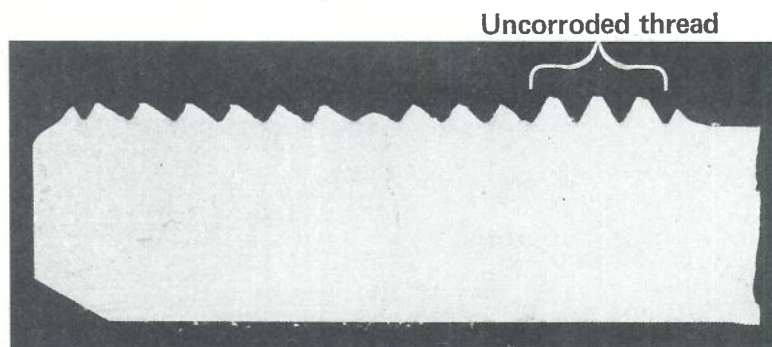


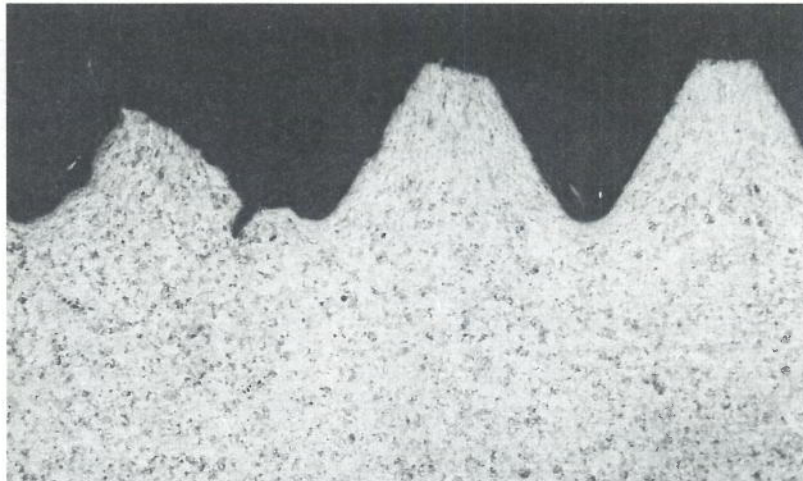
Figure 1 Alouette II main rotor head retention assembly



Bolt condition as found

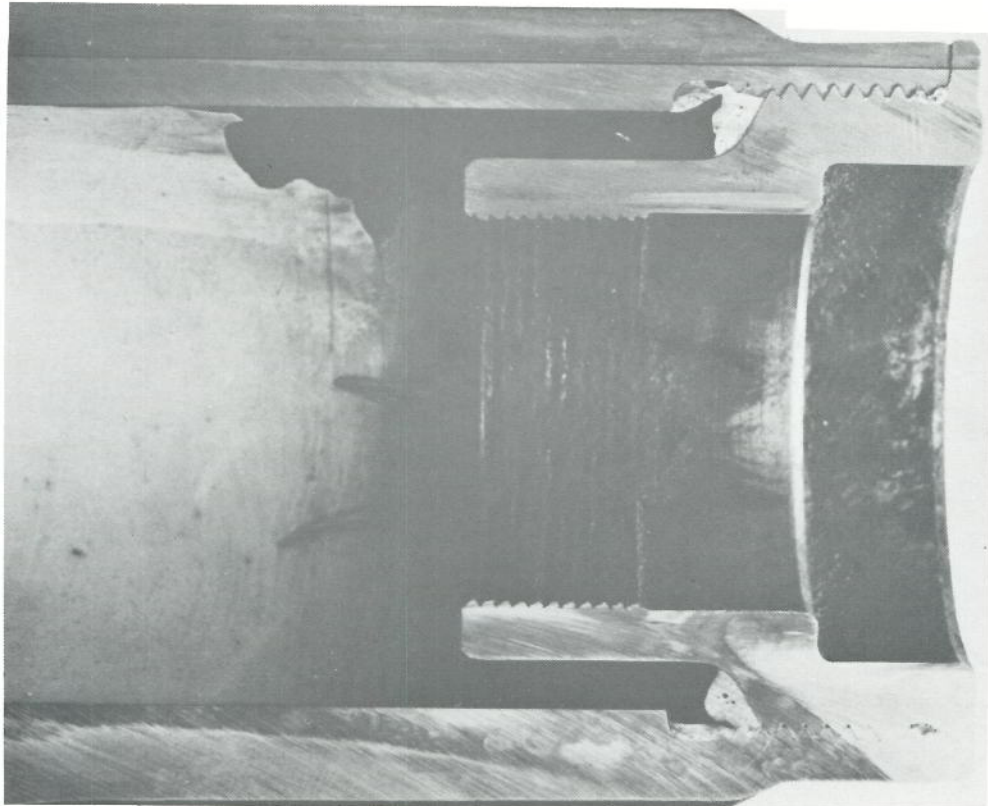


Section through bolt (x4)

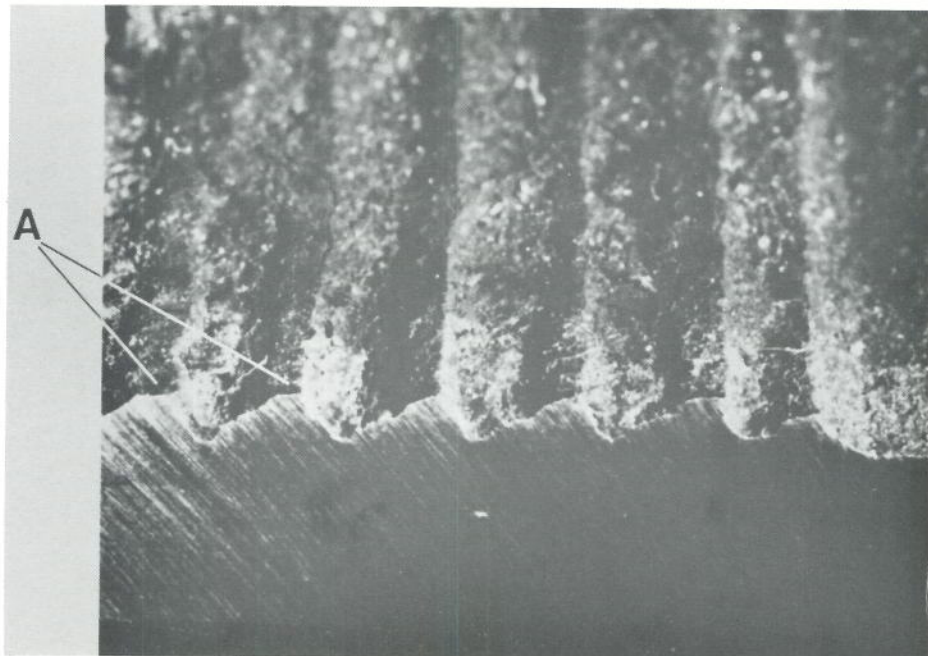


Corroded and uncorroded thread sections in bolt (x25)

Figure 2 Main rotor head retention bolt



Vertical section through mast, showing corrosion product in thread (x1.4)



View showing loss of thread form in mast, and evidence of vertical smearing at A (x12)

(Photographs by RAE Farnborough)

Figure 3 Main rotor mast condition

CAA APPROVAL OF THE PMIS

CAA maintenance schedule approval for schedule HM12 (the PMIS) was given to Helicopter Hire Ltd in April 1977 under reference MS/Alouette/9, and was last renewed on 18 October 1982.

The approval contained the following relevant notes, conditions and endorsements (in part).

“Note:

The Maintenance Schedule identified above is approved by the Civil Aviation Authority (CAA) on the basis that it prescribes the minimum maintenance to be performed on the aircraft to which this Schedule relates. Nothing contained in, or omitted from, this Schedule absolves persons employed in implementing the requirements from ensuring that the aircraft is, at all times, maintained in an airworthy condition.”

“Conditions:

1. The implementation of the requirements of this Schedule shall be controlled by such documents and records as will enable personnel authorised to make certifications under the Air Navigation Order to ascertain to their satisfaction that the requirements have been complied with.”

“4. In implementing the requirements of the Schedule compliance shall, as appropriate, be shown with:

(a) British Civil Airworthiness Requirements

(b) Civil Aircraft Inspection Procedures

(c) CAA Airworthiness Notices, with particular reference to Airworthiness Notice No 36.”

“(8) Non-compliance with any of the conditions of this Approval Document or its Endorsements shall invalidate the Approval of this Maintenance Schedule. This Approval Document includes 4 Endorsements.”

“Endorsements:

4. The operator or his contracted Maintenance Organisation, may vary the periods prescribed by this Schedule provided that such variations are within the limits of sub-para (a) to (e) of this endorsement.

Variations shall be permitted only when the periods prescribed by this Schedule (or documents in support of this Schedule) cannot be complied with, due to circumstances which could not reasonably have been foreseen by the Operator, or by his contracted Maintenance Organisation.

The decision to vary any of the prescribed periods shall be taken only by the Chief Inspector/Quality Manager or person of equivalent status on behalf of the Operator or his Contracted Maintenance Organisation.

Particulars of every variation so made shall be entered in the appropriate log book(s).

(a) Items Controlled by Flying Hours

Period Involved	Maximum Variation of the prescribed period
(i) 5,000 flying hours or less	10%
(ii) More than 5,000 flying hours	500 flying hours.”

The CAA approval document did not contain the 600 hour minimum utilisation, either as a condition or as an endorsement.