



14 April 2009  
FOIA reference: F0000810

Dear 

I am writing in respect of your recent application, of 13 March 2009, for the release of information held by the Civil Aviation Authority.

In assessing your request in line with the provisions of the Freedom of Information Act 2000, we are pleased to be able to provide the information below.

Your request for near misses and accidents has been interpreted as meaning all aircraft proximity hazards (Airprox) assessed by the UK Airprox Board, and all accidents and serious incidents as classified by the Air Accidents Investigation Branch.

The data retrieval for Airprox was based on the following criteria:

- Involving at least one Boeing B777 aircraft, (including UK and/or foreign registered aircraft)
- Airprox occurred within UK airspace.

There are 22 Airprox reports which meet the above criteria. Twenty of these events were assessed as risk category C, "No risk of collision". A further two events were assessed as risk category B, "the safety of the aircraft was compromised".

For convenience, we have enclosed the CAA summary report of these Airprox events. With regard to the second part of the question, we have searched the mandatory occurrence report database for all reportable accidents and serious incidents involving a Boeing B777 aircraft (including UK and/or foreign registered aircraft). The summary reports of these 15 accidents and serious incidents are attached:

The attached summaries include the date and location of the event, basic details on fatalities and injuries (if appropriate) and a description of what happened. For further information on those reports where there is a reference to an AAIB report, please visit the Air Accidents Investigation Branch website at [www.aaib.gov.uk](http://www.aaib.gov.uk).

In order to preserve the open reporting culture which is a vital component of the UK's excellent safety record, some information which is provided to the CAA under the Mandatory Occurrence Reporting Scheme (MORS) is exempt information under Section 44 of the Freedom of Information Act 2000. Section 44 (1)(a) provides that information is exempt information if its disclosure is prohibited by or under any enactment. Section 23 of



the Civil Aviation Act 1982 is such a statutory prohibition. Accordingly, the obligations of the CAA to comply with Section 23 are unaffected by the Freedom of Information Act.

**Freedom of Information Act : Section 44**

(1) Information is exempt information if its disclosure (otherwise than under this Act) by the public authority holding it-

- (a) is prohibited by or under any enactment,
- (b) is incompatible with any Community obligation, or
- (c) would constitute or be punishable as a contempt of court.

(2) The duty to confirm or deny does not arise if the confirmation or denial that would have to be given to comply with section 1(1)(a) would (apart from this Act) fall within any of paragraphs (a) to (c) of subsection (1).

**Section 23 of the Civil Aviation Act is such a statutory prohibition. Accordingly, the obligations of the CAA to comply with Section 23 are unaffected by the Freedom of Information Act.**

Under Section 23, information supplied to the CAA in connection with its regulatory functions and which relates to a particular individual or organisation must not be disclosed by the CAA unless such disclosure is authorised by one of the exceptions contained in Section 23 itself.

Information regarding a specific airline is exempt under Section 23 of the Civil Aviation Act and so we are not able to provide details of the airlines involved. Additional information such as the nationality of the aircraft, the flight number, the owner and charterer of the aircraft, and the start and intended destination (departure and arrival airports) may lead to identification of the airline. Therefore, these criteria are also exempt under Section 23 of the Civil Aviation Act and have not been provided.

Copies of the full air traffic control report also fall under this exemption.

If you are unhappy with how we have dealt with your request in the first instance you may approach the Freedom of Information Case Manager in writing at:-

Rick Chatfield  
FOIA & EIR Case Manager  
Civil Aviation Authority  
Aviation House  
Gatwick Airport South  
West Sussex  
RH6 0YR  
rick.chatfield@caa.co.uk

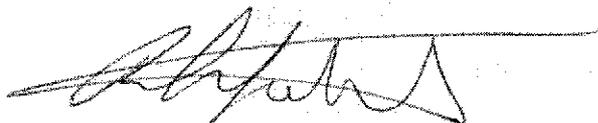
The CAA has a formal internal review process for dealing with appeals or complaints in connection with Freedom of Information requests. The key steps in this process are set in the attachment.

Should you remain dissatisfied with the outcome you have a right under Section 50 of the Freedom of Information Act to appeal against the decision by contacting the Information Commissioner at:-

Information Commissioner's Office  
FOI/EIR Complaints Resolution  
Wycliffe House  
Water Lane  
Wilmslow  
Cheshire  
SK9 5AF  
[www.ico.gov.uk/complaints.aspx](http://www.ico.gov.uk/complaints.aspx)

Should you wish to make further Freedom of Information requests, please use the e-form at <http://www.caa.co.uk/foi>.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Rick Chatfield', with a long horizontal line extending to the right.

Rick Chatfield  
FOIA & EIR Case Manager

## CAA INTERNAL REVIEW & COMPLAINTS PROCEDURE

- The original case to which the appeal or complaint relates is identified and the case file is made available;
- The appeal or complaint is allocated to an Appeal Manager, the appeal is acknowledged and the details of the Appeal Manager are provided to the applicant;
- The Appeal Manager reviews the case to understand the nature of the appeal or complaint, reviews the actions and decisions taken in connection with the original case and takes account of any new information that may have been received. This will typically require contact with those persons involved in the original case and consultation with the CAA Legal Department;
- The Appeal Manager concludes the review and, after consultation with those involved with the case, and with the CAA Legal Department, agrees on the course of action to be taken;
- The Appeal Manager prepares the necessary response and collates any information to be provided to the applicant;
- The response and any necessary information is sent to the applicant, together with information about further rights of appeal to the Information Commissioners Office, including full contact details.

## Safety Regulation Group

Safety Investigation &amp; Data Department

Aviation House  
Gatwick Airport South  
West Sussex  
RH6 0YR

Direct Dial 01293 573220  
Direct Fax 01293 573972  
E-mail sdd@caa.co.uk

Switchboard 01293 567171  
Fax 01293 573999

*These records were retrieved from the UK CAA Mandatory Occurrence Reporting (MOR) system by a member of SIDD*

*The MOR system records include information reported to the CAA, information obtained from CAA investigations, and deductions by CAA staff based on the available information. The authenticity of the contents or the absence of errors and omissions cannot be guaranteed. Records in this system commenced on 1 January 1976 coincident with the introduction of Mandatory Occurrence Reporting in the UK, but occurrences reported voluntarily are also included, and no distinction is made between them.*

**Note: Any data provided from these records are made available on the understanding that they are only to be used for purposes of flight safety and must not be used for other purposes.**

**SUBJECT: Airprox reports in UK airspace involving at least one Boeing B777 aircraft**

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>199704936</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	22 Sep 1997
<b>Classification :</b>	Occurrences	<b>Location :</b>	60N 12W
<b>Events :</b>	ATC Occurrence - Airprox (C)	<b>Location Info :</b>	

**Pretitle :**

*ATC Occurrence - Airprox (C) : B777 & B767, at 60N 12W, at FL350.*

**Precis :**

B777 passed 60N 10W one hour earlier than expected & came into conflict with the opposite direction B767. CAA Closure: The B777 crew, when seeking their Oceanic clearance, passed a wrong estimate for the Oceanic joining position. The hour error was not detected by the relevant controllers. Appropriate follow up action has been taken on both aspects. This AIRPROX is now subject to a separate review by the Joint AIRPROX(C) Assessment PANEL (JAAP) & details of their finding should be published in AIRPROX (Controllers) Report Book Volume 15. AIRPROX 54/97.

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<b>A/C Type :</b>	B747	<b>Occurrence Number :</b>	<b>199806198</b>
<b>Flight Phase :</b>	Climb	<b>Occurrence Date :</b>	24 Oct 1998
<b>Classification :</b>	Occurrences	<b>Location :</b>	London-Gatwick - LGW
<b>Events :</b>	ATC Occurrence - Airprox (C)	<b>Location Info :</b>	

**Pretitle :**

*ATC Occurrence - Airprox (C) : B747 and B777 6nm North East of Gatwick at 5600ft.*

**Precis :**

Separation lost with a B777 when a B747 climbed above its cleared altitude of 5000ft whilst on a LAM SID. Both a/c received a TCAS RA. CAA Closure: Flight crew error. Altitude excursion.

**Note: Any data provided from these records are made available on the understanding that they are only to be used for purposes of flight safety and must not be used for other purposes.**

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Appropriate operator action has been taken as a result of this AIRPROX. This AIRPROX is now subject to a separate review, by the United Kingdom AIRPROX Board (UKAB). AIRPROX 29/98.

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<b>A/C Type :</b>	B737	<b>Occurrence Number :</b>	<b>199902124</b>
<b>Flight Phase :</b>	Descent	<b>Occurrence Date :</b>	15 Apr 1999
<b>Classification :</b>	Occurrences	<b>Location :</b>	BLUSY 11
<b>Events :</b>	UK Airprox	<b>Location Info :</b>	

**Pretitle :**

*UK Airprox : B737 and B777, 11nm from BLUSY at FL240.*

**Precis :**

B737 was descending to FL240 which was occupied by the B777. CAA Closure: ATC error. The controller issued the B737 with a descent clearance to the level occupied by the B777. Appropriate ATC remedial action has been taken as a result of this AIRPROX. This AIRPROX is now subject to a separate review by the United Kingdom AIRPROX Board (UKAB).

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200001871</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	27 Mar 2000
<b>Classification :</b>	Occurrences	<b>Location :</b>	LOGAN
<b>Events :</b>	UK Airprox Loss of Standard Separation	<b>Location Info :</b>	25 S

**Pretitle :**

*UK AIRPROX - B777 and military jet 25nm South of LOGAN at FL350.*

**Precis :**

Due to the large number of military a/c (16 pairs of mixed nationality) anticipated during the egress phase of a NATO Tactical Leadership Programme (TLP) air exercise over East Anglia, the LJAO Clacton (Mil) sector was manned by a Controller (CLN MIL) and a Planner/Coordinator (PLN). Prior to the exercise, the Senior Military Supervisor and the LJAO Supervisor had activated the recurring Airspace Classification Notice (ACN) at , which is established for TLP UK-Belgium recoveries. FL190 and FL330 had been agreed and blocked within the appropriate UK airspace (following a general track from Honington to KOKSY) for the exclusive use of CLN MIL, and the LJAO Central (Mil) Coordinator personally briefed the CSCs on the CLN, DVR, LUS and NSEA Sectors. The a/c involved in the incident were a B777, which was westbound on Upper Air Route UL602 at FL350, a pair of F16s, and a pair of Mirages. The F16 pair and the Mirage pair were level at FL330 and in receipt of a Radar Control service from CLN MIL on frequency whilst tracking SE. The Mirages were about 17nm behind the F16s; there were also three flights on the frequency at FL190, plus a pair at FL390, which had been tactically coordinated through the sector. Following a radar handover to the Belgian Mil (BEL MIL) controller at Belgar Radar , the F16 flight left the CLN MIL frequency. The trigger for events that followed was the F16 pair's climb, initiated by the BEL MIL controller, to FL350 and the B777 pilot's subsequent reaction to the F16s passing ahead of his a/c. The BEL controller however, instructed this climb once the F16s had established two-way contact and were within the Brussels UIR; it is believed that the climb was issued because of a confliction with eastbound traffic further to the S, routeing along UG1 between KONAN and KOKSY and also at FL330. At the time of the incident, an order within the BEL Controllers Order Book existed which enabled BEL MIL to take 3nm horizontal separation against GAT in the Upper Airspace. In Belgian Military terms therefore, separation had not been eroded; the Order has since been withdrawn and the separation criteria are now the same for all parties. The B777 Captain stated later that he did not actually receive a TCAS RA on the F16 pair, although he claimed that 'it' came within 300ft of his a/c. Nevertheless it appears, that the B777 pilot descended his a/c of his own volition. The LATCC SMF did not activate, nor did the STCA. Having originally stated his intention to file two 'Airmisses', the B777 pilot later withdrew both. The members of the LATCC (Civ) controlling watch however, elected to continue the incident as a controller filed Airprox.

CAA Closure: The root cause of the Airprox was the B777 pilot's descent in reaction to some form of TCAS indication, which was triggered by the BEL controller's action of climbing the F16 flight in front

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of, and to the same level as, the B777. There was however, no risk of collision to the a/c as the minimum horizontal separation was at least 3.5nm. BEL's requirement to climb the F16s was prompted by coordination difficulties deeper into Belgian airspace. Whilst CLN MIL, and the CLN SC, did their best to resolve the ensuing conflict, the breakdown in communication between the controlling teams, following an unfounded assumption that LJAO had climbed the F16s, resulted in the military and civilian controllers reacting individually to the information presented to them rather than working together. The LJAO controllers however, had tried to discover what action was being taken with the B777. The processes and agreements involved in transferring traffic between LJAO and BEL were adhered to on the day in question. The core problem was the management and internal coordination of OAT and GAT within the BEL/Maastricht area of responsibility. This Airprox is now subject to an independent review by the UK Airprox Board (UKAB).

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200006769</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	12 Sep 2000
<b>Classification :</b>	Occurrences	<b>Location :</b>	MERLY
<b>Events :</b>	UK Airprox TCAS Report Altitude Deviation	<b>Location Info :</b>	12 E

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**Pretitle :**

*UK AIRPROX - B777 and two military jets 12nm East of MERLY at FL250.*

**Precis :**

Altitude bust by the military jets. The two military a/c were under the control of a military fighter controller. During high speed intercept radar training, and aware of the B777's presence, both the military jets exceeded their capped level of FL240, and came into conflict with the B777 at FL250. The B777 received, and responded to, a TCAS RA to climb.

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<b>A/C Type :</b>	B767	<b>Occurrence Number :</b>	<b>200103995</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	15 Jun 2001
<b>Classification :</b>	Occurrences	<b>Location :</b>	ATWEL
<b>Events :</b>	UK Airprox Loss of Standard Separation UK Airprox	<b>Location Info :</b>	10 W

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**Pretitle :**

*UK AIRPROX 94/2001 - B767 and a B777 10nm West of ATWEL at FL350.*

**Precis :**

The Airprox occurred towards the end of a night duty, when sectors were being opened. The B767 was Eastbound and co-ordinated into Copenhagen's airspace at FL 350, an opposite direction level. Co-ordination had been accepted on an Westbound opposite direction B777, also at FL350. There was only a 3 min difference in estimates at the UIR boundary for these two a/c but the controller, who had just opened the sector, did not spot the conflict until the B777 called on frequency. At this time the a/c were head on at 35nm. Vectors were passed but there was difficulty in establishing and maintaining two-way contact with both a/c. The B767 eventually responded to, and complied with, turn and descent instructions. The B777 responded to a TCAS climb. CAA Closure: Appropriate local ATC action taken.

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<b>A/C Type :</b>	B737	<b>Occurrence Number :</b>	<b>200104704</b>
<b>Flight Phase :</b>	Descent	<b>Occurrence Date :</b>	11 Jul 2001
<b>Classification :</b>	Occurrences	<b>Location :</b>	London-Heathrow - LHR
<b>Events :</b>	UK Airprox TCAS Report	<b>Location Info :</b>	10 SE

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**Pretitle :**

*UK AIRPROX 117/2001 - B777 and a B737 10nm Southeast of Heathrow at FL90.*

**Precis :**

The B737 was holding at BIG, and the B777 holding at OCK. The B737 was descended to FL90, and instructed to leave BIG heading 270 deg, in preparation for vectoring to Heathrow R/W27L. It was the controller's intention to descend the B777, still holding at OCK, from FL110 to FL100. However, a slip of the tongue resulted in the B777 being instructed to descend to FL90, which was correctly read back. The B777 was now turning right for the outbound leg of the hold, when the controller noticed the conflict between it and the B737. Avoiding action was passed and separation was reduced to 2.5 nm and 100 ft. CAA Closure: Appropriate local ATC action taken.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200204019</b>
<b>Flight Phase :</b>	Descent	<b>Occurrence Date :</b>	17 Jun 2002
<b>Classification :</b>	Occurrences	<b>Location :</b>	BARLU
<b>Events :</b>	UK Airprox ATC Engineering Loss of Standard Separation	<b>Location Info :</b>	2 SSW

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**Pretitle :**

*UK AIRPROX 80/2002 - B777 and B737 at FL320 near BARLU. B777 received TCAS TA, conflict alert activated. Avoiding action and traffic information issued.*

**Precis :**

The B777 called on frequency descending to FL340 on course to BARLU. Shortly afterwards the crew requested further descent. The trainee checked the strips and, seeing no confliction, issued a clearance to descend to FL260. However, investigation revealed that the B777 had not reached the transfer of control point. Shortly afterwards the B737 called at FL320 approaching BARLU in conflict with the B777. The mentor tried to take control but the 'Mentor Box' failed and so the mentor told the trainee what to do. There was confusion and the trainee turned the B777 rather than the B737 as requested. The two crews saw each other and separation reduced to 2.7nms at the same level, before the B777 descended through the level of the B737 and vertical separation was re-established. The incident will assessed by UKAB. CAA Closure: Appropriate ATC action taken.

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<b>A/C Type :</b>	B757	<b>Occurrence Number :</b>	<b>200206471</b>
<b>Flight Phase :</b>	Descent	<b>Occurrence Date :</b>	09 Sep 2002
<b>Classification :</b>	Occurrences	<b>Location :</b>	Ockham (OCK)
<b>Events :</b>	UK Airprox Loss of Standard Separation TCAS Report	<b>Location Info :</b>	6 E

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**Pretitle :**

*UK AIRPROX 166/2002 - B757 departing BIG hold and B777 in OCK hold at FL90. Both a/c received TCAS TA. Avoiding action and traffic information issued to both a/c.*

**Precis :**

The B757 was instructed to leave the BIG hold heading 270 degrees and descend to FL90. The B777 was in the OCK hold maintaining FL90. The controller had only intended to descend the B757 to FL100 but, inexplicably, had cleared it to FL90. As the B777 turned outbound in the OCK hold, it came into conflict with the B757. Avoiding action was passed and minimum separation recorded was 2.6nm and 100 feet. CAA Closure: Appropriate ATC action taken.

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<b>A/C Type :</b>	A321	<b>Occurrence Number :</b>	<b>200206841</b>
<b>Flight Phase :</b>	Climb	<b>Occurrence Date :</b>	22 Sep 2002
<b>Classification :</b>	Occurrences	<b>Location :</b>	Ockham (OCK)

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<b>Events :</b>	UK Airprox Altitude Deviation TCAS Report Loss of Standard Separation	<b>Location Info :</b>	2S
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**Pretitle :**

*UK AIRPROX 185/2002 - A321 and B777 at FL80 inside LTMA, 2nm South of Ockham. Alleged altitude deviation by A321. STCA and SMF activated, B777 received TCAS RA.*

**Precis :**

Flt no 4147 was cleared to climb to FL130 on heading 180 degrees. However the A321, flt no 4139 same operator, responded to the instruction. The OCK/WILLO SC did not note that the wrong pilot replied. The latter a/c turned and climbed in accordance with the clearance its pilot had acknowledged. This resulted in a conflict with the B777, which was under the control of Heathrow INT S. The B777 reported a TCAS climb. The SC was alerted by STCA to the situation but by this time the a/c had passed. Minimum separation 1.7nm/800ft. The incident was subject to assessment by UKAB. The foreign operator has been contacted concerning the callsign similarity. CAA Closure: Appropriate ATC personnel action taken.

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<b>A/C Type :</b>	B737	<b>Occurrence Number :</b>	<b>200207652</b>
<b>Flight Phase :</b>	Climb	<b>Occurrence Date :</b>	22 Oct 2002
<b>Classification :</b>	Occurrences	<b>Location :</b>	Lambourne (LAM) Hold
<b>Events :</b>	UK Airprox Loss of Standard Separation TCAS Report	<b>Location Info :</b>	

**Pretitle :**

*UK AIRPROX 208/2002 - B737 and B777 at Lambourne at FL140. Both a/c received and reacted to TCAS RAs. STCA and SMF activated.*

**Precis :**

Investigations reveal that the AIRPROX was caused by trainee controller instructing the B777 to descend to FL140 whilst in the LAM hold, without ensuring separation against the B737 transiting the hold at FL140. The trainee was not fully aware of the plan which the Mentor had devised and coordinated. Although the trainee was alerted to the situation by another controller and took quick action to resolve it, he used a wrong call sign which negated the effect. This AIRPROX is now subject to a separate review by the United Kingdom AIRPROX Board (UKAB). CAA Closure: Appropriate remedial ATC action has been taken as a result of this AIRPROX.

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<b>A/C Type :</b>	A320	<b>Occurrence Number :</b>	<b>200208114</b>
<b>Flight Phase :</b>	Hold	<b>Occurrence Date :</b>	10 Nov 2002
<b>Classification :</b>	Occurrences	<b>Location :</b>	Ockham (OCK)
<b>Events :</b>	UK Airprox Loss of Standard Separation TCAS Report	<b>Location Info :</b>	1 E

**Pretitle :**

*UK AIRPROX 219/2002 - A320 and B777 3nm East of Ockham at FL90. B777 received a TCAS TA.*

**Precis :**

The A320 was inbound to Heathrow via the Biggin Hold. It was instructed to leave the hold on a Westerly heading at FL90. The controller then suddenly became busy with a Heathrow go-around and an a/c returning to Heathrow with a PAN. The controller concentrated on these events and the A320 was not descended in sufficient time to pass under the Ockham hold, thus coming into conflict with a B777 entering the Ockham hold at FL90. Appropriate local ATC action has been taken as a

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result of this AIRPROX. This AIRPROX is now subject to a separate review by the United Kingdom AIRPROX Board (UKAB). CAA Closure: No further CAA action required.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200306019</b>
<b>Flight Phase :</b>	Climb	<b>Occurrence Date :</b>	02 Sep 2003
<b>Classification :</b>	Occurrences	<b>Location :</b>	BEDFO
<b>Events :</b>	Loss of Standard Separation UK Airprox TCAS Report	<b>Location Info :</b>	

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**Pretitle :**

*UK AIRPROX 137/2003 - B777 and Do328 inside Airway at FL190, overhead BEDFO.*

**Precis :**

The B777 and the Do328 had been placed on headings of 330° and 335° respectively to maintain separation as they were both climbing to FL190. The B777 contacted the LACC controller and was instructed to continue on the heading and climb to FL280. This was read back as 360 on the heading and 280 on the altitude. The controller did not detect the incorrect readback. This turn brought the B777 into conflict with the Do328 and separation was lost. CAA Closure: Appropriate ATC remedial action has been taken as a result of this AIRPROX. This AIRPROX is now subject to a separate review by the United Kingdom AIRPROX Board (UKAB).

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200308357</b>
<b>Flight Phase :</b>	Hold	<b>Occurrence Date :</b>	01 Dec 2003
<b>Classification :</b>	Occurrences	<b>Location :</b>	Bovingdon (BNN)
<b>Events :</b>	UK Airprox Loss of Standard Separation TCAS Report	<b>Location Info :</b>	6 WNW

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**Pretitle :**

*UK AIRPROX 194/2003 - Two B777 in Bovingdon hold. First B777 inadvertently cleared to descend to second B777 level (FL130). Both a/c received TCAS RA. Avoiding action and traffic info issued.*

**Precis :**

STCA activated. B777(1) was holding at BNN, descending to FL130. B777(2) was, subsequently, cleared by the TC N SC to descend to FL130 into the hold at BNN. The SC did not realise his error, in clearing two a/c to the same level, until B777(2) reported descending in reaction to a TCAS RA. This flight was issued with a turn onto East and B777(2) was instructed to climb to FL140, whereupon the pilot reported a TCAS RA Climb. Minimum separation recorded as 1.6nm/400ft, with vertical separation being restored about 30secs later. The incident will be subject to assessment by UKAB. CAA Closure: Appropriate ATC personnel action taken.

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<b>A/C Type :</b>	MD11	<b>Occurrence Number :</b>	<b>200406233</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	02 Sep 2004
<b>Classification :</b>	Occurrences	<b>Location :</b>	Strumble (STU)
<b>Events :</b>	Loss of Standard Separation UK Airprox TCAS Report	<b>Location Info :</b>	3 NE

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**Pretitle :**

*UK AIRPROX 166/2004 - B777 and an MD11 3nm NE of Strumble at FL370. Both a/c received TCAS RAs.*

**Precis :**

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Separation lost when B777 was cleared to climb to FL380 through the level of an MD11 at FL370. STCA activated. B777 received and reacted to a TCAS RA. Traffic info given. The MD11 was eastbound at FL370 and had been cleared to route direct to Dover from just west of Strumble. The SC climbed two B777 aircraft, in stages, to FL380 whilst placing them on headings which ensured they stayed just to the north of the Upper ATS route centreline. The SC believed that both would be level at FL380 before lateral separation between these aircraft and the MD11 was eroded. This was not the case and avoiding action was passed to all three aircraft. The first B777 filed an Airprox against the MD11 whilst the second B777 did not file, even though standard separation was not maintained. Appropriate local ATC action taken. This AIRPROX has been subject to a separate review by the United Kingdom AIRPROX Board (UKAB).

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<b>A/C Type :</b>	EMB 145	<b>Occurrence Number :</b>	<b>200503999</b>
<b>Flight Phase :</b>	Hold	<b>Occurrence Date :</b>	28 May 2005
<b>Classification :</b>	Occurrences	<b>Location :</b>	Bovingdon (BNN)
<b>Events :</b>	UK Airprox TCAS Report Loss of Standard Separation	<b>Location Info :</b>	4 NW

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**Pretitle :**

*UK AIRPROX 78/2005 - EMB145 and B777 in the Bovingdon Hold at FL80.*

**Precis :**

Traffic info and avoiding action was given. EMB145 reported receiving a TCAS RA. STCA and SMF activated. Investigation established that controller incorrectly believed that minimum stack level (MSL) was FL80 and, following B777 departure, climbed B777 to FL80 in error. B777 then lost separation with EMB145 which was descending to FL80 in the BNN Hold. Controller would have received both verbal and visual notification of MSL. Appropriate ATC personnel action taken. This occurrence is the subject of a separate review by the UK Airprox Board.

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<b>A/C Type :</b>	B737	<b>Occurrence Number :</b>	<b>200600326</b>
<b>Flight Phase :</b>	Climb	<b>Occurrence Date :</b>	16 Jan 2006
<b>Classification :</b>	Occurrences	<b>Location :</b>	Strumble (STU)
<b>Events :</b>	UK Airprox TCAS Report Loss of Standard Separation Flight Crew Occurrence	<b>Location Info :</b>	20SW

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**Pretitle :**

*UK AIRPROX 3/2006 - B737 and a B777, 20nm Southwest of the STU VOR. Both a/c received TCAS RAs. Avoiding action given by ATC. STCA activated. Separation lost.*

**Precis :**

Investigation established that the B777 was westbound maintaining FL360 and the sector was under the control of a mentor and trainee. While concentrating on turning another a/c away from an active danger area, the trainee instructed the B737 crew to climb to FL360, which put the a/c into conflict with the B777. The mentor did not notice this transmission and was drawn to the fact when the B737 queried a return on their TCAS. Avoiding action and traffic info were passed but separation was lost. Appropriate local ATC action taken. This AIRPROX will be subject to a separate review by UKAB.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200601619</b>
<b>Flight Phase :</b>	Descent	<b>Occurrence Date :</b>	01 Mar 2006
<b>Classification :</b>	Occurrences	<b>Location :</b>	St Abbs (SAB)
<b>Events :</b>	UK Airprox TCAS Report	<b>Location Info :</b>	8 SW

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**Pretitle :**

*UK AIRPROX 25/2006 - B777 and two military a/c 8nm SW of ST ABBS VOR at FL200. B777 reported receiving a TCAS RA of climb.*

**Precis :**

Information indicates that this was a sighting report via TCAS in Class G airspace. The B777 crew did not acquire the military jets visually. This AIRPROX has been subject to a separate review by the United Kingdom AIRPROX Board.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200708629</b>
<b>Flight Phase :</b>	Descent	<b>Occurrence Date :</b>	06 Sep 2007
<b>Classification :</b>	Occurrences	<b>Location :</b>	Birmingham
<b>Events :</b>	UK Airprox Loss of Standard Separation ATC Occurrence	<b>Location Info :</b>	11 NW

**Pretitle :**

*UK AIRPROX 129/2007 - B777 and PA34, 11nm Northwest of Birmingham at FL110.*

**Precis :**

Separation lost between a B777 heading Southeast passing FL110 during descent to FL90 and a PA34 heading South at FL110. Traffic info was given and B777 was given avoiding action of a right turn onto heading 200deg. Investigation established that, when the controller took over the sector, the PA34 was maintaining FL110, heading 155, and, after the handover had taken place, the a/c was placed on its own navigation to Honiley. No further transmissions were made to, or received from, the PA34 until after the AIRPROX had occurred. The B777 was inbound to Birmingham and the controller realised it would have to be descended through the PA34. The B777 was descended at the pilot's discretion to FL150 and then FL120 to expect FL90 at CHASE. Subsequently, the B777 was cleared to descend to FL90, level at CHASE. At the time it was approximately 24nm from the PA34. The controller assessed that lateral separation would exist before vertical was lost and so he transferred the B777 to Birmingham. Birmingham APR instructed the B777 to turn right on initial contact, updating this to an avoiding action turn. Traffic info was passed about the PA34, but separation was lost. Appropriate ATC personnel action taken. This AIRPROX will be subject to a separate review by UKAB.

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<b>A/C Type :</b>	Military	<b>Occurrence Number :</b>	<b>200710264</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	18 Oct 2007
<b>Classification :</b>	Occurrences	<b>Location :</b>	GIBSO
<b>Events :</b>	Airspace Infringement Flight Crew Occurrence Loss of Standard Separation UK Airprox	<b>Location Info :</b>	40 NE

**Pretitle :**

*UK AIRPROX 161/2007 - B777 and a military transport, Northeast of GIBSO at FL190.*

**Precis :**

Military a/c infringed Airway R8 (Class A) and lost separation with a B777. Traffic info and avoiding action was given to B777 who reported having military a/c on TCAS and later visual. Military a/c was wearing a Boscombe Down squawk.

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<b>A/C Type :</b>	EMB 145	<b>Occurrence Number :</b>	<b>200802625</b>
<b>Flight Phase :</b>	Climb	<b>Occurrence Date :</b>	19 Mar 2008
<b>Classification :</b>	Occurrences	<b>Location :</b>	ERLOT

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<b>Events :</b>	Loss of Standard Separation Flight Crew Occurrence TCAS Report UK Airprox ATC Occurrence	<b>Location Info :</b>
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**Pretitle :**  
*UK AIRPROX 34/2008 - Loss of separation between a B777 and an EMB145. Traffic info and avoiding action given. STCA activated and both a/c reported complying with TCAS RAs.*

**Precis :**

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200810828</b>
<b>Flight Phase :</b>	Climb	<b>Occurrence Date :</b>	05 Oct 2008
<b>Classification :</b>	Occurrences	<b>Location :</b>	Detling (DET)
<b>Events :</b>	UK Airprox Flight Crew Occurrence Loss of Standard Separation	<b>Location Info :</b>	

**Pretitle :**  
*UK AIRPROX 138/2008 - B777 and B757 at Detling at FL190.*

**Precis :**  
B777 called on frequency climbing to FL170 on radar heading 095deg and was cleared to continue on heading and climb to FL290. A B757 approximately 6nm South of B777, called on frequency also climbing to FL170 on heading 095deg and was cleared to climb to FL280. A short time later B777 was observed on heading 110deg and converging with B757. STCA activated. Traffic info and avoiding action was given to both a/c. Separation was lost.  
CAA Closure: The B777 crew deviated from their assigned heading and turned into conflict with the B757. This AIRPROX has been subject to a separate review by the United Kingdom AIRPROX Board (UKAB).

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Number of Records : 22

## Safety Regulation Group

Safety Investigation &amp; Data Department

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*These records were retrieved from the UK CAA Mandatory Occurrence Reporting (MOR) system by a member of SIDD*

*The MOR system records include information reported to the CAA, information obtained from CAA investigations, and deductions by CAA staff based on the available information. The authenticity of the contents or the absence of errors and omissions cannot be guaranteed. Records in this system commenced on 1 January 1976 coincident with the introduction of Mandatory Occurrence Reporting in the UK, but occurrences reported voluntarily are also included, and no distinction is made between them.*

**Note: Any data provided from these records are made available on the understanding that they are only to be used for purposes of flight safety and must not be used for other purposes.**

**SUBJECT:** Serious Incidents and Accidents (as classified by the Air Accidents Investigation Branch) involving a Boeing B777 aircraft – regardless of nationality of operator and registration

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<b>A/C Type :</b>	B747	<b>Occurrence Number :</b>	<b>199702255</b>
<b>Flight Phase :</b>	Taxi	<b>Occurrence Date :</b>	14 May 1997
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	London-Heathrow - LHR
<b>Events :</b>	UK Reportable Accident	<b>Location Info :</b>	

**Pretitle :**

*UK Reportable Accident : As a B747 and a B777 were taxiing to hold for R/W27L, their wingtips collided.*

**Precis :**

AAIB Field investigation. The B747 was overtaking a B777 during a taxiing manoeuvre. The P1 misjudged the sepn distance & the a/cs LH winglet struck & damaged the B777's right aileron (trailing edge) some 15ft from the wing tip. The winglet had then passed under the wing lightly scoring the under surface before causing substantial damage to the leading edge slat. The flight crew of the B777 were alerted to this accident by their pax. The B747 operating company has now highlighted, in its briefing material for crews operating into Heathrow, the fact that extreme caution is advised when taxiing in some congested areas of the airport as there may be no wingtip clearance between large wingspan a/c. The Airport authority has also set up a working group to cover this problem which has been tasked to produce recommendations by mid December 1997. (See also AAIB Bulletin 9/97 Ref EW/G96/05/23),

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>199907612</b>
<b>Flight Phase :</b>	Take Off	<b>Occurrence Date :</b>	05 Nov 1999
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	London-Heathrow - LHR
<b>Events :</b>	UK Reportable Accident	<b>Location Info :</b>	

**Note: Any data provided from these records are made available on the understanding that they are only to be used for purposes of flight safety and must not be used for other purposes.**

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**Pretitle :**

*UK Reportable Accident : A/c over-rotated on take-off, resulting in tailscrape & hole in fuselage fwd of pressure bulkhead.*

**Precis :**

AAIB Field investigation. At VR 161Kts with a gusting crosswind, the copilot rotated at what she thought was the normal rate of 2.5deg/sec. The actual rate as indicated on the FDR analysis was 3.5deg/sec. The rotation was maintained to an angle of 12.8deg with the main landing gear still on the runway. Tail contact occurs at approximately 11deg in that condition. After airborne, the crew received an EICAS message that the aircraft had suffered a tail strike. The aircraft was then depressurised in accordance with the emergency checklist and climbed initially to FL90, jettisoned fuel and was radar vectored for an uneventful landing at London Heathrow.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200106166</b>
<b>Flight Phase :</b>	Parked	<b>Occurrence Date :</b>	05 Sep 2001
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	Denver
<b>Events :</b>	Reportable Accident Fire (not engine) Ramp Incident	<b>Location Info :</b>	

**Pretitle :**

*UK Reportable Accident : B777 fire during refuelling at Denver. One fatality. Small number of remaining passengers disembarked expeditiously. Joint AAIB/NTSB investigation.*

**Precis :**

During refuelling, with the aircraft parked at the gate to unload passengers, a pressurised refuelling hose broke loose from the aircraft and a fire erupted. The National Transportation Safety Board determines the probable cause(s) of this accident as follows: The overstress fracture of the aircraft's refuelling adapter ring that resulted from the abnormal angular force applied to it; The applied angular force occurred due to the ground refueller inadequately positioning the hydrant fuel truck (in relation to the aircraft), and his inattentiveness while lowering the refuelling lift platform, thus permitting the refuelling hose to become snagged and pulled at an angle; The fracture of the adapter ring during the refuelling led to the ignition of the pressurised (mist producing) spilled fuel and subsequent fire. See NTSB Factual Report ref: DEN01FA157, which can be viewed in full at [www.nts.gov/ntsb](http://www.nts.gov/ntsb).

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200203668</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	05 Jun 2002
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	Bogota
<b>Events :</b>	Turbulence Problems Aircraft Occupant Injury / Death - Crew Reportable Accident	<b>Location Info :</b>	

**Pretitle :**

*UK Reportable Accident : Cabin crew suffered serious leg injuries due to turbulence whilst enroute. Operator investigation.*

**Precis :**

The aircraft was avoiding CB activity which was indicated on the weather radar when it encountered moderate turbulence for five to ten seconds. Seat belt signs had been illuminated but two cabin crew members suffered serious injuries to their ankles. They were considered to be in shock, but stable. At the time of the incident the aircraft was half way to destination, and as one of the injured crew members was destination based the P1 decided to continue to the destination airport. Operator investigation as part of a wider remit on cabin crew procedures. No UK AAIB involvement unless requested by the operator.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200300003</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	01 Jan 2003
<b>Classification :</b>	Serious Incidents	<b>Location :</b>	
<b>Events :</b>	Crew Illness / Incapacitation Emergency Call	<b>Location Info :</b>	

**Pretitle :**

*Serious Incident : PAN declared due to first officer illness/incapacitation enroute. Flight continued to destination and uneventful landing carried out. AAIB AARF investigation.*

**Precis :**

Shortly after a routine departure the first officer left the flight deck feeling unwell. A flight attendant was called in his absence. On his return 30 minutes later, having vomited, the commander decided to retain handling duties. Neither had eaten on board and had eaten separately prior to the flight. Later whilst over the Atlantic the first officer left the flight deck again. On this occasion the Cabin Services Director was called to the flight deck as he held a PPL and R/T licence. 'Medi link' was contacted for advice. A diversion was not felt to be necessary and since the weather was poor on the east coast of North America the commander decided to proceed to the UK. The first officer was medicated and left resting in the cabin. The company was advised of the situation on HF radio and assistance requested. A 'PAN' and single crew operation was declared with 'Shanwick Control'. The aircraft was routed directly to an automatic landing on Runway 09R at LHR. AFS met the aircraft but the first officer left the aircraft unaided after assisting the commander with shutdown and secure checks. See AAIB Bulletin 7/2003, ref: EW/G2003/01/03.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200300133</b>
<b>Flight Phase :</b>	Taxi	<b>Occurrence Date :</b>	10 Jan 2003
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	London-Heathrow - LHR
<b>Events :</b>	Reportable Accident Ground (AD) Collision - Obstacle / Vehicle	<b>Location Info :</b>	

**Pretitle :**

*UK Reportable Accident : Nr1 engine struck airbridge when parking on stand with APIS system in use. No injury to 247 POB. AAIB AARF investigation.*

**Precis :**

After landing the aircraft was directed to park on Stand M32. The stand, incorporating an airbridge, was equipped with an Aircraft Positioning and Information System (APIS) where the pilot interprets alignment and stopping information essential for accurate parking. The pilot reported that as he approached the expected stopping position the countdown distance indications changed directly from 1.2 metres to 'T FAR - STOP' indicating that the aircraft had overrun the correct position. The aircraft was stopped immediately, both engines were shut down and the passengers disembarked normally. Subsequent observations revealed that the leading edge of the left hand engine cowling had struck the airbridge and was punctured. The floor of the airbridge was also buckled and the auto leveller damaged. The pilot also noted that the wheels of the airbridge were positioned one metre outside the normal operating area defined by a painted circle. The dispatcher, who had monitored the aircraft as it manoeuvred onto the stand however, reported that, prior to the collision, the wheels of the airbridge were within the marked circle. She also reported that the APIS indications counted down normally until the 'STOP' indication and changed to 'T FAR - STOP' by the time the aircraft engine had struck the airbridge. Furthermore an engineer, standing by the normal stop position, saw the 'STOP' indication and then stepped clear of the aircraft's nosewheel as it continued past him. The aircraft eventually stopped four metres beyond the designated stop position. The APIS records the operation of its guidance system together with any faults that occur. The data for this manoeuvre was analysed and indicated that no faults were recorded and the normal stopping information was displayed, including the instruction to 'STOP'. A tug was used, after passenger disembarkation, to push back the aircraft and then reposition it onto stand. During this manoeuvre the APIS again operated normally with the recorded data showing that the 'STOP' command occurred at the correct stop position. See AAIB Bulletin 4/2003, ref: EW/G2003/01/08.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200300854</b>
<b>Flight Phase :</b>	Taxi	<b>Occurrence Date :</b>	08 Feb 2003
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	London-Heathrow - LHR
<b>Events :</b>	ATC Occurrence Ground (AD) Collision - Other A/c Reportable Accident	<b>Location Info :</b>	

**Pretitle :**

*UK REPORTABLE ACCIDENT-During aircrew pre departure checks damage found to B777's L/H elevator. Believed damage caused when B777 taxied onto Stand W5 and hit a B747 being towed. ATC error.*

**Precis :**

Also score marks on the underside of the LH stabilizer. Minor damage found to the winglet of the B747. AARF investigation. Flight recorder data and recorded ground movement radar show that at 0708 hrs the 2 a/c made contact, while each was moving forwards. Neither the flight crew nor the tow crew (of the B747) were aware of any contact between the a/c. The upper surface of the LH winglet of the B747 contacted the underside of the left horizontal stabiliser of the B777. Although there were several required walkround inspections of each a/c in the intervening periods the damage was not noted until approximately 1855 on the same day at Heathrow for the B777 and following the B747's arrival at Hong Kong after its flight from Heathrow. When the B777 arrived at Heathrow it could not fully position on its Stand W5 as the AGNIS had not been switched on and this information had been passed to ATC. When ATC gave the B747 tow crew their clearance they did not pass information about the position of the B777 nor would it be possible for the crew to see the W5 stand markings from their position on the centreline of the taxiway. See AAIB Bulletin 7/2003 Ref EW/G2003/02/09. An ATC investigation noted that the B777 was one of a number of aircraft, inbound to T4, having to hold short of their stand due to a lack of stand guidance, thereby obstructing taxiways, and a number of a/c were having to hold on various taxiways, awaiting stand availability. All of this added to the controller's workload and increased the complexity of the task. Appropriate ATC follow-up action has been taken. The question of T4 congestion has been raised at the highest level with the aerodrome authority and the airline concerned. In addition, ATC Ops staff now attend regular monthly workshops with the aerodrome authority and the airline and 'ad-hoc' meetings are arranged with T4 staff in order to address specific issues when they arise.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200304039</b>
<b>Flight Phase :</b>	Climb	<b>Occurrence Date :</b>	26 Jun 2003
<b>Classification :</b>	Serious Incidents	<b>Location :</b>	Reigate
<b>Events :</b>	Detached A/c Part Emergency Call Diversion /Return A/c Maintenance Flight Crew Occurrence	<b>Location Info :</b>	

**Pretitle :**

*Serious Incident: Air Driven Unit (ADU) bay access door separated during climb, damaging two cabin windows. PAN declared, aircraft returned. AAIB Field investigation.*

**Precis :**

AAIB Bulletin 3/2005, ref: EW/C2003/06/04 - Summary: A large access door, measuring 4 x 6 feet and weighing 70lb, detached from the aircraft shortly after take off from Gatwick Airport, causing substantial damage to two cabin windows and minor damage to the fuselage and fin. Fragments of the door penetrated into the cabin and large parts of it landed close to persons on the ground. It was likely that only one of the thirteen door catches had been fastened and that the door had suffered overload failure due to aerodynamic forces as the aircraft accelerated, allowing it to open and detach. Multiple walk-round inspections of the aircraft by different personnel had failed to detect the open

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catches. The inadequate fastening had apparently occurred during a routine maintenance check due to a deviation from standard procedures; a practice that reportedly had been fostered by features of the maintenance system and may have been commonplace. It appeared likely that the human performance factors evident in this event could be affected beneficially by improvements in the operator's maintenance and inspection systems. One safety recommendation (2004-77) has been made to the aircraft operator.

CAA Closure: CAA FACTOR F13/2005 was issued on 12 April 2005.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200304332</b>
<b>Flight Phase :</b>	Cruise	<b>Occurrence Date :</b>	07 Jul 2003
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	En Route
<b>Events :</b>	Reportable Accident Turbulence Problems Loss of A/c Control Aircraft Occupant Injury / Death - Crew	<b>Location Info :</b>	

**Pretitle :**

*UK Reportable Accident: Enroute turbulence encounter between Houston and Chicago. No damage to aircraft. 87 POB, 1 serious injury (cabin crew member sustained a broken ankle). NTSB investigation.*

**Precis :**

CAA Closure: This occurrence is subject to investigation by the U.S. Authorities. On receipt of their report the CAA's records will be updated accordingly and the occurrence may be re-opened if further action is deemed necessary.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200405542</b>
<b>Flight Phase :</b>	Take Off	<b>Occurrence Date :</b>	11 Aug 2004
<b>Classification :</b>	Serious Incidents	<b>Location :</b>	Houston
<b>Events :</b>	Engine Malfunction Emergency / Precautionary Evacuation Diversion /Return Smoke / Fumes (not engine) Manufacture	<b>Location Info :</b>	

**Pretitle :**

*Serious Incident: High engine vibration on take off. Smoke in cabin. Aircraft returned. Crew and passengers evacuated. Internal engine fire/damage. NTSB investigation.*

**Precis :**

CAA Closure: Investigation revealed that a LH engine turbine blade had failed due to a fatigue crack, causing excessive vibration which in turn resulted in the failure of an oil seal leading to smoke inside the a/c. The failed blade had been mis-marked with the wrong part number by the manufacturer, allowing it to remain in service far in excess of its life limit. A review by the manufacturer confirmed that no other such blades had been mis-labeled. Additional measures have been adopted to ensure that no further mis-identified blades will be released. See NTSB Factual Report ref: DCA04IA066, which can be viewed in full at [www.nts.gov/ntsb](http://www.nts.gov/ntsb).

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200405898</b>
<b>Flight Phase :</b>	Take Off	<b>Occurrence Date :</b>	24 Aug 2004
<b>Classification :</b>	Serious Incidents	<b>Location :</b>	Melbourne
<b>Events :</b>	Engine/Malfunction Power Loss - First Engine Diversion /Return	<b>Location Info :</b>	

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**Pretitle :**

*Serious Incident: LH engine failure on take off. Aircraft returned and landed safely. Engine intake acoustic lining missing. Subject to investigation by Australian authority.*

**Precis :**

Engine manufacturer advised.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200501421</b>
<b>Flight Phase :</b>	Landing	<b>Occurrence Date :</b>	01 Mar 2005
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	Manchester (MCT)
<b>Events :</b>	Reportable Accident Fire (not engine) Landing Gear Problems Contingency A/c Maintenance	<b>Location Info :</b>	

**Pretitle :**

*UK Reportable Accident: LH MLG fire after landing. Emergency evacuation carried out. AAIB Field investigation.*

**Precis :**

AAIB Bulletin 1/2006, ref: EW/C2005/03/01 - Summary: Whilst the aircraft was taxiing, following an otherwise uneventful landing at Manchester, flames were seen around the wheels of the LH main landing gear. As the airport Rescue and Fire Fighting Service (RFFS) attempted to extinguish the flames, copious quantities of what the RFFS Watch Commander assessed as smoke were produced and, fearing that the fire was getting out of control, he advised the aircraft commander to evacuate the aircraft. Minor injuries were sustained by some passengers and several fire service personnel during the evacuation. The investigation determined that the cause of the fire, established as being in the nr10 main landing gear wheel, most likely resulted from the maintenance practice used when cleaning the wheel heat shields. It was likely that these had been immersed in a flammable solvent, which allowed the ceramic fibre insulation material contained within to become contaminated. The fire occurred on the second landing after the wheel had been fitted to the aircraft, when the brake pack temperature was likely to have been higher than on the previous landing. Four safety recommendations have been made (2005-092, 2005-093, 2005-097 and 2005-131) of which three are addressed to the UK CAA.

CAA Closure: CAA FACTOR F10/2005, detailing the CAA responses to the four AAIB Safety Recommendations, was issued on 10 March 2006. Any further CAA action required will be progressed via the 'Annual Review of AAIB Recommendations' procedure.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200709711</b>
<b>Flight Phase :</b>	Parked	<b>Occurrence Date :</b>	03 Oct 2007
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	London-Heathrow - LHR
<b>Events :</b>	Reportable Accident Ramp Incident 3rd Party Injury / Death	<b>Location Info :</b>	Stand 422

**Pretitle :**

*UK Reportable Accident: Loading vehicle struck a/c near rear baggage hold. Driver's legs trapped against a/c. Serious injury to ramp staff. Minor damage to a/c. Subject to operator investigation.*

**Precis :**

The a/c was not damaged as a result of this accident and the investigation was delegated by the AAIB to the operator involved.

CAA Closure: The operator's investigation concluded that whilst using a pallet loader the cab was driven into the a/c. The operative had both legs trapped and broken. Passengers were disembarked. The operative has stated that he was unable to stop the vehicle. The vehicle was subsequently

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checked and found serviceable.

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200800448</b>
<b>Flight Phase :</b>	Approach	<b>Occurrence Date :</b>	17 Jan 2008
<b>Classification :</b>	UK Reportable Accident	<b>Location :</b>	London-Heathrow - LHR
<b>Events :</b>	Reportable Accident Runway Undershoot Engine/Malfunction Power Loss - Additional Engine Icing Problems Fuel	<b>Location Info :</b>	

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**Pretitle :**

*UK Reportable Accident: Engines failed to respond to power demands. A/c lost speed and landed short of runway. A/c destroyed. 152 POB - 1 serious and 12 minor injuries. AAIB Formal investigation.*

**Precis :**

The a/c was established on the approach in landing configuration with autopilot and autothrottles engaged. At approx 780ft the autothrottles commanded an increase in thrust from both engines, which initially responded. However, at about 720ft, right engine thrust reduced followed seven seconds later by left engine thrust. The engines both continued to produce thrust above flight idle but less than that commanded they then failed to respond to further autothrottle demands and subsequent manual movement of the thrust levers. Airspeed reduced as the autopilot attempted to maintain the glideslope and by 200ft had fallen to about 108kts. The autopilot disconnected at approx 175ft, the a/c descended rapidly and the landing gear made contact with the ground some 1000ft short of the paved runway surface just inside the airfield boundary fence. During the impact and short ground roll the NLG collapsed, the RH MLG separated and the LH MLG was pushed up through the wing. A significant amount of fuel leaked after the a/c came to rest but there was no fire. An emergency evacuation was carried out via the slides, all of which operated correctly; eight passengers received minor injuries and one suffered a broken leg. Examination of recorded flight data showed no anomalies in any of the major a/c systems and initial investigation found no indications of any pre-existing problems. It was later discovered that both engine HP fuel pumps showed signs of abnormal cavitation, indicating either a restriction in the fuel supply or excessive fuel aeration. However, both pumps were assessed as being capable of delivering full flow. A loose union was found in a fuel tank scavenge line and some small items of debris were discovered in the fuel tanks. One Safety Recommendation (2008-009) was made to the a/c manufacturer regarding the emergency engine shutdown sequence and has been addressed by issue of a Multi Operator Message. See AAIB Special Bulletins S1/2008 and S3/2008. An AAIB Interim Report, issued 4 September 2008, concludes that the fuel flow to both engines was restricted, most probably due to ice within the fuel feed system and contains three Safety Recommendations (2008-047, -048 and -049). After further testing it was concluded that the most likely location of the ice restriction was the fuel oil heat exchanger (FOHE). AAIB Interim Report 2, issued 12 March 2009, refers and contains five additional Safety Recommendations (2009-028 to -032).

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<b>A/C Type :</b>	B777	<b>Occurrence Number :</b>	<b>200900019</b>
<b>Flight Phase :</b>	Take Off	<b>Occurrence Date :</b>	02 Jan 2009
<b>Classification :</b>	Serious Incidents	<b>Location :</b>	Atlanta
<b>Events :</b>	Engine/Malfunction Power Loss - First Engine Uncontained Engine Failure Rejected Take-Off	<b>Location Info :</b>	

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**Pretitle :**

*Serious Incident: Power surge in RH engine on take-off. Take-off aborted. Passengers deplaned*

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*without injury. Possibly uncontained - impact dent in fuselage. Subject to overseas investigation.*

**Precis :**

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Number of Records : 15