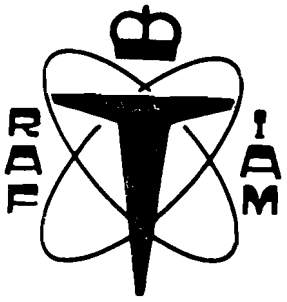
CONFIDENTIAL HUMAN FACTORS INCIDENT REPORTS

FEEDBACK Nº 7



INTRODUCTION.

As we reported in Feedback No 6, by far the largest proportion of reports we receive concern fatigue, sleep and related incidents. We are collating all these reports for submission to the Flight Time Limitations Board at the request of the CAA.

However, we realise that continually to fill the few pages of Feedback we have available with stories of fatigue can become a bit dreary, so we have limited the fatigue section to just four reports this time but don't think that the subject has faded away - far from it.

A word about our address list. From the number of "Feedbacks" that are returned to us marked either "Gone Away" or "Unknown at this address" and from talking to crews who complain that they "NEVER receive Feedback," it is clear that our address list is not all it should be. Every pilot with a CPL or higher, and every licenced flight engineer should receive his (or her) personal copy of Feedback through the post. If yours is going astray, or you are not on our list, then please let us know and we can sort it out. A call on Aldershot 24461 Ext. 4375 will suffice, ie, if you haven't got a copy of this, let us know without delay (Shurely shome mishtake?-ED).

Finally, although the main idea of CHIRP is to receive your reports of incidents, many of you send us your suggestions and ideas for improving safety and aviation generally. We would like to encourage this type of response, and we will be happy to receive as many as you care to send. They all receive a sympathetic ear, and when a number of similar items builds up, they can and will be dispatched, suitably dis-identified of course, to the right area for consideration.

Just a reminder that, as ever, items appearing in italics are, as nearly as possible, in the reporter's own words.

APRIL 1985

KNOW WHAT I MEAN?

After I had taken off I switched from COM 1 to COM 2 during a frequency change and promptly lost audio from all the radios. After some minutes worrying and looking for answers I realised that I had switched all the audio switches to "Speaker" while I had been trying to regain reception. The speaker was u/s. The problem probably arose because I had been flying an aircraft with very similar equipment and layout in the last few days with the exception that the audio box, although of identical design, had been modified so that DOWN was "Normal" and UP was "Emergency." Needless to say the aircraft that I was flying had UP for "Phone" and DOWN for "Speaker." The only way of establishing what the switches did was a small label on the facia which could only be read with the cockpit floodlights on and was peeling off anyway. I would like to add that if anyone had asked me while I was on the ground I would have been able to tell them the switch positions in each aircraft. It was only while most of my brain was occupied with the SID that I made the mistake.

* * *

As we back tracked the runway, we did the pre-t/o checks. When I came to take off brief, the Capt. said "Standard." He didn't specify whose leg. He had done the previous inbound leg. I didn't question his brief and assumed wrongly he was going to do the take-off. However as we began the take off roll we both realised that neither pilot was handling the aircraft. I took the control column and the take off was normal. I have often thought about that incident since. Recently another pilot in a different company described a similar situation. The solution is ALWAYS to say "Standard Left Seat" or "Standard Right Seat Take Off".

* * *

On arrival stand 4 applied parking brake, shut down engines. Received thumb up from ground staff, took it as "chocks in", released brakes. 10 secs later F/O asked why they were pushing us back - I realised we were rolling and applied brakes. Towed back to stand. Rolled 15 feet. No damage, no injuries, a/c did not tip. Pax on board, belt signs on. Note that I apply no blame to the ground staff, whom I could not identify. His signal was not "chocks in" and the misinterpretation was my fault. Incident Report considered but not submitted as only possible category is (1), ie, severe mental strain, which I do not consider applicable.

* * *

I was flying the sector, the plane was quite heavy and the configuration for take-off at that weight was 5 degrees flap and wet power. V1/VR = 94 kts V2 = 98 kts. The take-off run was quite normal and at 94 kts I rotated the plane, it lifted off and then seemed to sag and was reluctant to climb and it also yawed slightly. I told the captain that something seemed to be wrong and that I suspected an engine malfunction. However the plane recovered and climbed away normally. At 500ft. I asked for the flaps to be retracted and we then discovered what the problem was - I had forgotten to select flaps and the captain hadn't noticed. I had been distracted by being given the airways clearance as soon as we started to taxi, which is when the flaps are usually selected, but the check list calls for flaps to be checked at a later stage which I must have failed to do. Also, we were kept waiting at the holding point for five minutes when I could have double checked everything instead of looking out of the window. However, (in my defence) I must add that in the previous week I had flown a lot with another captain who always insisted on selecting flap himself despite it being the co-pilot's job - perhaps I had got out of the habit of doing it myself.

NOW YOU SEE IT?

VISUAL APPROACH OVERSEAS Co-pilot was flying the aircraft with reported weather of 3000 scattered 8000 overcast wind 040/10-15 visibility 10 miles dusk. Cleared for radar positioning to visual 04R. ILS 04R off the air ILS 04L in use. Landing on both runways. Normal positioning from N.E. with positioning to the centerline and descent to 3000ft. The controller was inquiring if we had an aircraft four miles ahead, landing on 04L, in sight and he was informed we were in cloud. Descent given to 2500ft and at 10-12 miles D.M.E. still no contact with other aircraft or field due to being in cloud. We were then given a dogleg heading 090 and requested further descent and cleared to 1500ft; at this height we were in the bottom of the cloud layer with some glimpses of the surface. At approximately 5 miles we requested permission to descend and were given a heading of 010. At about 800ft we saw what looked like the runway dead ahead. I called runway in sight but as I had doubts I asked if we were lined up and was informed that we were slightly right and to change to tower frequency. The apparent runway did not check with the track bar or the course indicator so I ordered a go round which was carried out at about 400ft. The apparent runway was a taxiway. We were picked up by radar very quickly and a very apologetic controller brought us round for another approach with the I.L.S. working on 04R. No problems. I believe the error was caused by several factors, mainly that the radar controller was not aware of the deterioration of the weather and also the wind was about 090/30 at 1000ft and the dogleg put us well inside the outer marker. I imagine the dogleg was required because of lack of visual contact with the aircraft landing 04L. No lights were visible from our position which did not help nor that we were expecting to see the runway ahead to the right when in fact it was to the left. I feel that this approach highlights the tendency for some airfields to do visual approaches when conditions are not suitable or perhaps to keep the procedure going for too long with the weather deteriorating.

Note. I enclose this report not because there was a serious danger of landing on the taxiway but because I am reliably informed that within the last few months a D.C.10 of another European carrier had a similar experience but he landed on a taxiway.

NOW YOU DON'T!

RVR was not available at destination but, with the factorisation allowed by the operations manual, 550m. reported met.vis. was the minimum for no approach ban to the runway in use. One aircraft had landed on such a report, but since then the reported visibility had reduced to 300m.

After about two holding patterns the captain asked for a further observation of visibility to be made, claiming that from above conditions seemed to be changing. Although approach control advised that the tower controller was continuously observing and that changes would be passed as they happened, the captain's similar requests were repeated regularly during the next twenty minutes. This, with remarks about the frustration of being able to see the airfield but not to land on it, obviously made for some annoyance among the controllers.

A half mile PPI approach was started as soon as 550m. was reported. From about six miles on finals the approach lights could be clearly seen through a gap in the fog. The co-pilot called "decision height" and, with the approach lights still in sight, the approach was continued. As soon as sight of the approach lights was lost under the aircraft, it flew into much thicker fog, and the copilot, having no definite ground contact or other lights in sight, called "runway not in sight". The captain did not reply, but after a second or two, four white PAPI lights were seen fairly well to the left. After a further short interval the captain called for landing flap, starting a small correction left at the same time. After a third short interval the runway lights and 300m. markings were seen beneath the aircraft and a normal landing followed.

Happily the two pilots were (and are) good friends. After things had been discussed with the controllers, and in the privacy of the crew room, they agreed it was an error to have suggested the controller should have passed different visibility figures. The captain claimed he never lost sight of either approach lights or runway lights, the copilot claimed he had no visual reference after passing the approach lights, and they agreed to differ as to the need for an overshoot.

Morals: (i) The books are correct about slant visibility.

(ii) Beware of becoming so impatient that you may build up a situation where an overshoot will be a moral defeat!

IT'S NOT ME.....

C/U ON AFD BY 757 P1

There we were, descending steeply trying to catch G.P. and localiser at six miles, just waiting for a GPWS - so decided to GA! That was the early decision, incidentally ATC apologised for approach but were trying to squeeze 2 a/c into the same approach. As the GA was not from low down, once initiated the F/D decided to do its own thing and commenced a profile not to my requirements. After a bit of fumbling and feeling, not wishing to remove scan from EFIS on first ever GA, I switched off the L F/D , or so I thought. Unfortunately the R/T switch is less than 1 inch from the F/D switch and that was switched off in the middle of the GA sequence! Ha, Ha, Ha! Bloody funny to some ignorant un-ergonomic bum. This a/c has so many basic ergonomic traps that it should have a Government Health Warning, at least an "Ergonomic Audit" should be carried out to identify all likely pitfalls and warn all crews. TTFN!

* * *

During the cruise, while writing the engine readings in the Tech Log for trend monitoring, I discovered that one of the oil pressure gauges was reading 15 psi. The normal running pressure is 85 psi which is exactly 180 degrees from 15 psi. The needles on all the engine gauges are of a type with the "tail" of the needle about 2/3 the length of the "head" and not pointed. A normal check of engine gauges is "everything at 5 o'clock" so for some time I had been checking that the gauge was reading 11 o'clock. It was of course a gauge error and no caution lights came on but I wonder how long it would have continued to fool me if we did not carry out trend monitoring. Incidentally, the fault would not have been picked up on the next start as the fault was that the gauge was over-reading and came round a second time, so it would have risen normally.

A normal descent to Lambourne was carried out, with a briefing for an ILS approach for 28L. After holding over Lambourne, Heathrow cleared us for the approach with a radar heading for an intercept. As I was flying, I requested the copilot to select the ILS freq. and identify it upon leaving Lambourne. A normal ILS intercept followed. The O.E. locator was giving us somewhat a correct indication initially, but as soon as we got closer, it started drifting to the left.

Heathrow approach then advised us that the R/W in use was 28L, and it appeared we were on finals for 28R.

A quick look at my chart confirmed that we had the wrong ILS selected. 28L freq. was then selected, and the approach corrected and carried out normally.

After landing, I discussed the problem with my co-pilot, and he had the following to say : Upon leaving Lambourne, he dropped the single chart he had, which showed 28L. After picking it up, had placed it on the opposite side which displayed 28R. the two being very much alike. Without noticing, he selected the 28R freq. and identified it correctly, and missed seeing the "(R)", under the workload of the approach.

I guess it was somewhat my fault too for not looking at the freq. selected at the time, and relying on the co-pilot completely.

Subsequently a look at the chart confirmed that 28L and 28R were on opposite sides of the same paper. The thought haunted me about writing to Jeppeson, to advise them that they had two nearly identical approaches on opposite sides of the same paper, with the potential of helping to make a mistake. But Jeppeson have recently amended the charts, knowingly or unknowingly, to a better format displaying 28L & 28L Cat II, 28R & 28R Cat II. The possibility is that thay have changed it accidentally, and it could happen at a different location somewhere else.

* * *

On intermediate approach while moving his hand from the VHF frequency selector switch, on the centre pedestal, to the heading select knob on the glare shield, the Captain's right knuckle contacted the go-around button on the left thrust lever - with the expected result!

.....IT'S THE SWITCH

For the third time, I was caught by variation of switch positions on our F27's. During the after start checks, the F/O put the water methanol switches on instead of the pitot heaters. On some aircraft, these switch positions are exchanged. As full power was achieved, I was surprised to hear water-meth flow cutting in (my own taxy checks having failed to spot the ergonomically induced error). I at once realised what had occurred, put the pitot heaters on, and allowed the water-meth take off to continue. Not hazardous on this occasion, the lack of initial pitot heat could have been dangerous in more severe winter weather. I know that others have made this error several times, though not usually reaching the take-off stage.

On frequent occasions the increasing reliance on computer flight logs and fuel plans has produced errors in the reading of waypoint co-ordinates and fuel amounts due to poor quality dot-matrix printers. So far all these errors have been spotted by cross checking with a conventionally printed flight log. However my company is determined to remove the conventional Flight Log and to replace it with only a computer print-out, solely on the grounds of cost saving. This is a potential source of error unless we get better quality printers and better laid-out print-outs.

* * *

All the above reports involve some sort of ergonomic problem. We have not given all the aircraft types here as one or two companies have tended to ignore problems in the past if they thought they didn't apply specifically to them. What we think is required is what Mike Ramsden has termed "Safety Imagination" - ie don't think that because it's not exactly your type something very similar can't happen to you.

By the way, just so that EPSON doesn't sue us, we ought to mention that we prepare FEEDBACK drafts on dot matrix printers (cheap ones - we work for the Government remember) and we guess that using decent ribbons might solve the problem raised in the last report. Try complaining (ie making this constructive suggestion).

SOUNDS LIKE A GOOD IDEA

I taxied to the holding point as the sun rose. The visibility started to deteriorate as the sun rose above the horizon and shallow fog patches started to form. Whilst awaiting clearance for takeoff a 747 landed. As soon as the 747 had passed I entered the active runway and slowly backtracked to the threshold turning to face down the runway. Assuming that the 747 had cleared, as by now the far half of the runway was obscured, we called for take-off. The controller immediately replied "Negative one 747 backtracking to a turnoff". I had forgotten that the last turnoff was blocked. Just then the shape of the 747 emerged from the murk heading, naturally, straight towards us. Unfortunately the 747 crew had completed their after landing checks and switched off their landing, taxy and strobe lights otherwise we would have seen them far earlier. Suggest that anytime anyone has to backtrack an active runway they always leave all the lights on. That might make the difference between someone who rolls in ignorance stopping in time or causing another "Tenerife".

GUARANTEE
NO RECORD OF YOUR NAME AND ADDRESS WILL BE KEPT

NAME.....

ADDRESS.....

.....

.....

PHONE No.....

DATE OF RECEIPT AT THE R.A.F. INSTITUTE OF AVIATION MEDICINE

WE ASK THAT YOU GIVE YOUR IDENTITY ONLY TO ENABLE US TO CONTACT YOU IF WE ARE NOT CLEAR ABOUT ANY PART OF YOUR ACCOUNT.

IN ANY EVENT THIS PART OF THE FORM WILL BE RETURNED TO YOU, AS SOON AS POSSIBLE, TO CONFIRM THAT WE HAVE RECEIVED YOUR REPORT.

YOURSELF
CREW POSITION
TOTAL FLYING HOURS
HOURS ON TYPE

THE AIRCRAFT
TYPE
No. OF CREW

THE FLIGHT
DATE
FROM :-
TO :-
IFR/VFR
TYPE OF OPERATION

THE INCIDENT
TIME (PLEASE STATE LOCAL/GMT)
DAY/NIGHT
LOCATION
PHASE OF FLIGHT
WEATHER (IMC/VMC)

PLEASE USE THIS SPACE TO WRITE YOUR ACCOUNT, USING EXTRA PAPER IF YOU NEED TO

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