

SERIOUS INCIDENT

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| Aircraft Type and Registration: | Hawker Hunter F6.A Hunter, G-KAXF | |
| No & Type of Engines: | 1 Rolls-Royce Avon MK 207 turbojet engine | |
| Year of Manufacture: | 1956 | |
| Date & Time (UTC): | 18 October 2008 at 1032 hrs | |
| Location: | Runway 26, Exeter Airport | |
| Type of Flight: | Private | |
| Persons on Board: | Crew - 1 | Passengers - None |
| Injuries: | Crew - None | Passengers - N/A |
| Nature of Damage: | 150 gallon drop tank damaged beyond repair | |
| Commander's Licence: | Private Pilot's Licence | |
| Commander's Age: | 69 years | |
| Commander's Flying Experience: | 13,967 hours (of which n/k were on type) Last 90 days - 9 hours Last 28 days - 2 hours | |
| Information Source: | Aircraft Accident Report Form submitted by the pilot and further enquiries by the AAIB | |

Synopsis

As the aircraft touched down on Runway 26 at Exeter Airport, an external fuel tank fell from its wing and landed on the grass to the south of the runway. The tank hit a runway edge light and damaged the runway surface. The tank was held onto the wing by an electromagnetic tank release unit. The jaws of the unit opened on touchdown releasing the tank.

History of the flight

The aircraft took off from Runway 26 at Exeter Airport for a general handling flight and the pilot selected the landing gear up. Although it seemed to the pilot that the landing gear retracted fully, there was an indication in the cockpit that the nosewheel door remained unlocked.

The pilot selected the landing gear down, obtained indications that it was down and locked, and decided to curtail the flight and land. He informed ATC that he had a technical problem, stressed it was not an emergency, and flew on for about 10 minutes to reduce the aircraft's mass to the maximum allowable for landing. The pilot then flew the aircraft to the airfield overhead and joined the right hand circuit.

As the aircraft touched down, the external fuel tank fell from its left wing and landed on the grass to the south of the runway. The tank, which contained approximately two gallons of fuel, hit a runway edge light and damaged the runway surface. The pilot did not notice

anything unusual and was informed of the incident by the aerodrome controller. He continued to taxi and shut down normally. Part of the runway was closed for 30 minutes while the damage was assessed. The pilot did not recall the landing as being 'heavy'.

Tank release unit

The fuel tank was held under the wing by an electromagnetic tank release unit whose jaws closed around a lug on top of the tank. It appeared that the force on the jaws, imparted by the tank at the moment of landing, was sufficient to cause them to open and release the tank. There was no evidence that the release unit was unserviceable before the event. Similar release units were removed from the operator's other aircraft, tested for serviceability and refitted.

Advice on jettisoning tanks

Civil Aviation Publication (CAP) 632 details the terms under which ex-military aircraft can be operated on the UK register under a Permit-to-Fly. It states that;

'drop tanks should only be jettisoned as a last resort and when their retention would imperil the aircraft and crew and bring increased risk to persons on the ground'. It also states that 'pilots should be aware that empty drop tanks have a negligible effect on gliding or range performance of jet aircraft. Therefore, consideration should be given to retaining them in the event of forced landing.'

Anecdotal evidence from Hunter pilots suggested they concur with this advice as aircraft have landed safely on the tanks following partial lowering of the landing gear. There was also concern that asymmetric release of the tanks would make a given situation worse.

Aircraft certification

A clamp lock, in use with Swiss registered Hunters, clamps around the jaws of the release unit to prevent them from opening, the tanks cannot be jettisoned either deliberately or inadvertently. The Hunter was accepted onto the UK register under a Permit-to-Fly based on the safety record it gained during military service. The aircraft standard accepted onto the register did not include the Swiss modification which is not, therefore, cleared for use on UK aircraft.

Analysis

Advice from the CAA suggests that to jettison empty drop tanks would be of negligible benefit to an aircraft in an emergency. Authorising the Swiss modification for use would prevent accidental jettison such as that which occurred in this incident. However, the safety record of the aircraft standard currently cleared for flight does not give grounds for concern. The argument is finely balanced and the evidence in this report does not support any recommendations.