No: 3/86 **Ref: EW/G86/01/06**

Aircraft type and registration:	Piper PA34 Seneca G-FLYI (light twin engined fixed wing aircraft)	
Year of Manufacture:	1972	
Date and time (GMT):	30 January 1986 at 1245 hrs	
Location:	Elstree Aerodrome, Herts	
Type of flight:	Commercial (training)	
Persons on board:	Crew — 2	Passengers — None
Injuries:	Crew — None	Passengers — N/A
Nature of damage:	Damage to nose section (none to engines and propellers)	
Commander's Licence:	Commercial (Light) Pilot's Licence	
Commander's Age:	39 years	
Commander's Total Flying Experience:	2856 hours (of which 156 were on type)	
Information Source:	Aircraft Accident Report Form submitted by the pilot.	

When the undercarriage was selected down for landing, the "gear unsafe" light for the nosewheel remained on. In the inspection mirror on the port cowl it could be seen that the noseleg had not extended.

The gear was recycled in "NORMAL" and "EMERGENCY" without achieving extension of the noseleg. With "down" selected, using both systems in turn, the aircraft was subjected to both positive and negative "g" loads, and a touchdown on the mainwheels was carried out. None of these manoeuvres succeeded in freeing the noseleg.

In preparation for landing the pilot-under-training moved to the rear port seat next to the main exit in order to achieve an aft centre-of-gravity position. On final approach the port engine was shut down and the propeller feathered with the blades horizontal. At touchdown the starboard engine was shut down and the propeller successfully feathered with blades horizontal before the nose was lowered. Damage to the aircraft during the landing was restricted to the nose section.

Prior to the flight a new nose undercarriage shimmy damper had been fitted. Correct assembly of the front attachment of the damper requires the bolt (PIN 400 910) to be installed head down. This is the reverse of normal engineering practice which would be to install the bolt "head up" so that it would not immediately fall out of its location if the nut came off. On G-FLYI the bolt was fitted "head up" and, thus installed, it fouled the fixed undercarriage support structure and jammed the noseleg during extension.