1. Introduction

An aircraft fitted with a Purolator fuel filter suffered an engine failure shortly after take-off. The cause was determined to be debris in the fuel reaching the carburettors. This type of filter contains a filter element held in place by a knurled nut on a central shaft. The nut had loosened allowing unfiltered fuel to reach the engine.

This service bulletin introduces an inspection schedule for aircraft fitted with a Purolator fuel filter, or fuel filter of similar design. It also introduces a modification to rectify the problem.

All Savannah aircraft are fitted with this filter. Other aircraft in the BMAA fleet may also have this filter fitted.

Figure 1: Purolator fuel filter with the glass tube removed for clarity. This example has a retaining spring fitted to stop the knurled nut from loosening.
2. Classification and compliance

This service bulletin – inspection and modification – is mandatory for affected aircraft.

The filter must be inspected as part of the daily inspection (before the first flight each day).

The filter must be modified before the next Permit revalidation inspection.

3. Implementation

For aircraft fitted with an unmodified Purolator fuel filter, or fuel filter of similar design, the filter must be inspected as part of the daily inspection (before the first flight each day) to ensure that the filter is correctly assembled and unfiltered fuel cannot bypass the filter element and reach the engine.

If the filter is found to be incorrectly assembled this must be rectified, and the fuel system downstream of the filter flushed and checked for contamination, before flight.

The inspection regime must be followed until the fuel filter is modified to ensure the knurled nut cannot loosen. The modification is to install a retaining spring from Europa Aircraft. The retaining spring is slid over the central shaft and stops the knurled nut from loosening. The filter in figure 1 is shown with this retaining spring in place. The filter must be modified before the next Permit revalidation inspection.

Alternative modifications require approval either from the BMAA or the type approval holder (factory built aircraft). An affected fuel filter must not be changed for a filter of a different design without taking advice from the BMAA or the type approval holder (factory built aircraft), as there may be good reason why the Purolator filter is specified.

4. Certification

The aircraft owner/operator may perform the daily inspection part of this service bulletin.

Rectification of an incorrectly assembled fuel filter (i.e. tightening of a loose knurled nut) and flushing/checking of the fuel system may be performed by the aircraft owner/operator or his employee. Details must be recorded in the airframe and engine logbooks. It is recommended that the reassembled fuel system is independently inspected by a competent person before flight.

When modified (i.e. a retaining spring fitted), the filter and reassembled fuel system must be inspected before flight by a BMAA Inspector who must also make an entry in the aircraft’s airframe logbook.
5. Parts


6. Operating data

For affected aircraft inspection of the fuel filter must be added to the daily inspection. A copy of this service bulletin must also be retained with the Operator’s Manual.

7. Authorisation

This Service Bulletin has been authorised by the BMAA Chief Technical Officer.

Authorised by

B J Syson
Chief Technical Officer
British Microlight Aircraft Association

Initial Distribution: all Savannah registered owners; owners of other BMAA administered aircraft by request.

Appendix 1: Contact details

<table>
<thead>
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