

Lancair 320, G-FOPP

AAIB Bulletin No: 9/99 Ref: EW/G99/05/43 Category: 1.3

Aircraft Type and Registration: Lancair 320, G-FOPP

No & Type of Engines: 1 Lycoming IO-320 piston engine

Year of Manufacture: 1999

Date & Time (UTC): 28 May 1999 at 1240 hrs

Location: Cranfield, Bedfordshire

Type of Flight: Private

Persons on Board: Crew - 1 - Passengers - None

Injuries: Crew - None - Passengers - N/A

Nature of Damage: Noseleg collapsed, propeller damaged, engine shock loaded, cowling and engine support damaged

Commander's Licence: Airline Transport Pilot's Licence with Instructor's Rating

Commander's Age: 58 years

Commander's Flying Experience: 11,500 hours (of which 5 were on type)

Last 90 days - 70 hours

Last 28 days - 21 hours

Information Source: Aircraft Accident Report Form submitted by the pilot

The aircraft had been built from a kit bought in 1992 and its construction had been completed early in 1999. The aircraft was to be flown on its first flight by an experienced test pilot. As the aircraft accelerated on its take-off run the wind was from the right and balanced the torque reaction so that little rudder correction was needed. At 65 kt the pilot eased the control stick rearwards, aiming to rotate at 75 kt. As soon as weight was taken off the nosewheel there was a violent shimmy and the nose pitched downwards. The pilot closed the throttle and held the stick fully aft but the aircraft settled onto its nose and slid to a halt.

The nosewheel shimmy damper is incorporated into the oleo-pneumatic nose strut. It was found that the strut which had been received in the kit and was fitted to the aircraft was an early type which had been discontinued following nosewheel shimmy problems. The two struts have the same part number (GM 14) but are of differing external appearance and are also distinguished by being from different manufacturers; the early standard fitted to G-FOPP was labelled as being manufactured by 'AROTEK' of Washington State, USA and the replacement was labelled as

manufactured by 'ESCO'. The aircraft kit manufacturer has stated that a check of their records has shown that no other struts of the early standard are currently in the hands of customers.