

INCIDENT

Aircraft Type and Registration:	Boeing 747-443, G-VROM	
No & Type of Engines:	4 General Electric CF6-80C2B1F turbofan engines	
Year of Manufacture:	2001	
Date & Time (UTC):	8 October 2006 at 0800 hrs	
Location:	Near London (Gatwick) Airport	
Type of Flight:	Commercial Air Transport	
Persons on Board:	Crew - 19	Passengers - 365
Injuries:	Crew - None	Passengers - None
Nature of Damage:	None	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	53 years	
Commander's Flying Experience:	14,754 hours (of which 6,340 were on type) Last 90 days - 112 hours Last 28 days - 52 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot and enquiries by the AAIB	

Synopsis

Following an instruction to take up the hold before commencing an approach at London (Gatwick) Airport, the commander declared an emergency to avoid landing with Final Reserve Fuel. The aircraft was given priority for the approach, and the final landing was achieved with 7 tonnes of fuel remaining. Company Reserve Fuel was 7.4 tonnes and the Final Reserve Fuel was 3.9 tonnes.

History of the flight

Towards the end of a transatlantic flight the crew had checked the ATIS for the destination of London (Gatwick) Airport. For the expected landing, the weather was good with visibility greater than 10 km and the lowest cloud at 1,200 ft aal.

During the subsequent descent, the crew was instructed to take up the hold at 'Goodwood' and to expect a 10 minute delay prior to commencing approach. Due to earlier route diversions because of adverse weather and a lower than forecast tailwind during the cruise, the crew had insufficient fuel to accept any delay. The commander advised ATC that he could not accept a delay and was then asked if he wished to declare an emergency or to divert. The nominated diversion was London (Heathrow) Airport and the commander was aware that it would be very busy at that time of day. He estimated that if he accepted the hold, his landing fuel would be close to Final Reserve Fuel. With the knowledge that Gatwick Airport was on single runway

operations, the commander decided that declaring an emergency was the most sensible option and declared a 'MAYDAY'. The aircraft was then given priority for an approach and landed uneventfully at Gatwick. The aircraft landed with 7 tonnes of fuel.

Relevant information

For the incident flight, the Company Minimum Reserve (CMR) Fuel was 7.4 tonnes, which was the normal minimum fuel on landing. This comprised Final Reserve Fuel of 3.9 tonnes, which was the fuel required to hold for 30 min at 1,500 ft aal, and 3.5 tonnes of fuel for the planned diversion. If, during flight, the planned fuel at destination fell below the CMR, the commander had to decide whether to initiate a diversion or continue to destination. His decision would be based on the cause of the delays, the actual and forecast weather at his alternate airfield, the serviceability of the approach aids at the alternate and the accuracy of en-route winds forecast between destination and alternate.

The company Operations Manual included the information that the term 'Fuel Emergency' was not recognised by UK ATC. Crews are instructed to declare a 'Pan' when the estimated fuel on landing was

expected to be less than Final Reserve Fuel. If the fuel on board reduced to an amount only sufficient for 20 min endurance, then a 'Mayday' must be declared.

ATC procedures require that priority is given to aircraft in emergency. However, the declaration of 'MAYDAY' will not always result in a total prohibition on other aircraft taking off or landing at the nominated destination. Any prohibition would depend on the emergency and the distance and time involved before the aircraft in emergency was on final approach.

Conclusion

With the information that the aircraft had a 10 minute delay before starting the approach for landing, the commander had to decide whether to accept the hold, divert to his destination or declare an emergency. His main concern was that accepting a hold would result in the aircraft landing with close to Final Reserve Fuel. With his knowledge that he would probably encounter another delay at the alternate airfield of Heathrow, he decided to declare an emergency for an approach to his primary destination. This was in accordance with his company procedures but a 'Pan' call, rather than a 'Mayday' would have been more appropriate.