

Slingsby T67M260, G-BWXB, 19 August 1996

AAIB Bulletin No: 12/1996

Ref: EW/C96/8/11 Category: 1.3

Aircraft Type and Registration:	Slingsby T67M260, G-BWXB
No & Type of Engines:	1 Lycoming AEIO-540-D4A5 piston engine
Year of Manufacture:	1996
Date & Time (UTC):	19 August 1996 at 1020 hrs
Location:	8 nm east of Barkston Heath
Type of Flight:	Military Training
Persons on Board:	Crew - 2 - Passengers - None
Injuries:	Crew - Nil - Passengers - N/A
Nature of Damage:	None
Commander's Licence:	Airline Transport Pilot's Licence
Commander's Age:	54 years
Commander's Flying Experience:	Last 90 days - 75 hours approximately Last 28 days - 25 hours approximately
Information Source:	Occurrence Report and AAIB enquiries

As part of an aerobatic training detail, the aircraft was performing a 'push up' manoeuvre from an inverted attitude when a loud 'bang' was heard whilst the aircraft was being subjected to approximately -2.4g. The instructor recovered from the manoeuvre and transmitted a MAYDAY call. The sortie was discontinued and the aircraft returned to Barkston Heath without further incident. It was subsequently found that the left side of the canopy had flexed such that its edge had displaced over an alloy locating lug bonded to the cockpit coaming. This condition remained until (with the aircraft on the ground) the canopy was opened, following which it could be re-closed without problem. Neither the canopy, nor its operating mechanism, had sustained any damage as a result of the incident. The accompanying photographs show the canopy and associated locating lug on a similar aircraft.

Unlike earlier versions of the T67, which have a 'one-piece' windscreen and canopy assembly, the T67M has a fixed windscreen and a separate canopy. The latter is supported on struts on either side, and moves in an 'up-and-over' action. When closed, its leading edge is clamped against the windscreen arch by a latching mechanism.

The aircraft manufacturer was aware of at least one similar incident which had occurred to an aircraft that was in a high-speed dive, close to Vne (the 'never exceeded airspeed'). This aircraft, and GBWXB, had accumulated only 25 flying hours approximately, at the time of their respective occurrences. There has also been at least one case of a canopy opening when the engine RPM was increased above 1500. This led to the issue, in June 1996, of Service Bulletin No 68, which required checks for correct operation of the canopy latching mechanism. This was not thought to have been a factor in this incident however, and the manufacturer has indicated that the problem may lie in a 'bedding down' process associated with the windscreen arch seal. The manufacturer has additionally indicated an intention to amend the Maintenance Manual to include a special check, shortly after such aircraft enters service, which will call for inspection of the seal and adjustment of the canopy latching mechanism, as appropriate.