety. In the same area of operation we already compromise best practice by using runways with a tail wind or a strong cross-wind component in the name of noise abatement.

Where has our collective common sense flown to?

ANOTHER UNWELCOME TREND?

During a descent to Flight Level (FL) 110 in the London TMA (Terminal Control Area), we were passing approximately FL160 with a low rate of descent (RoD) of approximately 1000 fpm. We were asked to increase RoD to 'good rate' until out of FL120; I obliged easily by an increase of speed (I had 'managed' a speed reduction due to a full load, a breakfast service and then delays advised at ###); I now get a TCAS 'TA' (Traffic Collision Avoidance System 'Traffic Advisory' message) passing FL120 due my high rate of descent and an aircraft below in the climb!

I'm prompted to write because of your recent LEVEL BUST 'AWARENESS WORKS' pamphlet. With such high rates of climb/descent available to the 757/767, I'm getting into the habit of intervening the autopilot system by using V/S (Vertical Speed) mode to restrict rate of climb/descent approaching a cleared Flight Level/altitude within busy TMAs in order to avoid such TCAS orientated incidents, BUT increasingly, I seem to be asked to give 'good rates of climb/descent' often with only LESS than 2000ft to go to a cleared level.

Is anyone else seeing this unwelcome trend?

Your pamphlet highlights "UNDERSTAND RATE OF CLIMB AND DESCENT" [AIC 67/96] - I've not seen this but presumably it tries to COUNTER the above example?

CHIRP Comment: This report highlights a problem that can arise during approaches and departures in busy TMAs. The LEVEL CHANGE mode of many modern Autopilots is capable of providing high rates during extended climbs and descents, but is designed to perform gentle entry and level-off manoeuvres for passenger comfort and thus rates of climb/descent will be reduced when approaching the cleared level or when changing altitude by around 2,000 ft or less. The ATC requirement for expeditious traffic flow is for aircraft to establish good rates of climb/descent as quickly as possible and maintain these to as close to the cleared level as practical. As the reporter notes, complying with an ATC request to maintain a good rate of climb/descent within around 2,000 ft of the cleared altitude may cause a TCAS Advisory, as stated in this report. A second potential problem with some earlier flight systems is that operating in the VERTICAL SPEED mode when close to the selected altitude can result in the target altitude being inadvertently deselected.

ATCOs can assist by limiting requests for high rates when an aircraft is within 2,000ft of the cleared altitude. Similarly, pilots of lower performance aircraft are reminded that they are required to maintain at least 500ft per minute when climbing/descending and should notify ATC if unable to comply.

The "LEVEL BUST - Awareness Works" pamphlet referenced in the report was produced by CAA (SRG). CHIRP was asked to assist in distributing the pamphlet as widely as possible.

AIC 67/96 was published in June 1996 and contained an analysis of causal factors in 235 reported level violations. One of the factors attributed to pilots was 'Mishandling rate of climb or descent' which was identified as a causal factor on 18 occasions.

USER-FRIENDLY R-NAV?

Shortly after lifting from AAA (a North Sea platform around 150nm from base) we were advised that we might be required to divert to XXX (another platform) to pick up a CASEVAC (casualty). We do not normally fly to XXX, but I had the rig position information and needed to load the position of XXX into the Area Navigation - a Kingair KLN 90.

The KLN 90 has a worldwide database, but all North Sea rig/platform waypoints are in the limited non-protected Supplementary Database. I attempted to locate XXX in the Supplementary Database by entering the rig four-letter identification. This required scrolling through the alphabet four times and moving the cursor to each letter

in turn. XXX was not in the Supplementary Database! To enter the Latitude and Longitude requires 18 scrolls through the alpha/numerics and cursor moves. Having written the Latitude and Longitude, I got the co-pilot to crosscheck it and pressed 'ENTER' - It wasn't accepted ... BOTHER!

I realised that whilst carrying out the above I had also been diverting my attention to monitor my P2's flying, so I did the whole 'nine yards' again - with the same result. I realised that, due to the fact that the Supplementary Database was full, I needed to remove a waypoint to make space. This required scrolling through all the 100+ waypoints to find one that could be removed. Having done that it was back to the procedure for entering XXX. Once I had done this I found we had flown 32 miles!

Time to do some fuel calculations. I was still flying inbound to base and was reaching the point where I did not have fuel to return to XXX and hold a land diversion. I contacted a nearby platform YYY and suggested that I wait on YYY, while a decision as to whether I was required to return to XXX was made, and I could take on fuel to cover all contingencies. By the time the company agreed I was well past YYY. So I instructed the P2 to make a 180-degree turn, while I went to insert YYY into the Active route. I entered the four-letter identification for YYY without success - I checked the identification - it was correct. I was not inclined to clear out another waypoint and go through another extended period of knob twiddling. Using mental DR (*Dead Reckoning*), common sense and the aircraft radar I managed to find YYY lurking behind a shower.

The rest of the flight was a breeze and the casualty safely delivered to hospital, but no thanks to the KLN 90.

The points are:

1. The method of operation is unwieldy - after having it on the fleet for several years all crews still have problems using it to a greater or lesser degree, as it is not intuitive in use.
2. The North Sea waypoints - platforms, reporting points, HMRS (*Helicopter Main Routes*) etc. are not in a fixed database.
3. The supplementary waypoint database is not large enough to hold all North Sea requirements, bearing in mind we need the continental route structure for diversions.
4. The size of the writing is meant for a fixed wing panel, which is closer than the centre-console mid-position in a two-crew helicopter. This is a particular problem for older crew with glasses.

I question how this situation, which has real human factors safety aspects, is allowed to continue. The cockpit workload pressure caused by an unsuitable Area

Navigation installation can cause real dangers for the unwary!

CHIRP Comment: Operational deficiencies in flight management/navigation systems equipment are often compensated for through training and/or Standard Operating Procedures. Although this may be acceptable in normal operations, these latent deficiencies can present significant traps for the unwary in abnormal situations, where speed of operation may be of the essence.

Some of the pilots are voting with their feet, but just some sensible policing by the C.A.A. would go a long way to create a safer environment.

CHIRP Comment: The senior management of the company concerned was contacted and provided with the relevant requirements for the operation of more than one type in Public Transport operations, contained in JAR-Ops 1 Sub Part N. The company acknowledged some of the reported problems and subsequently conducted a further review of its manning and multi-type rating policies to align its operations more closely with wider industry practice.

DOES IT SOUND FAMILIAR?

Problem	% Mentioning
Lack of sleep or undisturbed (sic) sleep	57
Waiting about between trips	46
Unsatisfactory living conditions	40
Unsatisfactory ground crew organisation	28
Long working hours	28
Aircraft design	26
Irregular meals, poor food	23
Extra flying	20
Domestic worries	20
Lack of recreation	10

"Major causes of fatigue to British aircrews during the Berlin Airlift" - Source: 'War on the Mind' by Peter Watson (Hutchinson 1978)

Seems life hasn't changed a lot in 50 years!

INADVERTENT TAIL-GATING

This is a general observation that I have previously reported of an incident waiting to happen.

Taxi at night - often wet - aircraft ahead not seen until very late. Hard stop. Reason - no near centre line tail navigation light. Rear-facing white lights on wing tips are completely lost in other airfield lights. No logo light or not switched on.

If there are ice inspection lights for engines or wing, putting them on when taxiing at night may help.

There is much current concern about visibility of aircraft on tow, particularly by towbarless tractors, but aircraft under power remain my main concern.

CHIRP Comment: Since 1995, we have received more than 20 previous reports detailing difficulties experienced in identifying an aircraft taxiing ahead, because the rear-facing wing-tip mounted lights are lost against other airfield lights. Several of these incidents occurred in reduced visibility/poor weather conditions.

As winter approaches, remember the problem still exists and wingspans continue to increase!

TOO MANY LIGHTS

Why do an increasing number of aircraft wait on the holding area at LGW with all headlights on full, while some poor guy is trying to land on the active runway in typical Gatwick weather?

This demonstrates to me a lowering of airmanship standards - no thought.

Come on wake up!!

EFFECTIVE CREW COMMUNICATIONS?

In our company we have recently employed several pilots from many different countries. Many of these pilots have English as their second language. In normal day-to-

TOO MANY TYPES

As a flight crewmember operating in a corporate environment, my colleagues and I find ourselves outside of the protection umbrella, where Public Transport is concerned, provided by the C.A.A.

Our company in its wisdom, in deciding to use fewer pilots, requires flight crew to hold more than one type rating. In the past one crewmember can have as many as five different types on his licence and be expected to fly all of them in one week on a mixture of scheduled and ad-hoc operations. This is the extreme case, but usually a crewmember, including relatively inexperienced individuals, will hold 3 types (the minimum is 2). The types are not common and they include piston, turboprop and jet.

Too often I find myself (and others around me) looking in the wrong place for a lever or a switch. To make matters worse we are asked to do this with only 13-month base checks on each type. Each pilot does approximately 700 to 900 hrs a year regularly doing 12-14 hour days (often involving a split duty) four or five days a week, followed by two days off.

day operations this does not cause too many problems but when messages have to be passed quickly there is often a need to repeat several times or simplify the instruction greatly. Fortunately, I have not had a major emergency with a non-English speaker but I do have my doubts as to how much harder things would be in a stressful situation.

Not a problem with an easy solution but certainly one that needs to be addressed - possibly on Simulator checks where a degree of stress loading could be safely applied or possibly closely looked at by the CAA Flight Operations Inspectors asking to fly with a selection of foreign nationals.

From ASRS CALLBACK September 1999:

Recently ASRS received a refreshing international flight operations report in which an ATC instruction was rendered in plain English, understood by the US crew, and complied with promptly. No apparent problem, one would think - but read on.

We were approaching [airport in England] on a relatively clear morning. We held for about 10 minutes and then made an approach under Approach Control radar vectors and Tower control. An aircraft in position was cleared for take-off and we were cleared for "land after" the departing aircraft. I decided not to make a go-around. We were stable and landed after he broke ground. We made a normal roll-out and taxied in. Tower commended "good job". Later we found out a newspaper called it a near miss.

Therefore, even though the "land after" clearance works well over there, in the same situation I would go-around next time.

In this judgement dance between the pilot and controller, we still don't know who was leading. What's certain is that "land after" is not recognized by the International Civil Aviation Organization (ICAO) as accepted ATC terminology.

CHEMICAL REACTION

On push back a strong smell of chemical fumes leaked onto the flight deck from the forward toilet. Both the Captain and the First Officer could smell it. We have been subjected to this chemical smell off and on for over a year now in varying strengths which causes full 'flu-like' symptoms, to just a sore throat.

I query the suitability of this chemical in a toilet so close to the flight deck and also what the long-term effects on crew will be, sat in these fumes for 7 hours at times.

This situation is not getting any better although the Company have put in a lot of effort to overcome this problem.

CHIRP Comment: Several previous company reports on this condition had been submitted by flight crew and investigated, but without any apparent improvement in the flight deck environment.

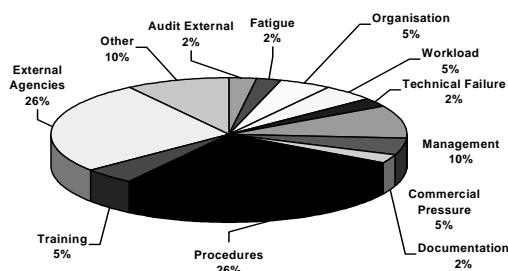
Our enquiries to the manufacturer of the product revealed that this particular fluid could be used in two strengths, one, at high concentration, for use overnight as a scouring agent, or, in a much more diluted solution, as a standard disinfectant for operational use. In the case reported, a much higher concentrated solution than that recommended was being used in operational service.

In response to our enquiries, the toilet fluid manufacturer proactively carried out a subsequent review of the usage of their product with the operator. Their representative found a potentially hazardous condition in that another chemical was being used to clean the toilet surrounds which, if placed in contact with the toilet fluid, produced a vigorous chemical reaction and generated chlorine gas.

ENGINEERING REPORTS

Engineering Reports received in Period: 16

Key Areas:



In FEEDBACK 51 we referred to the high incidence of reports relating to the shortage of engineers and the long hours that some are, or feel, obliged to work. The effects of the pressures placed on engineers and of those that individuals impose upon themselves in order to get the job done continue to be the dominant engineering issue reported to this Programme. The following report describes the pressures facing one engineer:

"ILL" TREATMENT?

A year ago I was the sole engineer on a base, basic working week 50 hours, before snags and any extended scheduled maintenance. A few of these hours could have been considered as 'standby'. Daily hours of work mostly governed by times of daylight throughout the year. Required to work days off regularly; I was then around 50 years old. I had been working this routine for several years.

I finally fell victim to an ongoing and constant fatigue, no doubt not helped by a very disturbed sleep pattern. I began to feel (in my own terms) low. Eating habits were always erratic due to the job but I began to develop a 'feast or famine' habit. I became difficult to live with. I battled on (past training maybe), kept going, and didn't go to the doctor, despite my wife urging me to. I kept going because the routine was going to change soon and be a little more favourable, maybe. It is a big mistake to try and battle through because when the crunch comes and you're asked if you have a doctors report and you say no, the only sound you'll hear is the ticking clock. I later discovered that some of the people around me had noticed a change in my character and my demeanour. Nobody apparently felt the need to take any action. Again, I should have taken action for myself.

Eventually I made a mistake. I expected a severe disciplining. I got it. I was sacked.

What is important is the fact that I allowed myself to think I could cope, but pride comes before a fall, and hindsight is as much use as a candy-floss door knob.

I had previously mentioned to my line manager that I felt I might have to take time off under the auspices of AWN 47. He told me that "I could be drawing attention to myself". So I would say, don't rely on the backing of anyone - watch your own back and your own health.

Whilst I applaud the aims and content of AWN 47 it places all the responsibility on the individual and none on the organisation, thereby rendering it toothless. It appears to be a circuitous way of avoiding the subject of regulating engineers' hours, although others in the industry who may have an effect on flight safety do have their hours regulated.

A CAA surveyor once told me that it was too difficult to regulate engineers' hours due to the diversity of the industry. I would argue that the operations of aircrew are even more diverse than those of engineers, and that lobbying by the industry on the grounds of costs is a more likely explanation. I would further argue that, if the fare-paying public and general aviation clients were fully aware of the current and impending situation, they might readily pay any increased costs.

However, I see little hope of a change in the situation for the foreseeable future. The remedy for engineers gaining more than just a grudging respect lies in the hands of engineers themselves, and they are, it is often said, their own worst enemies.

CHIRP Comment: This report was forwarded, after disidentification, to Tony Ingham Chief Surveyor CAA (SRG). Tony's written comments were as follows:-

Third Party Reply: Your correspondent (*in FB51*) notes that the shortage of engineers is mainly of industry's own making, which CAA agrees with. For the past three years

the subject of limited resources has been discussed at the CAA Roadshows around the country as well as with industry liaison groups. The Royal Aeronautical Society paper published in early June 1999 (*The Challenge of the Future*) is focused on the current shortage of maintenance personnel, the absence of adequately supported training schemes and the implications for industry. The CAA Chairman provided a covering letter to the Chief Executives of all JAR 145 and AOC holders that made it quite clear that recruitment was their responsibility, without resources their CAA approvals were in jeopardy and business opportunities would be lost to foreign competition.

To invest in training will help to secure the future of air transport undertakings, but that has to be managed in such a way to make an attractive career for young people or they will continue to drift into Financial Services, Computers and Marketing, which are on the surface more attractive and better paid. Whilst we hear of some concerns about AN 47, most people agree with it. Some industry managers however have apparently rejected advice from engineers that they were unfit to continue and placed them under undue pressure to reconsider their position. That is unacceptable behaviour when it is now widely accepted that a safety culture and the management of safety are the important issues.

Readers may remember the JAR 145 QA review published as CAA paper 97011, recommendation number 11.5 asked CAA not to regulate engineer working time as the EU Working Time Directive would address this within a year or so. We agreed, but have some concern that the Working Time Directive will not do what we had hoped.

CAA has therefore asked the JAA Maintenance Committee to table their existing national controls for all to see, and enquire if other NAAs have the same concerns about the Working Time Directive. Additionally the UK Operators Technical Group, representing UK industry, has offered to develop some draft proposals to regulate engineers' working time.

In the UK, some maintenance personnel do not like to have working hours regulated, the 12 hour shift pattern of 4 on, 4 off, has resisted a number of management attempts to replace it. Then there are contract labour personnel who work long hours on purpose - for the financial reward on offer.

Off-duty time may not be restful if excessive activity is involved, sports, DIY, car restoration, heavy gardening etc, which are possibly just as tiring as the full time job.

It is impossible for CAA to regulate rest-time between shifts to ensure that it is taken as rest, but a combination of a busy job and little real rest can cause a problem.

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Engineers are in general very responsible and it is only a minority that abuse their shift patterns and arrive at work in an unfit condition.

Some form of duty time limitation may become necessary and the best way is for JAA to impose this through JAR 145, a maximum time on duty followed by a specified time off.

INADEQUATE MANPOWER

Although this is not a report of a specific incident, I feel that I must file this report as I am so concerned that if not corrected a serious incident is only a matter of time.

The problem, which I must bring to your attention, is with my previous employer and concerns the serious lack of manpower to carry out the work that is expected of them.

I would be surprised if other reports had not been raised by current employees, although there must be an element of fear due to the small size of the workforce; it would be easy for the management to identify the reporter.

As I keep in close contact with many of the current employees I am aware of the problems they face. This company simply does not employ enough licensed engineers to undertake the workload they are undertaking. At a time when the airline has acquired many new aircraft and routes, the number of experienced licensed engineers has reduced considerably, as they are no longer willing to accept the conditions they work under and have moved on to better employers, they are not being replaced.

Currently base maintenance is being conducted with only one or two approved inspector supervisors per shift to cover airframe and engine inspections - avionics cover has been provided by one sole avionics engineer for some time.

The line operation is also seriously undermanned for the workload they are expected to achieve. The lack of avionics licensed engineers means that some shifts do not have a permanent engineer and cover is supplied using overtime. Surely the amount of overtime that is routinely expected is in contravention of AWN 47. I hope it is within your powers to investigate this company before there is something to report or worse.

I am aware of the pressures placed on the approved inspectors in the hangar is to complete checks on time, to the point that certain engineers are allowing technicians (some with very limited experience of aircraft) to carry out inspections which are certified without even checking their work. There can be no

possible way that checks are carried out to the proper standard.

CHIRP Comment: It is not in our remit to investigate any organisation, but we know a man who can!

We understand that the operator in question has now been able to recruit to a level that is acceptable to the Authority.

APRON SAFETY

A report in the August 1999 edition of Callback, the journal of ASRS, our counterpart in the USA, detailed an incident in which a caterer was sucked into the number 1 engine of a B727 that was being run after arrival at the gate to provide electrical power while off-loading passengers. The ASRS comment emphasised the need for all ground personnel, including contractors, to understand that flashing aircraft beacons mean that engines are running or engine start is imminent.

The following reports emphasise the importance for both flight and ground crews to adhere to correct ramp safety procedures:

(1)

During a turnaround inspection a member of the crew, who had boarded the aircraft, started one engine without warning the ground crew or requesting clearance from the marshaller. The Tech Log had not been given to the flight crew and the certifying engineer was standing alongside the aircraft discussing a technical problem with the captain. The ground engineer did not have ear protection available and had to return to the flight line to get the Tech Log and ear defenders whilst the aircraft engine was running.

CHIRP Comment: The incident was reported to the Handling Agent, who took up the matter with the operator concerned. The Agent has received assurances about future operations to prevent a repetition.

(2)

Whilst working at various airports I have noted that some aircraft arriving on stand leave their anti-collision lights on until the engines have wound down to a certain percentage or approximately 30 seconds after shutting off the fuel levers. When the anti-collision lights have been switched off the ground staff recognise this action as the signal to proceed about their business of opening the hold doors or replenishing the aircraft as necessary, i.e. they consider it safe to walk both in front of and behind the engines.

In some airlines, flight crew raise an MOR (or Company equivalent) whenever they note that hold doors have been opened prior to the anti-collision lights being switched off. The aim of these reports is to reinforce the

need to ensure that those people whose work brings them into close proximity of operational aircraft are aware of the dangers. As there seems to be an increase in out-sourcing such people (who may also be on short term contracts or seasonal workers) it is only right that such violations are documented in order that managers can advise individuals and the training programme be reviewed.

I am now working for another airline (*non-UK operator*) and have noticed that the anti-collision lights are switched off in an irregular fashion. Sometimes it is done in the time it takes for the flight crew to move their hand from the fuel shut-off lever to the anti-collision light switch.

After watching one baggage handler walk dangerously close to an engine that had only just started to wind down, I questioned the Captain about the speed in which the anti-collision light had been switched off. Having explained how I had observed what happens when ### aircraft arrived on stand the Captain replied "In all my 35 years I have never heard of such a thing". My retort of "So you haven't killed anyone yet!" was not appreciated.

The majority of people working on or around aircraft are normally aware of the dangers - even if a little complacent - and know when it is safe to proceed. The problem is the increasing number of casual workers appearing. These people may well have been trained to proceed only after the anti-collision lights are switched off. It may also be said that they do not have the experience to be aware that, even though the lights are off, it may not still be safe to proceed.

It appears that the national or international standards used to indicate when an arriving aircraft may be safely approached on the stand is the switching off of the anti-collision lights - this being done after the fuel levers are switched off. However, is there anything laid down about waiting until a certain engine percentage has been reached or after a certain amount of time before switching the lights off? Or am I unnecessarily concerned about the dangers of walking past a "wind-milling" engine?

CHIRP Comment: Various documents contain requirements or recommendations relating to some aspects of ramp operations. These include: CAP 642 Section 5; Notice to AOC Holders 1/93; App 1 to JAR-OPS 1.1045 Para 8.2.2; Rules of the Air Regulations Section III Para. 9.

However, the references contain no advice as to the rundown time of engines, after which it might be considered safe to approach the aircraft. This issue and the consistency of airlines' application of these procedures have been passed to the UK Flight Safety Committee Ramp Safety Working Group for their consideration as to whether further guidance might be beneficial.

ONLY TAKES A SECOND, WHERE'S THE 'ARM?

As the reporter himself says in this report, interruptions to planned work can lead to un-enforced errors either of commission or omission.

One of our aircraft had a pressurisation problem and we suspected the rear outflow valve as the cause. The part was in stock and the aircraft was night-stopping with us. There were just two of us and we only had the one aircraft to look after. I explained that we would carry out the Daily first before attacking the pressurisation problem and any other defects there may be.

The aircraft duly arrived on time and I went about the "inside" parts of the Daily whilst my colleague did the "outside". Whilst I was running round the outside of the aircraft (checking all the external lights) I saw my colleague standing on a small set of steps by the rear outflow valve. He said that he had removed the suspect valve and fitted the new unit. He had also managed to connect one plug but was having difficulty with the other (this particular outflow valve has two motors, an A.C. motor at one end and a D.C. motor at the other). Custom and practice has also been to disconnect and reconnect the plugs by reaching through the open outflow valve rather than removing part of the rear hold back wall to gain access.

I said I would have a go at fitting the plug. Reaching my arm in through the valve I located the plug and felt for the motor socket. Having done this it was just a matter of orienting the quick release connector and the job would have been done. As I slowly turned the plug the orientation came in line and the plug mated with the socket - at the same moment the valve started to close!!

I cannot remember the last time I had moved so fast! I do know that the removal of my arm was not a conscious action, it was pure primal self survival instinct. During my walk to the cockpit to pull the necessary circuit breakers I pondered on what might have been. What were the chances of remaining an engineer with only one arm? What were the chances of any sort of work with only one arm? Would I be able to write with my other hand?

How did I get myself into such a situation? It was certainly not ignorance as I have been well trained and am experienced enough to know better. Stupidity comes high on my list of reasons. The facts of the matter were:-

1. I was carrying out one task when I was presented with an unexpected situation - I thought my colleague would still have been carrying out the Daily and was surprised to see that he was in the final stages of fitting the valve.

2. One plug had been fitted and I put his difficulty in fitting the other down to the amount of cold weather clothing he was wearing.
3. I reasoned that it would only take a second to connect the plug.
4. If I thought about it at all I may have subconsciously reasoned that it would take a couple of minutes for me to get to the cockpit and return. Finding the relevant circuit breakers may also take the same amount of time. Four or five minutes preparation for a job taking less than ten seconds - don't bother!

What I do know is that had I finished the Daily before changing the valve (kept to the plan) I know I would have pulled the circuit breakers. I would also have printed off the Maintenance Manual pages - not necessarily for the removal/refitment of the unit but for the post fitment checks and to make sure the correct procedure was quoted in the Tech Log.

I re-learnt an old lesson - always isolate systems prior to working on them. Have I learnt anything else from this experience? Yes, I learnt that fear can make me move faster than I thought possible. Will I do something as stupid again? I thought I would never do anything so stupid in the first place. I therefore find it difficult to say NO.

No doubt this incident could be filed under Human Factors but, at the end of the day, there was no pressure to perform and there were no real outside influences to stop me doing the job properly. This was a straight forward human error of not thinking through the consequences of my actions.

EXPERIENCE AND ENGINEERS' STATUS

The status of engineers is a recurring theme in our postbag. This commentary, in part, is concerned with the new licensing requirements.

The following comment reflects the feelings of almost every Licensed Engineer I know. It has been written because I feel that we are being betrayed by the CAA in the way we are viewed and treated. We are classed as a 'necessary evil' rather than assets. There was a time when I was very proud to have attained the level of a multi-licensed engineer, but sadly that is no longer the case.

Although this is basically an Engineering gripe, it affects Flight Crew directly.

Regarding the lack of Engineers. Yes, I agree with most of the arguments that have been put forward over the past few months, but I believe that the problems are far deeper.

I began my career in aviation back in the first half of the 70's, when I joined ### company at the age of 16. Five

years later I made my way into aircraft maintenance and after a further four years I considered that I was ready to take a licence. Now with three licences and over 25 years experience, ranging from apprentice to crew-chief, I am desperately seeking a way out of this industry! Why? Well, it has become obvious that the job of Licensed Engineer is no longer of any real value, for instance:

1. Could you imagine the reaction if someone said to a solicitor, "Here's a man who has been unemployed for eight years, we've given him a two-year course and now he's fully qualified to join you as an equal." The bulk of ab initio students may be fine on the theory that has been drilled into them, but the majority can barely hold a spanner, let alone know which end to use.
2. The Blessed CAA send us all a news letter; in it they tell us that they cannot give us professional status, that is for us to chase with our employers. Then by a wave of their magic wand we are to lose our 'Engineer' status and become Technicians. Doesn't sound much does it? But, imagine what would happen if the CAA waved the same magic wand and turned Captains and First Officers into Senior Drivers and Junior Drivers.
3. As if it wasn't enough that we are being downgraded, we even have to take an extra licence to qualify!
4. It seems to me that the CAA is determined to keep us as 'Tradesmen' rather than granting us professional status. It also appears that they are prepared to lower their standards to keep it that way. I have heard many times that a licence is equivalent to a HND or higher, yet when I inquired over taking a degree course, the CAA told me that licences held no academic equivalent and could not be used for 'previous study exemption' in the way of HNC's etc.
5. In all fairness to the CAA, to combat the shortfall in manpower, they have lowered the standard required to gain a licence. They have removed the penalty marking system and reduced the amount of written questions; in all honesty they may as well give them out as 'Good Conduct' awards.

When industry slumped in the mid to late 70's, training was an easy place to save money. There were years when ### company took on no apprentices at all. To overcome this shortfall, they 'de-skilled' the job, bringing in a large number of 'related trade' workers. Some of these were very capable mechanics, but the majority earned the nickname of 'quick-fit fitters'. Now the CAA has gone one step further in its 'blind-eye' approach to ab-initio engineers. A better description may well be ad-infinitum (*engineers*).

It can only be a matter of time before there is a major incident that is directly related to the inexperience of an

ab-initio Engineer, unfortunately all Engineers will be 'tarred with the same brush'.

Engineers are victims of three circumstances:-

Firstly: the old British management philosophy of 'If he wears overalls, then he's an oil-rag'.

Secondly: we don't make the company any money. When we are hard at work the aircraft is on the ground and producing no revenue. To many people the fact that we are fixing a defect is seen that we are causing the delay.

Thirdly: the call of the accountant, 'number-crunchers' do not understand aircraft engineering; just look back at the amount of companies who have been brought down by the meddling of accountants.

If you think good engineers are expensive, try having an accident!

A very disillusioned Engineer.

CHIRP Comment: The issues raised in this report were passed to Jim McKenna Head of Engineer Licensing, who provided the following response:-

The reporter quite correctly highlights issues that should be of concern to the industry. The observations made however are perhaps a little dated and it would be worth mentioning the actions already taken.

The ab-initio course carried out under the provisions of BCAR Section L has worked quite well for a number of years. It is fair to say that commercial pressures have had an impact in this area too and perhaps organisations are too eager to satisfy the sponsor's needs rather than achieve good training standards. Several training organisations have also been unable to obtain adequate practical experience with maintenance organisations for their students. This often meant that the new licence holder did not have the expected balance of practical experience against theoretical knowledge. Such experience is essential however to the effectiveness of the engineer concerned.

The CAA reviewed the situation with each of the approved organisations, including the management of practical experience and the setting of examinations.

Following this, in two cases the approvals were temporarily suspended until the examination standards were reviewed and new exams put in place. The CAA also introduced a limitation endorsed on the new licence, which precluded the individual from holding a type rating or type authorisation within a company until a further 12 months experience had been gained. This had always been the case for type ratings but had not been specified for authorisations. The minimum length of the basic course was also increased in many cases where the course covered multiple licence categories.

This strengthening of the requirements has raised the standard but there is still scope for improvement.

The term 'engineer' has been used in aircraft licensing terms since 1919 but is generally one that has been much misused in Britain over the years. Other European States and professional institutions within the UK are adamant that an engineer is someone who has achieved high academic standards (normally degree level) and who is accorded Chartered Engineer status. Whilst it is recognised that the 'licensed engineer' has an important role to play within the industry, the Royal Aeronautical Society has not been able to secure Chartered Engineer status for such individuals, the Incorporated Engineer being that title deemed appropriate.

An extra licence is not required in order to continue to practice as a license holder under JAR-66. This topic has been adequately covered in recent guidance leaflets on the subject of protected rights and these have been sent individually to each license holder and are also available on the CAA web-site, www.srg.caa.co.uk.

The subject of academic exemptions is difficult to resolve. The knowledge required for licence issue is extensive and covers a mix of theory of the topic concerned and the practical application of this theory. Current academic courses are not aligned to the licence syllabus and since the licence is seen as a vocational qualification, credit for advancement to higher education is not yet identified. It is hoped that through the work being undertaken by the Royal Aeronautical Society under their 'Challenge to the Future' paper, supported fully by the CAA, these sorts of issues can be addressed.

The CAA removed the penalty marking system on the multiple-choice examinations in order to anticipate alignment with the forthcoming JAA system. The CAA was a lone voice in the JAA advocating the continuance of penalty marking since the technique was seen by other states as being unfair, even unconstitutional in some cases. The CAA did however achieve a higher pass mark, 75% as a compensatory measure, but not the statistically equivalent 80% that seemed to be appropriate. The purpose of the written (essay) questions is to test the individual's ability to express technical issues in a written format. This can be readily determined by one set of questions and it is not entirely necessary to examine each technical subject in this manner. It is interesting to note that most candidates fail the essay exam because of inadequate English or through not putting enough in the answer, two lines of writing does not go far!

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The CAA carefully considers all the factors associated with a proposed change to the licensing system before adopting it. We certainly do not believe that we give licenses away, a fact that hundreds of candidates who fail each year will agree to. The license itself is only a starting point however and is only as good as the individual's past experience and exposure to the tasks he or she is expected to undertake. Many will always expect a licensed engineer with minimal experience to act as if they had 25 years or more. JAR-145 quite correctly requires that the competence of individuals be determined notwithstanding the fact that they may be licensed. If a licence holder is being authorised but is not competent through a lack of general or type experience, where does the JAR organisation sit?

SURVEY COMMENTS

As a certifying engineer working for a major UK charter airline I am increasingly concerned with the aspect of 'Human Factors' in our industry and the obvious lack of concerns shown by our management in particular. At the moment, the airline industry, as a whole, is enjoying a particularly 'fruitful' period. I find this coupled with a lack of training over the past few years has resulted in an ACUTE lack of suitably experienced certifying engineers. Indeed, at the moment our company is attempting to recruit engineers of all trades at various bases but with very little response. This in turn places ever-increasing demands on the engineers who are left, which obviously erodes the margin of safety that we all like to maintain.

In an everyday context, this obviously leads to minor mistakes with no serious consequences, but on occasions it can lead to near-catastrophic circumstances, as have been documented previously.

I firmly believe that the responsibility of working hours for licensed engineers must be taken away from the individual and the companies concerned and be regulated by the Authority under an umbrella such as CAP 371. I also believe that licensed engineers should be affiliated to BALPA in order that our professional status can be more clearly defined.

FEEDBACK - COMMENTS

DELAYED DEPARTURE (FB50)

In FEEDBACK 50, we published a report under the title "Delayed Departure" from a pilot who became frustrated as a result of ATC delays prior to departing from a Middle East airport. We have received the following responses from ATCOs:

(1)

Reference the pilot who reported problems in the Mid-East. I worked at an ACC in the region, and understand his frustrations. I would like to communicate with him via yourselves to advise him that it is LESS of his fault than he imagines!

(2)

I have been employed as an ATCO at ### Airport in the Middle East for several years and have been actively involved in aviation for over 20 years.

As feedback on your article in Issue 50 "Delayed Departure", I can confirm that for Cat 2 ILS operations, 15nm spacing is the recommended spacing between landing aircraft, 20nm being applied should one wish to depart an aircraft between arrivals. This is not widely known nor appreciated, but I am sure that you can alter that situation.

I am a great believer in "the big picture", and, as highlighted many times in FEEDBACK, there is no substitute for familiarity. 'Fam' flights and visits to the tower seem to be a thing of the past, mostly tied up with red tape and excuses. I have invited hundreds of aircrew to visit the tower for a chat and a coffee; less than 1% ever bother. The ones that have visited are happy to re-visit and assist in finding solutions for problems, both procedural and personal, should the need arise.

Familiarity with a procedure in an environment such as ours - aviation in general, often leads to the assumption that everyone in the "chain" understands what is happening and why. It is the fault of the training systems of each discipline in not demonstrating or acknowledging the need for such enlightenment. This is further complicated by the differences of the regulations and requirements in different countries and regions.

Middle Eastern airports are a melting pot for aviation culture. At #### we have pilots from as far apart as: USA, former USSR - all parts thereof, China, India, Pakistan, Singapore, Germany, Norway, Sweden, Australia, New Zealand, Ireland, UAE, Yemen, Iran, Afghanistan, etc, etc. This brings the language barrier very much into play. I have spoon fed clearances one piece at a time to enable "read-back". I have even sent aircraft back to their parking stand and instructed them to find someone who can read any part of a clearance back at all! All in a days work!

All of this is done in an ATC environment where I am the only ATCO on shift at any one time (shortest shift length - seven hrs). I take whatever traffic is thrown my way during the shift and frequently never leave the chair, which has been broken for more than a year and for which there never seems to be any money in the "budget", except to use the bathroom. I receive, on

average, about one 20-minute break per month from the boss, and, have frequently found the need to jeopardize flight safety whilst in the bathroom!

This is most absurd.

Please through your columns ask crews to have pity. Sometimes, it's just a bad day!

RTF PROCEDURES - FOOD FOR THOUGHT?

My first point is in response to the item "Deaf Ears?" in Issue 51. In a quiet jet it is not only unnecessary to use the interphone system to communicate with the pilot sitting a few feet from you, it interferes with radio calls coming in. I have (recently) operated under both systems. The other pilot has been so busy talking on intercom on more than one occasion that he failed to hear ATC calling. I now insist on un-intercom-assisted speech across the flight deck so that ATC are not competing for attention. I would also go so far as to ban cockpit speakers and insist that headsets are worn all the time. Call me old fashioned, but I do fly state-of-the-art jets, not noisy turbo props!

My second point relates to recent comments on poor R/T phraseology. Recently I have been operating in Italy. So many pilots and ATC there do not use the full callsign or the proper R/T phraseology related to flight level instructions. The general level of R/T is so poor that, in my opinion, there will be a serious incident directly related to the wrong aircraft obeying the wrong instruction. As an example "Six-oh-seven cleared to nine zero". "ABC 6-OH-7" climbs or descends to "FL 290" while "XYZ 607" goes to "FL 90". Often an aircraft callsign is not used AT ALL in responses to ATC instructions or in response to a request or report from the aircraft by ATC. Flying out of Milan the other night a ### (*European major airline*) aircraft thought ATC had cleared him down to FL 90 when in fact ATC had cleared us up to FL 90 on departure.

My third point relates to crew procedures. Why do so many pilots - Captains as well as First Officers - insist on getting out the clipboard during a climb (and sometimes in the descent) and writing stuff down? It is much more important to monitor, listen out, lookout while the aircraft is making ANY transition through other flight levels, not do unimportant paperwork. Paperwork related to the flight should be kept to a minimum and addressed in steady cruise flight and on the ground.

The above points are all general but I have witnessed too often missed calls by the pilot supposed to be operating the radio, poor R/T, and the ETA for some waypoint way down the line being calculated, as airliners pass by above and below with THEIR pilots doing the same. So why don't we all pay attention, listen out, lookout, use

good R/T discipline and make commands crisp and clear.

Thank God for GPWS and TCAS.

MORE ON LANGUAGE & UNDERSTANDING

FEEDBACK has recently carried considerable debate on the subject of the use of languages other than English on ATC frequencies.

Having spent nearly 30 years as an airline pilot, with both British and French companies, I am now partially retired but, amongst other professional activities, I spend some time with controllers of ### ATCC (*French Regional Air Traffic Services Unit*), where I instruct in Aviation English. In view of my experience, you may perhaps be interested in my point of view.

Firstly, the problems described by other correspondents are taken very seriously at the centre. The training of new controllers has a large element of English language formation and includes a period of six weeks at school in the United Kingdom. ATC cadets already have the equivalent of GCE A level qualifications in English prior to starting their training. This language training continues when they are continuing their on-job-training at the centre. At this Unit there are four English teachers working part time. All are native English speakers and three are trained language teachers. Licensed controllers have to undertake refresher training at regular intervals; this can be done on site or during a week-long course in England.

Pilots and Controllers, whose native tongue is English, should be grateful that they are alone in not having to pass an exam in a foreign language to obtain their licenses. However it could also be argued that in an industry where well educated and intelligent personnel spend most of their working hours either controlling or being controlled by non native English speakers, the knowledge of a foreign language should be part and parcel of their cultural baggage it only to give then an insight into the problems being faced by the other person.

I am often struck by the fact that some native English-speaking pilots, in emergency situations, make little effort to help the controllers understand the nature of their problems. Messages are frequently spoken too rapidly and with little thought as to the use of a simplified vocabulary. A recent example concerned a non-native English speaking pilot who transmitted "We have maybe a bomb on board". This was perhaps unfortunately understood by the controller as "We have baby born on board" and his reply "Congratulations to the mother" must have caused incredulity in the cockpit. In general, messages concerning possible explosive devices are the source of some of the worst examples of

misunderstanding. This arises because there are many different ways to describe the problem. Pilots are renowned for understating the importance of an emergency and are consequently reticent when it comes to using the word "bomb". There are numerous alternatives, we talk of "suspect packages", "unidentified baggage", "unclaimed suitcases", "hoax messages", "explosive devices". Many of these phrases are simply not understood by controllers. To be perfectly honest we are probably expecting too much of a non-native English speaker to understand such a variety of phraseology, no matter how much language training he may have received. Other examples abound, an engine flameout is probably better described as an engine failure, restart probably better than relight.

Finally, in view of the persistent nature of these difficulties perhaps the ICAO, or other international body, should consider the creation of a series of code words corresponding to different emergencies. After all most of us understand "Mayday", how about one easily remembered unambiguous word meaning "our ops department has advised us that we maybe have an explosive device on board."

AN UNTIMELY CALL (FB51)

In the last issue, a pilot commented on the unsettling effect of the use of the Company Frequency to advise inbound crews of roster changes. We received the following suggestion:

As pilots with ### (a principal UK operator), we must contact Crew Control before coming off duty to see if there are any roster changes. It has become normal procedure, once we have faxed the log through to operations, to dial in on the phone that is provided in each crew-room.

Sometimes there are no changes, which is a refreshing change but, because this standard procedure is in place, the changes are often minor although not always pleasant. Such is the nature of our job.

Surely it would be a simple thing to require the crews of this Company to do the same? It would remove the feeling of dismay and 'doom and gloom' that pervades their flight deck once such messages to call in are received.

In this present climate of disruption, pilot shortages and ATC and technical delays, it is a pity that some members of our profession seem to expect a normal, routine life. Life just ain't like that I am afraid and you have to take the rough with the smooth.

ID STRESS (FB51)

In the last issue of FEEDBACK, an engineer described the bureaucratic nature of the security procedures at some UK

airports and the consequent impact on engineers. We have received several more reports on this matter from both engineers and flight crewmembers. The following three reports give the flavour of our postbag on this issue. Please keep them coming the more examples we can quote, the stronger the case for some action.

(1)

Arrived at Scottish Airport mid morning for the first of several sectors, no problems this morning - full crew - aircraft on time, no slot required.

We (crew) walk to the aircraft via the normal passenger security point (no separate crew validation point). Empty pockets of keys - loose change etc before entering scanner only for scanner to bleep as I pass through. Security man then takes great pleasure in giving me an over-the-top search - open wallet, wrist watch off etc.

Arrived at aircraft wound up, not a good way to start several sectors.

Is it only me these people upset or are there others?

(2)

I was very interested to read the item on ID stress. First of all, I think we can reassure your contributor that this problem is not limited to engineers - aircrew get plenty of similar aggravation.

For example, some months ago at ### (UK Regional Airport), Security queried the fact that my First Officer was not carrying his licence with him. Fortunately I was carrying mine, but I did point out that the ANO (Air Navigation Order) only requires us to carry it when operating the aeroplane. I think his ID was a ### or a ### one (other UK airports), and for some reason they did not see their way clear to accept that.

At other locations Security have refused to accept a licence. Of course, since the Home Office withdrew the licence re-entry rights there is no photo in a professional licence, which I suppose makes that not unreasonable. However, Security seem to happily wave through PPL holders with no ID and no licence photo. (Actually, I have stuck a photo in my own licence - it seems to help, and Security have never queried it!)

At ### (UK major airport) some years ago, Security refused to accept my ID for the simple reason that the guy did not trouble to read it properly. The pass was then current issued at that same airport!

I think that there are two possible answers to these problems - accepting that the job of a security officer is an extremely boring one (as anyone who ever pulled guard duty in the RAF will testify!). First, the Home Office should be made to agree to the restitution of re-entry rights on production of a professional licence. This

could be extended to Ground Engineers and all airports could be obliged to accept licences as identification.

That would not solve the problem entirely, as there is still the problem of Cabin Crew, Loadmasters etc. The Americans have a thing, which I think is called an International Crewmember Certificate which is issued to all flight crew and cabin crew, plus "Flying Spanners" and loadmasters etc. I have some idea that the CAA used to issue these years ago, so I see no reason why CAA could not take care of issuing them in consultation with FCL and Engineer Licensing.

In the short term, maybe it would be better for the employers of your contributor to describe him as a Flight Engineer on his ID? I see no illegality in that - a Flight Engineer does not actually have to hold an FE licence. Certainly the ones who used to travel as Flying Spanners on the DC4 and Argonaut did not necessarily hold FE licences.

(3)

My Company is a "Go now" charter operator that often fills in for other airlines, AOG (*Aircraft on Ground*) situations, as well as conducting its own VIP charters. As such, we often have the need to visit airports in many different countries at very short notice. We also took the route of aircrew yellow striped passes several years ago.

In the most part it has worked well in allowing our staff access to airports throughout Europe, Russia and the former Soviet block and even Africa.

The most problems have been experienced at non-BAA airports in the UK with ### being in a league of its own. The level of difficulty experienced here led the airport director to give his home telephone number to us with the instruction to call him at any time day or night if our staff were refused entry.

If you research the legislation which covers the issue of aircrew passes you will not find any reference to the job title that must appear on them. Indeed B727, L1011, B747 Classic and DC8 aircraft all have engineers as part of the flight crew.

The conclusion I have come to is that the system exists to allow the access we seek but the education of the security staff is poor to say the least. Further reading of the legislation reveals that security staff do not have the right to hinder the holder of a correctly issued aircrew pass.

The reporter's idea with regard to the use of the licence as a means of ID whilst a good one would not be required if only security staff were more up-to-date on the regulations.

CHIRP Comment: Although the Department of Environment, Transport and the Regions has overall responsibility for the security policy at UK airports, many of the reported problems appear to stem from individual airports' application of the policy. We are currently investigating the best way of representing reporters' concerns.

CAA (SRG) FLIGHT OPERATIONS DEPARTMENT COMMUNICATIONS

The latest CAA (SRG) Flight Operations Department Communications have been issued since July 1999:

9/99

1. The Introduction of 8.33 KHZ Frequency Spacing for VHF Communications in European Upper Airspace

10/99

1. Operation by Flight Crew of More Than One Multi-Pilot Aircraft Type or Variant
2. Aeroplane Flight Simulator Qualification and Approval
3. Operator Crew Resource Management (CRM) Courses
4. Introduction of JAR-FCL 1
5. Supervised Initial Line Training of Inexperienced Crews
6. The Future Monitoring of AOC Holders' Maintenance Support Arrangements
7. Delay of Implementation of JAR-Ops 1.820 (Aeroplane Automatic Emergency Locator Transmitter Requirements)

11/99

1. Letter of Consultation: Proposal to Amend the Air Navigation (No 2) Order 1995 to Enhance the Safety of Public Transport Helicopter Operations at Night

12/99

1. Implementation Schedule for EU-OPS 1
2. Notice of Proposed Amendment - Operations NPA-OPS 15
3. Alleviations for Performance Class B Aeroplanes Flying in Accordance with VFR

13/99

1. Letter of Consultation - Proposal to Amend Schedule 4 of the Air Navigation (No 2) Order 1995 to Require the Carriage of a Terrain Awareness and Warning System in Turbine Engine Aeroplanes which have a Maximum Total Weight Authorised Exceeding 5,700kg or are Authorised to Carry More Than Nine Passengers

14/99

1. Proposal to Amend the Air Navigation (No 2) Order, the Rules of the Air Regulations 1996 and the Air Navigation (General) Regulations 1993 to Require the Carriage and Operation of Reduced Vertical Separation Minimum Equipment and Procedures for Aircraft Flying in UK Designated RVSM Airspace.