

# Gulfstream American GA-7, G-EENY

## AAIB Bulletin No: 7/97 Ref: EW/G97/05/04 Category: 1.3

<b>Aircraft Type and Registration:</b>	Gulfstream American GA-7, G-EENY
<b>No &amp; Type of Engines:</b>	2 Lycoming O-320-D1D piston engines
<b>Year of Manufacture:</b>	1979
<b>Date &amp; Time (UTC):</b>	9 May 1997 at 0722 hrs
<b>Location:</b>	Cranfield Airfield, Bedfordshire
<b>Type of Flight:</b>	Training
<b>Persons on Board:</b>	Crew - 2 - Passengers - None
<b>Injuries:</b>	Crew - None - Passengers - N/A
<b>Nature of Damage:</b>	Damage to both propellers, engines and the nose gear doors
<b>Commander's Licence:</b>	Airline Transport Pilot's Licence with FI Rating
<b>Commander's Age:</b>	58 years
<b>Commander's Flying Experience:</b>	9,000 (of which 1,000 were on type) Last 90 days - 240 hours Last 28 days - 83 hours
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the pilot

The student pilot of this aircraft had performed the internal and external checks, prior to the first flight of the day, during which time he was satisfied that the main landing gear selector was down, the emergency selector was in, three green lights were illuminated and the 'gear in transit' light was serviceable. After completing the pre-starting checks, both engines were started and were reported to have been running normally when the pilot felt a slight jolt and the nose gear collapsed. He quickly shut off the throttles, mixtures and electrics, by which time the engines had stopped, and vacated the aircraft. An engineer was quickly on scene and the pilot reported that he confirmed the landing gear selector to have been in the down position.

When the aircraft was recovered, the main landing gear was checked and found to be down and locked. As the aircraft was lifted, the landing gear emergency valve was pulled to the open position whereupon the nose gear lowered and locked into the down position. After removal to a hangar the aircraft was placed on jacks and the gear examined for defects, but only the nose gear doors were found to exhibit light damage. Gear retraction and emergency freefall tests were then

carried out, apparently normally, but it was established that the 'squat' switch was jammed in the 'air' position such that with the aircraft's weight on wheels, a gearup selection would not be inhibited. Following appropriate checks and propeller replacement, the aircraft was made safe and ferried 'gear down' to the operator's main maintenance base for a more detailed examination and shock-load checks of the engines. It was then discovered that two pins within socket J29, through which the squat switch connections run, had become displaced such that the connections to one 'common' and one normally 'open' contact were not continuous. This would most likely have inhibited the gear up warning horn.

The operation of the landing gear was last checked during a 150-hour check, some 68 hours prior to this accident. The operator of this aircraft has pointed out that the squat switch was probably the one fitted to the aircraft at manufacture in 1979 and that in the training role this aircraft would have accrued more than an average number of landings. In addition, at least one other GA-7 aircraft operated by the same training organisation has been recently found to have a squat switch stuck in the 'air' position.