

---

## 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/>**

**Note: Reprinted by kind permission of the AAIB.**

---

### **Cautions:**

1. Accident reports can be and sometimes are revised. Be sure to consult the investigative agency for the latest version before basing anything significant on content (e.g., thesis, research, etc).
  2. Readers are advised that each report is a glimpse of events at specific points in time. While broad themes permeate the causal events leading up to crashes, and we can learn from those, the specific regulatory and technological environments can and do change. ***Your company's flight operations manual is the final authority as to the safe operation of your aircraft!***
  3. Reports may or may not represent reality. Many many non-scientific factors go into an investigation, including the magnitude of the event, the experience of the investigator, the political climate, relationship with the regulatory authority, technological and recovery capabilities, etc. It is recommended that the reader review all reports analytically. Even a "bad" report can be a very useful launching point for learning.
  4. Contact us before reproducing or redistributing a report from this anthology. Individual countries have very differing views on copyright! We can advise you on the steps to follow.
-

# 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.