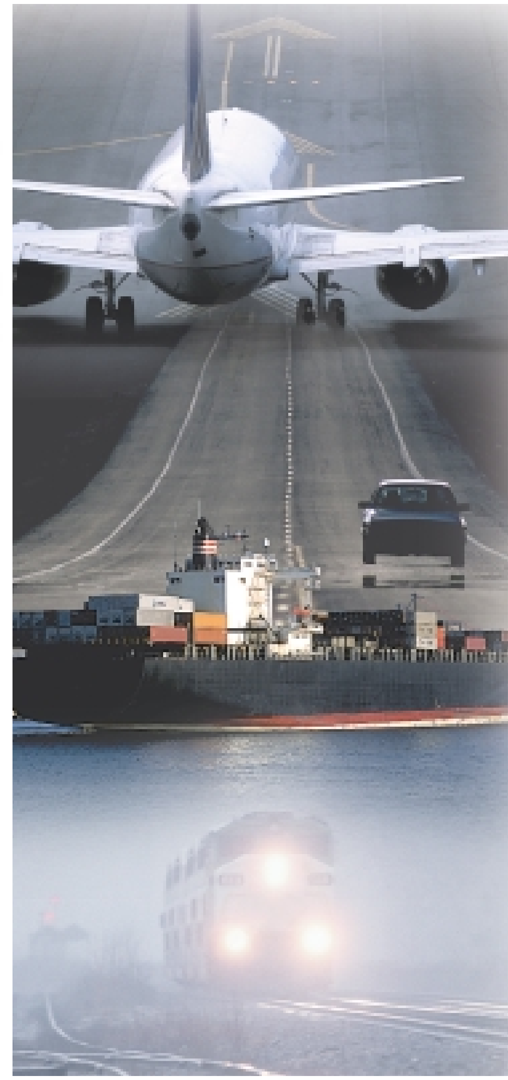
ATSB – Supplement

ATSB Australian Transport Safety Bureau

Safety INVESTIGATIONS *Supplement*



Welcome to the Australian Transport Safety Bureau's special section in *Flight Safety Australia* designed to provide you with valuable safety information arising from the Bureau's air safety activities.

ATSB IS THE focal point for the Federal Government's efforts to maintain and improve transport safety across all modes. Formed in July last year, it brings together the expertise and considerable knowledge of the Bureau of Air Safety Investigation, the Federal Office of Road Safety, the Marine Incident Investigation Unit and a Rail Safety Unit. By drawing on the strengths of its component parts and by sharing a broader knowledge of safety systems, the Bureau is able to deliver improved safety outcomes across all modes.

Aviation safety remains, of course, a priority for the Bureau, which is extending and building on the work of BASI through its 'no blame' aviation accident, incident and safety deficiency investigations.

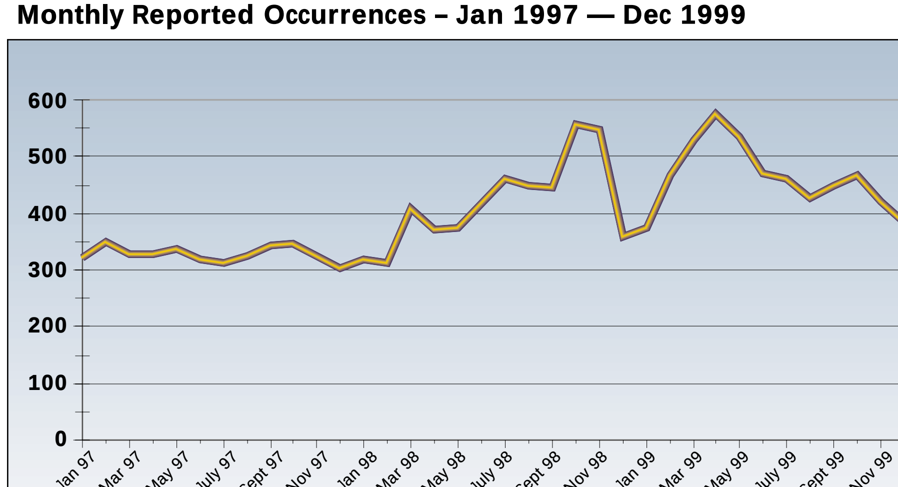
In future issues of *Flight Safety Australia*, the ATSB will provide you with details of current trends in aviation accidents and incidents emerging from its statistics database and its Systemic Incident Analysis Model. It will also raise important safety issues identified through the Confidential Aviation Incident Reporting System, announce new safety occurrence reports and feature vital safety issues identified through investigations and research.

As a regular independent contributor to *Flight Safety Australia*, ATSB will ensure that everyone with an interest in aviation receives the safety information they need.

Aviation Safety Occurrence Statistics

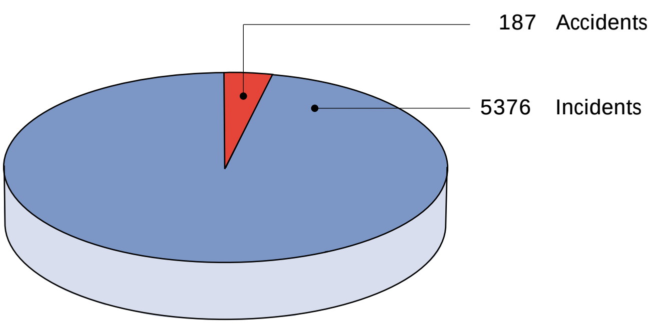
MANDATORY REPORTING OF all aviation safety occurrences – accidents, serious incidents and incidents – involving civil aviation operations, provides the ATSB with a wealth of statistical information on the health of aviation safety in Australia. In future issues of *Flight Safety Australia* we will look at the reasons behind some of the changing trends in the key safety statistics.

Monthly Reported Occurrences – Jan 1997 — Dec 1999



There were 5563 aviation safety occurrences reported to the ATSB in 1999. Of these, only 187 or 3.5% were accidents. While the number of incidents reported increased by 10.8% on the previous year, the number of accidents fell by 16.5% from 224.

1999 Occurrence Types



Briefly, an accident generally involves aircraft damage while a serious incident describes an occurrence where an accident nearly occurred. An incident concerns an occurrence associated with the operation of an aircraft that affects or could affect the safety of the operation of the aircraft or another aircraft. (See our website www.basi.gov.au/reqnot/reg7.htm for the full definitions of aviation accidents and incidents.)

The safety occurrence information contained in the ATSB database can be grouped according to the aircraft involved in the occurrence. These groupings or sectors include:

- agriculture
- business
- charter
- high-capacity regular public transport
- low-capacity regular public transport
- flying training
- military
- other aerial work
- private
- the very small sectors of gliding, ballooning and sport
- general aviation (*The general aviation sector actually comprises the sectors of agriculture, business, charter, flying training, other aerial work, private and unknown.)*

The ATSB is looking to produce regular reports on important safety issues affecting the key aviation sectors. These reports will analyse current safety developments in Australia as well as drawing on the latest overseas experience.

The sector reports will be widely distributed within the relevant aviation sectors, published on our website and available on request by phoning the ATSB on 1800 621 372.

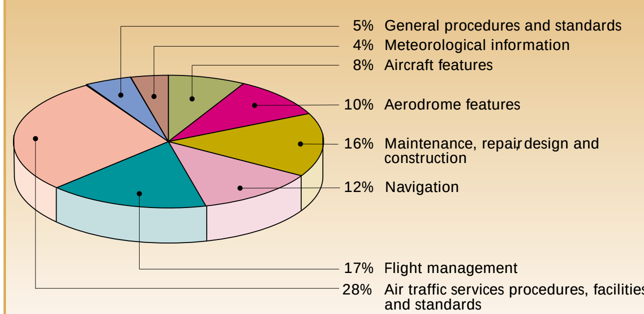
Telephone
Australian Transport Safety Bureau
on 1800 621 372

The Systemic Incident Analysis Model — A New Approach to Safety Information

THE ATSB USES the Systemic Incident Analysis Model (SIAM) to record and analyse all aviation safety occurrences. This innovative safety information system is a powerful tool for accident prevention and systems safety enhancement.

This safety system database can determine where the overall system is most vulnerable. An informed judgement can then be made as to where and how to best allocate resources to obtain the most effective safety return for aviation.

SIAM defence failures 1999



SIAM has been designed to maximise the safety value of occurrence information by allowing areas of vulnerability in the safety defences to be found and fixed before they contribute to accidents or serious incidents.

Defences are components of a system which are intended to manage and control hazards. Defences can take the form of ‘hard’ or engineered safety features such as automatic ground proximity and airborne collision avoidance systems. These contrast with ‘soft’ defences such as standard operational procedures, or particular skills such as navigation.

SIAM defence failures are categorised into three levels. Level One SIAM failures are broad descriptions of defences (e.g. Aircraft Features). Level Two SIAM failures identify the components of each Level One category (e.g. Monitoring/Warning Systems). Level Three SIAM failures identify in more detail the elements of the defence that failed (e.g. Ground Proximity Warning System).

The diagram above displays the broad SIAM Level One defence failure headings for the total aviation system and their relative significance. In coming issues we will explore aspects of the information available on SIAM Level Two and Three defence failures.

A detailed report explaining how the SIAM system works will soon be available on the ATSB website. The report will contain preliminary analyses of SIAM data for the high-capacity RPT, low capacity RPT, charter and general aviation sectors.

We look forward to your comments on this information. The report will also contain recommendations to address some of the safety issues arising from the data.

Recently completed investigations

www.atsb.gov.au

As reports into aviation safety occurrences are finalised they are made publicly available through the ATSB website. The details of the most recently completed investigations added to our website are set out below.

Fixed-wing Aircraft

Occ. no.	Occ. date	Location	Aircraft	Short description
199802022	6 June 1998	2 km NE Hoxton Park NSW	Piper Archer & Piper Tomahawk	Mid-air collision at 2000 feet.
199803972	23 Sept. 1998	Melbourne Airport	Boeing 767, Beech 1900 & Boeing 737	Surface movement incident–three aircraft.
199804451	20 Oct. 1998	Coffs Harbour NSW	Beech 1900	Propeller bird strike while taxiing at night.
199805078	16 Nov. 1998	11 km SW Williamtown NSW	BAe Jetstream 31 & Beech Super King Air B200	Communication problems during Class G Airspace trial.
199805365	26 Nov. 1998	King Island Tas.	Piper PA-32	Aircraft destroyed following takeoff in gusting wind conditions.
199805359	29 Nov. 1998	22 km NE Kingscote SA	Cessna 402B	Jammed elevator trim tab.
(DFSI)	28 Dec. 1998	E Bermagui NSW	RAAF Orion & Cessna 402	Airborne confliction during search and rescue operation.
199900220	16 Jan. 1999	Coconut Island Qld	Britten Norman Islander	Loss of control at low altitude and crash following go-around.
199900673	11 Feb. 1999	Port Hedland WA	Cessna 441	Safety deficiencies identified in incorrectly rigged aileron control cable.
199900604	15 Feb. 1999	Norfolk Island	Piper Chieftain	Fuel reserves on passenger flights to Norfolk Island.
199900990	19 Feb. 1999	Townsville Qld	Airbus A320	APU fire on ground.
199901299	28 Mar. 1999	28 km W Pittsworth Qld	Piper Pawnee Brave	Agricultural spray aircraft strikes motor vehicle during takeoff.
199901340	2 Apr. 1999	3 km NE Aldinga SA	Lancair 235	Loss of engine power followed by loss of control.
199901880	24 Apr. 1999	167 km ENE Adelaide SA	Boeing 737	Intermittent failure of K11 relay in flight accessory box.
199902290	1 May 1999	Archerfield Qld	Skyfox Gazelle	Safety deficiency involving 'SCAT' hoses under negative pressure.
199902458	20 May 1999	22 km NNE Brisbane Qld	BAe 146 & Airbus A320	Airborne confliction into Brisbane.
19902679	2 June 1999	Canberra ACT	Airbus A320	Cargo-loading procedures affect takeoff.
199903131	27 June 1999	Coolangatta Qld	Boeing 737	Fatigue affects flight-deck performance.
199903768	25 July 1999	2 km NNE Latrobe Valley Vic.	Metroliner & De Havilland Chipmunk	Safety deficiency in straight-in approach procedures at some aero-dromes.
199904312	2 Sept. 1999	Sydney NSW	Saab 340 & Boeing 767	Active runway safety deficiency identified following surface movement incident.
199905438	17 Nov. 1999	13 km WSW Cairns Qld	Dash 7 & Cessna 310	Safety deficiency identified in separation assurance techniques following breakdown in separation.

Helicopters

Occ. no.	Occ. date	Location	Aircraft	Short description
199700583	26 Feb. 1997	32 km E Gladstone Qld	Hughes 369HS	Loss of aircraft after striking ship during on board takeoff.
199900645	20 Feb. 1999	26 km ESE Holbrook NSW	Agusta 47-G-2A1	Wirestrike at low height above ground.
199904791	10 Oct. 1999	World Trade Centre (ALA) Vic.	Bell 206B	Fatigue crack leads to compressor stator vane breakage.

For more occurrence reports and safety information go on line

visit us @ www.atsb.gov.au

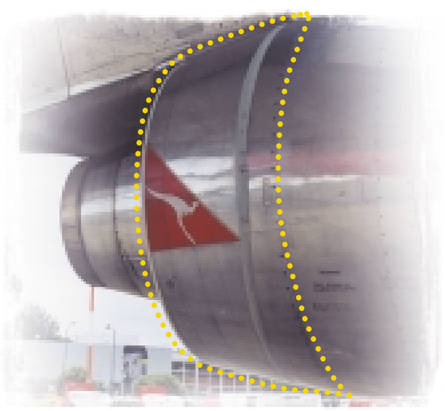
Safety Snippets

Boeing 747-238 cold stream nozzle cracks

Occurrence report 199906038

Inadequate inspection requirements have been identified following a Boeing 747-238 cold stream nozzle failure.

While climbing through approximately 10,000 ft after take-off, the crew heard a bang and felt a jolt through the airframe.



Most of the engine's cold stream nozzle was later found to have separated from the aircraft, and some of the wing leading edge panels had been damaged by the departing nozzle, as was the no. 1 flap fairing (canoe).

A fleet-wide check of 13 aircraft found a further six nozzles cracked in the nozzle skin structure under the acoustic lining in the top corners of the nozzles.

Inspection requirements did not detect the cracks before they separated the nozzle from the aircraft. The area cannot be inspected on an installed nozzle without removing the panels and using a visual aid.

ATSB has recommended that Rolls Royce Commercial Aero Engine Limited, CASA, the UK's CAA and the USA's FAA, notify operators using Rolls Royce RB211-524D4 or similar engines that the cold stream nozzle may fail during operation. The Bureau has also recom-mended reviewing nozzle inspection criteria to minimise possible failure during operation.

Unforecast weather risk at Norfolk Island

Occurrence report 1999804317

Unreliable meteorological forecasts for Norfolk Island are sometimes causing pilots to carry out unplanned diversions or holding.

The period 1 January 1998 to 31 March 1999 witnessed several occurrences involving unforecast or rapidly changing conditions at the island. In one instance, the pilot in command elected to divert the aircraft to Auckland after mechanical turbulence and windshear frustrated two runway approaches.

Norfolk Island's Meteorological Observing Office sometimes limits its operating hours due to staff shortages. Also, wind-finding radar and weather-watch radar cannot detect local thunderstorms or rainshowers.

Because regulations do not require pilots of regular public transport aircraft to carry fuel reserves other than those dictated by the forecast weather conditions, an unforecast deterioration in the weather at an isolated aerodrome such as Norfolk Island could be serious.

ATSB has recommended that the Bureau of Meteorology review its methods and resources for forecasting at Norfolk Island, and CASA has undertaken to review the fuel requirements for flights to remote islands.

Tiger Moth crash puzzle

Occurrence report 1999805459

A blistered carburettor float valve was an unusual factor in a Tiger Moth crash.

The aircraft suddenly lost power soon after take-off, and was badly damaged while landing in a nearby golf course.

The aircraft's fuel system showed that sufficient clean fuel should have been available to power the engine. But the carburettor float valve, which was made from natural cork covered with a fuel-proof varnish seal, had two large blisters in the varnish. The larger of these was binding against the float chamber housing walls. This could have caused either an excessively rich or lean mixture, either of which would have caused the engine to run rough and stop. Oil wetness and sooting of the spark plugs suggested the mixture was excessively rich.

Specialist examination of the float could not explain why the varnish had blistered, and the Bureau's database showed no record of a similar event. Tiger Moth operators contacted during the investigation knew of several incidents where the varnish surrounding the cork float had cracked and the cork float had then absorbed fuel. But none had any previous experience of the varnish blistering in this manner. The UK's CAA and UK manufacturers of the floats have been alerted by the ATSB.

Maintenance 'error'

Lessons from the ATSB survey

by Alan Hobbs

THE 'PILOT FACTOR' has been the subject of much aviation safety research since WW II. As a result, we now understand a great deal about visual illusions, cockpit design, crew coordination and the other challenges that confront pilots. Armed with this information, airlines can offer their aircrew appropriate training, manufacturers can design and build better systems, and regulators can ensure that appropriate countermeasures are in place to reduce the safety impact of pilot error.

Deficiencies in the maintenance of the world's airline aircraft are estimated to be involved in 12% of major accidents and 50% of engine-related flight delays. As with problems in the cockpit, many problems in the hangar arise from human rather than technical failures. Yet until recently, the human factors that affect the work of maintenance personnel have been largely overlooked. Before we can propose solutions for maintenance error, we need to understand what it is and why it happens.

As part of an ongoing safety program, the Australian Transport Safety Bureau is investigating the human factors which affect the day-to-day work of maintenance personnel. In late 1998, a safety survey was distributed to licensed aircraft maintenance engineers (LAMEs) in Australia. The survey was designed to identify safety issues in maintenance, with a particular emphasis on human factors.

The survey received an excellent response: nearly 1400 surveys were returned.

Six hundred and ten respondents used the survey to report a safety occurrence. Occurrence reports were not linked with particular organisations or individuals as the focus of this study was on general safety issues rather than specific companies or individuals. The reported occurrences provide a wealth of information on the human factors of aircraft maintenance.

Occurrence outcomes

For LAMEs employed by airlines, the most common type of occurrence was one in which a system was operated unsafely during maintenance. For example, flaps or thrust reversers might have been operated when equipment was not clear of the area.

For non-airline maintenance, the most common occurrence was incorrect assembly or orientation of parts. This type of incident, however, was less frequent in airline maintenance.

*Outcome of incident**	*Airline*	*Non-airline*
System operated in unsafe condition	18%	7%
Towing event	9%	3%
Incomplete installation, all parts present	8%	9%
Person contacted hazard	7%	9%
Vehicle or equipment contacted aircraft	7%	1%
Wrong assembly or orientation	6%	11%
Material left in aircraft	4%	5%
Part damaged during repair	4%	2%
Panel or system not closed	3%	3%
Wrong equipment/part installed	3%	4%
Part not installed	3%	6%
Required servicing not performed	3%	4%
Degradation not found	1%	5%

**Figures are rounded to nearest percent*

'…many LAMEs reported that they took shortcuts from time to time'.

Human errors

Ninety-five per cent of the occurrences involved the actions of people. The most common error types were memory lapses (such as forgetting to tighten a connection), procedure shortcuts (such as deciding not to perform a functional check due to a lack of time) and errors arising from a lack of knowledge. Some occurrences involved more than one error. For example, a memory lapse may have been followed by a procedure shortcut.

Memory lapse	18%
Procedure shortcut	15%
Lack of knowledge	10%
Failure to check	8%
Failure to see	6%
Unclassifiable	26%

Memory lapses are a particular hazard for maintenance personnel. The survey included a series of questions about memory lapses. More than half of the LAMEs who responded to the survey reported that they had left a tool or torch behind in an aircraft in the last 12 months.

LAMEs are frequently faced with the temptation to take procedure shortcuts. When asked about their day-to-day job, many LAMEs reported that they took shortcuts from time to time. For example, fig. 1 indicates that just under a third of LAMEs reported that, in the previous year, they had decided to omit a functional check or engine run due to a lack of time.

Contributing factors

Respondents were asked to suggest why the occurrence had occurred. As can be seen, pressure, fatigue, coordination problems and training were the most commonly mentioned causal factors.

*Outcome of incident**	*Airline*	*Non-airline*
Pressure	21%	23%
Fatigue	13%	14%
Coordination	10%	11%
Training	10%	16%
Supervision	9%	10%
Lack of equipment	8%	3%
Environment	5%	1%
Poor documentation	5%	4%
Poor procedure	4%	4%

LAMEs frequently attributed memory lapses to pressure and/or fatigue, while procedure shortcuts were associated with pressure or a lack of equipment. Poor coordination with other workers often resulted in a required check being omitted.

A lack of equipment was cited more frequently by airline LAMEs than by their counterparts in non-airline maintenance.

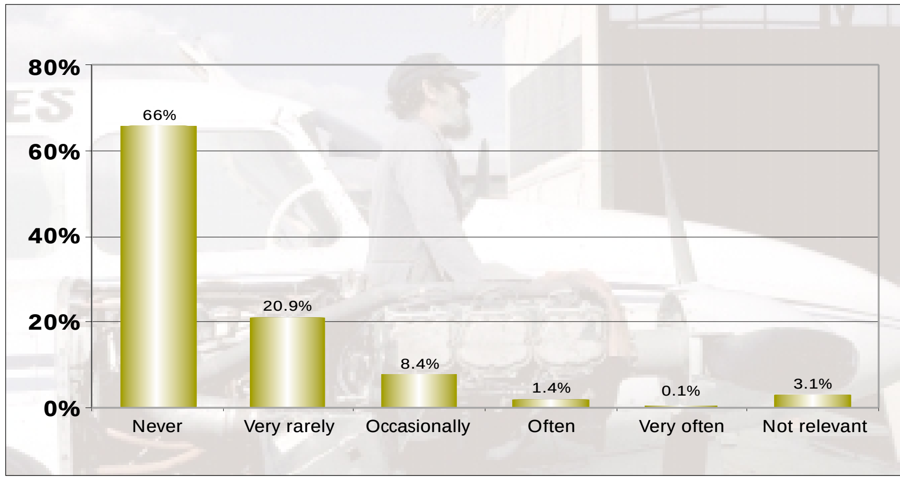
Time of day

Because fatigue was mentioned by many LAMEs as a problem, it is worth considering the times at which occurrences occurred. In high-capacity airlines, maintenance occurrences were most frequent at around 1100, but then reduced in frequency between 1200 and 1300, presumably as workers took meal breaks. The next most frequent time for occurrences in high-capacity airlines was around 0300. These occurrence patterns do not reflect variations in the number of workers present, because for high-capacity airlines there are almost as many workers present at night as during the day.

The time of occurrences in non-airline maintenance showed a different pattern, largely reflecting the fact that most work is carried out during daylight hours. There were two definite peaks in occurrence times, one just before 'knock off' time and the other just before lunch.

Just as there are 'black spots' on our roads, so there are also 'black times' for shiftworkers. For maintenance workers on night shift, it seems that 0300 is a black time. Late morning and early afternoon are also danger times. There is a clear lesson here for those who schedule maintenance tasks: 0300 is an undesirable time to be carrying out complex or crucial maintenance tasks.

Figure 1.
'How often have you decided not to do a required functional check or engine run because of a lack of time'?



For those who work more conventional hours, the times immediately before breaks appear to be danger periods. In particular, the end of the working day can produce a hazardous combination of pressure and fatigue.

Conclusions

Although many maintenance incidents reflect system problems, ultimately LAMEs themselves are the last line of defence in that system. Most LAMEs have little control over system issues such as hours of work, equipment and work schedules, but there are things that individual LAMEs can do to reduce their chances of being involved in an incident.

One way to counter the human factor at work is to be aware of situations that promote errors and shortcuts. Here are four danger signs and how to recognise them.

Excessive reliance on memory. Our memories are not always as reliable as we think, particularly when we are tired. Memory lapses are the most common errors in maintenance. It is tempting fate to interrupt a partly completed job without adequate reminders to tell you, and others, of its stage of progress.

You run the risk of a memory lapse every time you try to keep a critical task step in mind to perform later, without any reminders. It is better to assume that you will forget something, and take precautions, than to hope that you will remember everything.

Pressure. Being asked repeatedly 'how long is it going to take?', getting angry during a job, starting to curse more than usual, or even being about to go home as soon as you complete the job can be signs of pressure. Even the most careful workers can find themselves leaving out steps or taking shortcuts in situations like these. Recognising such pressures, and ensuring that they do not lead to risk-taking or shortcuts, is an important skill.

Tiredness. You may not feel tired, but if you have not had a good night-time sleep in the last 24 hours, or if you have been at work for longer than 12 hours, there is a good chance that you will be impaired by fatigue. Fatigue can increase your chances of making errors, particularly memory lapses. Sleepy people are also more irritable and harder to work with!

Inadequate coordination. A breakdown in coordination is one of the most common circumstances leading to incidents. In many cases, coordination breaks down when people make unspoken assumptions about a job without actually communicating with each other to confirm the situation. Sometimes LAMEs fear that they will give offence if they are seen to check the work of colleagues too thoroughly, or it they ask too many questions.

Coordination danger signs include rushed shift hand-overs, a lack of adequate communication, not asking questions because you feel silly or you don't want to offend a workmate, working with unfamiliar people, or working with per-sonnel who don't normally get involved in hands-on work. ■

ATSB – Supplement

Confidential Aviation Incident Reporting

CAIR comment

Feedback on some of the more interesting and important safety issues identified through the ATSB's Confidential Aviation Incident Reporting system will be a regular part of our supplement in *Flight Safety Australia*. The supplement, I should stress, has complete editorial independence from CASA.

The CAIR system is a valuable resource for identifying, addressing and rectifying safety deficiencies. If you have a safety concern and are not sure what to do about it, please do not hesitate to call on 1800 020 505 for a chat. In talking the issue through, we can clarify the safety deficiencies and decide how to address the matter. To make a CAIR report that could help improve aviation safety for all of us, it is not necessary to have a complete understanding of the problem or be an expert communicator. People in the CAIR office can assist you in developing a report. You can be confident that the final report states only what you, the reporter, wanted it to.

It is important for follow-up purposes that we have the name and contact details of a person making a report. However, all CAIR reports are 'de-identified' (made anonymous) before they are entered into the CAIR database. The de-identified information is available as data for safety studies or to help identify safety deficiencies or hazards. All reports received are therefore valuable.

I hope you find the information that follows interesting and, most of all, helpful.

Carol Boughton
Director of Air Safety Investigation

Legend: FYI = *For your information.*

CAIR reports

Noise Sharing Procedures

I hold an ATPL and work for a major carrier based in Sydney, operating predominantly out of Sydney Airport. I am concerned about the noise-sharing procedures utilised by Sydney Air Traffic Controllers.

The allocation of a particular runway, or group of runways, continues to be driven by political timing rather than the prevailing weather. I have no objection to the use of 07/25, provided that it is the most suitable runway commensurate with the weather conditions, and that the aircraft performance manual allows its use. But the current method of allocating runways in accordance with 'political acceptability' rather than sound judgement and common sense is courting an accident by reducing safety margins.

It is all very well to say that crosswinds up to 15 knots should be acceptable, or 25 if ATC could get away with it, but to see B747s landing on runway 25 off a non-precision approach in the dark and with 15 knots of crosswind doesn't make a lot of sense when the wind is blowing straight down 16 or 34 and there is a perfectly serviceable ILS available. One such event I witnessed involved a foreign carrier which had flown 14 or so hours from an East Coast US time zone. The crew were allocated runway 25 at short notice, based purely on noise-sharing considerations. When I left Sydney Approach frequency, they were carrying out S-turns at 20 DME in order to achieve an acceptable profile prior to landing off a visual approach, over a displaced threshold, with the surface wind 160/15, on an unfamiliar short runway and in the dark! Accidents are rarely caused by a single event and, when you add in variables such as damp/wet runways, fatigue and a couple of knots of downwind etc., this type of operation hardly represents the optimum level of safety that passengers and crew should expect at Sydney.

In addition to the B747 example, I could quote numerous others of reductions in safety standards caused by the political allocation of runways at Sydney Airport, but the underlying safety implications are un-changed. It is not uncommon to see a runway change to one with less than favourable conditions and, after several demands for the original runway(s) due to operational requirements, the runway direction is reversed.

I believe that a review of the runway allocation process at Sydney Airport should be undertaken, with the express intention of operating at the optimum level of safety. The natural fallout from such a review would allow the use of all runways.

CAIR note: Three previous FYI documents had been forwarded to both the Civil Aviation Safety Authority and Airservices Australia, and replies had been received. Discussions with reporters at the time the FYIs were written, indicated that there were strong concerns about operations into Sydney Airport, particularly about the effects of noise abatement requirements.

Response from Airservices Australia: The Long Term Operating Plan (LTOP) represents the Government's policy on how Airservices is required to operate air traffic services into and out of Sydney Airport.

The LTOP was developed to address noise issues at Sydney Airport. The plan includes ten runway configurations, which are interchanged, depending on the weather and traffic, to maximise aircraft movements over water and to ensure a fair spread of unavoidable noise over populated areas.

The noise sharing procedures used by Sydney Air Traffic Control reflect Airservices' legal obligations, as defined in the Air Services Act (1995) to protect the environment from the effects of aircraft operations.

Runway selection criteria were formulated after extensive consultation with industry as well as community groups with the objective of maximum utilisation of available runways.

Recent consultation with CASA and airlines has confirmed the suitability of the criteria. This consultation established that the criteria are within the normal operating parameters of most if not all aircraft regularly using Sydney Airport. All parties to this consultation were mindful of the fact that to significantly reduce crosswind and downwind limits for runway nomination would result in a significant reduction in airport capacity due to an increase in use of single runway operations.

AIP EMR 1-1 11.2 states that 'the pilot in command must ensure that the nominated runway or direction is operationally suitable'. Air Traffic Control nominate runways based on the AIP criteria. The pilot in command always has the right and the responsibility to decline a nominated runway if it is operationally unsuitable. Additionally, if a significant number of aircraft are unable to accept the runway on operational grounds the runway mode of operation will be changed to preserve system safety and efficiency.

'…the right and the responsibility to decline a nominated runway if it is operationally unsuitable…'

Finally, on the issue of runway 25 operations, an ILS approach is planned for introduction to operational service in the first quarter of 2000.

Suggestion to Re-Route Coastal Track at Moorabbin

Approaching Carrum and on descent to 1500 feet for report and entry to Moorabbin, our separation from an aircraft flying south at approximately 1500 feet was too close.

If the other aircraft was from Moorabbin, then it should have been to the east and over land. If it was tracking coastal from Point Ormond to Carrum as recommended on Melbourne VTC (see large scale panel), then this recommended track places southbound aircraft at Carrum at 1500 feet, the same altitude as aircraft proceeding to Moorabbin via Carrum (the busiest GAAP approach point). I suggest re-route of coastal aircraft to avoid Carrum and warning about traffic on VTC.

CAIR note: The reporter suggested that, if routes and altitudes cannot be changed, a prominent note be added in a box next to Carrum warning of the conflicting traffic potential.

Response from Airservices Australia: Carrum is a busy tracking point, which is commonly used by aircraft entering and exiting Moorabbin to the south and coastal traffic tracking to the north and south.

The ERSA entry for Moorabbin specifies segregated routes to and from the south when Moorabbin duty runways are 17 or 35.

The Melbourne VTC recommends altitudes which provide 1000 ft segregation for traffic tracking coastal in the vicinity of Moorabbin. The VTC further recommends landing/taxi lights turned on, and warns of beach patrol traffic below 1000 ft in summer. This advice appears on the chart to the west of Moorabbin referring to 'Tracking Coastal Point Ormond to Carrum'.

Airservices notes the reporter's concerns and considers those pilots planning entry to or exit from Moorabbin via Carrum may not necessarily consider the warning applicable to their track. Consequently, the Aeronautical Data Services group is reviewing the presentation of warning advice in this area.

Operation of Warbirds at Bankstown

First report: *Operation of warbirds (particularly jet warbirds) under CAR 262AM in a major population centre like Bankstown, is a high-risk issue. The safety record of jet warbirds is not sufficiently sound to justify operations from an airport in a dense civilian population zone.*

The operational regime now in place has subverted the safety index system in AC21.25(1). Warbird operations should be confined to remote aerodromes.

Second report: *The MiG-15, Iskra, BAC-167, Cessna A-37, T-28 and L39 aircraft, especially the jets, operate in and out of Bankstown on a regular basis. This is a high population density area. Operations on many occasions are in contravention of the risk index contained in AC 21.25. There have been several incidents, including runway excursions. This is a risk to the public. There are several schools, clubs, shopping centres and a hospital in the area. These are aging aircraft and generally not being operated or maintained as the original military operator did or the manufacturer intended. These aircraft are the hobby end of the spectrum and should be restricted to operation in remote, low population density areas. The public around airports such as Bankstown and operators of type certified aircraft sharing the same airspace, should not be exposed to the obvious risks (refer CAR 262AM).*

Third report: *Warbirds are being flown in and out of a densely populated area on revenue flights and are being operated and maintained by inexperienced personnel. The original intention was to allow these aircraft to be operated as Airshow Display aircraft, not to be engaged in commercial operations. Considering the number of accidents sustained by Warbirds in relation to the number of hours flown, this matter is of serious concern.*

Fourth report: *It has come to my attention that MiG-15 aircraft and other ex-military aircraft are operating regularly in and out of Bankstown. These aircraft are high-risk aircraft.*

The operation of these aircraft over populated areas is not in the spirit of the legislation and poses a threat to the safety of innocent individuals in the Bankstown region. Operators of these aircraft in some cases are operating in contravention of the regulations.

CAIR note: These four reports were received over a few days. They are forwarded to the Australian Warbirds Association and the Civil Aviation Safety Authority for information.

A CAIR form can be obtained from the ATSB website @ www.atsb.gov.au or by telephoning 1800 020 505.

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