

# Boeing 747-236B, G-BDXA

**AAIB Bulletin No: 3/98 Ref: EW/G97/10/05 Category: 1.1**

<b>Aircraft Type and Registration:</b>	Boeing 747-236B, G-BDXA
<b>No &amp; Type of Engines:</b>	4 Rolls Royce RB211-524D-19 turbofan engines
<b>Year of Manufacture:</b>	1977
<b>Date &amp; Time (UTC):</b>	12 October 1997
<b>Location:</b>	Unknown, but thought to be on final approach to London Heathrow Airport
<b>Type of Flight:</b>	Public Transport
<b>Persons on Board:</b>	Crew - N/K - Passengers - N/K
<b>Injuries:</b>	Crew - None - Passengers - None
<b>Nature of Damage:</b>	Damage to right wing to body fairing and upper surface of inboard right trailing edge flap
<b>Commander's Licence:</b>	Airline Transport Pilot's Licence
<b>Commander's Age:</b>	N/A
<b>Commander's Flying Experience:</b>	Last 90 days - N/A Last 28 days - N/A
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot, operator investigation and AAIB enquiries

After arriving at London Heathrow on a flight from Montreal, ground engineers reported that part of a right-hand wing to fuselage (fillet) panel was missing. The crew had not reported any handling difficulties and in fact were unaware of the incident. Closer examination revealed that the forward 12 inches of this panel, No 294A, had broken away and that a sealing strip, approximately 8 feet in length, attached to its end was trailing over the inboard trailing edge flap. Damage to the fuselage and flap upper surface had occurred as a result of this seal flailing in the slipstream, and the airline concerned believes the panel probably failed during final approach to Heathrow. The forward edge of the panel is normally secured with three screws, but it was apparent that two of the screws were missing, and that the associated anchor nuts were damaged. In addition, the butt strap at the forward end of the panel was cracked between the two damaged anchor nuts and sealant had been

applied between the panel and butt-strap in what appeared to have been an attempt to secure the panel.

The subject panel had been refitted to the aircraft during maintenance in August 1997, the associated task card being annotated with an instruction to fit the panel in accordance with Maintenance Manual (MM) reference(s). The MM, section 53-51-01, stated that "stainless steel bolts and dimpled washers are installed at the same location(s) on the fairing panel as they were prior to removal of the panel(s). Installing different hardware in these location(s) may result in unacceptable electrical bonding." An inspection of the panel was recorded as having been carried out 24 hours after it had been installed, but the engineer concerned was not able to recall if dimpled washers had been used. The investigation was not able to establish the direct cause of the damaged anchor nuts or for how long they might have been defective. The airline concerned stated that a 'clearance to fit' this panel is not a declaration that the anchor nuts are serviceable, but might be construed as such by maintenance personnel. Also, as there was no requirement on the task card to inspect the condition of the nuts, the situation could arise whereby unserviceable anchor nuts would not be reported or rectified.

Since this incident, all relevant information relating to this event has been circulated to maintenance personnel and an amendment of the relevant section of the MM identifying problems associated with anchor nuts will be made.