

**INCIDENT**

<b>Aircraft Type and Registration:</b>	DHC-8-402 Dash 8, G-JEDK	
<b>No &amp; Type of Engines:</b>	2 Pratt & Whitney Canada PW150A turboprop engines	
<b>Year of Manufacture:</b>	2002	
<b>Date &amp; Time (UTC):</b>	19 August 2010 at 1445 hrs	
<b>Location:</b>	Manchester Airport	
<b>Type of Flight:</b>	Commercial Air Transport (Passenger)	
<b>Persons on Board:</b>	Crew - 4	Passengers - 31
<b>Injuries:</b>	Crew - None	Passengers - None
<b>Nature of Damage:</b>	None	
<b>Commander's Licence:</b>	Air Transport Pilot's Licence	
<b>Commander's Age:</b>	48 years	
<b>Commander's Flying Experience:</b>	6,311 hours (of which 2,751 were on type) Last 90 days - 106 hours Last 28 days - 15 hours	
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the aircraft commander	

**Synopsis**

Smoke entered the cabin and flight deck soon after takeoff. The aircraft returned to Manchester Airport and a successful evacuation was carried out on the runway after landing. There were no injuries. The source of the smoke was a failed internal oil seal in the left engine.

**History of the flight**

Shortly after takeoff the senior cabin crew member contacted the commander to say there was mist or smoke in the cabin, together with a strange smell. Shortly afterwards the flight deck also began to fill with smoke and the flight crew carried out the smoke vital actions. A 'PAN' call was transmitted and the decision made to return to land back at Manchester.

When the flight crew had completed all appropriate checklist items, they contacted the cabin crew to brief them for the arrival. By this time the smoke in the cabin had worsened, so the crew upgraded their status to 'MAYDAY'. The cabin crew were briefed to expect a normal landing, followed by an emergency evacuation on the commander's order.

As the smoke in the cabin thickened, a toilet fire alarm activated. The two cabin crew prepared to fight a toilet fire but none was found. They then checked overhead lockers for signs of fire but again none was found. Circuit breakers for cabin and galley equipment were pulled as a precaution. The cabin crew then briefed passengers seated by the self-help exits.

After about 14 minutes airborne, the aircraft landed without further incident and was brought to a stop on the runway. Once the appropriate drills had been completed and the propellers had stopped rotating, the commander ordered the evacuation. It was successful and without injury. Emergency services estimated that the evacuation was complete in about 15 seconds.

An engineering inspection revealed that an internal oil seal in the left engine had failed, leading to oil contamination of the engine bleed air and thus of the conditioned air supply to the cabin.