

EASA REGULATORY IMPACT ASSESSMENT
PASSENGER EMERGENCY EXIT LOCATOR SIGN
SEPTEMBER 2009

Issue 1

AMENDMENT RECORD

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ABBREVIATIONS

CRI	Certification Review Item
CS	Certification Specifications (EASA)
EASA	European Aviation Safety Agency
ELOS	Equivalent Level of Safety (FAA)
ESF	Equivalent Safety Findings (EASA)
FAA	Federal Aviation Administration (USA)
FAR	Federal Aviation Regulations (FAA)
NPA	Notice of Proposed Amendment
RIA	Regulatory Impact Assessment
SFAR	Special Federal Aviation Regulations (FAA)

1 PURPOSE AND INTENDED EFFECT

1.1 ISSUE WHICH THE NPA IS INTENDED TO ADDRESS

CS 25.811(d)(1) requires there to be a passenger emergency exit locator sign above the aisle near each passenger emergency exit, or at another overhead location if there is insufficient headroom.

In some smaller aircraft, no overhead location is practical for the emergency exit locator sign and they have not been able to comply with CS 25.811(d)(1). It has therefore been necessary for some aircraft to be certificated using Certification Review Item/CRI (Equivalent Safety Findings/ESF, or ELOS in the case of FAA certification), which allowed the installation of combined emergency exit marking and locator signs. It should be noted that the requirements for passenger emergency exit locator signs have not presented any significant compliance issues for larger transport aeroplanes for commercial use.

This NPA addresses the difficulty on smaller transport aeroplanes in complying with CS 25.811(d)(1) due to their low headroom, regardless of their type of operation.

1.2 SCALE OF THE ISSUE

The difficulty in compliance with the requirement CS 25.811(d)(1) on the smaller transport aeroplanes was identified during the review of certification documents carried out in a study for EASA¹. An accident review carried out in the same study shows that there have been no threats specifically related to the emergency exit locator or marking signs not being visible or legible. The issues discussed here are therefore related only to certification/compliance issues.

EASA has issued, amongst others, a CRI (No. 190/D-29) for the ERJ-190-100ECJ (max. 19 passengers) allowing the passenger emergency exit locator sign to be combined with the exit marking sign. For this category of aeroplanes, the issue was the difficulty in installing an overhead emergency exit locator sign because it would present a head strike hazard due to the low headroom of the cabin.

A review of FAA ELOS and Exemptions for smaller transport category aeroplanes² (up to a maximum certificated passenger capacity of 60) in the period January 1994 to February 2006, found that the request for a combined emergency exit marking and locator sign was the third most frequent subject of application. These applications (ST5542NY-T-S-1, SP5109SE-T-C-1, ST3302WI-T-A-1, AT5177AT-T-C-1, ANM-113-04-01, TC2548WI-T-AG-4) were made for 9 different aircraft models consisting of Bombardier BD-100-1A10 (max. 16 passengers), Cessna Model 680 (max. 13 passengers), Dassault Falcon Models 50, 900, 900EX and 2000 (max. 19 passengers), Gulfstream Model GV-SP and GIV-X (max. 19 passengers), and a Bombardier CL600-2B16 (max. 19 passengers).

The FAA issued a Final Rule in SFAR No. 109 'Special Requirements for Private Use Transport Category Airplanes' on 8 May 2009. Paragraph 8 of the SFAR permits the use of a single exit sign to meet the requirements of 25.811(d)(1) and (2) as follows:

8. Emergency Exit Signs. In lieu of the requirements of Sec. 25.811(d)(1) and (2) a single sign at each exit may be installed provided:

- (a) The sign can be read from the aisle while directly facing the exit, and*
- (b) The sign can be read from the aisle adjacent to the passenger seat that is farthest from the exit and that does not have an intervening bulkhead/divider or exit.*

The text of the above requirements was used as the basis of the proposed amendment to CS-25 on this subject.

1.3 BRIEF STATEMENT OF THE OBJECTIVES OF THE NPA

The purpose of the NPA is to amend CS 25.811(d)(1) to include a requirement that caters for small transport category aeroplanes that do not have a practical overhead location for the passenger emergency exit locator sign. An alternative means utilising the exit marking sign required by CS 25. 811(d)(2) has been certificated via ESF by EASA (ELOS by the FAA). There is no evidence that such installations could pose a safety risk to the occupants. Incorporation of this amendment into CS-25 will reduce certification costs for manufacturers and EASA.

2 OPTIONS

2.1 THE OPTIONS IDENTIFIED

Two regulatory options for Agency action are considered in this Regulatory Impact Assessment:

Option 1 – Do Nothing

The “Do Nothing” option means no amendments to CS-25 in relation to the passenger emergency exit locator signs will be made. Installation of exit locator signs on small transport category aircraft with low headroom will continue to be addressed by means of ESF.

Option 2 – Rulemaking Action

This option means amendment of CS-25 to allow using the exit marking sign as the exit locator sign if there is no practical overhead location for the exit locator sign due to low headroom, provided that the compensating factors are achieved. This amendment would incorporate the provisions that have been implemented using ESF.

The proposed amendment would be accomplished by replacing the existing CS 25.811(d)(1) with the following text:

(d) The location of each passenger emergency exit must be indicated by a sign visible to occupants approaching along the main passenger aisle (or aisles). There must be –

(1) A passenger emergency exit locator sign above the aisle (or aisles) near each passenger emergency exit, or at another overhead location if it is more practical because of low headroom; except -

- (i) that one sign may serve more than one exit if each exit can be seen readily from the sign; and*
- (ii) a sign may be omitted if no overhead location is practical; provided that the emergency exit marking sign can be read from the aisle while directly facing the exit, and can be read from the aisle adjacent to the passenger seats that are farthest from the exit in each direction except where there is an intervening bulkhead/divider or exit.*

2.2 THE PREFERRED OPTION SELECTED

See Section 5.3.

3 SECTORS CONCERNED

The proposed regulatory change is to CS-25 and hence the aircraft affected will be those for which the application for a type certificate is made after the regulatory change considered in this RIA. Only newly designed CS-25 aeroplanes will be affected and it is envisaged that only smaller aeroplanes will benefit from the regulatory change. There will be no additional cost borne by aircraft manufacturers, aircraft converters or aircraft operators for compliance with the proposed regulatory change. There will be a marginal cost to EASA for the rulemaking activities. There is a potential benefit in terms of time and cost saving for aircraft manufacturers and EASA from a simplified cabin certification process.

4 IMPACTS

4.1 ALL IDENTIFIED IMPACTS

4.1.1 Safety

In terms of safety impacts, aircraft crew and passengers will not be affected by Option 1 or Option 2 since there is no change in the level of safety currently provided by the requirements stipulated in the ESF.

4.1.2 Economic

Option 1 – Do Nothing

The certification of combined emergency exit marking and locator sign will continue to be addressed by ESF, which incurs additional costs and time.

Option 2 – Rulemaking Action

This option would result in a marginal cost to EASA for the rulemaking activities, which may be offset by the cost savings associated with a simplified certification process. The simplified certification process will also benefit the manufacturers of aeroplanes with low headroom due to the reduced time and costs.

4.1.3 Environmental

No environmental impacts have been identified.

4.1.4 Social

No social impacts have been identified.

4.1.5 Other Aviation Requirements outside EASA scope

There would be no impact on other aviation requirements outside EASA scope.

4.1.6 Foreign comparable regulatory requirements

ICAO Annex 8 was reviewed and no text was found in conflict with the content or overall objectives of this NPA.

As discussed in Section 1.2, the FAA has issued SFAR No. 109 which allows the installation of a combined emergency exit marking and locator sign in aeroplanes with VIP configurations (for private use). There are no other rulemaking activities being carried out by FAA or Transport Canada that are pertinent to this subject. The introduction of new rules in CS-25 will result in differences with FAR 25/CAR 525.

4.2 EQUITY AND FAIRNESS ISSUES IDENTIFIED

There are no issues of equity and fairness associated with any of the options considered in this Regulatory Impact Assessment.

5 SUMMARY AND FINAL ASSESSMENT

5.1 COMPARISON OF THE POSITIVE AND NEGATIVE IMPACTS FOR EACH OPTION EVALUATED

Option 1 – Do nothing

Certification of the combined emergency exit locator and marking signs will continue to use ESF, which incurs increased costs and time to EASA and manufacturers/converters.

Option 2 – Rulemaking Action

There are benefits in amending CS-25 to allow the use of emergency exit marking signs as emergency exit locators when the installation of emergency exit locator signs on any overhead location is impractical, provided that the compensating factors are achieved. Amendment of CS-25 would remove the additional certification costs incurred by manufacturers and EASA as a result of the necessity for certification using ESF, without reducing the level of safety.

This option would introduce differences with FAR 25/CAR 525.

5.2 A SUMMARY DESCRIBING WHO WOULD BE AFFECTED BY THESE IMPACTS AND ANALYSING ISSUES OF EQUITY AND FAIRNESS

In terms of safety impact, aircraft crew and passengers will not be affected by either option since there is no change in the level of safety currently provided by the requirements stipulated in the ESF (or ELOS).

In terms of economic impacts, EASA, manufacturers/converters, and ultimately operators would benefit from the reduction of time and costs associated with the certification process if Option 2 – Rulemaking Action is selected.

5.3 FINAL ASSESSMENT AND RECOMMENDATION OF A PREFERRED OPTION

After due consideration the Agency believes that **Option 2 - Rulemaking Action** is to be preferred.

There are benefits in amending CS-25 to allow the use of emergency exit marking signs as emergency exit locators when the installation of emergency exit locator signs on any overhead location is impractical, provided that the compensating factors are achieved. Amendment of CS-25 would remove the additional certification costs incurred by manufacturers and EASA as a result of the necessity for certification using ESF, without reducing the level of safety.

Rulemaking as described under Option 2 above is therefore considered to be justified.

6 REFERENCES

¹ RGW Cherry & Associates (2009) *Study on CS-25 Cabin Safety Requirements, Report No. 4208/R/000454/KK Issue 4*, prepared for the European Aviation Safety Agency

² RGW Cherry & Associates Limited (2006) *An Evaluation of Equivalent Levels of Safety Findings and Exemptions Relating to Cabin Safety Regulations for Smaller Transport Aeroplanes, Prepared for Transport Canada, 0945/R/000343/KK Issue 1*