
Smoke emergency, Boeing 757-200APF, TF-FIE

Micro-summary: This Boeing 757-200 crew thought they smelled smoke, and diverted.

Event Date: 2005-08-18 at 2239 UCT

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

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

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INCIDENT

Aircraft Type and Registration:	Boeing 757-200APF, TF-FIE
No & Type of Engines:	2 Rolls-Royce RB211-535E4 turbofan engines
Year of Manufacture:	1987
Date & Time (UTC):	18 August 2005 at 2239 hrs
Location:	London Stansted Airport, Essex
Type of Flight:	Public Transport (Cargo)
Persons on Board:	Crew - 2 Passengers - None
Injuries:	Crew - None Passengers - N/A
Nature of Damage:	Main bearing in engine
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	40 years
Commander's Flying Experience:	6,924 hours (of which 4,488 were on type) Last 90 days - 246 hours Last 28 days - 58 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and further inquiries by AAIB

The aircraft was taking off from Runway 23 for a short night flight to Liege, Belgium; the first officer was the handling pilot. The takeoff was uneventful until, at about 5-10 kt below V_1 , the captain thought he might have seen some smoke in the cockpit. At this time the first officer was unable to confirm the presence of smoke.

At approximately 500 ft, the captain turned-up his reading light and called that he could see smoke and the first officer confirmed that he could smell it. They called the control tower, explaining the circumstances and requesting a turn-back and landing. The controller asked if they were declaring an emergency but the captain declined, saying that the smoke had cleared however he still preferred to return. They were given

radar vectors to 5 to 6 miles finals and the aircraft landed on Runway 23 without any difficulties after a total airborne time of 11 minutes. The Airport Fire Service attended and, after a brief inspection, the aircraft was taxied back to the gate with everything appearing normal.

A technician from the maintenance provider attended and agreed that he could also smell an odour of hot oil, apparently emanating from the air conditioning system. Subsequent inspection suggested that an oil leak, apparently from the No 1 bearing in the left engine, had been ingested into the intermediate pressure compressor and thence into the air conditioning bleed air. Initial actions were to change and inspect the pressure and

scavenge oil filters but the operator subsequently opted to change the left engine. After this the aircraft was released to service with no further reports of air contamination.

A subsequent strip examination of the engine showed that a cracked No 1 bearing front ring seal had been responsible for the oil leak.