

EASA	COMMENT RESPONSE DOCUMENT
	EASA PAD No. 14-045 [Published on 05 March 2014 and officially closed for comments on 02 April 2014]

Commenter 1: Air Europa – Lukasz Michalik Boldin – 10/3/2014

Comment # 1

Following the opening of consultation period for subject EASA PAD, please note that in reference to the following paragraph:

§ 2.1 *For aeroplanes that have a version of the auto-throttle computer installed that is enabled to load software (using a disc supplied by GE), within 3 months after the effective date of this AD, modify the affected unit.*

After consultation with the autothrottle manufacturer, the possibility to load software is intrinsic to all autothrottle units P/N 760SUE2-* by themselves. However, in order to load software to those units, the operator shall have specific and dedicated tooling, which most operators do not have. It could be worth noting in the AD wording that in order to fall within the 3-months compliance timeframe, not only the units must be enabled to load software (which all P/N 760SUE2-* are indeed), but also the operator must have the appropriate tooling. Failure to clarify this aspect may lead to additional burden and cost for the operators (purchasing a tooling which is estimated to be used only once) in a fairly limited time span.

EASA response:

Comment agreed. It has been confirmed by GE Aviation Systems (see Comment #2 below) that the A/T software cannot be modified in situ. The Final AD has been amended accordingly and paragraph (2.1) has been removed.

Commenter 2: GE Aviation Systems – James Lockyer – 10/3/2014

Comment # 2

We have recently been made aware of EASA notification of a proposal to issue an Airworthiness Directive, PAD No.: 14-045, published 5th March 2014.

We have reviewed the document and note that in the section titled “*Required Action(s) and Compliance Time(s):*” paragraph (2) implies that some versions of Autothrottle Computer can have their flight software loaded “on wing”. Without needing to remove the computer from the aircraft. This is not the case. All versions of these Autothrottle Computers can only be updated in a suitably equipped and approved avionic repair shop, be that a GE or airline/third-party repair shop.

I believe this confusion may have stemmed from the fact the earliest variant of the 760SUE series of Autothrottle Computers, the 760SUE1-1, also requires a firmware upgrade, as detailed in GE Service Bulletin 760SUE-22-1268. Before the latest flight software can be loaded.

This firmware update requires circuit card programming equipment which, to the best of our knowledge, only GE has. All later part number (760SUE2-* onwards) can have the updated flight software loaded via GE or ATLAS based test equipment, which we understand a number of third party repair shops do have.

EASA response:

Comment accepted. The Final AD has been amended accordingly and paragraph (2.1) has been removed.

Commenter 3: KLM Royal Dutch Airlines – Cees de Jong – 17/3/2014

Comment # 3

References:

/A/ EASA PAD 14-045

/B/ FAA NPRM FAA-2014-0122

/C/ Boeing SB 737-22A1215 Autothrottle computer replacement

/D/ Boeing SB 737-34A2292 EGPWS Airspeed Low alert activation.

/E/ GE Aviation SB 760SUE-22-1303 Autothrottle computer: Introduction of software with enhanced LRRRA data processing. (P/N 760SUE2-5).

Description:

Ref. /A/ en ref. /B/ are issued to propose an AD note against ref /B/ Boeing SB.

Ref. /B/ specifies a deadline of 36 months after issuance of the AD, the 36 months is also specified in the ref. /C/ SB.

Ref. /A/ specifies additional requirements based upon the completion of ref. /D/ SB as follows:

- 1- For Aeroplanes that have a version of the Autothrottle computer installed that is enabled to load software within 3 months after the effective date of the AD.
- 2- Aircraft Pre Mod ref. /D/ within 12 months.
- 3- Aircraft Post mod ref. /D/ within 36 months.

Required Action.

- 1- Ref /C/ and ref /E/ do not specify the possibility to upgrade the Autothrottle computer in Situ.
Are Boeing and GE Aviation going to revise the Ref. /C/ and /E/ SB's to provide instructions to upgrade the Autothrottle computer in Situ?
- 2- Is Boeing going revise ref. /C/ service bulletin to address the different deadlines specified by EASA in relation to implementation of ref. /D/ SB?
- 3- What is Boeing position on the differences between the deadlines specified by EASA and the FAA?
- 4- Could Boeing copy KLM in, in the communications related to this request between Boeing and EASA.

Your help is very much appreciated.

EASA response:

1. Comment agreed. See also Comments #1 and #2 above.

2. It is not planned or expected that the Boeing SB will be revised. The EASA AD requirements overrides any compliance times for aircraft registered in an

EASA (EU and associated countries) Member State.

3. The commenter should contact Boeing for information or request their position on this subject.

4. The commenter should contact Boeing for additional information.

No changes have been made to the Final AD in response to comments 2, 3 and 4 above.

Commenter 4: KLM Royal Dutch Airlines – Erwin Groot – 2/4/2014

Comment # 4

With regard to EASA PAD 14-045 KLM has the following comments.

[A] Page 2 - Required Actions:

Par. (2.1) For Aeroplanes that have a version of the auto-Throttle computer installed that is enabled to load software (using a disk supplied by GE), within 3 months after the effective date of this AD, modify the affected unit.

Comment [A]:

This paragraph cannot be complied with, because none of the affected auto-throttle computers, in accordance with the accomplishment instructions of Boeing SB 737-22A1215 and GE-Aviation SB 760SUE-22-1303, have the capability of loading software on board of the aeroplanes.

[B] Page 2 - Required Actions:

Par. (2.2) For Aeroplanes that are not able to load software, within the compliance time specified in table 1 of this AD, as applicable, replace each auto-throttle computer with a unit that has the new software installed.

Aeroplanes Pre mod 737-34A2292 (EGPWS Airspeed low alert) within 12 months.

Aeroplanes Post mod 737-34A2292 (EGPWS Airspeed low alert) within 36 months.

Comment [B]:

FAA proposes in NPRM FAA-2014-0122 a deadline of 36 months for incorporation of SB737-22A1215.

Boeing proposes a deadline of 36 months for incorporation of SB737-22A1215.

Deviating from the proposed deadline of 36 months specified in FAA NPRM FAA-2014-0122 and Boeing SB 737-22A1215 for pre mod SB 737-34A2292 aircraft poses a significant economic burden on operators in Europe. Further, the number of spare Auto-Throttle computers is insufficient to complete the modification program within the 12 months addressed in PAD 14-045.

- KLM has to modify 17 Auto-Throttle computers on its 737 fleet .

- Shop turnaround time for the modification is 30 days. With 2 spare Auto-Throttle computers, the minimum time required to complete the modification is anticipated to be 12 months.

SB737-34A2292 addresses the same safety concern as SB 737-22A1215 but introduces a different technical solution. Incorporation of SB 737-22A1215 is not mandated by a (proposed) FAA AD and should not be used as baseline for the AD requirement.

EASA response:

Comment [A] agreed. See also Comments #1 and #2 above.

Comment [B] partially agreed. The defect correction and proposed corrective action were estimated in accordance with Part 21.1.3 and AMC21.A.3B(d)(4). After coordination with GE Aviation, it was concluded that operators of aircraft registered in an EASA Member State should be capable of retrofitting their fleet within 18 months. Boeing SB 737-34A2292 was defined as a mitigating factor by Boeing and FAA, which is why for post SB 737-34A2292 aircraft, the AD provides a longer compliance time.