



Australian Government

Australian Transport Safety Bureau

Loading related event involving Airbus A320, VH-VGI

Melbourne Airport, Victoria, 21 December 2016

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Addendum

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Loading related event involving Airbus A320, VH-VGI

What happened

On 21 December 2016, an Airbus A320 aircraft, registered VH-VGI (VGI), and operated by Jetstar Airways, was being loaded at Melbourne Airport, Victoria, prior to operating flight JQ792 to Sunshine Coast, Queensland (Figure 1).

Figure 1: Image of VH-VGI



Source: Medhi Nazrinia

At 0500 Australian Eastern Daylight-savings Time (AEDT),¹ a clerk at a freight organisation commenced their shift at the organisation's Melbourne Airport freight office. As it was the week before Christmas, it was a very busy week.

The organisation had recently introduced a new system for processing freight, however, a decision was made to revert to the old system due to the amount of freight to be entered and issues which had been experienced with the new system the previous day.

A team of clerks organised which items of freight are loaded on specific unit loading devices (ULDs)² to be sent to aircraft for flights around Australia. They then send the loading information to the airline. The team was short one person and the person who had been called in to cover the shift was starting work at 0700. Until that person commenced their shift, the clerk was responsible for completing two freight uplift roles. This meant the clerk was responsible for processing freight on all narrow-body³ flights the organisation sent freight to, departing from Melbourne.

Because of the large amount of freight to be processed, including a large amount of freight from the previous night still waiting to be processed, there was a lot of radio traffic between leading hands organising the loading/unloading of the ULDs, and the clerk regarding the management of the freight. The clerk spent about 20 minutes on the radio, and then processed freight for 9 or 10 flights over the next half an hour.

During this time, the clerk identified two pieces of freight, which needed to be sent to the Sunshine Coast. These two pieces of freight contained flowers and meat and weighed a total of 93 kg. Rather than informing the leading hand, the clerk put the freight in a ULD and wrote that ULD number on the same page they had previously written the details of a different ULD, one that was

¹ Australian Eastern Daylight-savings Time is Co-ordinated Universal Time (UTC) +11.

² Containers used to transport freight.

³ An aircraft with a single aisle.

to be sent to Adelaide. The clerk then went to the office and the ULD was processed as going to the Sunshine Coast; however, when the clerk returned to the ULD with the freight, they inadvertently put the Sunshine Coast freight card on the ULD destined for Adelaide. This ULD contained medical goods with a gross weight of 245 kg. This ULD was subsequently loaded on the flight to the Sunshine Coast.

The clerk realised an error was made when the ULD, which was intended to go to Adelaide, could not be located. The clerk, who commenced work at 0700, noticed the same number ULD on the Sunshine Coast flight paperwork and they then found the ULD that was supposed to go to the Sunshine Coast. That ULD was put on the next flight to the Sunshine Coast.

Once the error was detected, the clerk rang the Sunshine Coast freight office. They were informed the incorrect container had been sent and provided them with details of the freight so the ULD could be sent back to Melbourne, then to Adelaide.

The aircraft remained within all weight and balance limits during the flight.

Freight processing systems

The organisation was transitioning between an old and new processing system. In the old processing system, all information (such as weight and container number) was entered into an office computer. It was also the clerks' responsibility for planning which flight the freight will go on and they rely on information from the leading hands for the freight details. The clerk would write the number of the container down, enter the number via the computer and then they would itemise the freight that had gone into the container. The cards itemising the freight would be printed out and attached to the container.

In the new system, information is entered on tablet computers. It is the customer's responsibility to book their freight onto flights themselves. Staff are on the floor and are required to put the piece of freight in a container and enter the details on the tablet in succession. The system has built in checks, which would not allow the same number ULD to be used. This new system had been introduced about a week prior to the incident, but due to technical issues, they had reverted to using the old system.

Clerk's comments

The clerk provided the following comments:

- They felt very busy. Within the first hour, they would have processed freight for about 9 to 10 flights, which was double the usual workload.
- They had to process all flights to Adelaide, Brisbane, Canberra, Alice Springs, and Townsville, as well as all other narrow-body flights. Normally this role would be divided between two clerks.
- If there is a person unable to work their shift, they try to find a replacement. They had done so in this case, but the replacement could not start until 0700.
- Normally at Christmas time, they would have extra staff rostered, but that year they did not.
- On the day, they felt under stress due to the busy time of year.

Previous occurrences

A search of the ATSB's occurrence database found occurrences relating to incorrect loading information being processed, particularly when staff were under high workload:

- On 16 May 2010, an Embraer ERJ 190 aircraft was operated on a positioning flight from Adelaide, South Australia to Brisbane, Queensland ([ATSB investigation AO-2010-034](#)). The pilot-in-command reported that the load and trim sheet for the aircraft was inaccurate due to items being counted twice. It was found that the error occurred when the airport movements coordinator inadvertently selected the incorrect aircraft configuration in the company's computerised load and trim system during a high workload time.

- On 8 September 2016, an Airbus A320 aircraft was being loaded at Sydney Airport, New South Wales to Brisbane, Queensland ([ATSB investigation AO-2016-119](#)). The leading hand received the deadload weight statement (DWS) and checked the containers. The third container number (1483) did not match the number listed on the DWS (4183), nor the container card (4183). The leading hand assumed that the freight handler had inadvertently transposed the numbers incorrectly and amended the card and DWS with 1483 and continued loading. When the aircraft was unloaded in Brisbane, it was found that the incorrect container (1483) was delivered and was nearly 650kg heavier than container 4183. The loading procedure if the DWS is incorrect, is that the container must not be loaded onto the aircraft. The leading hand noted that the short turnaround time and the flight was the last one of the day led to procedures being bypassed.

Safety analysis

An incorrect ULD, weighing 245 kg was loaded onto VGI operating the Sunshine Coast flight, where the load sheet recorded a ULD of 93 kg. The error occurred when the clerk put the freight card for the Sunshine Coast flight on the Adelaide ULD, and the card for the Adelaide flight on the Sunshine Coast ULD. The Adelaide ULD was then sent to the Sunshine Coast. Because these ULDs had the same ULD number, it is likely the clerk misread the flight details and put the cards on the incorrect ULDs.

In the old processing system, the same ULD number can be entered twice into the system. In the new system, this would result in an error feedback. Without the error feedback, the clerk would not have known that the same container was entered twice. Furthermore, this data cross check is completed by the same person who entered it, making it difficult to detect any errors, particularly if they are experiencing a high workload.

The same error involving heavier weights could have a significant impact on the handling and performance of an aircraft.

Findings

These findings should not be read as apportioning blame or liability to any particular organisation or individual:

- The incorrect ULD card was placed on the Adelaide ULD, leading it to be sent to the Sunshine Coast.
- There was no error feedback on the old system of entering information into an office computer meaning the clerk would not have realised they had entered the same container number twice in the system.
- Due to the absence of a staff member and the time of the year, the clerk was experiencing a high workload as they were required to take the responsibility for organising freight for all narrow body flights, rather than dividing them between two people.

Safety action

Whether or not the ATSB identifies safety issues in the course of an investigation, relevant organisations may proactively initiate safety action in order to reduce their safety risk. The ATSB has been advised of the following proactive safety action in response to this occurrence.

Freight organisation

As a result of this occurrence, the aircraft operator has advised the ATSB that they are taking the following safety actions:

- The operator issued a revised loading instruction to prevent a recurrence of this type of event. The instruction stated after weighing the ULD or barrow⁴, immediately record the weight on the appropriate ULD or barrow card and immediately insert in the ULD/Barrow pocket. Then close load in the Cargo system and move the ULD/Barrow to the designated staging area away from build-up areas.

Safety message

This investigation highlights the effect of high workload on data input errors, as well as the importance of system feedback to indicate that the correct data has been entered. One of the ATSB's SafetyWatch priorities is [data input errors](#). These errors, such as using the incorrect loading figures occur for many different reasons. The consequence of these errors include a range of aircraft handling and performance issues.



General details

Occurrence details

Date and time:	21 December 2016 – 0900 EST	
Occurrence category:	Incident	
Primary occurrence type:	Loading related	
Location:	Melbourne Airport	
	Latitude: S 37° 40.40'	Longitude: E 144° 50.60'

Aircraft details

Manufacturer and model:	Airbus A320-232	
Registration:	VH-VGI	
Operator:	Jetstar Airways	
Serial number:	4466	
Type of operation:	Air Transport – High Capacity	
Persons on board:	Crew – 6	Passengers – 180
Injuries:	Crew – 0	Passengers – 0
Aircraft damage:	Nil	

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to operations involving the travelling public.

⁴ A frame used for holding ULDs.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.