

No: 3/90

Ref: EW/G89/10/08

Category: 1a

**Aircraft Type
and Registration:**

BAC One Eleven 520FN, G-BEKA

No & Type of Engines:

2 Rolls-Royce Spey 512-14DW turbo-fan engines

Year of Manufacture:

1970

Date and Time (UTC):

26 October 1989

Location:

En-route between Al-Maria and Manchester

Type of Flight:

Charter

Persons on Board:

Crew - 6 Passengers - 123

Injuries:

Crew - None Passengers - None

Nature of Damage:

Minor damage to trailing edge of rudder.

Commander's Licence:

Airline Transport Pilot's Licence with Instrument Rating

Commander's Age:

51 years

**Commander's Total
Flying Experience:**

13,220 hours (of which 4,300 were on type)

Information Source:

Aircraft Accident Report Form submitted by the pilot

After landing the commander was advised of damage to the rudder trailing edge. No noticeable control effects had been experienced. It was observed that a large section of rudder honeycomb trailing edge outer skin was missing from the left side.

Engineering investigation showed that a portion of skin approximately 7 feet by 11.5 inches had separated due to local disbonding, probably as a result of moisture ingress and subsequent cyclic freezing and thawing. This damage had been exploited by the aerodynamic loads on the skin, leading to extensive failure of the bond and separation of the skin portion.

The rudder trailing edge section had been built before 1972. After that time the bonding materials used in production of these sections were superseded by improved materials.