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AIR ACCIDENT INVESTIGATION UNIT

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PRELIMINARY ACCIDENT REPORT

This is preliminary information, subject to change, and may contain errors. Any errors in this Report will be corrected when the Final Report has been completed.

1. AIRCRAFT MANUFACTURER:	CESSNA
Model:	U206G STATIONAIR - Turbine
State of Registry:	Ireland
Registration:	EI-HOG
Serial Number:	U20605745
Year of Manufacture:	1980
2. OPERATOR:	Irish Parachute Club Limited (IPC)
3. TYPE OF OPERATION:	Parachute Drop
4. DATE / TIME:	15 March 2009 @ 14.20 hrs
5. POSITION OF OCCURRENCE:	Clonbullogue Airfield, Co Offaly, Ireland (EICL).
6. PERSONS ON BOARD:	Crew: 1 Passengers: 0
7. INJURIES:	Crew: 0 Passengers: 0
8. DAMAGE:	Substantial
9. INVESTIGATOR-IN-CHARGE:	P. Judge

The aircraft had recently commenced operations with the IPC. During its sixth flight, following refuelling, the Pilot reported a significant power loss while climbing through 9,000 ft. The parachutists were instructed to jump from the aircraft, which then attempted to return to the Airfield. The Pilot was unable to reach the airfield and touched down in a ploughed field short of the runway. The nose undercarriage partially collapsed, the aircraft pitched over its nose and came to rest inverted. The Pilot was uninjured.

On inspection, the Investigation found that the fuel system and tanks had not being damaged in the accident. No evidence of fuel spill was found. The LH tanks were found to be empty and the RH tanks contained only 2 litres. At this point in time, the Investigation believes that fuel starvation was the probable cause of the engine failure. On examination of the fuel system, the Investigation found that the fuel system had been modified by a Supplementary Type Certificate (STC) No. SA3634SW approved by the USA FAA.

This modification involved fitting extra bladder tanks in the wings, outboard of the main standard Cessna tanks, sealing up the filler point in the original tanks, and fitting a new filler point in the top surface of the bladder tanks. The only fuel tank quantity indication system was the original Cessna float gauges in the Cessna tanks. The IPC had concerns regarding the accuracy of these gauges and therefore relied on a calibrated dipstick and a flow meter gauge for fuel management.

The Investigation found that there was a relatively slow rate of transfer of fuel from the bladder tanks into the main tanks. As a result, when fuel was added to the bladder tanks at a rate of 30 litres per minute, the initial dipstick indication over-read by approximately 100%. However, when the fuel was allowed to settle for a few minutes, the dipstick then accurately showed the correct contents. Thus, measuring fuel contents immediately after refuelling gave an erroneous and exaggerated indication of the quantity of fuel in the aircraft.

The Investigation is ongoing and a Final Report will be published in due course.

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