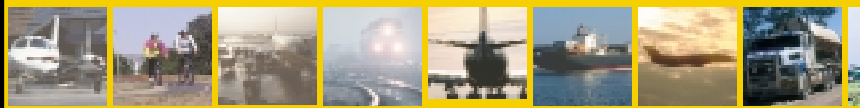
The Australian Air Saf



The ATSB makes a significant contribution to the safety of the Australian aviation industry and travelling public through investigation, analysis and open reporting of civil aviation accidents, incidents and safety deficiencies.

It performs air safety functions in accordance with the provisions of Annex 13 to the Convention on International Civil Aviation (Chicago Convention 1944) as incorporated in Part 2A of the *Air Navigation Act 1920*. Part 2A contains the ATSB's authority to investigate air safety occurrences and safety deficiencies.

The ATSB is an operationally independent bureau within the Federal Department of Transport and Regional Services. ATSB investigations are independent of bodies, including regulators that may need to be investigated in determining causal factors leading to an accident or incident. ATSB is a multi-modal bureau with safety responsibilities in road, rail and sea transport in addition to aviation.

The Australian Air Safety Investigator is a regular eight-page feature in *Flight Safety Australia* produced with editorial independence by the ATSB. It aims to keep the industry informed of the latest findings and issues in air safety from the bureau's perspective.

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A Confidential Aviation Incident Reporting (CAIR) form can be obtained from the ATSB website or by telephoning 1800 020 505.

Main landing gear door separation

Occurrence 200105518

DURING the approach, and while below the maximum limit speed of 270 Kts, the flight crew of the Boeing 767 aircraft lowered the landing gear to assist in speed reduction. After a normal landing at Darwin, the crew was informed by a maintenance engineer that the right main landing gear (MLG) strut door had separated from the aircraft. Although an extensive search was conducted by the operator's maintenance staff, the separated door and some attachment fittings were not recovered.

A subsequent examination of the remaining MLG shock strut door attachment fittings revealed that they all showed fractures characteristic of rapid overloading, and were damaged as a result of the door separation but had not contributed to the initial failure sequence.

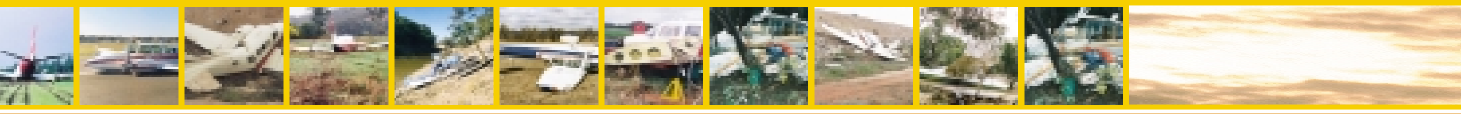
The aircraft manufacturer issued a Fleet Team Digest (767-FTD-52-01005, revised 21 November 2001), referring to Service Bulletin (SB) 767-32A0051, revision 3, dated 27 March 1997. The Digest indicated that the manufacturer had received reports of loose or fractured MLG shock strut door attach bolts and that they had 'identified details in the MLG door attach joint assembly that can lead to bolt preload loss.' The Digest also indicated that operators may wish to inspect the applicable MLG shock strut door attachment joints for looseness. Looseness or premature failure of MLG shock strut door attach bolts could have lead to the loss of the door from the aircraft.

A similar event occurred to an Australian registered B767 aircraft, VH-NOA, on 26 August 2000, during approach to Amsterdam airport in the Netherlands. The Dutch Transport Safety Board is investigating this occurrence.

Safety action: As a result of this occurrence, the operator raised an Engineering Instruction (EI), EI-767-032-0102 Rev 0, to immediately inspect all B767 MLG shock strut doors and check the torque values of the door attaching hardware. All of the operator's B767 aircraft were subsequently checked between 23 November 2001 and 8 December 2001. The inspection revealed that a number of MLG shock strut door mounting bolts were found to be below the required Aircraft Maintenance Manual (AMM) torque value and were retorqued to the correct value. As a result of the EI inspection, the operator subsequently issued a revised EI (EI-767-032-0102 Rev 1) requiring that the inspection be conducted on a regular basis; every 3 months.

As a result of reports of loose or fractured MLG shock strut door attach bolts, the aircraft manufacturer developed an engineering change to prevent the MLG shock strut door attach bolts from loosening and indicated that a Service Bulletin to incorporate those changes would be released in the second quarter of 2002.

As there have been two similar events on Australian registered aircraft, The Australian Transport Safety Bureau will continue to monitor actions relating to B767 MLG shock strut door separation occurrences pending the release of the Service Bulletin.



Recently completed investigations

As reports into aviation safety occurrences are finalised they are made publicly available through the ATSB website.

Published March–April 2002

Occ. no.	Occ. date	Released	Location	Aircraft	IssueApr
200101903	29-Apr-01	22-Apr-02	4 km NW Nagambie Vic.	Cessna 208	Parachuting accident
199905562	24-Nov-99	18-Apr-02	Sweers Is. Gulf of Carpentaria QLD	Cessna U206A	Loss of control in reduced visibility
200103079	13-Jul-01	17-Apr-02	46 km SE TASHA–IFR QLD	Boeing747-400/Boeing737-476	Infringement of separation standards
200104881	09-Oct-01	15-Apr-02	106 km NNW Maleny VOR QLD	DHC-8-102/DHC-8-102	Short term conflict alert
200103344	18-Jul-01	15-Apr-02	28 km E Canberra VOR ACT	Boeing 767-336/Boeing 737-800	Infringement of separation standards
200001434	25-Apr-00	10-Apr-02	13 km S Brooklyn Bridge VTC NSW	Piper PA-34-220T	Engine failure due to fuel exhaustion
200105429	13-Nov-01	25-Mar-02	Abeam Moomba SA	Boeing 747SP-38	Uncommanded yaw
200102455	05-Jun-01	20-Mar-02	170 km E Darwin NDB NT	Beech 200	Faulty bleed air flow pack
200003951	30-Aug-00	20-Mar-02	167 km SE Dili Aero. Other	Embraer-Empresa EMB-120 ER	Increasing cabin altitude after levelling off
200003725	30-Aug-00	20-Mar-02	83 km SE Dili Aero. Other	Embraer-Empresa EMB-120 ER	Increasing cabin altitude after levelling off
200102538	10-Jun-01	14-Mar-02	Jabiru (ALA) NT	Cessna T207A	Aileron control rod-end failure
200003771	04-Sep-00	07-Mar-02	65 km ESE Burketown (ALA) QLD	Beech 200	Hypobaric Hypoxia – A probable factor
200105518	20-Nov-01	05-Mar-02	2 km ESE Howard Springs NT	Boeing 767-338ER	Main landing gear door separation
200105660	29-Nov-01	05-Mar-02	130 km E Osborne Mine (ALA) QLD	Fairchild SA227-AC	Loss oil line-engine failure
200100252	18-Jan-01	05-Mar-02	3 km N Bencubbin WA	Bell 206B(III)	Collision with powerlines/ground

Safety briefs

Increasing cabin altitude after levelling-off

Occurrence: 200003951

The Embraer Brasilia aircraft was operating a Regular Public Transport flight from Dili, East Timor to Darwin NT. The crew elected to level off and cruise at amended Flight Level (FL) 210.

Shortly after levelling off, and when the aircraft was approximately 90 NM SW of Dili, the flight crew noticed the cabin altitude was rising at an increasing rate, with the rate of increase quickly exceeding the instrument's full-scale deflection of 2,000 ft/minute.

The crew immediately commenced a high-speed descent and, because they were reacting to the increasing cabin altitude ahead of the aircraft's warning systems, they elected not to don their supplemental oxygen masks.

As the cabin altitude exceeded 10,000 ft, the crew recalled that the aircraft master caution warning activated and was associated with the cabin altitude warning chimes. At that stage, the aircraft was reported to be passing FL140 and was continuing to descend at about 3,000 ft/min.

The crew continued the descent and appeared to regain some control of the cabin altitude by using the cabin pressurisation controller in the "manual" mode and maintaining a cabin altitude of about 8,000 ft.

At FL112, which was the lowest safe altitude for this route segment, they levelled out and continued to their planned destination. After levelling out, the flight attendant called the flight crew on the cabin interphone and advised that during the descent the supplemental oxygen masks in the main cabin had automatically deployed.

No injuries were reported as a result of the incident.

Hypobaric Hypoxia – A probable factor

Occurrence: 200003771

On 4 September 2000, a Beech Super King Air 200 aircraft, VH-SKC, departed Perth, Western Australia at 1009 UTC on a charter flight to Leonora with one pilot and seven passengers on board.

For the first 12 minutes of the flight, the operation of the aircraft and the communications with the pilot appeared normal. However, shortly after the aircraft had climbed through its assigned altitude, the pilot's speech became significantly impaired and he appeared unable to respond to ATS instructions. Several open microphone transmissions over the next 10-minute period revealed the progressive deterioration of the pilot towards unconsciousness and the absence of any sounds of passenger activity in the aircraft. Five hours after taking off from Perth, the aircraft collided with the ground near Burketown, Queensland, and was destroyed. There were no survivors.

The investigation concluded that the incapacitation of the pilot and passengers was probably a result of hypobaric hypoxia due to the aircraft being fully or partially unpressurised and their not receiving supplemental oxygen. Due to the extensive damage to the aircraft the investigation could not determine the reason for the aircraft being unpressurised, or why the pilot and passengers did not receive supplemental oxygen.

Faulty bleed air flow pack

Occurrence: 20012455

The Beech Super King Air 200 aircraft was on an aeromedical flight from Darwin to Gove. The flight had been planned to maintain a cruise level of FL150. The crew for the flight consisted of the pilot and a flight nurse. An off-duty company pilot was also on board for the flight back to Gove and occupied the co-pilot's seat.

During the climb, at FL130, the pilot contacted Air Traffic Control (ATC) and amended the planned cruise level to FL270. As the aircraft passed through FL254 he noticed that the left and right "Master Warning" captions, positioned on the instrument coaming, began to flash. The cabin "ALT WARN" annunciator had illuminated, indicating a rising cabin altitude of above 12,500 ft. The cabin ceiling mounted passenger oxygen masks also automatically deployed.

The pilot then contacted ATC and gained clearance for an immediate descent to FL210. The pilot, passenger and the flight nurse immediately donned oxygen masks, with the pilot carrying out the applicable "Phase One" actions for a loss of cabin pressurisation.

A maintenance inspection carried out by the aircraft's operator found that the left bleed air flow pack and associated pneumostat unit were faulty, and that the main cabin door seal was damaged. Those components were replaced. There were also several minor pressurisation leaks that were repaired.

The pilot indicated that he had descended through the assigned altitude due to being preoccupied with the pressurisation and associated "Phase One" checklist actions.

Aileron control rod-end failure

Occurrence: 20102538

A Cessna T207A aircraft, with seven persons on board, was departing Jabiru for a local scenic flight. The operator reported that the control rod end for the right aileron disconnected and the aileron deflected upwards shortly after the aircraft had rotated for takeoff. The takeoff was continued as there was insufficient runway remaining to stop the aircraft. A significant amount of left aileron input was then required to counteract the tendency for the aircraft to roll right. The pilot was able to conduct a normal left circuit and landed the aircraft safely at the departure runway.

The investigation found that the swivel joint for the rod end, which attached to the outboard end of the right aileron control rod, had fractured and separated at the base of the threaded section. The rod-end fitting consisted of a rounded but flat-sided cast-alloy housing with a threaded tail section, which was attached to the interconnecting drive rod from the wing. The housing contained a spherical bearing with a bolt through the centre (at ninety degrees to the threaded tail) which connected the drive rod to the aileron control surface.

Metallurgical examination confirmed that the rod-end bearing had seized in the housing due to surface corrosion on the sliding surfaces. That action had exposed the threaded shank section of the fitting to elevated bending loads, rather than the push-pull loads for which it was designed. Cracking then initiated and propagated, through about 50% of the rod-end cross section, under normal operating conditions over an extended period before finally separating.

Examination of the maintenance documentation for the aircraft showed that the failed rod was fitted to the aircraft as a new item on 14 Oct 1999. The rod end failed in service on 13 June 2001. At that time it had completed a total of 754.3 hours time-in-service. The rod ends did not have a time-in-service life and were listed by the manufacturer as an “on condition” item.

Local safety action: The operator reported, to ensure integrity, they had conducted an inspection of all flight control rod ends for the company fleet of aircraft.

Collision with powerlines/ground

Occurrence: 200100252

The pilot of the Bell 206 helicopter had been tasked to conduct a powerline inspection for the local electricity power company, with two power company employees on board as observer and inspector. After inspecting an anomaly on a structure the pilot transitioned the helicopter from the hover to forward flight. The pilot and front seat observer received fatal injuries and the rear seat inspector received serious injuries in the crash that followed.

When the pilot commenced casual flying for the operator, he successfully completed a check flight on the Bell 206 helicopter type with the operator's Chief Pilot. The flight did not include any specific training and checking regarding powerline survey or inspection operations.

Neither power company employee had undergone any formal training from their employer or the operator to enable them to carry out their roles in helicopter powerline inspections as active crew members, despite there being a requirement to do so in the operator's operations manual.

The investigation found that the only published guidance and operating standard in Australia for helicopter powerline work, was the Electricity Supply Association of Australia Ltd (ESAA) document “Guidelines for use of helicopters for live line work”, August 1995. Neither the power company sub-division or the helicopter operator involved with the accident was aware of this document. Consequently their procedures were inadequate for the task.

The regulatory authority did not mandate competency standards for low-level powerline survey operations for helicopter.

Situational awareness

Occurrence 200101996

A Boeing 747-400 (B747) was en route from Sydney to Hong Kong at flight level (FL) 350 via air route R340. The aircraft passed GUTEV, on the Brisbane/Ujung Pandang FIR boundary, at 0625 Universal Coordinated Time and estimated Ambon at 0703. Shortly after, the B747 crew overheard the crew of a Boeing 767-300 (B767) report at BUTPA, also on the FIR boundary but on air route A461. The B767 crew reported that they were at FL350 and estimated Ambon at 0703.

The B747 crew were aware that the air routes converged and became concerned that separation may not be maintained. They requested a change of level to FL390. The Ujung Pandang air traffic controller approved the change of level when the B747 was about 200 NM from Ambon. The crew later reported the occurrence and an investigation by Airservices Australia (Airservices) found that the lateral separation point for aircraft on the air routes was approximately 269 NM south-east of Ambon. There had been an infringement of separation standards.

The minimum longitudinal separation standard between aircraft operating on these converging route segments was 10 minutes, subject to the application of Mach Number Technique.

Brisbane Centre TOPS Local Instructions, stated that the Carpentaria controller was responsible for the separation of converging and diverging traffic on the routes. The instructions also stated that the Territory controller shall not amend or issue a clearance, for northbound aircraft tracking via A461 to BUTPA, without prior coordination with the Carpentaria controller.

The Territory and Carpentaria sectors abutted and at the time of the occurrence were combined and being managed by a single controller. Airservices found that a change of controllers had taken place at approximately 0608 and that both controllers had not noticed the pending conflict.

The B747 crew's level of situational awareness prevented a more significant occurrence.

Pilot incapacitation

Extract from a presentation by Terry KIng and Sarah Reda

Human factors elements combine as flight and cabin crewmembers balance workload, standard and emergency operational requirements and CRM skills for a successful outcome when a pilot falls ill in-flight.

THE 737 aircraft had left London the night before for a European destination. The crew had night stopped together, and this was the return leg to London.

There were two flight crewmembers and five cabin crew. It was a full flight, at night.

The captain asked for the descent checklist, but the first officer did not respond. The captain thought the first officer was looking out the window for other aircraft. Suddenly, without any warning, the first officer lost consciousness; her leg extended and kicked the rudder, causing the aircraft to yaw and roll.

The captain grabbed the controls in an effort to stop the aircraft from rolling suddenly, and shouted "I have control". His whole focus and physical effort was directed towards maintaining the aircraft in a safe flying attitude. The autopilot had been disconnected, which helped him to quickly use manual control to compensate for the roll caused by the rudder activity.

Alerting the crew

The captain was unable to make the required emergency 'Alert' call to the cabin crew because the microphone position, aft of the centre console, was too far away for him to reach whilst still trying to fly the aircraft. The normal 'Cabin Call' switch, which was the nearest single switch, was used instead to call for assistance.

The captain was aware that the senior cabin crewmember (SCCM) was close by, as she had been in the flight deck several times, and expected a reasonably timed response to the call.

When the SCCM arrived in the flight deck her mental model was at odds with the situation as she fully expected that the cabin call was for tea, coffee or the defects log. As she entered the flight deck, the Captain shouted "Get her out" The SCCM thought, "Who? Was there somebody else in the flight deck?" Very quickly it became apparent the captain was referring to the first officer.

The SCCM pulled the first officer off the controls by moving the seat aft and then shouted to the crewmember in the forward galley for help. She was faced with 'Pilot Incapacitation', the drill for which required two cabin crew to answer the alert call from the flight deck - but there had been no 'Alert' call.

Difficulties

As the SCCM tried to deal with the ill first officer, the captain, still busy flying the aircraft, tried to explain to the SCCM what he had observed of the first officer's condition.

There was very little room to manoeuvre the first officer. Because it was a night flight the flight deck was very dark. The captain was considerably distracted by his concern for the first officer and both the SCMM and the captain were reaching their 'capacity bucket'.

> "The captain grabbed the controls in an effort to stop the aircraft from rolling suddenly, and shouted "I have control""

At this stage, only the captain, SCCM and another forward cabin crewmember were aware of the situation. The aft cabin crewmembers had suspected turbulence when they felt the jolt caused by the rudder activity and had secured the galleys and cabin.

The SCCM could not comply with the 'Incapacitation Drill' requirement to use the crew oxygen mask as she was unable to see, or reach, the mask. She moved the first officer's seat aft, and requested a portable oxygen bottle. She was unable to put the first officer's head back due to lack of space and also found it difficult to put the mask on her face as her head was continually moving. At the same time, she was trying to hold the awkward portable oxygen bottle.

Thought process

The descent was well under way and the involved cabin crew were aware that the increased workload for flight crew at this stage of flight made it more important for the first officer to be moved immediately. The cabin crew suggested to the captain that they move the first officer, who was fairly small and light in weight, to the galley. They were concerned that if a doctor came into the flight deck they may not be able to handle the dark, enclosed environment. Also, the first officer's condition may have worsened and she may again have interfered with the controls.

Crew's decision

The cabin crew lifted the first officer out of her seat and moved her to the galley. They had already closed the galley curtain as they believed that it was important to obstruct passenger vision and remove any concerns regarding the safety of the flight. They were also concerned that dealing with passenger queries then would have increased their workload.

At this stage, the Captain, SCCM and two cabin crew were the only people on board who were aware of the situation. The two aft-stationed crewmembers were unaware of the situation at the front cabin. In order to attract their attention the SCCM motioned to them with hand movements.

The cabin crew placed the first officer in the forward galley by Door 1 Right, out of sight of the passengers, although they were concerned that the exit might be blocked if there was an emergency evacuation. This was the balance of the risks at the time.

Captain's concerns and decisions

The captain's concerns were for the overall safety of the aircraft and also for his unwell colleague. His priority was to get on the ground as soon as possible whilst maintaining SOPs. He now had a conflict of interest as he had to battle between getting on the ground quickly and maintaining SOPs while balancing emotional, human factors considerations. He decided to declare an emergency–'Mayday.' Although he was nearer to Heathrow he decided to proceed to Gatwick as this was his home base, familiar territory he hoped would help in reducing his single-pilot workload that was also being increased by a number of frequency changes as he approached to land.

Appreciation of workloads

The SCCM continued to monitor the flight deck and cabin, checked the captain's welfare and workload and also offered to assist with the checklist. The captain declined her offer as he felt the checklist was simple and trying to explain it to a cabin crewmember, unfamiliar with the flight deck procedures, would have increased his workload without any real gain.

As soon as the first officer was cleared of the controls the captain had re-engaged the autopilot. Unfortunately, auto land was not available, so a manual landing was performed. Once again, this added to the workload of the remaining pilot.

The landing was uneventful. After landing, the aircraft was met by the emergency services as it cleared the runway and stopped on the taxiway.

Training perspective

In understanding each others roles, the team drew on their experience and training and established behaviour from the previous sector.

There was a need for some of the team to work 'outside the box', while others continued to work within standard operating procedures. The SCCM, for instance, had a change of roles, becoming the aircraft manager and monitoring the resources of the whole crew, including the one and only pilot. She was the only crewmember left keeping their head above water-the captain was flying the aircraft, the other crew were looking after the passengers and preparing the cabin for landing.

Communications

Communications were varied to meet the changing situation. This included the decision not to communicate the situation to the passengers. Changes in what was expected affected the crew's mental modes, with some time lost in involving everybody at an early stage.

Decision making

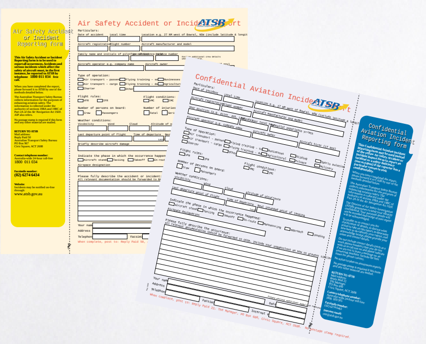
Procedures were adapted to meet the situation. Flight deck and cabin crew combined training, knowledge, technical and practical experience in using existing procedures as the skeleton for decision making, and joint team activity. Emotions affected behaviour and decision making.

The combination of the two worlds of Standard Operating Procedures and Crew Resource Management saw the successful outcome to the emergency situation.

(Extracts from a presentation by Terry King, Manager, Safety and Emergency Procedures Training, British Airways, and Sarah Reda, Safety and Emergency Procedures Trainer, British Airways at the Southern California Safety Institute 19th Annual International Aircraft Cabin Safety Symposium. Los Angeles, USA, 4-7 March 2002).

Confidential Aviation Incident Reporting

Under Australian legislation, all aviation accidents and incidents must be reported. The yellow coloured Air Safety Accident and Incident Report is normally used to make reports to the Australian Transport Safety Bureau. The blue coloured Confidential Aviation Incident Report (CAIR) may be used where the reporter requires that their confidentiality be protected.



The continuing success of the CAIR program depends on three essentials. I call these essentials "the three pillars of CAIR". They are:

- The maintenance of the confidentiality of the reporter,
- The willingness of industry to use the system, and
- The provision of feedback to the reporter and industry.

The Director of Safety Investigation guarantees the reporter's confidentiality. Feedback is provided to the reporter with a telephone call or letter acknowledging receipt of the report, and then through the report's publication in this column, or directly to the reporter on request. While I have a degree of control over the first and last of the three pillars, the willingness of industry to use the program can be lost in a moment.

The CAIR program needs the support of all facets of industry: flight crew, operators, engineers, regulators and managers. Everyone committed to aviation safety should promote and support the reporting of incidents through both the open and confidential incident reporting systems.

The Confidential Aviation Incident Reporting (CAIR) system helps to identify and rectify aviation safety deficiencies. It also performs a safety education function so that people can learn from the experiences of others. The reporter's identity always remains confidential. To make a report, or discuss an issue you think is relevant, please call me on 1800 020 505 or complete a CAIR form, which is also available from the Internet at www.atsb.gov.au

Chris Sullivan
Manager CAIR

FOD hazard on runway

(CAIR 200105453)

A colleague of mine was working on the runway at [location] *on the evening of* [date]. *The colleague was operating a drag broom. This drag broom is a broom with steel metal brushes that are rotated. This rotation removes rubber particles from the touchdown zone of the runway.*

During the process, the steel bristles on the broom were coming loose and lodging on the runway and in the pavement. As my colleague had had training in FOD hazards, this was reported to the team leader on a number of occasions. The matter was ignored. No effort was made to collect the steel on the runway. Some of the steel bristle remained stuck in the pavement after the pavement was washed at the end of the shift. The comment was made it would be too expensive to remove and the contractor would charge a variation for it. My colleague's concern is that this steel FOD may cause another Concorde accident. Metal on runways and aircraft tyres does not mix.

A way to prevent a similar occurrence is not to use a metal broom. However, according to the airport engineer the process may not work without metal brushes. My colleague has seen other processes that do not involve a metal brush. Maybe this should be considered.

Response from Airport Operator: The matter raised by the reporter has been thoroughly investigated.

Over a period of 8 nights, runway [##] was undergoing a de-rubberising process in the touchdown zone portion of the runway. At the completion of each night, airport operations officers inspect the runway for serviceability prior to handing the runway back to ATC for full operations.

At the completion of night 7 of the works, airport operations officers discovered approximately 30 pieces of wire embedded in the bitumen. The wire was identified as coming from the brushes of a de-rubberising vehicle. The brush core heads were immediately inspected and tested for security.

The de-rubberisation vehicle had recently been acquired from the United States and a detailed inspection discovered that it was not fitted with a magnetic arm on the drag broom. The purpose of which is to catch any metallic objects during the cleaning process. The owner/operator of the vehicle was unaware the arm was missing and as airport maintenance staff were unfamiliar with the new vehicle, were equally unaware it was not "fit for purpose". It should be noted that inspection after the last night of work found no loose bristle evident on the pavement. Subsequent to this report, local procedures have now been issued, that all vehicles must be inspected and "signed-off" as fit for purpose prior to any works.

With regard to the last point made by the reporter. [Airport operator] engineers have been researching and working with numerous international specialists including NASA, on techniques for de-rubberisation. To that end, [airport operator] now leads many in the field of runway de-rubberisation with CASA now reviewing our work, with the view of setting national standards based on our findings and techniques.

Aerodrome symbols (CAIR 200105695)

There is a concern that some gliding clubs have developed the practice of leaving the "double cross" symbol permanently at airfields from which they operate. The [location A] *Gliding Club operates from* [location B] *about one*

Australian Transport Safety Bureau

weekend in four and they insist that it is correct to leave the double cross out permanently.

The fear is that people who often use the airfield will ignore the signal and possibly end up being involved in an incident. It is understood that the club has the same practice at [location A] *airfield.*

CAIR note: Aeronautical publications, AIP Australia (ENR 5.5) and Rules and Practices for Aerodromes (Chap 11), both have references to gliding operations and ground signals. The double white cross indicates that gliding operations are in progress. While it may be considered reasonable to place a permanent signal at an aerodrome where gliding operations are being conducted on a daily basis, signals should normally be removed at the completion of the gliding operations. The de-identified content of the CAIR was forwarded for information to the Gliding Federation of Australia and to the club concerned.

Aircraft parking (CAIR 200105902)

This report concerns the parking of RPT operators' aircraft at [location] *Airport. The report concerns manoeuvring and parking in the terminal area. There is currently no provision and regulation of parking for all aircraft in this area. As a result RPT operations are often placed in an unsatisfactory situation where there are either no turnaround parking spaces available, or involve considerable escorting* [of passengers] *to/from a distant apron location. Could the "SMC/Tower" be involved in giving parking guidance?*

Response from Airservices Australia: Airservices is not able to assist in this issue, as it is not within our area of responsibility. The issue should be directed to the Airport owner.

Response from Airport Operator: Our company has held discussions with the RPT users of [location] Airport. As a result of this CAIR report and our meetings with these RPT operators, we have elected to designate a painted and marked "RPT AIRCRAFT ONLY" parking bay adjacent to the passenger terminal. This area will be reserved exclusively for RPT operators and will be operational by [date].

We also investigated your advice that the Tower be involved in providing "parking guidance" to aircraft operators to ensure that the area is not taken up by short term parking by itinerant airport users. Unfortunately, due to operational issues, Airservices Australia advised that they would not be able to assist us in this matter.

Nevertheless, our company appreciates your advice and believes that the actions to be taken by our company will alleviate this matter and provide benefits to the airport, RPT operators, the public and the Australian Transport Safety Bureau.

Separation scare (CAIR 200200010)

We were [location A] *for* [location B] *at FL240, around 20 NM north of* [reporting point], *I was chatting to the captain when I looked up and out the corner of my eye saw what looked to be another aircraft coming straight toward us. As we do not have TCAS, I was unaware of the other aircraft until it was a few seconds from what looked like a collision course (opposite direction, same track, and same level.) Before I had a chance to tell the captain and take evasive action it became clear to me the aircraft was actually at FL250.*

A few seconds later the aircraft [airline/aircraft type] *passed directly overhead us at FL250.*

It would be nice if ATC could advise us of opposite direction traffic if they are on the same route with only 1,000 ft separation. This would avoid us having panics when we don't need to.

Unpressurised RPT flight

(CAIR 200105699)

On [date, aircraft registration and type] *departed* [location A] *for* [location B] *on a RPT flight. The pilot in command requested FL115 from air traffic control and was cleared at that level. The aircraft was unpressurised and the pilot in command was the chief pilot of* [operator] *based at* [location A].

Response from CASA: CASA has investigated the issue raised in this report. The investigation has revealed that the pilot in command decided to ascend to Flight Level 115 for a period of approximately six minutes to avoid the turbulent conditions being experienced at 10,000 feet.

The pilot in command has advised CASA that he made this decision for the comfort and safety of his passengers.

The operator has acknowledged that this incident occurred and the pilot has been debriefed by the responsible CASA Flying Operations Team Leader.

Unsafe use of seatbelt by pilot

(CAIR 200102170)

I recently experienced an example of poor airmanship displayed by a charter pilot with [operator]. *I was seated in the second row of seats of the C206 sitting directly behind the front seat passenger. While preparing for takeoff for a joyflight over Fraser Island from a beach strip I attempted to assist the front seat passenger secure his seat belt by passing forward to him the sash part of the seat belt to affix the lap buckle. The pilot stopped me from assisting the passenger stating that it was not necessary to use the sash part of the belt. I challenged him about this, particularly my concern that he could be incapacitated should his head hit the instrument panel during turbulence or a ground roll incident. He dismissed my concerns, stopped the passenger using the sash belt, and then proceeded to make the beach takeoff with his sash belt and that of the passenger dangling unsecured.*

CAIR note: As an investigator, I have spoken to pilots who have walked away without a scratch from accidents where they were properly restrained. I have also seen the biological matter from those who were improperly restrained and involved in accidents. Seatbelts and harnesses are installed for a reason. Their use is also mandated through legislation. CAO 20.16.3 para 4.1 states: "Except as provided in subsections 14 and 16 safety harnesses, or seat belts where safety harnesses are not fitted, shall be worn by all persons at the times listed in paragraph 3.1. Seat belts and harnesses shall be adjusted to fit the wearer without slack". During take-off and landing is one of the times listed at paragraph 3.1.

Delayed report of heavy landing

(CAIR 200000035)

A heavy landing in [location] *was not reported until the aircraft returned to* [maintenance base location]. *The flight data recorder showed a vertical speed of 896 ft/min on touchdown (1.75G). As a result of the FDR reading, the aircraft was withdrawn from operations and an abnormal conditions inspection schedule was raised. Why are these defects always carried back to* [maintenance base location] *and not reported until the crew completes their duty period?*

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