FINAL REPORT

AAIU Synoptic Report No: 2005-026
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In accordance with the provisions of SI 205 of 1997, the Chief Inspector of Accidents, on 22 June 2004, appointed Mr. John Hughes as the Investigator-in-Charge to carry out a Field Investigation into this occurrence and prepare a Synoptic Report.

Aircraft Type and Registration:	Islander BN-2B-26, EI-CUW
No. and Type of Engines:	2 x Avco Lycoming O-540-E4C5
Aircraft Serial Number:	2293
Year of Manufacture:	1998
Date and Time (UTC):	16 June 2004 @ 17.05 hrs
Location:	Weston Aerodrome
Type of Flight:	Ferry Flight
Persons on Board:	Crew - 1 Passengers - Nil
Injuries:	Crew - Nil Passengers - Nil
Nature of Damage:	Starboard Aileron mass-balance damaged.
Commander's Licence:	CPL
Commander's Details:	Male, aged 37 years
Commander's Flying Experience:	6,461 hours (of which 1065 were on type)
Information Source:	Operator

1. FACTUAL INFORMATION

1.1 History of the Flight

EI-CUW was on a charter flight to the Isle of Man on the 16 May 2004. Upon return from the Isle of Man the aircraft landed in Weston aerodrome in Co. Dublin for fuel. After refuelling, the pilot commenced to taxi, with the R/H wing moving over the fuel dispenser. At this time, the mass-balance of the starboard aileron contacted the fuel dispenser causing the arm of the mass-balance to sustain structural failure. The aircraft was taxiing at approximately 2 mph when the balance weight contacted the fuel dispenser. The control column moved abruptly. The Tower informed the pilot that the aircraft had struck the fuel dispenser. The pilot was unaware of the collision at this time and attributed the abrupt control column movement to a gust of wind. The pilot then shut down his engines immediately. The operator's engineering staff was contacted to inspect the damage to the aircraft. There were no reported injuries in this incident. Damage to the ground fuel dispenser was slight.

1.2 Damage to Aircraft

The R/H Aileron balance weight arm was bent and cracked. The aileron was sent to the aircraft manufacturer for inspection and repair. The R/H aileron hinge bearings were inspected and replaced. As a precaution, the R/H aileron drive rod and drive rod bolts were replaced, as were the aileron attachment bolts.

1.3 Additional Information

The Avgas fuel storage installation at this aerodrome consisted of an overground fuel tank with an underground feed pipe to a standard forecourt petrol dispenser **(See Appendix A)**. The dispenser is sited at the edge of a tarmacadam ramp, adjacent to the aircraft parking area. The fuel outlet from the dispenser feeds an adjacent fuel filter and from there, to the refuelling nozzle via a 30 metre hose. A fire extinguisher is available on site. There were inadequate markings on the ground to warn personnel that they were in the vicinity of a dangerous substance.

2. ANALYSIS

The Captain was responsible for the parking and taxiing of his aircraft and clearly should not have been close to the obstacle on the ground. A pre-flight check should have indicated the proximity of the aircraft to the fuel dispenser. In such a case a towing vehicle would have been required.

Both the IAA and the HSA have a role within the aviation industry. The IAA in relation to the safety of aircraft and the HSA in relation to the health and safety of people. Where aircraft are refuelled with fuel direct from dispensers or hydrants connected to a storage tank, special requirements are demanded by the IAA in addition to the issue of the airfield licence. The HSA require that areas where explosive atmospheres may occur should be classified into zones and these zones marked accordingly. Guidance from the EU Commission is also available in Directive 1999/92/EC. The UK CAA CAP 748 (Airside Safety Management) defines a "Fuelling Zone" as an area that would qualify as a Zone O or Zone 1 under the Dangerous Substances and Explosives Atmosphere Regulations (DSEAR). The above Directive states *"if the hazardous place is not the whole space concerned, but only part of it, that part may be marked by yellow/black diagonal stripes (e.g. on the floor). It may be desirable to place other warning signs in accordance with 92/58/EEC for example, forbidding smoking etc."*

The IAA Aerodrome Licensing Manual states:

"Aircraft will usually taxi and park under their own power. In order to do this safely the taxi and parking areas should allow for at least 15 metres separation between aircraft extremities and vehicles, fences etc". This indicates that the aircraft might have to be pushed or towed to the Refuelling Zone.

Their licence requirements also state:

"The licensee is required to ensure that arrangements for the acceptance, storage, handling and dispensation of aviation fuel at the aerodrome meet the safety requirements of the Irish Aviation Authority".

3. CONCLUSIONS

(a) Findings

The RH aileron balance was allowed to strike the Avgas Fuel dispenser whilst the aircraft was starting to taxi under the control of the Captain of the aircraft.

(b) Cause

The aircraft was parked too close to the fuel dispenser during refuelling.

4. SAFETY RECOMMENDATIONS

4.1 Airport Management should seek urgent advice from the Airworthiness Department of the IAA on the current safety standards applicable to Avgas dispensers at Airports.
(SR 25 of 2005)

APPENDIX A