

Cessna 310K, G-OBNF

AAIB Bulletin No: 1/97 Ref: EW/G96/09/04 Category: 1.2

Aircraft Type and Registration:	Cessna 310K, G-OBNF
No & Type of Engines:	2 Continental IO-470-V piston engines
Year of Manufacture:	1966
Date & Time (UTC):	6 September 1996 at 0759 hrs
Location:	Runway 13, Edinburgh Airport
Type of Flight:	Private
Persons on Board:	Crew - 1 - Passengers - Four
Injuries:	Crew - None - Passengers - None
Nature of Damage:	Right main landing gear collapsed, damage to right wingtip, tailplane tip and propeller
Commander's Licence:	Commercial Pilot's Licence
Commander's Age:	27 years
Commander's Flying Experience:	1,340 hours (of which 175 were on type) Last 90 days - 129 hours Last 28 days - 48 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

Following a smooth touchdown on the main runway the aircraft was being taxied on Runway 13 at a fast walking pace when the pilot heard a knocking sound from the right main wheel. The aircraft immediately yawed to the right and settled onto its right wingtip. The pilot shut the aircraft down and evacuated the passenger through the main cabin door.

The ATC controller did not receive an emergency call from the aircraft but he noticed that the aircraft had come to a halt with a collapsed landing gear and initiated the "Aircraft Ground Incident" procedure. The airport fire service attended the aircraft and were followed later by the local emergency services. The airport fire crew reported a large fuel spill and they spread foam over the right engine and wing. They were dissuaded by the pilot from cutting into the airframe to get access to the battery and this was disconnected by engineers who arrived to recover the aircraft.

On examination it was found that the disc of the right main wheel brake had become partially released from the anti-rotation slots in the wheel hub and one of the dogs on its periphery had

fouled the main leg, dug into the leg and stopped the wheel rotating. The reaction from the retardation loads on the locked wheel had caused the main leg support structure to collapse. The disc was retained within the anti-rotation slots in the wheel hub by five spring clips which were each, in turn, held in place by a stud. Three adjacent sets of the studs and clips were missing. Each stud was fitted through the spring clip and the hub rim from the outside and it is possible that loss of profile or of spring stiffness in the shaped and split shank could allow a stud to be ejected under centrifugal loads. One stud was also found to be missing from the left brake.

This aircraft had suffered two previous accidents (reported in AAIB Bulletins 11/94 and 6/95). In the first the nose landing gear had failed to extend and in the second the left main landing gear had collapsed when the pilot tried to turn the aircraft rapidly to avoid running off the end of the runway.