

**Aviation Safety Investigation Report  
199805392**

**Boeing Co  
B747**

**28 November 1998**

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**NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at [www.atsb.gov.au](http://www.atsb.gov.au).**

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| <b>Occurrence Number:</b> 199805392<br><b>Location:</b> 100km SE Heathrow, Aerodrome<br><b>State:</b> Other<br><b>Date:</b> Saturday 28 November 1998<br><b>Time:</b> 1300 hours<br><b>Highest Injury Level:</b> None | <b>Occurrence Type:</b> Incident<br><br><b>Inv Category:</b> 4<br><br><b>Time Zone:</b> UTC |
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| <b>Aircraft Manufacturer:</b> Boeing Co<br><b>Aircraft Model:</b> 747-438<br><b>Aircraft Registration:</b> VH-OJD | <b>Serial Number:</b> 24481 |
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| <b>Type of Operation:</b><br><b>Damage to Aircraft:</b><br><b>Departure Point:</b><br><b>Departure Time:</b><br><b>Destination:</b> | Air Transport High Capacity International Passenger Scheduled<br>Minor<br>London United Kingdom<br><br>Bangkok Thailand |
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**Approved for Release:** Wednesday, August 11, 1999

As the aircraft approached the top of climb the crew received a warning indicating a failure of the equipment cooling system. Ground engineering were contacted and the failure was confirmed. After dumping fuel, the aircraft returned to London and landed without further incident. A post-flight inspection revealed broken wiring within the electrical loom to the equipment cooling valve. The wires had arced and there was evidence of charring to the cargo hold insulation blanket in that area.

Because the aircraft had returned to London, the incident was investigated by the UK Air Accidents Investigation Branch. They reported that the broken wiring was difficult to locate as it had been incorrectly routed beneath the thermal insulation blanket in the forward cargo hold. It was evident that a small fire had occurred to the outer film of the blanket and that this was associated with the broken wiring. The fire had affected an area of about 40 X 15 cm. Water, resulting from condensation, was present in the bilge and it was considered possible that this may have limited the extent of the fire. As the integrity of the blanket had not been compromised, it was not replaced. The blanket had recently been changed for a lighter weight blanket manufactured in-house by the operator and met the flammability requirements. The wiring was repaired by in-line splicing and the aircraft returned to service.

The report added that the maintenance crew considered that the wires may have been inadvertently damaged when they were stepped on whilst hidden from view, possibly when the blanket was replaced. The maintenance personnel reported that it was not uncommon to lose balance whilst working within the cargo bays.

