INCIDENT

Aircraft Type and Registration:	DHC-8-402 Dash 8, G-FLBC
No & Type of Engines:	2 Pratt & Whitney Canada PW150A turboprop engines
Year of Manufacture:	2009
Date & Time (UTC):	10 October 2010 at 1845 hrs
Location:	Amsterdam Schiphol Airport, The Netherlands
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 4 Passengers - 54
Injuries:	Crew - None Passengers - None
Nature of Damage:	Left main landing gear, both tyres and brake assembly
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	64 years
Commander's Flying Experience:	15,000 hours (of which 4,000 were on type) Last 90 days - 250 hours Last 28 days - 80 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by AAIB

Synopsis

Shortly after arriving on stand, and just as normal passenger disembarkation was about to begin, flames were observed coming from the left hand main wheel assembly. The passengers vacated using the aircraft forward door directly into the terminal. The flames went out after a short time and the aerodrome fire and rescue service (AFRS) cooled the affected wheel and brake assemblies.

History of the flight

The aircraft was performing a scheduled passenger service from Southampton to Amsterdam Schiphol Airport. It was the third sector the aircraft and crew had operated that day and the previous two sectors had proceeded without incident. The co-pilot was the handling pilot and, after landing on Runway 06, applied moderate braking on the runway. The commander then took control of the aircraft. The commander made little use of the wheel brakes during the 14-minute taxi to the stand, where the aircraft was shut down normally. As passenger disembarkation was about to begin through the rear left exit, the ground crew alerted the crew to a fire in the left main wheel assembly. The crew halted disembarkation through the rear exit and passengers vacated the aircraft through the front left exit directly into the terminal. The fire went out after approximately two minutes although the wheel continued to emit smoke until cooled by the AFRS.

Engineering investigation

The brake units and wheel assemblies were replaced and the aircraft returned to service the following day. The aircraft operator carried out an engineering investigation of the affected brake units but this proved inconclusive. The investigation determined that the most likely cause of the fire was that the affected brake unit was not fully released whilst the aircraft was being taxied. The heat generated by the brake caused the grease in the wheel hub to melt, leak out and ignite when it came into contact with the hot brake units.