# Agusta Bell 206B, G-PEAK, 2 September 1997

## AAIB Bulletin No: 4/98 Ref: EW/G97/09/01 Category: 2.3

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| **Aircraft Type and Registration:** | Agusta Bell 206B, G-PEAK |
| **No & Type of Engines:** | 1 Allison 250-C20 turbine engine |
| **Year of Manufacture:** | 1970 |
| **Date & Time (UTC):** | 2 September 1997 |
| **Location:** | Maintenance |
| **Type of Flight:** | N/A |
| **Persons on Board:** | Crew - Nil - Passengers - Nil |
| **Injuries:** | Crew - N/A - Passengers - N/A |
| **Nature of Damage:** | Cracks in main rotor pitch change link |
| **Commander's Licence:** | N/A |
| **Commander's Age:** | N/A |
| **Commander's Flying Experience:** | N/A |
| **Information Source:** | Mandatory Occurrence Report and further inquiries by AAIB |

During routine maintenance on a 100 hour check,inspection revealed a suspected crack in one of the main rotorpitch change links at the lower swaged end. Localised paint removalconfirmed two cracks approximately 7 mm in length running alongthe rod from the lower end. The rod was retrieved by AAIB forexamination to identify the failure mechanism and to considerthe failure's potential to explain an accident to another AgustaBell 206B.

Detailed examination of the rod confirmedthe presence of three small, longitudinal, through-thickness cracksin the rod wall adjacent to the threaded end fitting. (Figures1 and 2). The cracks measured approximately 2, 7 and 8.5 mm inlength and were located at 70_intervals in one half of the rod circumference. The orientationand appearance of the cracks and the presence of corrosion deposits,both within the cracks and in the gap between the end fittingand the rod wall, suggests that a corrosion mechanism was responsiblefor the cracking observed.

Cracking of this sort was the subject of aBell Helicopter Alert Service Bulletin and subsequent AirworthinessDirective in 1973 and is now monitored through routine maintenanceinspections, the process by which these cracks were identified.

Examination of the main rotor pitch changelinks from the other Agusta Bell 206B under investigation by AAIBhas precluded this cracking mechanism from contributing to thataccident.