1 Introduction

An elevator control cable was found to be coming into contact with the crank at its forward end, resulting in a broken strand of wire. Another example of the same issue has been reported, although the contact had not yet caused significant damage to the cable in this case. This bulletin is issued to advise all other owners and their BMAA Inspectors of this potential problem.

2 The issue

The elevator control cables are connected to the crank at their forward end using D-shackles*. On the aircraft in question this allowed the end of the lower, ‘up elevator’, cable to contact the crank when the stick was held fully back. The contact point was at the end of the cable where it is formed into a loop around a thimble. Over time this caused damage to the cable as well as marking the crank. The point of connection of the cable to the crank is highlighted in the drawing and photo of the control system below. Note that the control stick is to the right-hand side in both cases (although not visible in the photo).

* On later aircraft, each D-shackle is replaced with a pair of plates and a pair of bolts. This maintains a greater distance between the elevator cable and crank, so that contact is impossible.
The photo below shows the broken strand in the cable.

3 Inspection

The area is easily accessible through the large inspection hatch under the fuselage immediately behind the main undercarriage hoop. Good illumination – such as a bright torch – is essential. It is recommended to have an assistant to operate the controls to see if the cable comes into contact with the crank.

Inspect the affected area within 10 hours of the effective date of this bulletin, and ensure that it is checked by a BMAA Inspector at the next Permit revalidation inspection.

If there is damage to the cable or crank – such as broken strands or significant wear - the aircraft may not be flown. If there is slight contact, and no significant damage yet, the aircraft may continue to be flown while the problem is resolved subject to regular inspection of the cable and crank to ensure their condition is not deteriorating.

4 Reporting and Repair

Report all cases of contact between cable and crank to the BMAA Technical Office (technical.office@bmaa.org) so that we are aware of the extent of the problem, and can advise on possible repairs (in case of damage) and approve modifications (to stop further damage).

All repairs and modifications must be performed in accordance with BMAA procedures, and all replacement parts must be original, or otherwise approved by the Technical Office.

Note: The technical content of this document is approved by the BMAA, UK CAA organisation approval ref. DAI/8909/84