

ACCIDENT

Aircraft Type and Registration:	DHC-8-402 Dash 8, G-JEDU
No & Type of Engines:	2 Pratt & Whitney Canada PW150A turboprop engines
Year of Manufacture:	2004
Date & Time (UTC):	28 May 2008 at 1755 hrs
Location:	Paris Charles de Gaulle Airport, France
Type of Flight:	Commercial Air Transport (Passenger)
Persons on Board:	Crew - 4 Passengers - 37
Injuries:	Crew - None Passengers - None
Nature of Damage:	Rear underside of main fuselage damaged on touchdown
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	48 years
Commander's Flying Experience:	8,706 hours (of which 2,783 were on type) Last 90 days - 120 hours Last 28 days - 34 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot and further enquiries by the AAIB

Synopsis

The aircraft was operating a scheduled flight from Exeter Airport, Devon, to Paris Charles de Gaulle Airport, France. The commander was line training the co-pilot, who was the handling pilot. During the final approach, at approximately 120 ft aal, the IAS reduced below V_{REF} without any significant increase in power from the co-pilot or intervention from the commander. The aircraft subsequently landed on its tail, 11 kt below V_{REF} , causing damage to the underside of the fuselage.

The commander had recently returned to work after an illness and subsequently felt he should have been advised to have a longer recuperation period. The CAA

subsequently issued additional guidance to Aviation Medical Examiners.

Background information

On 26 April 2008 the commander was admitted to hospital and discharged 12 days later, on 7 May 2008.

On 12 May 2008 the commander contacted his General Practitioner who signed him off as sick until 18 May 2008; at this time he also informed his Aviation Medical Examiner (AME) about his hospitalisation. The AME advised the commander that as he had finished his course of medication and it had

been less than 21 days since the start of the illness¹ he could return to work when he felt fit and no medical examination would be required. The commander returned to work on 19 May 2008, 23 days after being admitted to hospital.

After his return to work the commander worked for three days, followed by two days off, followed by five days on again. He flew four sectors on each of the last five days; the accident happened on the fifth day.

History of the flight

The aircraft was operating a scheduled flight from Exeter Airport, Devon, to Paris Charles de Gaulle Airport, France (CDG). The commander was line training the co-pilot, who was the handling pilot. The surface wind was 190°/10 kt, the visibility was in excess of 10 km and there were FEW clouds at 4,500 ft aal. V_{REF} for the approach was 114 kt.

The flight was uneventful until the aircraft was established on the ILS for Runway 27R at CDG. Having transferred to the Tower frequency, ATC instructed G-JEDU to maintain 180 kt until 4 nm; this the crew accepted. At 4 nm the IAS was 173 kt and the power levers were reduced to flight idle. They remained at flight idle until 120 ft aal and the IAS reduced at a constant rate. At 500 ft the IAS was approximately 136 kt ($V_{REF} + 22$ kt).

At approximately 120 ft aal, with the aircraft fully configured with Flap 15 for landing, the IAS reduced below V_{REF} . The commander said “SPEED APPEARS TO BE A BIT LOW” to which the co-pilot responded by increasing the power levers by approximately one

percent of torque to 8%². The speed continued to decrease and the aircraft subsequently landed on its tail at 103 kt, ($V_{REF} - 11$ kt), illuminating the RUNWAY TOUCHED warning; there was no intervention from the commander.

The aircraft vacated the runway, taxied onto stand and the passengers disembarked normally. The commander inspected the aircraft where damage to the underside of the tail section was discovered before he reported the accident to ATC.

The commander attempted unsuccessfully to contact the operator’s Flight Safety Manager and Fleet Manager; the accident occurred out of normal working hours. He contacted the operator’s logistics department and discussed the accident with the duty manager. The duty manager asked the commander to operate another aircraft back to Exeter as part of the recovery programme and the commander accepted this request.

Commander’s comments

The commander stated that during the preceding week, after his return to work, he did not feel unwell but was getting progressively more tired. He added that on the approach into CDG he recalled thinking more power was required, to the extent that he thought he needed to apply the power himself and yet he did not react to what was developing. He also remembered a sense of “why am I not reacting to this” and being puzzled by this.

At the time he did not realise that he was required to be grounded as a result of the accident and was happy to accept the request to fly another aircraft back to Exeter.

Footnote

¹ See CAA medical below.

Footnote

² An approximate power setting for a Flap 15 approach is 14-15% torque.

The commander felt that, in the absence of any specific medical advice, he returned to work too early and by the end of the five days work prior to the accident, was suffering from some form of post-infectious fatigue which had a detrimental effect on his reactions and decision making.

Co-pilot's comments

The co-pilot stated that as she had only flown with the commander since his return to work, after his illness, she could not compare his manner during the accident flight to that of previous flights.

Operations manual

Part B4 of the operator's Operations Manual (OM) states that at every 100 ft below 500 ft aal, the non-handling pilot is to call out the speed unless it is between +5 kt and -0 kt of that to be flown. It also states that in order to achieve a stabilised approach, the speed must not exceed 160 kt inside 4 nm and that the IAS must not exceed $V_{REF} + 15$ kt at 500 ft radio altitude. At 500 ft the pilot flying is to call '500 ft' to which the non-handling pilot is to respond with either 'stable' or 'go-around', depending on the previous criteria.

Part A of the OM states that:

following an accident or incident in which it is necessary to contact the Chief Inspector of Air Accidents, the crew are immediately grounded.'

CAA medical

The CAA Aeromedical Section stated that an effect of the illness experienced by the commander could be an intermittent fatigue that can last for 6 weeks after the main symptoms of the illness have disappeared.

The reverse side of UK CAA JAA medical certificates states the following:

'Decrease in medical fitness

Holders of medical certificates shall, without undue delay, seek advice of the AMS [Aeromedical Section], an AMC [Aeromedical Centre] or an AME when becoming aware of:

- *Hospital or clinic admission for more than 12 hours*

Holders of medical certificates who are aware of:

- *Any illness involving incapacity to function as a member of a flight crew throughout a period of 21 days or more*

Shall inform the AMS, or the AME, who shall subsequently inform the AMS, in writing of such injury or pregnancy, and as soon as the period of 21 days has elapsed in the case of illness.'

Analysis

As stated on the reverse of pilots' medical certificates, the commander correctly informed his AME of his hospitalisation. However, as he was not incapacitated for greater than 21 days when he telephoned his AME, there was no need for his AME to inform the AMS.

The crew flew faster than 160 kt to 4 nm as stated in the OM. The IAS was greater than $V_{REF} + 15$ kt at 500 ft radio altitude and the co-pilot did not call "500 ft"; as a result there was no call of "STABLE" or "GO-AROUND" from the commander. Additionally the commander did not call out the speed every 100 ft below 500 ft even though the IAS was initially greater than +5 kt of that to be flown. The approach was not stable at 500 ft and should have been discontinued.

Once the commander brought the low speed to the attention of the co-pilot she only increased the power levers to 8% torque, 6-7% less than the suggested figure of 14-15%. This was not enough power to achieve V_{REF} and the commander did not take control to stop the IAS further reducing below V_{REF} .

The commander's recent medical history and his post-accident comments suggest that his feelings during the final approach and his lack of intervention could be attributed to post-infectious fatigue. A lack of knowledge of post-accident procedures in the operator's logistics department allowed the crew to fly another sector.

Safety actions

The co-pilot undertook training in the simulator before continuing with her line training. After additional training sectors, this was successfully completed.

All the operator's logistics and engineering staff have been trained on the definition of an accident and serious incident and post-accident procedures.

Following this accident, the CAA's Aeromedical section sent the following notice to all AME's:

*'Subject: AME assessment of professional pilots'
fitness to return to flying after hospital treatment
for illness.*

When giving return to work advice to professional pilots after illness you should satisfy yourself that the pilot is fully fit to return to full flight duties. If the pilot had required admission to hospital, in all but exceptional circumstances you should review a report from the consultant responsible for treatment to ensure full recovery has been achieved. You should consider all possible sequelae from the illness such as increased fatigability or susceptibility to infection prior to confirming fitness to fly. In many cases you may decide to personally examine the pilot before making a judgement on fitness. If you give advice remotely by telephone you must ensure that you document the advice you give. The documented advice will form part of the pilot's aeromedical record and should be kept in accordance with the records retention policy.'