



Civil Aviation Authority

MANDATORY PERMIT DIRECTIVE



Number: 2022-003

Issue date: 03 February 2022

In accordance with the CAA Continuing Airworthiness Procedures, the issuance of a Mandatory Permit Directive (MPD) is proposed which will be applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the MPD Number above, to the email address specified in the 'Remarks' section, prior to the consultation date indicated

Type/Design Approval Holder's Name:

EUROPA AIRCRAFT COMPANY Ltd

Type/Model Designation(s):

Europa aircraft, all models, all serial numbers

Effective Date:	17 February 2022
TADS or equivalent:	Not Applicable
Foreign Directive (if applicable):	Not Applicable
Supersedure:	Not Applicable

ATA 52 - Aircraft Doors - Bracket - Modification

Manufacturer(s):

Europa Aircraft Company Ltd

Applicability:

Europa aircraft, all models, all serial numbers

Definitions:

For the purpose of this MPD, the following definitions apply:

LAA: Light Aircraft Association

Airworthiness Alert: LAA Airworthiness Alert LAA/AWA/21/08

Airworthiness Information Leaflet: LAA Airworthiness Information Leaflet MOD/247/012 (Mandatory)

Modification SM15833: LAA Standard Modification SM15833

Reason:

On the 23 of June 2021, LAA operated Europa (G-FLOR) suffered a left canopy door detachment in-flight, resulting in the door striking the left tailplane and causing minor damage to its leading edge and upper surface. Since 2003 there have been eight events involving the inadvertent opening of canopy doors fitted to Europa aircraft operated in the UK. An (AAIB) Air Accidents Investigation Branch investigation has found evidence that indicates that the canopy door opened in flight because the door's rear tapered locking shoot bolt was not engaged into its guide. An unsafe condition can occur when the canopy door appears to be closed and locked but has only engaged on the forward locking tapered shoot bolt guide, and not the rear. This can occur due to door flex when pulling down and closing the canopy door, which can result in the misalignment of the rear tapered locking shoot bolt with its guide.

A misalignment on the left hand 'pilots' door can be difficult to identify from the left seat once the door has been closed from the inside, due to restricted space inside the cockpit for the pilot. Furthermore, a reach over check to the opposite door from either seats occupant is not always possible due to lack of reach, single occupancy, or in a passengers case, inexperience.

Following a previous similar event on another Europa aircraft, the LAA advised the AAIB that they would work with the aircraft manufacturer to design a safety modification to prevent a recurrence of canopy doors inadvertently opening during flight on Europa aircraft. The LAA have worked with Europa Aircraft Ltd to develop a modification to prevent this unsafe condition, and issued Airworthiness Alert LAA/AWA/21/08, and MOD/247/012 (Mandatory) Airworthiness Information leaflet.

The leaflet contains information for LAA standard modification SM15833 and accomplishment instructions, which introduces the installation of an aerodynamically shaped 'stop' attached to the outer fuselage skin immediately aft of the canopy door rear locking bolt guide, and part of the fairing on the door. (See Appendix 1, figure 1).

This stop prevents the rear tapered locking shoot bolt from misaligning with its guide and riding over the outside fuselage skin when operating the lock lever, after canopy door closure. The stop baulks the shoot bolt should it attempt to misalign with its locking guide and ride over the outside skin of the door frame, to cause an unsafe condition. While the shoot bolt is baulked by the stop, the door operating lever is prevented from travelling its full distance to the indicated 'locked' position - in this condition the pilot or passenger is therefore unable to move the lever to the pre flight check 'locked' position (to confirm that the canopy door is correctly closed and locked) until the canopy door is correctly closed, allowing it to be properly locked.

Required Action(s) and Compliance Time(s):

- 1) From the effective date of this MPD within 5 flying hours or the next Permit to Fly revalidation, whichever is the sooner, determine if modification SM15833 has already been embodied by way of visual inspection. If the modification has not been embodied, comply with mandatory LAA Airworthiness Information Leaflet (MOD/247/012) and carry out Modification SM15833.
- 2) Action 1 as above, must be carried out by an appropriate person, and upon completion be inspected and certified with a Permit Maintenance Release statement by an LAA inspector.
- 3) Ensure compliance with this MPD is recorded in the aircraft logbook.

Reference Publications:

LAA Airworthiness Alert LAA/AWA/21/08 dated 1 November 2021

LAA Airworthiness Information Leaflet MOD/247/012 (Mandatory) Issue 1 dated 1 November 2021

LAA Standard Mod SM15833 Issue 2 dated 9 November 2021

Remarks:

1. The safety assessment has warranted immediate publication and notification without implementing the full consultation process.
2. If requested and appropriately substantiated, CAA can approve Alternative Methods of Compliance for this MPD.
3. Enquiries regarding this MPD should be referred to: ga@caa.co.uk
4. For any questions concerning the technical content of the requirements in this MPD, please contact: Light Aircraft Association, Turweston Aerodrome, Nr. Brackley, Northamptonshire, England, NN13 5YD. www.laa.uk.com Tel: +44 01280 846786.

Corrected

Appendix 1



Figure 1

Modification. Addition of a door rear lock shoot bolt stop.
LAA Standard Modification SM15833

Corrected