

Yak-52, RA44463

AAIB Bulletin No: 5/99 Ref: EW/G99/01/10 Category: 1.3

Aircraft Type and Registration: Yak-52, RA44463

No & Type of Engines: 1 Ivchenko Vedeneyev M-14P piston engine

Year of Manufacture: 1988

Date & Time (UTC): 9 January 1999 at 1600 hrs

Location: RNAS Yeovilton, Somerset

Type of Flight: Private

Persons on Board: Crew - 1 - Passengers - 1

Injuries: Crew - None - Passengers - None

Nature of Damage: Damage to propeller, spinner, engine, cowling and nose landing gear

Commander's Licence: Airline Transport Pilot's Licence

Commander's Age: 47 years

Commander's Flying Experience: 7,600 hours (of which 13 were on type)

Last 90 days - 31 hours

Last 28 days - 10 hours

Information Source: Aircraft Accident Report Form submitted by the pilot

The aircraft had been on the ground for some 10 minutes before it took off to carry out a Practice Forced Landing. The pilot selected the landing gear down later than normal but believed that he saw '3 greens', indicating that the landing gear legs were 'down and locked'. However, on landing the nosewheel collapsed and the aircraft slid to a halt. There was no fire and the pilot and passenger evacuated the aircraft without difficulty.

The aircraft is equipped with a pneumatic system which provides power for engine starting and also for operation of the flaps, landing gear and the wheel brakes. It is possible to start the engine with the pneumatic system inadvertently switched OFF, by virtue of the pneumatic reservoir effect provided by the pressure stored in the system. There have been a number of incidents with this type of aircraft involving loss of brake function on the ground for this reason.

As a result of these previous incidents, in 1997 the CAA had issued Mandatory Permit Directive MPD 1997-009 which required the embodiment of Aerostar Service Bulletin 7/95 on all such

aircraft on the UK register. This introduced a modification which isolated the remainder of the pneumatic system, thus preventing engine start if the pneumatic system had not been switched ON. However this aircraft was on the register of the Russian Federation and Aerostar Service Bulletin 7/95 had not been embodied.

From the pilot report and discussions with the maintenance organisation, it was apparent that the engine had probably been started with the pneumatic system switched OFF and that there had been sufficient residual pneumatic pressure in the system to retract the landing gear after the take off. However upon extending the landing gear, although the main gears had locked down assisted by their own weight, there would appear to have been insufficient residual pneumatic pressure to lock the nosewheel down against the airflow.