



**Australian Government**

**Australian Transport Safety Bureau**

**ATSB TRANSPORT SAFETY INVESTIGATION REPORT**

Aviation Occurrence Report – 200603130

Final

**Taxi Incident – JFK Airport, NY, USA – 29 May 2006**

**VH-OEE**

**Boeing Co. 747-400**





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### **Abstract**

On 29 May 2006, an Australian registered and operated Boeing Co. 747-400 was taxiing at New York, John F Kennedy (JFK) Airport. During the aircraft's final turn into its allocated parking bay, the right wingtip contacted a blast fence, resulting in damage to the outboard end of the right wing. An investigation was conducted by the US Federal Aviation Administration in conjunction with the US National Transportation Safety Board and the Australian Transport Safety Bureau.

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# THE AUSTRALIAN TRANSPORT SAFETY BUREAU

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The Australian Transport Safety Bureau (ATSB) is an operationally independent multi-modal Bureau within the Australian Government Department of Transport and Regional Services. ATSB investigations are independent of regulatory, operator or other external bodies.

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 fare-paying passenger operations.

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.

## **Purpose of safety investigations**

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

It is not the object of an investigation to determine blame or liability. However, 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.

## **Developing safety action**

Central to the ATSB's investigation of transport safety matters is the early identification of safety issues in the transport environment. The ATSB prefers to encourage the relevant organisation(s) to proactively initiate safety action rather than release formal recommendations. However, depending on the level of risk associated with a safety issue and the extent of corrective action undertaken by the relevant organisation, a recommendation may be issued either during or at the end of an investigation.

The ATSB has decided that when safety recommendations are issued, they will focus on clearly describing the safety issue of concern, rather than providing instructions or opinions on the method of corrective action. As with equivalent overseas organisations, the ATSB has no power to implement its recommendations. It is a matter for the body to which an ATSB recommendation is directed (for example the relevant regulator in consultation with industry) to assess the costs and benefits of any particular means of addressing a safety issue.

**About ATSB investigation reports:** How investigation reports are organised and definitions of terms used in ATSB reports, such as safety factor, contributing safety factor and safety issue, are provided on the ATSB web site [www.atsb.gov.au](http://www.atsb.gov.au).

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## FACTUAL INFORMATION

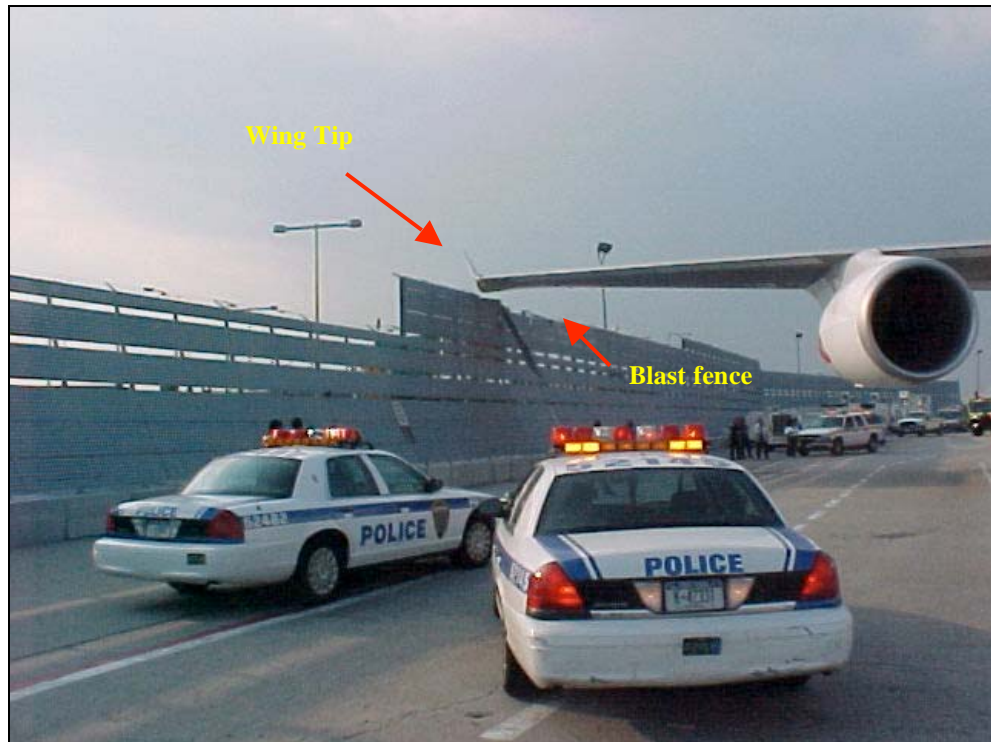
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On 29 May 2006, a Boeing Co. 747-400 was taxiing at New York, John F Kennedy (JFK) Airport. During the aircraft's final turn into its allocated parking bay (terminal 7, bay 3), the right wingtip contacted a blast fence<sup>1</sup> (Figure 1), resulting in damage to the outboard end of the right wing.

An investigation was conducted by the US Federal Aviation Administration (FAA) in conjunction with the US National Transport Safety Board (NTSB). The Australian Transport Safety Bureau (ATSB) appointed an accredited representative under Annex 13 to the Chicago Convention to participate in the investigation as the aircraft was Australian registered, owned and operated.

This ATSB report summarises the US investigation and subsequent safety actions.

**Figure 1: 747-400 wing tip and blast fence**



### US investigation findings

The aircraft had deviated to the right of the taxiway painted centreline and had also taxied past the assigned parking bay lead-in line.

The aircraft operator's Internal Notice to Airman (INTAM), gave a description of how to correctly position the aircraft to allow a straight entry into the parking bay, but was open to misinterpretation. The flight crew's misinterpretation of the INTAM led them to believe that the aircraft should be positioned to the right of the

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<sup>1</sup> Blast fence – Large barrier designed to divert thrust from jet engines.

taxiway centreline instead of the parking bay lead-in line, which was the intention of the description in the INTAM.

The pilots reported that they were following the ground marshaller's hand signals for guidance onto the bay. The ground marshaller reported that he had not given any guidance hand signals other than the signal that indicated he was the marshaller and that this was their bay, and he believed that the aircraft was not under his guidance at the time of the incident. The discrepancies between reports from the pilots and ground marshaller could not be reconciled.

The convergent nature of the taxiway with the blast fence was not noted in any pilot documentation. An almost identical incident had occurred in 2003 at the same section of taxiway with the same aircraft type belonging to a different operator.

Figure 2 is a picture of the taxiway and parking bays at JFK airport where the incident occurred. A 747 aircraft does not have to taxi too far past the parking bay lead-in line before the wing tip clearance to the blast fence becomes insufficient to safely make a turn.

**Figure 2: JFK Airport incident taxiway**



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## **SAFETY ACTION**

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### ***Aircraft operator safety action***

As a result of this incident, the aircraft operator initiated the following safety actions:

- The aircraft operator no longer allows their aircraft to taxi into the bay under their own power, they now have to be towed into the bay.
- The issuing of INTAM procedures have been amended to ensure that at least one other management pilot checks the contents of the INTAM for accuracy, to ensure only reliable and clear information is sent out.
- Details of the incident were communicated to all of the aircraft operator's pilots by way of a flight operations news letter.

### ***Terminal operator safety action***

As a result of this incident, the terminal operator advised the Australian Transport Safety Bureau that they have initiated the following safety actions:

The ramp area at terminal 7 between gates 1 through 6 was re-surveyed and mapped. Clearance between all aircraft types shown on charts and scale available to verify distance between B747 wing tip and blast fence.

The European Aeronautical group terminal information map was updated to add a caution about the importance of maintaining the taxiway centre line to avoid contacting the blast fence.

Details of terminal information map update forwarded to Jeppesen for inclusion in their manual.

Updated terminal information also given to airlines at a local level, i.e. airline station managers based at JFK.

Marshalling signals and training reviewed. Marshalling signal monitoring ongoing.

Details of the incident communicated to all terminal 7 operators and flight crew.

A safety assessment of taxi into terminal 7 bay 3 was carried out in November 2006. It was considered safe to resume taxi into bay operations but airline operators are permitted to make their own arrangements with regard to taxi in or tow in procedures.