
Tailpipe fire on start, Boeing 747-400, 9M-MPD

Micro-summary: On engine start, this Boeing 747 had a tailpipe fire.

Event Date: 1998-09-29 at 0940 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 747-400, 9M-MPD

AAIB Bulletin No: 2/99 Ref: EW/G98/09/20 Category: 1.1

Aircraft Type and Registration: Boeing 747-400, 9M-MPD

No & Type of Engines: 4 Pratt and Whitney PW 4056 turbofan engines

Year of Manufacture: N/K

Date & Time (UTC): 29 September 1998 at 0940 hrs

Location: London Heathrow Airport

Type of Flight: Public Transport

Persons on Board: Crew - 23 - Passengers - 356

Injuries: Crew - None - Passengers - 2 minor

Nature of Damage: Scorch marks in No 3 engine jet pipe, damage to right high speed aileron, flap sections and No 7 'boat fairing'

Commander's Licence: Airline Transport Pilot's Licence

Commander's Age: 42 years

Commander's Flying Experience: 17,000 hours (of which 1,600 were on type)

Last 90 days - 160 hours

Last 28 days - 40 hours

Information Source: Aircraft Accident Report Form submitted by the commander

The aircraft had just been pushed back from Stand J8, where Nos 1 and 4 engines had already been started due to the auxiliary power unit being unserviceable, into 'Juliet' cul-de-sac. During the subsequent start sequence for the No 3 engine, the ground crew observed that a fire had started in the jet pipe and immediately alerted the commander. Although no evacuation command had been given, a passenger seated towards the rear of the cabin left his seat and opened door 5L (ie the rearmost door on the left side) which resulted in a 'door open' indication on the flight deck. The door slide deployed, the passenger in question used it to leave the aircraft and he was followed by a number of other passengers. The ground crew immediately informed the flight deck of the evacuation that was in progress and, concerned by the potential danger posed by the jet efflux to these passengers on the ground, the pilots immediately shutdown all engines. Airfield Operations

personnel, who were in a nearby vehicle, together with airline staff and the tug crew attempted to make these passengers lie on the ground until the danger from jet efflux had ceased. All of the evacuated passengers, two of whom had suffered minor injuries, were taken into the terminal via Stand J6, and the passenger responsible for opening the aircraft door was later interviewed by the police.

The Airfield Fire Service promptly arrived at the aircraft and confirmed that the jet pipe fire had extinguished. The aircraft was then prepared for a return to the stand, where the crew and remaining passengers disembarked normally.

The jet pipe fire had caused damage to the right hand high speed aileron and right/outboard aft flap section, which required replacement, and the No 7 'boat fairing' had to be removed (in accordance with the Minimum Equipment List) prior to the aircraft's departure several days later. In addition, temporary repairs were required to the right/outboard mid and fore-flap sections.

The investigation of the No 3 engine was co-ordinated with the airline's maintenance base in Malaysia. There were no indications from the aircraft's Central Maintenance Computer that any engine limitations, such as exhaust gas temperature, had been exceeded. Accordingly it was decided to conduct a manual start on the engine which was accomplished successfully and the engine then ran normally. However as a precaution the fuel management unit, the electronic engine control and the fuel pump were all changed prior to the aircraft being despatched with 'auto start inoperative' placards, applicable to all engines, placed on the flight deck. The removed components were forwarded to their respective manufacturers for examination. The auto start system was subsequently reinstated and operated satisfactorily. Although it is considered possible that the fire occurred as a result of pooled fuel from the previous shutdown, the engine manufacturer has not yet reported back to the airline as to whether this was due to any defects in the components removed for examination.