

Dart Herald 401, G-BEYF

AAIB Bulletin No: 3/99 Ref: EW/G98/08/21 Category: 1.1

Aircraft Type and Registration: Dart Herald 401, G-BEYF

No & Type of Engines: 2 Rolls-Royce Dart 532-9 turboprop engines

Year of Manufacture: 1963

Date & Time (UTC): 13 August 1998 at 0755 hrs

Location: Guernsey Airport, Channel Islands

Type of Flight: Public Transport (Passenger)

Persons on Board: Crew - 2 - Passengers - None

Injuries: Crew - None - Passengers -N/A

Nature of Damage: None

Commander's Licence: Airline Transport Pilot's Licence

Commander's Age: 63 years

Commander's Flying Experience: 19,500 hours (of which 250 were on type)
Last 90 days - 57 hours
Last 28 days - 21 hours

Information Source: Aircraft Accident Report Form submitted by the commander

The aircraft, which was on a positioning flight, was descending into Guernsey Airport when the engine fire warning sounded and the left engine fire handle warning light illuminated. The crew immediately performed the Engine Fire in Flight drill, in accordance with the Emergency Check List, and discharged the contents of both fire bottles into the left engine, since the fire warning persisted after the first shot.

A 'PAN' call was made to Air Traffic Control and the Airport Fire Service met the aircraft after it had landed and come to a halt. Fire service personnel inspected the left engine nacelle but since no sign of fire was apparent, the aircraft was then taxied to the parking area and shutdown.

A subsequent inspection of the engine and interior of the cowling confirmed that there had been no fire. However further investigation by the airline's engineers revealed that, with the aircraft in a simulated flight condition, the left engine fire warning light illuminated and the warning bell sounded continuously. Electrical tests revealed the presence of a short circuit within the left engine fire warning element assembly which was traced to a chafed section on the element. This section was replaced and a subsequent insulation, resistance and continuity test indicated that the element had been restored within Maintenance Manual limits. A final check in accordance with the Maintenance Manual showed the fire warning system to be functioning correctly.

However after the aircraft had returned to service, false fire warnings associated with the left engine again occurred intermittently over the next six days. Consequently the entire firewire element assembly for the engine was replaced, together with the associated relay and relay base; no further recurrence of the fault was then experienced during subsequent operations.