

Hawker Hunter Mk.58A, G-PSST

AAIB Bulletin No: 9/2004	Ref: EW/G2004/05/21	Category: 1.1
Aircraft Type and Registration:	Hawker Hunter Mk.58A, G-PSST	
No & Type of Engines:	1 Rolls-Royce Avon MK 207 turbojet engine	
Year of Manufacture:	1959	
Date & Time (UTC):	30 May 2004 at 1718 hrs	
Location:	Southend Airport, Essex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Significant damage to the tail	
Commander's Licence:	Commercial Pilot's Licence	
Commander's Age:	56 years	
Commander's Flying Experience:	3,300 hours (of which 900 were on type)	
	Last 90 days - 26 hours	
	Last 28 days - 11 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

History of the Flight

The accident flight had originated at Kemble Airfield and the pilot had carried out a flying display in the Southend area before landing on Runway 24 at Southend Airport. The aircraft was fitted with 150 gallon drop tanks on the inboard underwing stations and had approximately 1700 to 2200 lbs of fuel on board, giving an approach speed of 135 kt which was maintained throughout the final approach. In a Hunter aircraft the approach angle during the latter stages of a visual approach is usually less than 3° but in this instance the pilot elected to fly a steeper approach (approximately 3.5°) due to obstructions below the approach path to the runway. The weather conditions were fine, with a surface wind from approximately 240° at 8 to 12 kt.

After touchdown the braking parachute was streamed as usual, but the pilot thought that the tail may have contacted the runway at the same time as the main undercarriage. An external inspection confirmed this, revealing damage to the tailcone and jetpipe, which had been punctured when the tailskid detached from the tailcone.

The pilot stated that he had landed with the tailplane interconnect switched 'ON' which made the aircraft more sensitive in pitch during the flare manoeuvre. This was the normal position of the switch during an air display and whilst manoeuvring at high speeds. Although he had landed in this configuration before and without difficulty, he had intended to place the tailplane interconnect switch 'OFF' and, temporarily forgetting the status of the system, had not made due allowance in his landing

technique. The pilot also stated that he had deliberately aimed for a smooth touchdown in order to reduce wear on the tyres.

The Aircrew Manual for the type states: *'holding off may result in an excessive nose-up attitude (particularly in the case of a flapless landing or when carrying outboard stores) with the likelihood of scraping a tailcone and/or dropping a wing'*.

Tailplane and Elevator Interconnection

An electrical interconnection enables the variable-incidence tailplane to follow elevator movements automatically, a function designed to give greater manoeuvrability at high Mach numbers. The interconnection provides a pre-determined tailplane and elevator movement for a given control column deflection, and may be switched 'ON' or 'OFF' by a switch in the cockpit. A spring loaded telescopic strut is incorporated in the linkage so that full and unrestricted stick movement is always available. Use of the tailplane interconnection can make the aircraft more sensitive in pitch, which is most noticeable at aft centre of gravity. An aft centre of gravity is most likely to occur at very low or very high fuel loads or with outboard wing stores, although neither of these cases applied in this instance.

For reasons of control sensitivity, the Aircrew Manual for the type recommends that the interconnection be switched 'OFF' for takeoff and landing.

Conclusion

The pilot supplied a frank report, in which he considered that the combination of the steeper approach path, the engaged status of the tailplane interconnect system, and a desire for a smooth landing had contributed to a misjudged flare, as a result of which the tail had struck the runway.

The pilot further commented that other types he was current on at the time were all tail wheel aircraft. He thought that this may have lead to him accepting a higher than normal pitch attitude during landing.