



# **MANDATORY PERMIT DIRECTIVE**

In accordance with Article 9A(5)(b) of the Air Navigation Order 2000 as amended, the following action required by this Mandatory Permit Directive (MPD) is mandatory for applicable aircraft registered in the United Kingdom operating on a UK CAA Permit to Fly.

## **MPD: 2004-007 R1 CFM**

**Subject:** Main undercarriage

**Applicability:** All CFM Shadow B, BD, C, CD, D, DD, Streak Shadow and Starstreak Shadow series microlights.

**Reason:** The standard undercarriage assembly of CFM Shadow, Streak Shadow and Starstreak Shadow microlights consists of a steel framework attached to the composite fuselage. The outer section of the main undercarriage consists of two GRP pultrusion rods. An under-fuselage fuel tank, known as a 'slipper tank', is available as an optional modification or as part of the basic build standard.

There have been a number of cases of main undercarriage failure on these aircraft. There have also been cases of rupture of the under-fuselage fuel tank following failure of the undercarriage. Operation of microlights using the slipper tank has been prohibited by Mandatory Permit Directives (MPDs) 2003-019 R1 and 2004-002. This action was an interim measure pending resolution of the undercarriage problem.

This MPD has been raised to revision 1 to include all CFM Shadow aeroplanes and to reference the BMAA modification.

**Compliance:** Before further flight, replace the standard main undercarriage assembly with an approved alternative main undercarriage. Compliance with this MPD cancels MPD 2003-019R1 and 2004-002.

The following replacement undercarriage designs are available at this time:

For all Shadow B, BD, C, CD, DD aeroplanes and for Type Approved Shadow D series microlights, see British Microlight Aircraft Association (BMAA) Microlight Airworthiness Approval Note (MAAN) 1762. Copies of BMAA MAAN 1762 and further information can be obtained from:

British Microlight Aircraft Association  
Bullring  
Deddington  
Banbury  
Oxon  
OX15 0TT

Tel: 01869 338888  
Fax: 01869 337116

Email: [cto@bmaa.org](mailto:cto@bmaa.org)

continued overleaf

For Homebuilt Shadow D series aeroplanes, Streak Shadow and Starstreak microlights, see Popular Flying Association (PFA) Airworthiness Modification 11121 "Crosbie Main Undercarriage".

For Streak Shadow aeroplanes only, PFA Airworthiness Modification 11132 "Alternative Moulded Composite Undercarriage" can be embodied as an alternative.

Copies of PFA Modifications 11121 and 11132 and further information can be obtained from:

Popular Flying Association  
Turweston Aerodrome  
Nr Brackley  
Northants  
NN13 5YD

Tel: 01280 846786  
Fax: 01280 846780

Email: [engineering@pfa.org.uk](mailto:engineering@pfa.org.uk)

Record compliance with this MPD in the aircraft log book.

The original MPD became effective on 1 May 2004, this MPD becomes effective 22 May 2004.