

## Follow-up Action on Occurrence Report

**ACCIDENT TO PEGASUS QUIK, G-STYX, AT ISLE OF SHEPPEY, KENT ON 21 AUGUST 2004  
(FATAL MICROLIGHT CRASH)**

**CAA FACTOR NUMBER** : F39/2005  
**FACTOR PUBLICATION DATE** : 15 November 2005  
**OPERATOR** : Private  
**CAA OCCURRENCE NUMBER** : 2004/05798  
**AAIB REPORT** : AAR 2/2005

### SYNOPSIS

(From AAIB Report)

The Pegasus Quik microlight, with an instructor and passenger on board, departed Rochester Airfield for a trial lesson. Thirty five minutes into the flight, as it was flying at 500 ft along the north coast of the Isle of Sheppey, it pitched up steeply to the near vertical and entered a series of tumbling manoeuvres. As the microlight tumbled the trike unit, containing the two occupants, separated from the wing and descended vertically to the ground. Neither the pilot nor his passenger survived the impact. The initiation of the pitching moment and subsequent entry into the tumbling sequence was brought about by the failure of the right upright upper fitting, which caused full nose-up trim to be suddenly applied.

Some time previously the microlight's uprights upper fittings had been modified to comply with Service Bulletin 116 requiring the fitting of additional rivets. The additional rivets were not only fitted incorrectly, and without reference to the Service Bulletin, but two of them did not match the specification of those rivets supplied by the manufacturer in the modification kit. Additionally, no duplicate independent inspection was carried out on the correct embodiment of the modification.

The investigation identified the following causal factors:

- (i) Failure of the right upright upper fitting caused the microlight to enter a tumble manoeuvre from which it was not possible to recover.
- (ii) Service Bulletin 116, which introduced additional rivets in the upper fitting, was not correctly embodied.

Eleven safety recommendations have been made as a result of the investigation.

### FOLLOW UP ACTION

The eleven Safety Recommendations, made by the AAIB following their investigation, are reproduced overleaf, together with the CAA's responses.

### **Recommendation 2004-80**

It is recommended that the British Microlight Aircraft Association, take the necessary immediate steps to ensure the continued safe operation of the Pegasus Quik microlight aircraft with regard to the application of Service Bulletin 116 issue 2.

#### **CAA Response**

This Recommendation is not addressed to the CAA. However, Mandatory Permit Directive 2004-009 R2, requiring Service bulletin 116 Issue 2 to be undertaken before the next flight, was issued by the CAA on 29 September 2004.

**CAA Status - Closed**

### **Recommendation 2004-81**

It is recommended that the British Microlight Aircraft Association consider reviewing its policy, procedures and standards with regard to the implementation and inspection of 'field fitted' modifications and service bulletins.

#### **CAA Response**

This Recommendation is not addressed to the CAA.

**CAA Status - Closed**

### **Recommendation 2005-82**

It is recommended that the Civil Aviation Authority review its policy on the use of crash helmets and shoulder harnesses on microlight aircraft.

#### **CAA Response**

The CAA accepts this recommendation.

The requirements for use of seat belts and harnesses, and for giving briefings and instructions to passengers regarding their use, are contained in the Air Navigation Order. The use of crash helmets has, other than for some specialist operations that require CAA sanction, generally been considered to be a matter for personal discretion. However, the CAA will review the regulatory policies in both these areas, as they relate to flying in microlight aeroplanes, by April 2006.

**CAA Status - Open**

### **Recommendation 2005-83**

It is recommended that the Civil Aviation Authority conduct a review of the British Microlight Aircraft Association (BMAA) policy on the selection, training and revalidation of inspectors with a view to establishing; the minimum engineering skills and knowledge; appeal procedures and the individuals within the BMAA who should authorise a reduction in the minimum engineering standards.

#### **CAA Response**

CAA accepts this recommendation.

CAA has reviewed these activities and identified areas for improvement. Following this review the BMAA are implementing changes to their internal procedures and processes for the selection, qualification, training and

revalidation of inspectors. These changes will also establish the minimum engineering skills and knowledge required and the associated procedures for appeals and variations relating to inspector appointments. On completion of these changes the CAA will verify their efficacy by undertaking a review of their implementation with an anticipated completion date of June 2006.

**CAA Status - Open**

#### **Recommendation 2005-84**

It is recommended that the Civil Aviation Authority review their audit procedures of the British Microlight Aircraft Association.

#### **CAA Response**

CAA accepts this recommendation.

CAA has reviewed the audit procedures for the British Microlight Aircraft Association. As a result of the review, CAA carried out a detailed audit of the British Microlight Aircraft Association in May 2005. The CAA's future oversight of the British Microlight Aircraft Association will include product audits to further validate the BMAA processes. These product audits will include surveys of aircraft and the associated records and take account of the embodiment of modifications, the stage construction of homebuilt microlight aircraft, and an assessment of the annual inspection process by BMAA inspectors that forms part of the renewal of the certificate of validity. In addition the CAA will conduct audits on a quarterly rather than annual basis for the immediate future.

**CAA Status - Closed**

#### **Recommendation 2005-85**

It is recommended that the Civil Aviation Authority ensure that Service Bulletins involving work conducted on primary aircraft structure include a statement that duplicate independent inspections are required, and that both inspections are to be recorded in the aircraft logbook.

#### **CAA Response**

The CAA accepts this recommendation insofar as it relates to the need for a duplicate inspection. However, the CAA does not consider it appropriate to amend Service Bulletins with requirements for duplicate/independent inspections. This requirement is contained in the BMAA guide to airworthiness which identifies the need to carry out independent inspections whenever work is carried out on primary structure and the CAA consider this to be the most appropriate place for this information. The CAA has written to the BMAA and microlight aircraft manufacturers requiring them to identify alterations and modifications that affect primary structure in Service Bulletins and other change documents. The BMAA published an article in the November/December 2004 issue of its magazine "Microlight Flying" to remind all of its members of the importance of conducting independent inspections following work on the primary structure and the requirement to record their accomplishment in the aircraft logbook.

**CAA Status - Closed**

#### **Recommendation 2005-86**

It is recommended that the Civil Aviation Authority and Mainair Sports Limited take appropriate action to ensure that Pegasus Quik uprights that have been modified by owners are replaced with factory modified items.

#### **CAA Response**

The CAA accepts this recommendation.

P&M Aviation (formerly Mainair Sports Ltd) have issued Service Bulletin 120 which requires all modified uprights to be returned to the factory for verification of correct embodiment of the modification. Incorrectly modified uprights are to be replaced with factory modified items. The Civil Aviation Authority under Mandatory Permit Directive 2005-007 issued in July 2005 has mandated this Service Bulletin.

**CAA Status - Closed**

#### **Recommendation 2005-87**

It is recommended that the British Microlight Aircraft Association (BMAA) liaise with industry to ensure that advanced copies of Service Bulletins are passed to the BMAA so that comments can be made on their owner/members' and inspectors' ability to competently satisfy the instructions.

#### **CAA Response**

This Recommendation is not addressed to the CAA.

**CAA Status - Closed**

#### **Recommendation 2005-88**

It is recommended that the British Microlight Association (BMAA) ensure, through the issue of the Permit to Fly, that microlight aircraft are fitted with the correct placards and are maintained in accordance with either the manufacturer's or BMAA recommended maintenance schedule and that all maintenance is recorded in a Civil Aviation Authority approved log book.

#### **CAA Response**

This Recommendation is not addressed to the CAA.

**CAA Status - Closed**

#### **Recommendation 2005-89**

It is recommended that the British Microlight Aircraft Association review and regularly update their document entitled '*Guidelines for the Inspection and Maintenance of Microlight Aircraft*'.

#### **CAA Response**

This Recommendation is not addressed to the CAA.

**CAA Status - Closed**

#### **Recommendation 2005-90**

It is recommended that Mainair Sports Ltd takes action to ensure that the limitation placard on the Pegasus Quik is protected, or relocated, so that the data remains clearly visible to the pilot.

#### **CAA Response**

This Recommendation is not addressed to the CAA.

**CAA Status - Closed**