

No: 9/92

Ref: EW/G92/07/01

Category: 4

Aircraft Type and Registration: Shorts SD3-30-100: G-OGIL & G-BIFH

No & Type of Engines: 2 Pratt & Whitney PT6A-45R turboprop engines

Year of Manufacture: 1981 and 1980

Date & Time (UTC): 1 July 1992 at 0610 hrs

Location: Newcastle International Airport, Northumberland

Type of Flight: Taxiing

Persons on Board: Crew - 1 (G-OGIL) Passengers - None

Injuries: Crew - None (G-BIFH) Passengers - None

Nature of Damage: G-OGIL: Severe damage to nose, right hand wing, strut and the right propeller.
G-BIFH: Minor damage to nose skin and forward cargo bay door, severe damage to cabin freight door.

Commander's Licence: Airline Transport Pilot's Licence

Commander's Age: 54 years

Commander's Flying Experience: Approximately 15,500 hours (of which 1,340 on type)
Last 90 days - 136 hours
Last 28 days - 47 hours

Information Source: Aircraft Accident Report Form submitted on behalf of the pilot and telephone enquiries by AAIB.

G-OGIL had been refuelled and taxied to the operator's hangar to be prepared for service. The pilot who had taxied the aircraft reported that the nosewheel steering was deficient, probably due to air in the hydraulic system. As a result of this report, some bleeding of the hydraulic system had been carried out. After it had been prepared for service, another pilot boarded the aircraft and started the engines with the intention of taxiing 'IL' to its operating stand.

However, as he started to taxi the aircraft, the pilot found that the nosewheel steering did not appear to respond. The aircraft was then stopped, with some difficulty, and the pilot directed a ground technician to check that the nosewheel was connected (the steering link is normally disconnected for towing). The technician then indicated to him that all seemed normal and the pilot reversed the aircraft, using propeller reverse pitch, to give himself more room to manoeuvre. However when he then taxied forwards he found that the steering still did not respond and also that he could not stop the aircraft

using the brakes. The pilot was thus unable to control the aircraft and it collided with the hangar doors, a parked van and G-BIFH, which was inside the hangar.

Subsequent engineering investigations found that Brake Emergency Accumulator piston seal had been defective and, as a result, had allowed pressurised Nitrogen from the accumulator to escape into the hydraulic system.

In January 1988, a similar incident occurred to another Shorts SD3-30 (G-BHWT) at Southend Airport as a result of Nitrogen leakage past hydraulic accumulator seals and caused a collision with a parked Vickers Viscount 806 aircraft (AAIB Bulletin 8/88 refers).