

No: 3/89

Ref: EW/ C1093

Category: 1b

**Aircraft Type
and Registration:**

Cessna 421C, G-FTAX

No & Type of Engines:

2 Continental Motors Corp GTSIO-520-L piston engines

Year of Manufacture:

1977

Date and Time (UTC):

13 December 1988 at 0859 hrs.

Location:

Southampton Airport

Type of Flight:

Public transport (charter)

Persons on Board:

Crew - 1

Passengers - 2

Injuries:

Crew - None

Passengers - None

Nature of Damage:

Both propellers damaged, nose landing gear doors and underside of forward fuselage scraped.

Commander's Licence:

Commercial Pilot's Licence

Commander's Age:

33 years

**Commander's Total
Flying Experience:**

1700 hours (of which 17 were on type)

Information Source:

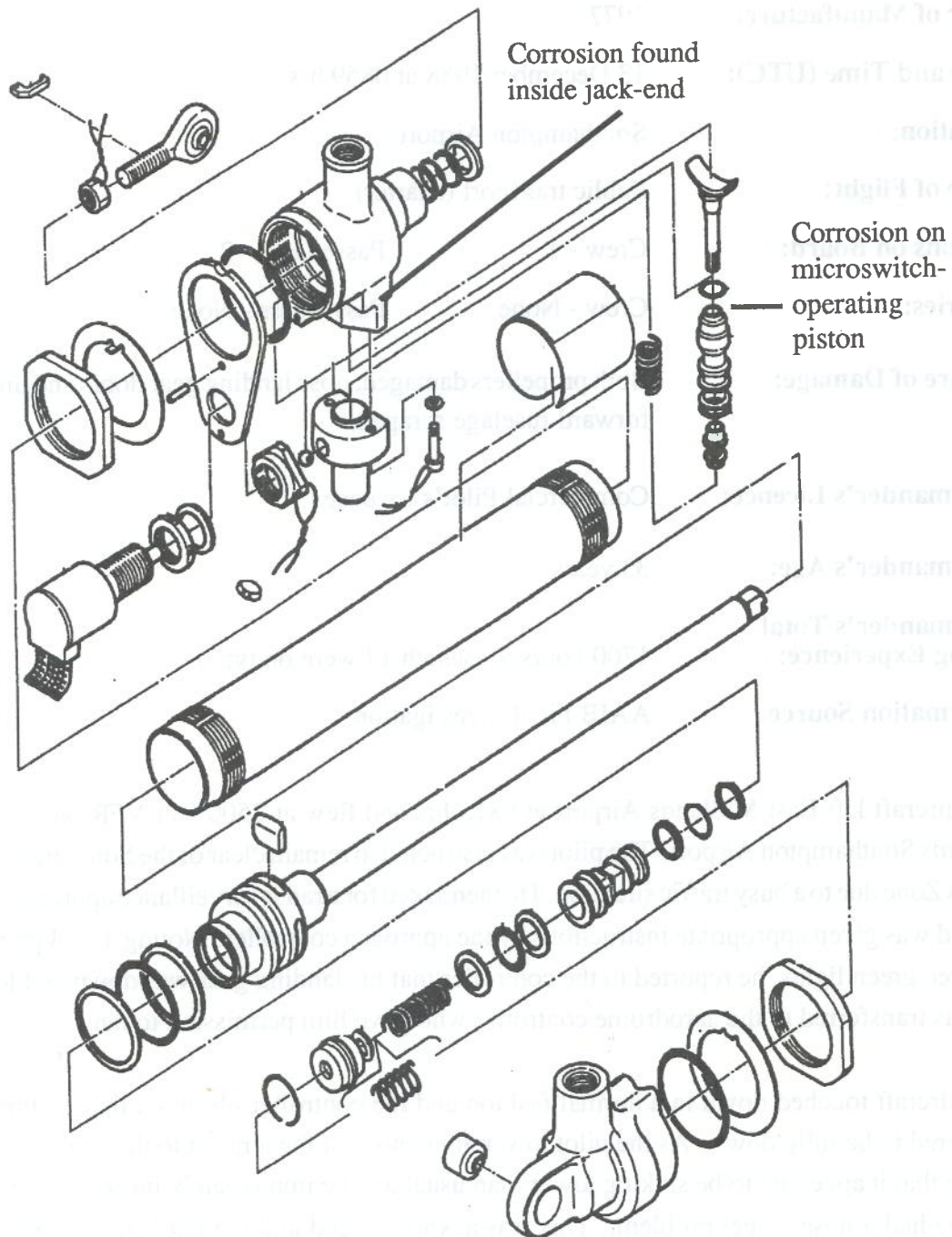
AAIB Field Investigation.

The aircraft left East Midlands Airport at 0815 hrs and flew at 2500 feet VFR on a direct track towards Southampton Airport. The pilot was instructed to remain clear of the Southampton Special Rules Zone due to a busy traffic situation. He then asked for a radar surveillance approach to runway 20 and was given appropriate instructions by the approach controller. Noting a cockpit indication of three green lights, he reported to the controller that his landing gear was down and locked and he was transferred to the aerodrome controller who gave him permission to land.

The aircraft touched down in a normal fashion and the controller observed that all three wheels appeared to be fully down. As the pilot lowered the nose of the aircraft to the runway he became aware that it appeared to be sinking lower than usual and he immediately informed the controller that he had a nose wheel problem. This was acknowledged and the crash rescue services were alerted. The pilot maintained full back pressure on the control column until there was insufficient aerodynamic force from the elevator to prevent the nose dropping further. Meanwhile he decided that a go-around was not feasible due to inadequate runway length remaining and he therefore feathered both propellers. However, before he had time to stop the engines the propellers had contacted the runway and then the nose of the aircraft lowered to the runway. The aircraft came to a halt at a point about 1200 metres along the runway. The pilot completed his shut down checks

and left the aircraft with his passengers.

The aircraft was recovered to a hardstanding where the nose was supported on a jack with the nose gear in the mid-travel position, electrical power was applied in this configuration and three green lights obtained. A down selection under power from a hydraulic rig caused the main gear to lock down satisfactorily but left the nose gear partially extended with three greens showing.



The nose gear was fitted with a Teijin Seiki jack assembly containing a downlock microswitch actuated by a mechanism driven by internal locking keys when the jack was fully extended. On retraction a spring was designed to move the mechanism away from the down position and allow the microswitch contacts to open.

Examination showed that the indicating mechanism remained in the 'down and locked' position irrespective of the position of the jack piston. Corrosion was found on both the jack cylinder-end containing the mechanism and on the corresponding end of the piston operating the microswitch. The return spring force was insufficient to overcome the friction between the two corroded parts, consequently the indicating mechanism remained in the down position.