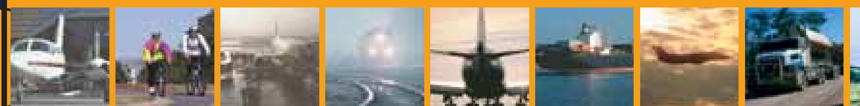
Australian Government

Australian Transport Safety Bureau

The Australian



Executive Director's Message

The primary article in this issue's ATSB supplement concerns the accident involving AdamAir Flight DHI 574 on 1 January 2007, in which all 102 lives on board were lost when the 737-400 crashed into the sea in the Makassar Strait at almost the speed of sound.

The Indonesian National Transportation Safety Committee (NTSC) released its final report into the accident last month – the result of an investigation that posed many challenges, including the retrieval of flight recorders from an ocean depth of 2,000 meters.

I have previously noted in the context of the Garuda accident that the ATSB maintains a very good working relationship with the NTSC and has also assisted them with training and other CVR/FDR downloads and analysis. At the request of the NTSC, the ATSB appointed an accredited representative to participate in the investigation, and work with NTSC in accordance with Annex 13 to the Chicago Convention. The US NTSB and Boeing also provided valuable assistance.

I congratulate the Chairman of the NTSC on the release of this report. It makes tragic reading on several fronts including from the pilot, maintenance, company, and regulatory perspectives.

However, I am particularly encouraged by the strong positive safety actions that have been taken as a result of the investigation, including efforts towards improved regulatory oversight, pilot training and aircraft maintenance.

This is not the first accident where pilots have lost an aircraft while trouble-shooting a relatively minor problem and it is a sad reminder indeed.

I encourage you to read the NTSC report – it is available on the ATSB website.

Kym Bills, Executive Director

Analysis, causality and proof in safety investigations

The ultimate purpose of a safety investigation is to enhance safety; it is not the purpose to apportion blame or liability. An investigation into an occurrence (accident or incident) can enhance safety by identifying safety issues and communicating those issues to relevant organisations. It can also enhance safety by providing information to the transport industry about the circumstances of the occurrence and the factors involved in the development of the occurrence.

The quality of a safety investigation's analysis activities plays a critical role in determining whether the investigation is successful in enhancing safety. However, investigations require analysis of complex sets of data and situations where the available data can be vague, incomplete and misleading. Despite its importance, complexity, and reliance on investigators' judgements, analysis has been a neglected area in terms of standards, guidance and training of investigators in most organisations that conduct safety investigations.

To address this situation, the Australian Transport Safety Bureau (ATSB) developed a comprehensive investigation analysis framework, which consists of standardised terminology and definitions; an accident development model; a defined process or workflow for conducting analysis activities; a set of tools to guide and document analysis activities; and policies, guidelines and training for investigators.

In March 2008, the ATSB released a Discussion Paper, which presented some of the key aspects of the ATSB investigation analysis framework and concepts. The paper also outlined some of the concerns that have been expressed with the ATSB framework and similar approaches, and the ATSB's consideration of these concerns.

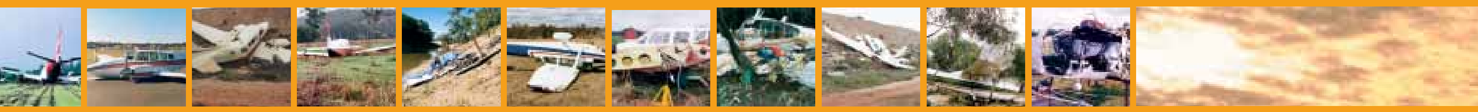
The ATSB investigation analysis framework is just a starting point. The intention is that, as investigators and external parties become more familiar with the framework, they will actively contribute to its ongoing improvement. In other words, the framework is a platform for documenting the ATSB's organisational learning about analysis methods.

It is also hoped and expected that ongoing development and provision of information about the ATSB framework can help the safety investigation field as a whole consider some important issues and help develop the best means of conducting safety investigations to enhance safety. Accordingly, any feedback or comment that any individual or organisation has regarding the ATSB analysis framework, ways to enhance that framework and for the ATSB to better communicate its findings, or any other matters discussed in this paper, would be gratefully received. ■

ATSB Human Factors course

The ATSB is a leader in the application of human factors to transport safety, and has developed a highly regarded Human Factors for Transport Safety Investigators course. A limited number of places are available to industry participants.

Aviation professionals who may benefit from the course include managers, supervisors, or operational personnel with a safety-related role, go to www.atsb.gov.au and click on 'Human Factors Course' in the 'Shortcuts' panel.



Indonesian NTSC releases Adam Air final report

On 1 January 2007, a Boeing 737, registered PK-KKW, operated by Adam SkyConnection Airlines (AdamAir) departed from Djuanda Airport, Surabaya at 05:59 UTC under the instrument flight rules (IFR), traveling to Sam Ratulangi Airport, Manado. There were 102 people on board; two pilots, 4 cabin crew, and 96 passengers comprised of 85 adults, 7 children and 4 infants. The aircraft disappeared from radar while cruising at 35,000 feet.

Following an extensive land, air, and sea search, wreckage was found in the water and on the shore along the coast near Pare-Pare, Sulawesi 9 days after the aircraft disappeared. Locator beacon signals from the flight recorders were heard and their positions logged. The Digital Flight Data Recorder (DFDR) and Cockpit Voice Recorder (CVR) were eventually recovered. The CVR revealed that both pilots were concerned about navigation problems and subsequently became engrossed with trouble shooting Inertial Reference System (IRS) anomalies for at least the last 13 minutes of the flight, with minimal regard to other flight requirements. This included identification and attempts at corrective actions.

The DFDR analysis showed that the aircraft was in cruise at FL 350 with the autopilot engaged. The autopilot was holding 5 degrees left aileron wheel in order to maintain wings-level. Following the crew's selection of the number-2 (right) IRS Mode Selector Unit to ATT (Attitude) mode, the autopilot disengaged. The control wheel (aileron) then centered and the aircraft began a slow roll to the right. The aural alert, BANK ANGLE, sounded as the aircraft passed 35 degrees right bank.

The DFDR data showed that even after the aircraft had reached a bank angle of 100 degrees, with the pitch attitude approaching 60 degrees aircraft nose down, the pilot did not roll the aircraft wings level before attempting pitch recovery in accordance with standard procedures.

The aircraft reached 3.5g, as the speed reached Mach 0.926 during sustained nose-up elevator control input while still in a right bank. The recorded airspeed exceeded Vdive (400 kcas), and reached a maximum of approximately 490 kcas just prior to the end of recording.

Flight recorder data indicated that a significant structural failure occurred when the aircraft was at a speed of Mach 0.926 and the flight load suddenly and rapidly reversed from 3.5g to negative 2.8 g. This g force and airspeed are beyond the design limitations of the aircraft. The aircraft was in a critically uncontrollable state at that time.

There was no evidence that the pilots were appropriately controlling the aircraft, even after the BANK ANGLE alert sounded as the aircraft's roll exceeded 35 degrees right bank.

This accident resulted from a combination of factors including the failure of the pilots to adequately monitor the flight instruments, particularly during the final 2 minutes of the flight. Preoccupation with a malfunction of the Inertial Reference System (IRS) diverted both pilots' attention from the flight instruments and allowed the increasing descent and bank angle to go unnoticed. The pilots did not detect and appropriately arrest the descent soon enough to prevent loss of control.

Technical log (pilot reports) and maintenance records showed that between October and December 2006, there were 154 recurring defects, directly and indirectly related to the aircraft's Inertial Reference System (IRS), mostly the left (number-1) system.

There was no evidence that AdamAir included component reliability in their Reliability Control Program (RCP) to ensure the effectiveness of the airworthiness of the aircraft components for the fleet at the time of the accident. AdamAir also did not provide their pilots with aircraft upset recovery training or proficiency checks.

During the investigation the NTSC issued a number of recommendations to the Directorate General Civil Aviation (DGCA) and AdamAir relating to IRS maintenance and training of flight crews in IRS and aircraft upset recovery. ■

Australian Transport Safety Bureau

Investigation briefs

Powerplant/Propulsion event

Occurrence 200605561

On 20 September 2006, the crew of a SAAB Aircraft AB SF340B aircraft, registered VH-RXE, were on a scheduled flight from Sydney, NSW to Merimbula, NSW. The crew reported that, shortly after takeoff, at about 1444 EST, they observed a zero reading on the left torque gauge and a 2 to 3 second, simultaneous illumination of the left ignition light. All other engine indications were normal and the crew climbed the aircraft to 8,000 ft and assessed the situation. They elected to return for a landing and advised air traffic control.

At approximately 1,000 ft on final approach, the crew reported that the left propeller began to 'autocoarsen'. During the approach, the crew made a PAN broadcast and advised that the left engine had been shut down. After landing the crew reported that they experienced airframe vibration and suspected a tyre had blown on landing. An inspection by emergency services personnel did not find any damage to the tyres and the crew taxied the aircraft to the terminal apron.

An examination of the aircraft systems could not find any reason for the zero reading on the left torque gauge, but the left digital engine control unit was replaced. A review of the crew's actions after they observed the loss of torque indication on the left torque gauge, found that they had selected the 'autocoarsen' switch to ON, prior to landing. That was contrary to directions in the flight crew operations manual that required the switch to be selected OFF when torque gauge indications read zero or were erratic. Consequently, the left propeller blades were automatically coarsened, effectively feathering the left propeller and resulted in an asymmetric landing.

The operator issued a notice to its aircrew reminding them of the requirement in the flight crew operations manual to not select 'autocoarsen' in these circumstances. ■

Rejected takeoff

Occurrence 200601453

At 1350 EST on 19 March 2006, an Airbus A330-303 aircraft, registered VH-QPB, commenced takeoff on runway 19 at Brisbane Airport, Qld, on a scheduled passenger service to Singapore. The pilot in command (PIC) was the pilot not flying (PNF) and the copilot was the pilot flying (PF) for the sector. Visual meteorological conditions prevailed at Brisbane.

During the take-off roll, the flight crew noticed a significant discrepancy between the PF and PNF's airspeed indications. In particular, the PNF's airspeed indication was 70 kts while the PF's airspeed indication was 110 kts. In response, the PIC assumed control of the aircraft and rejected the takeoff. During the rejected takeoff (RTO), the PIC was satisfied that sufficient runway length remained for the application of a more gradual braking rate. The PIC initially attempted to manually disconnect the autobrakes via brake pedal deflection but that attempt was not successful. The PIC then elected to press the autobrake 'Max-push button selector switch' (P/BSW) to disconnect the autobrakes. By that time, the aircraft's speed had reduced to approximately 20 kts. The time interval between the RTO and the deactivation of the autobrake was about 20 seconds.

Shortly after vacating the runway, the flight crew noted increased brake temperatures and selected the brake cooling fans ON. During the taxi, the brake temperatures continued to rise and became excessive. The fusible plugs on six of the eight main landing gear wheels melted and the respective tyres deflated. There were no injuries to the crew or passengers.

A post-flight engineering inspection of the aircraft found what appeared to be wasp-related debris in the PIC's pitot probe and the operator determined that the contamination was a probable contributory factor in the incident.

The operator and airport owner undertook a number of safety actions to minimise the risk of future wasp activity at Brisbane Airport. ■

Runway intersection collision

Occurrence 200700304

On the afternoon of 1 February 2007, a Piper PA-28R Cherokee Arrow, with the pilot, a flight instructor and a passenger was approaching to land on Runway 22 at Leongatha Aerodrome, Vic. At the same time the pilot of a Cessna 188B Agwagon was taking off on Runway 18 at Leongatha.

Both aircraft were operating under the visual flight rules (VFR). When the Arrow was on base leg, the pilot of the Agwagon broadcast on the Leongatha common traffic advisory frequency (CTAF) that he intended to conduct aerial spraying operations on a property 2 NM to the north of the aerodrome and that he would depart from Runway 18. The instructor and the pilot of the Arrow heard that transmission but did not visually check the position of the Agwagon on the ground. After turning onto final, the pilot of the Arrow broadcast his intention to make a full stop landing on Runway 22, but that transmission was not heard by the pilot of the Agwagon. The pilot of the Agwagon reported that he visually checked the approach to Runway 22 before commencing his takeoff, but did not see the Arrow.

When the Arrow was on the landing roll on Runway 22 and the Agwagon had just become airborne on Runway 18, the two aircraft collided at the intersection of the runways. Both aircraft were substantially damaged but none of the occupants were injured.

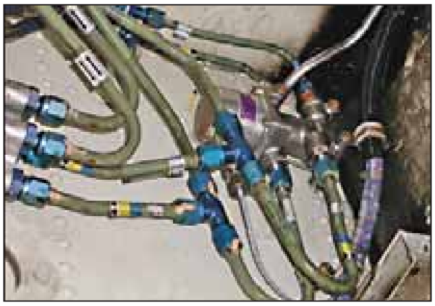
The investigation found that the lookout by the pilots of both aircraft was not adequate to ensure that there was no conflicting traffic for their respective operations. Neither aircraft displayed landing lights that may have improved the chance of the pilots seeing each other. Sun glare may have increased the difficulty for the pilots of the Arrow seeing the Agwagon. ■

Hydraulic system event

Occurrence 200606223

On 4 October 2006, at approximately 1045 EST, while on a scheduled flight from Canberra, ACT to Sydney, NSW, a Bombardier de Havilland DHC-8-315 (Dash 8) aircraft, registered VH-TQY, experienced a hydraulic system failure while on approach to land at Sydney Airport.

The flight crew became aware of the system failure when they selected the landing gear to extend during the approach sequence. Shortly after, the low oil pressure caution light for the number-two hydraulic engine pump illuminated. The crew established that the nose and right main landing gear doors had remained open and the left gear door had closed after all the gears had been extended.



The flight crew issued a radio alert to air traffic services and the aircraft commenced a missed approach. The crew then carried out the relevant quick-reference handbook (QRH) checks and landed at Sydney Airport on runway 16L without further incident. After touchdown, the aircraft was taxied to the arrivals bay using asymmetric engine power and braking. This was due to the nose wheel steering being inoperative from the hydraulic power loss.

The investigation determined that a solenoid-sequence valve failed, which resulted in the loss of pressure and quantity of hydraulic fluid from the aircraft's number-two hydraulic system. At the time of the failure the valve had accumulated 13,093.35 hours service and 16,458 flight cycles since new. Failure of the solenoid-sequence valve was due to the fracture of three of the four bolts that had clamped the two halves of the component together. Each of the fractured bolts had failed due to metal fatigue from exposure to in-service cyclic stresses that had developed during the operation of the aircraft's hydraulic system.

The defective unit was replaced and the aircraft was returned to service. ■

Landing gear collapse

Occurrence 200702171

On 9 April 2007, at 1703 WST, the main landing gear of a Beech Super King Air 200 (registered VH-SGT) collapsed on touchdown at Perth Airport. The aircraft was extensively damaged as a result of the collapse. No injuries were sustained by the pilot or passengers from the accident.

Approximately two hours earlier, shortly after takeoff from Perth, the aircraft had experienced a malfunction of the landing gear system. The main wheels and nose gear had become jammed and were unable to fully retract when selected up by the pilot. The pilot completed the emergency checklist actions contained in the Aircraft Flight Manual, but was unable to retract or extend the gear using either the automated control or the manual emergency system.

The Australian Transport Safety Bureau investigation revealed that two major system components had failed which could have prevented the landing gear from properly retracting/extending; the geared components within the right main landing gear actuator had fractured, and the left torque tube support bearing had seized from contamination and lack of lubrication. Although each component failure was apparently unrelated, the examination was not able to conclusively establish which failure had been the primary contributing factor in this landing occurrence. The Super King Air 200 aircraft landing gear system configuration was such that should either one of these component assemblies cease to function, extension or retraction of the landing gear would not have been possible.

As a result of this occurrence, the operator changed their system of maintenance to introduce an inspection interval and replacement schedule for all landing gear torque tube support bearings within their Super King Air 200 fleet.

The Civil Aviation Safety Authority released airworthiness bulletin 32-07 to all operators of Hawker Beechcraft 65, 70, Queen Air 90 and 200-series King Air aircraft that recommended changes to the maintenance schedule for landing gear components. ■

Depressurisation

Occurrence 200701935

At 1814 Central Standard Time on 2 April 2007, an Israel Aircraft Industries 1124, Westwind aircraft, registered VH-AJP, with a crew of two, departed Darwin Airport, NT on a scheduled cargo service to Alice Springs, NT. At 1844, during climb, at 34,000 ft, the crew heard a series of loud bangs followed by a loss in cabin pressure. The crew donned oxygen masks, closed the aircraft outflow valves and conducted an emergency descent to 10,000 ft. The aircraft was returned to Darwin.

An inspection of the aircraft revealed a hole in a top rear fuselage skin panel. The examination revealed that approximately 60% of the panel had been damaged by exfoliation corrosion. Close examination of the most severely effected regions revealed a substantial reduction in skin thickness.

The damage was most severe at the primary site of rupture, in the centre of the panel.

The panel was clad with a corrosion resistant pure aluminium alloy sheet; however, the aluminium cladding was removed on the chemical milled areas. Over time, the coating protecting the chemical milled areas had deteriorated, leading to the corrosion on the panel.

The panel was located in an area that was not considered susceptible to corrosion, so there were no detailed inspections required for the area.

As a result of this occurrence, the manufacturer has issued a notice to all 1124 Westwind aircraft operators informing them of the event and the corrosion that was found. The operator has carried out an inspection of the area on their entire fleet of 1124 Westwind aircraft. Where corrosion was present, the operator replaced the panel. The operator has also included an inspection of the area in their Corrosion Control Program. ■

REPCON briefs

Australia's voluntary confidential aviation reporting scheme

REPCON is a voluntary confidential reporting scheme for aviation. REPCON allows any person who has an aviation safety concern to report it to the ATSB confidentially while protecting the reporter's identity. This could include a self-report about something the reporter was directly involved in. REPCON would like to hear from you if you have experienced a 'close call' and think others may benefit from the lessons you have learnt. These reports can serve as a powerful reminder that, despite the best of intentions, well-trained and well-meaning people are still capable of making mistakes. The stories arising from these reports may serve to reinforce the message that we must remain vigilant to ensure the ongoing safety of ourselves and others. REPCON will also accept third-party reports where the reporter has a safety concern about, for example, training, cabin safety, flight operations, air traffic services, crew scheduling or maintenance practices.

Confidentiality – an ongoing challenge

Protection of the reporter's identity and any person referred to in a report is a key principle of a successful confidential reporting scheme. When forwarding a REPCON report to another party for comment or safety action, REPCON staff must remove any personal information contained in the report that might otherwise identify a person. Before forwarding the report, REPCON staff will consult with the reporter to determine whether they are satisfied that the essence of their safety concern has been properly expressed and that their identity cannot be determined. At times, this can result in the level of detail contained in the report being necessarily reduced. Consequently, REPCON staff occasionally receive responses from aircraft operator regulators and other parties indicating that, without additional detail, they are not able to verify the specifics of the safety concerns raised in the report. One such example has been included in this article (R200700111) where a claim was made that a component was repaired when it should have been overhauled.

Confidential Marine Reporting Scheme (CMRS)

The REPCON office conducts other tasks as well as managing the REPCON scheme. One of those tasks includes managing the marine confidential reporting scheme. The aim of the scheme is to improve safety in Australian waters by enabling the ATSB to receive, assess and act on confidential reports to prevent or reduce the risks of marine accidents. One such report has been included in this article (CMRS014). At times, the safety concerns described in CMRS reports are similar to those experienced in aviation and the learnings may be transferable across modes.

Use of non standard procedures

R200800012

Report narrative:

The reporter expressed concern that ATC management directed operational personnel to use a procedure different to the ATC approved airspace classification contingency plans to close the class C airspace at Canberra. This was to facilitate the work break of the approach controller who was the only person available and rostered on for the six hour duty period. This was also reported to have occurred in the Perth airspace recently.

REPCON comment:

REPCON contacted Airservices Australia and supplied them with the de-identified report.

An extract from the response received from Airservices has been included below. To assist with understanding the Airservices response, it must be noted that when Air Traffic Services are not available in a given airspace (contingency airspace), contingency plans are activated by Air Traffic Control and contingency procedures for Air Traffic Control and pilots to operate in this airspace are authorised and specified in the Aeronautical Information Publication.

> In the case of Canberra TCU [Terminal Control Unit], the risk manifested itself as a result of the short period of the outage and the importance to having all aircraft within the contingency area 'known' so that the on duty controller could safely and effectively resume services. Therefore a methodology of validity restricting access to the contingency area was required.
>
> A Temporary Restricted Area (TRA) is a method of [risk] mitigation that allows for the ability to restrict access to the contingency area and allow Airservices to exercise its powers under Air Services Regulation 3.03 (see 3.03(4)) even when the extant airspace determination is not effective. It should also be noted that a TRA is not always the most appropriate mitigator and does have limitations (i.e. not appropriate for large enroute sectors or airspace outside territorial water).
>
> The request to use a TRA in the above circumstances was not to change the contingency procedures but to contain the contingency area thereby allowing control over the access to the contingency area. In other words, there is no change to the contingency procedures other than containing the contingency area within a TRA.
>
> The contingency plans at the time of the occurrence specified that TRA will not be used to manage contingencies. This procedure was put into place when it was not known whether there would be an ability to use a TRA as a result of the transfer of the airspace regulatory function to CASA. As the option of a TRA is available as a mitigating strategy to manage the airspace risk, the thinking and procedures, at the time, need to be reviewed.
>
> As a result of the Post Activation Reviews of both of the above mentioned contingencies and the ability to utilise (where necessary) a TRA, the National ATS Contingency Plan has been amended. These modifications are being cascaded to the local plans for implementation.

Incorrect frequency selection

R200800007

Report narrative:

The reporter expressed concerns that [aircraft registration] landed on runway 05 at [name] aerodrome in very close proximity to another aircraft that had just departed in the opposite direction, runway 23. It was reported that [aircraft registration] was broadcasting on the incorrect CTAF (R) frequency. The reporter noted that the departing aircraft had the transponder switched on.

REPCON comment:

REPCON contacted the aircraft operator and supplied them with the de-identified report. The operator responded that the aircraft was flown by a trainee first officer and a training captain. Neither noticed the frequency had been selected to the incorrect frequency. The lack of a 'beep back' transmission may have alerted them to a problem. Both the Route Data Cards and the Jeppesen plates were amended with the new CTAF-R frequency. The Jeppesen approach plates have two frequencies very similar to each other (last digits are 6 and 7) in the briefing strip, the CTAF (R) and the PAL (pilot activated lighting). The anomaly in the charts has a NOTAM regarding this. The crew members have been instructed to be more vigilant with NOTAM's and in CTAF-R airspace to listen for the ARFU response.

Engineering concerns

R200800111

Report narrative:

The reporter expressed concerns about similarities between the operator and Ansett Engineering prior to Ansett going into voluntary receivership. An example of this is the shuffling of parts to keep aircraft flying. Due to the lack of availability of some parts, a component that had only three days left before it was required to be overhauled was fitted to an aircraft. This effectively allowed the aircraft to continue operating for a further three days, in which time an overhauled component might become available. The component fitted had been previously removed from service because it was determined to be due for overhaul.

Reporter comment:

When the component reached the workshop, it was repaired, not overhauled, by persons unknown to keep the aircraft flying due to the parts shortage.

Quotes from the article by Dr Rob Lee titled 'Reflections on Tenerife' (Flight Safety Australia SEP-OCT 2007 pages 48 and 49) have been included, in part, to illustrate the reporter's concerns:

> In virtually all aviation accidents, the key contributing systemic failures prior to the accident were known, and in many cases had been well documented. However little, or nothing had been done to rectify these factors until after the accidents occurred. Often a detailed, comprehensive, time-consuming and extremely expensive investigation has served merely to identify independently these pre-existing factors, and confirm their existence prior to the accident.
>
> Invariably, accident investigations reveal systemic factors that were well known, and which had not been effectively addressed by those agencies that had responsibility to do so. To use the 'hindsight' argument as an excuse for having done nothing is simply an attempt to avoid both accountability and responsibility'

Reporter comment:

It would be disappointing if the lessons learnt from Ansett were not applied to current maintenance organisations in determining if it is a healthy or unhealthy organisation. Safety professionals both before and after the collapse of Ansett indicated they had no idea the problems were either so large or widespread or that they existed at all. The 'glossy' responses to CAIR reports by both CASA and Ansett often left the reporters bewildered as to the narrow focus of the persons concerned, often only giving the initial report 'lip service'. Both CASA and the ATSB should be mindful that the aviation system is fragile and may not be as robust as thought.

REPCON comment:

REPCON contacted the aircraft operator and supplied them with the de-identified report. The operator responded that their procedures detail the requirements of the serviceable label and allows serviceability of a component to be detailed with regard to its previous status. The procedures also contain a process to allow the transfer of serviceable time from one assembly to another, this process is known as 'serviceable transfer'. The report details the need to overhaul the component and this may be true, however, the process detailed in the procedures manual allows for the serviceable transfer process to occur. The operator stated that the claim by the reporter that the item was repaired and not overhauled could not substantiated from the scant details provided. This report also refers to issues surrounding Ansett Engineering. [Operator] has used the Ansett case study [Investigation into Ansett Australia maintenance safety deficiencies and the control of continuing airworthiness of Class A aircraft] as a training tool on several occasions <www.atsb.gov.au/publications/2002/sir200211_001.aspx>.

How can I report to REPCON?

On line: ATSB website at www.atsb.gov.au
telephone number: 1800 020 505
by email: repcon@atsb.gov.au
by facsimile: 02 6274 6461
by mail: Freepost 600, PO Box 600,
Civic Square ACT 2608.

Serious incident involving the transfer of a technician

CMRS014

Report narrative:

The ship was at sea off Botany Bay unable to berth at Kurnell because of weather and sea state. Four technicians had been taken to the ship by boat to effect a repair on one of the ship's winches.

To transfer the technicians from the boat to the ship, the ship's crew lowered a safety harness which was attached to the ship's rail. The freeboard was about ten metres. After the first technician had donned the harness, the ship rolled away from the boat dragging the technician off the boat deck and slamming him against the ship's side. When the ship rolled back, the technician was dunked into the water. The technician was very fortunate that he was not sandwiched between the ship's side and the boat. The technician grabbed onto the ladder and commenced climbing, but was washed off the ladder. He then regained the ladder and managed to climb up onto the deck of the ship.

CMRS comment:

The Australian Maritime Safety Authority (AMSA) was contacted and supplied with the de-identified report. AMSA informed CMRS that they met with the ship's operators who committed to conducting a thorough investigation. As a result, the operator has undertaken to change their procedures for their entire international fleet as a result of this incident.

REPCON reports received	
Total 2007	117
First quarter 2008	27
What happens to my report?	
For Your Information issued	
Total 2007	58
First quarter 2008	16
Alert Bulletins issued	
Total 2007	1
First quarter 2008	4
Who is reporting to REPCON?#	
Aircraft maintenance personnel	26.4%
Air Traffic controller	4.9%
Cabin crew	1.4%
Facilities maintenance personnel /ground crew	0%
Flight crew	25.7%
Passengers	5.6%
Others*	36.0%

\# Repcon commenced on 29 Jan 2007
* examples include residents, property owners, general public