Boeing 757-236, G-BIKK

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Aircraft Type and Registration:	Boeing 757-236, G-BIKK
No & Type of Engines:	2 Rolls-Royce RB211-535C turbofan engines
Year of Manufacture:	1983
Date & Time (UTC):	23 September 1997 at 1443 hrs
Location:	Geneva Airport, Switzerland
Type of Flight:	Public Transport
Persons on Board:	Crew - 8 - Passengers - 124
Injuries:	Crew - None - Passengers - None
Nature of Damage:	Nil
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	47 years
Commander's Flying Experience:	12,800 hrs (of which 4,840 were on type)
	Last 90 days - 165 hours
	Last 28 days - 74 hours
Information Source:	Operator's Air Safety Reporting System

The aircraft was operating on a scheduled service flight fromMilan Linate Airport to London Heathrow. As the landing gearwas being retracted after take-off, an Engine Indication and CrewAlerting System (EICAS) message, 'GEAR DOORS' appeared. The crewrecycled the landing gear but this had no effect upon the statusof the indication. Some airframe vibration was apparent and thiswas confirmed by the cabin crew located near the middle of theaircraft. During the climb, the crew consulted the aircraft'sQuick Reference Handbook (QRH) which indicated that the only actionrequired was to limit the airspeed to 270 kt and Mach 0.82. Theyelected to cruise at FL310 and considered the potential drag penaltyand fuel implications of continuing the sector with a gear doornot closed.

The Hydraulics systems status page indicated that the Left systemquantity was lower than the other two systems. The Left systemquantity continued to reduce progressively and the Commander,in consultation with the First Officer, elected to divert to Geneva,which was close to the planned route

and had engineering supportfacilities. An EICAS Hydraulic Quantity warning appeared in duecourse as the contents reduced further.

The cabin crew were briefed and ATC informed, although no emergencywas declared. The crew completed the QRH checklists for Lossof Hydraulic Quantity and Loss of Hydraulic System Pressure Single(Left) System. A landing with 20° Flap was planned in accordancewith QRH procedure.

The aircraft was given radar vectors and completed an uneventfulILS approach and manual landing on Runway 05, with gentle manualbraking. The Commander planned to exit the runway at a rapidexit taxiway, should nosewheel steering not be available. Inthe event, there was sufficient hydraulic fluid remaining to allowthe nosewheel steering system to function and the commander commencedto taxied the aircraft off the runway.

When the aircraft was about 50 metres along the taxiway, ATC informedthe crew that there was smoke coming from the landing gear andthat the aircraft should stop in its present position. The AirportFire Service had been informed of the aircraft's situation andwere in attendance on the taxiway. Smoke was observed by thefire crew coming from the landing gear area.

There was no VHF communication link between the aircraft and thefire service. There were some communications difficulties but,using hand signals and attempting to shout messages through theopen flight deck DV windows, the Commander ascertained that thefire chief wanted the engines to be shut down. This was compliedwith and, believing that a fire hazard existed, the Commanderinitiated a full evacuation of the aircraft.

All of the emergency slides deployed correctly and all of theoccupants exited the aircraft without injury. Some passengerswere not constrained after the evacuation and strayed onto therunway before being assembled by the Fire Service prior to beingtaken back to the terminal.

The 'GEAR DOORS' EICAS message appeared because an hydraulic leakfrom a 'truck tilt actuator hose' caused a pressure drop whichwas enough to prevent the door lock from engaging during the gearretraction sequence. This reduced pressure however, was not lowenough to trigger an EICAS low pressure warning. After 19 minutesthe hydraulic leak produced an EICAS left hand reservoir warning,which is triggered when the reservoir contents drop below 48%. At this stage the captain decided to divert, and when gear downwas selected a left hand hydraulic system 'LOW PRESSURE' amberlight and EICAS message illuminated because the selection drainedaway most of the remaining fluid in the left hand system.

Two hydraulic fuses, fitted to the extend/retract lines, failedto operate and isolate the leaking hose. The fuses performedsatisfactorily on subsequent tests and may not have operated inthe aircraft because their leak detection parameters - flow rateand quantity - were not met. The fuses have been sent to Boeingfor further testing.

A check of the operator's records indicated that the failure ofthis particular hose is an uncommon event, and can therefore betreated as an isolated incident.