



Australian Government

Australian Transport Safety Bureau

Loading event involving Avions de Transport Régional ATR42, VH-TOX

Sydney Airport, New South Wales, 27 September 2016

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Addendum

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Loading event involving Avions de Transport Régional ATR42, VH-TOX

What happened

On 27 September 2016, at about 0030 Eastern Standard Time (EST), an Avions de Transport Régional ATR42-300 aircraft, registered VH-TOX (Figure 1), was being loaded at Sydney Airport, New South Wales, for a freight charter flight to Brisbane, Queensland.

The freight had arrived from a freight facility where it had been weighed and a load plan completed, with a total freight weight of 2,281 kg.

Prior to loading the freight, a representative from the aircraft operator was unsure of the accuracy of the provided weights and requested ground staff reweigh the freight using calibrated scales at the airport. The measured total weight was 3,215 kg, which was 934 kg more than stated on the load plan.

The flight crew, consisting of a captain and first officer, completed the trim sheet using the actual weights, and the aircraft was within its weight limitations and the allowable centre of gravity envelope. The aircraft operated to Brisbane without incident.

Figure 1: VH-TOX



Source: Daniel Vorbach edited by ATSB

Freight weighing

The freight was weighed at the freight facility using a forklift fitted with scales. Each item of freight was then allocated to a loading position on the aircraft using a spreadsheet from which the aircraft load plan was derived.

The aircraft operator commented that they had previously advised the freight company that forklifts should not be used for the weighing of freight when intended for carriage by air, as they were not sufficiently accurate. The loading supervisor, who was employed by the freight company and responsible for loading the aircraft in accordance with the load plan, was not aware that the weights recorded on the load plan were inaccurate.

The ground handling agreement between the aircraft operator and freight company did not include Sydney as a port of service at the time of the incident. Until recently, the operator's Sydney operations were based at Bankstown Airport, where calibrated floor scales were used to weigh the freight.

Findings

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

- The freight company weighed the freight using inaccurate (forklift) scales, resulting in a discrepancy of 934 kg from the actual freight weight. The aircraft load plan was derived from the inaccurate freight weights.
- The aircraft operator discovered the inaccuracy before loading and the aircraft was subsequently loaded within its weight and balance limitations.

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.

Aircraft operator

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

Change of port

The operator ceased operations into and out of Sydney Airport and reverted to Bankstown Airport, where calibrated floor scales are used to determine the freight weight for the load plan.

Safety message

Accurate aircraft weight and balance information is vital for the safety of flight, particularly during take-off. Inaccurate weight of freight items can lead to incorrect flight management selections such as power and trim settings. Discrepancies in these can result in reduced take-off performance and incidents such as tail strikes and runway overruns.

General details

Occurrence details

Date and time:	27 September 2016 – 0330 EST	
Occurrence category:	Incident	
Primary occurrence type:	Loading related	
Location:	Sydney Airport, New South Wales	
	Latitude: 33° 56.77' S	Longitude: 151° 10.63' E

Aircraft details

Manufacturer and model:	ATR - Gie Avions De Transport Regional ATR42	
Registration:	VH-TOX	
Serial number:	024	
Type of operation:	Charter – Freight	
Persons on board:	Crew – 2	Passengers – 0
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.

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.