

No: 4/91

Ref: EW/G91/02/07

Category: 1b

Aircraft Type and Registration: Cessna Citation 500, N11HJ

No & Type of Engines: 2 Pratt and Whitney JT15-1A turbofan engines

Year of Manufacture: 1972

Date and Time (UTC): 16 February 1991 at 1339 hrs

Location: Hatfield Airport, Hertfordshire

Type of Flight: Private (training)

Persons on Board: Crew - 2 Passengers - None

Injuries: Crew - None Passengers - N/A

Nature of Damage: Damage to fuselage underside, rear pressure bulkhead and flaps

Commander's Licence: Senior Commercial Pilot's Licence with Instructor rating

Commander's Age: 28 years

Commander's Total Flying Experience: 2,065 hours (of which 954 were on type)

Information Source: Aircraft Accident Report Form submitted by the pilot

The aircraft flew from Biggin Hill to Hatfield with the owner handling the aircraft from the left seat and a flying instructor in the right seat. The surface wind at Hatfield was from the north-east at 10 kt and there was no significant cloud. The intention was for the pilot to fly a missed approach from an ILS to runway 24 and then join the visual circuit on runway 06 for further practice. Before commencing the ILS approach, the instructor throttled back the right engine. Following the single-engined missed approach the instructor restored power on the right engine and the aircraft was flown round the circuit for a touch and go landing. After take-off the instructor again throttled back the right engine and the pilot flew a single-engined circuit and touchdown. The aircraft rolled again with full power and this time the instructor throttled back the left engine after lift-off. He briefed the pilot that for the final landing he was to assume failure of the normal brakes and to bring the aircraft to rest using the emergency brakes. The aircraft landed with the landing gear retracted.

The instructor later stated that he thought the landing gear warning horn circuit was performing abnormally. He described how the horn sounded not only when he throttled back an engine to simulate asymmetric flight but also when he advanced the retarded throttle again to normal power. Each time the horn sounded he pressed the horn silence button. He acknowledged that during the final circuit when the landing gear would normally have been lowered he was discussing the brakes failed landing procedure with the pilot and the landing gear was not lowered. At a late stage on finals, when

landing flap was lowered, the gear warning horn sounded again and he automatically silenced it. He stated that he believed the system to be faulty because it should not have been possible to silence the horn when full flap was lowered with the landing gear retracted. Shortly after lowering landing flap, power was increased and, when the throttle of the normally operating engine was closed prior to touchdown, the horn sounded again. At this stage he realised that the landing gear was still retracted and he attempted to increase power for a go-around. Before the engines spooled up the flaps contacted the runway and he then closed both throttles. The aircraft came to rest quite gently and both he and the pilot were able to vacate the aircraft through the normal exit.

Other pilots confirmed that it was not unusual for the landing gear warning horn to sound as the throttle was advanced in the circumstances described above but they were not aware of any other occasions when it had been possible to silence the horn with the landing gear up when landing flaps were selected.

The aircraft is still under repair, and the landing gear warning horn circuit has not yet been tested.