

**INCIDENT**

<b>Aircraft Type and Registration:</b>	Cessna 560XL, G-WCIN
<b>No &amp; Type of Engines:</b>	2 Pratt & Whitney Canada PW545A turbofan engines
<b>Year of Manufacture:</b>	2000
<b>Date &amp; Time (UTC):</b>	8 July 2005 at 1435 hrs
<b>Location:</b>	On departure from Gibraltar
<b>Type of Flight:</b>	Public Transport (Passenger)
<b>Persons on Board:</b>	Crew - 2                      Passengers - 2
<b>Injuries:</b>	Crew - None                      Passengers - None
<b>Nature of Damage:</b>	Engine damage
<b>Commander's Licence:</b>	Airline Transport Pilot's Licence
<b>Commander's Age:</b>	53 years
<b>Commander's Flying Experience:</b>	6,000 hours (of which 500 were on type) Last 90 days - 50 hours Last 28 days - 20 hours
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot and subsequent telephone enquiries by AAIB

**Synopsis**

As the aircraft rotated for takeoff, the right engine vibration alert caption became illuminated and the pilot reduced power on that engine. He consulted the aircraft Check List and then continued his flight to the planned destination using reduced power on the right engine.

It was established that the aircraft's fuel filler dust cover had detached and struck the fan of the right engine. The cover was found on the runway close to the rotation point.

**History of the flight**

The aircraft was being used for a private flight from Gibraltar to Jersey. The commander had asked for the aircraft to be refuelled and had completed his pre-flight external checks before the refueller had arrived. At about that time, the passengers arrived and the commander continued with the preparations for the flight, leaving the refueller to continue.

After the aircraft had been refuelled, the aircraft was dispatched without the commander, personally, re-checking the security of the fuelling point on the aircraft. The takeoff progressed normally until the point of rotation when the right engine vibration alert caption became illuminated. The commander established the

aircraft in the climb, reduced power on the right engine and reported to ATC that he might have a problem. An external observer on the airport had noted that the aircraft was making an unusual noise at takeoff and reported this to ATC, who subsequently informed the pilot. The pilot informed ATC that he had a minor engine vibration and was intending to continue to his destination. The aircraft completed the flight to its destination using reduced power on the right engine.

During the inspection of the runway, prompted by these reports of engine vibration and an unusual noise, a heavily damaged piece of red-painted metal was found. This was subsequently identified as the dust cover which is fitted over the refuelling point and attached to the airframe by a lightweight chain. On Cessna 560 XL aircraft this is positioned behind an openable panel in the wing root fairing, directly ahead of the leading edge of the right wing. After landing, inspection of the fan of the right engine of G-WCIN showed it to be severely damaged.



**Figure 1**

Condition of fan of right engine after landing