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## Brake fire after landing, Boeing 747-467, VR-HUE, 9 September 1996

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**Micro-summary:** This Boeing 747-467 experienced a brake fire after landing.

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**Event Date:** 1996-09-09 at 0336 UTC

**Investigative Body:** Aircraft Accident Investigation Board (AAIB), United Kingdom

**Investigative Body's Web Site:** <http://www.aaib.dft.gov/uk/>

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# Boeing 747-467, VR-HUE, 9 September 1996

## AAIB Bulletin No: 11/96 Ref: EW/C96/9/2 Category: 1.1

<b>Aircraft Type and Registration:</b>	Boeing 747-467, VR-HUE
<b>No &amp; Type of Engines:</b>	4 Rolls-Royce RB211-524G turbofan engines
<b>Year of Manufacture:</b>	1993
<b>Date &amp; Time (UTC):</b>	9 September 1996 at 0336 hrs
<b>Location:</b>	Stand M26, London Heathrow Airport
<b>Type of Flight:</b>	Scheduled Passenger
<b>Persons on Board:</b>	Crew - 22 - Passengers - 387
<b>Injuries:</b>	Crew - Nil - Passengers - Nil
<b>Nature of Damage:</b>	Damage to No 1 wheel, tyre and brake pack
<b>Commander's Licence:</b>	Airline Transport Pilot's Licence
<b>Commander's Age:</b>	48 years
<b>Commander's Flying Experience:</b>	13,804 hours (of which 3,424 were on type) Last 90 days - 171 hours Last 28 days - 21 hours
<b>Information Source:</b>	AAIB Field Investigation.

The aircraft had previously operated a sector from Singapore to Hong Kong, following which the No 1 main wheel assembly, complete with bearings, had been changed due to tyre wear. The aircraft then operated the Hong Kong to Heathrow sector normally until, after parking on the stand and while the passengers were disembarking, a ground engineer reported a brake fire. The fire was rapidly extinguished by the ground crew. The Airport Fire Service arrived just three minutes after being called, however the fire was out when they arrived, and they then continued to monitor the situation while the disembarkation continued normally.

Inspection of the aircraft showed that a limited fire had occurred affecting only the No 1 wheel and brake. The wheel and brake pack were removed and the axle inspected, but no other damage was found. A replacement wheel and brake pack were fitted and the aircraft was returned to service. No anti-skid or thrust reverser defects were reported or found, and the runway condition had been

dry. The landing weight had been calculated as 249,200 kg and medium autobrake had been used during the landing.

It was noted that the tyre was contaminated with grease which had been thrown radially outwards by wheel rotation, and that excessive grease was visible around the inner bearing. The grease had been very hot, and a quantity of old grease had accumulated around the heat shield within the brake pack assembly. The inner bearing was inspected and found to contain excessive quantities of grease which had exuded from the bearing and migrated radially outwards. There was no evidence that the grease had come from the axle, or brake pack. The replacement wheel was inspected before fitment and it was noted that excessive grease had also been packed in the associated wheel bearings. The excess grease was removed before fitting the wheel.

Both of the wheel and bearing assemblies had been overhauled by the operator. The maintenance organisation in London has advised the operator of the problem. The operator's Engineering Department had published an Advisory Newsletter in June 1996 advising that a few cases of carbon brake fires had been reported and that these were thought to be due to excessive grease application during wheel, or brake, installation. It stated: "Excessive grease may cause a fire when the brake becomes hot".