Fairchild Bolingbroke Mk IV T, G-BPIV

AAIB Bulletin No: 11/2003	Ref: EW/G2003/08/31	Category: 1.2
Aircraft Type and Registration:	Fairchild Bolingbroke Mk IV T, G-BPIV	
No & Type of Engines:	2 Bristol Mercury XX piston engines	
Year of Manufacture:	1943	
Date & Time (UTC):	18 August 2003 at 1925 hrs	
Location:	Duxford, Cambridgeshire	
Type of Flight:	Aerial work (display transit)	
Persons on Board:	Crew - 2	Passengers - None
Injuries:	Crew - Minor	Passengers - N/A
Nature of Damage:	Distorted fuselage, severe damage to landing gear and engine shock loaded	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	38 years	
Commander's Flying Experience:	7,500 hours (of which 130 were on type)	
	Last 90 days - 115 hours	
	Last 28 days - 42 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

The aircraft was returning to Duxford, Cambridgeshire, after a display at Somerley Park when the pilot noticed a disparity in readings between the left and right tank fuel gauges. There was also significantly less total fuel than would have been expected for this stage of the flight. The fuel levels were checked as being correct prior to the flight with a dipstick and without any reason to suspect a leak, the pilot assumed a gauge error. He continued towards Duxford, calculating that even if the gauge readings were correct, there was still sufficient fuel to complete the planned route. As the aircraft joined left base leg for Runway 24 at Duxford, the right engine started to surge and a decision was taken on early finals to land in a field to the east of the runway. Full flap was selected and power reduced in order to land in this field but at this point the right engine began developing power, making the runway a more viable option. As the pilot attempted to land on the runway, the right engine stopped. Full power was selected on the left engine but because of the developing right roll, power had to be reduced again. The aircraft subsequently hit the embankment short of the threshold, sliding up it, turning through 90° and coming to a stop.

Subsequent investigation showed that the right engine had failed through fuel starvation. When calculating the fuel required, the pilot had applied the consumption figures for a 'weak' mixture setting but had flown the flight with 'normal' mixture selected, consumption data for which was unknown. The investigation was unable to establish why the right hand engine had used more fuel than the left.

Although fuel cross feed was selected, it appears to have been incapable of supplying fuel from the left tank to the right engine during the left banked turn onto finals.