



## COMMENT RESPONSE DOCUMENT

EASA PAD No. 17-062

**[Published on 19 May 2017 and officially closed for comments on 16 June 2017]**

### **Commenter 1: Regional Express – Richard Taylor – 14 June 2017**

#### **Comment # 1**

Regional Express (Rex) strongly objects to the modification requirement of PAD No. 17-062. The PAD removes the existing AD controls and provides only one option and one manufacturer. This mandate will place the manufacturer of the double stitched de-ice boot in a position of market dominance that will stifle any alternate option for a de-ice boot which could be proven to be superior than the existing de-ice boot or the de-ice boot which is proposed by this PAD.

#### **EASA response:**

**Disagreed.**

***This PAD mandates a final design solution, supported by the aircraft manufacturer, to address a safety issue.***

***Any alternative design option (already existing or to be developed) can still be presented through the EASA AMOC process, and potentially be recognised as a means of compliance to the AD.***

#### **Comment # 2**

Rex has been using an alternate part number de-ice boot which shows superior cycle life before failure to the existing de-ice boot and therefore offers an equivalent level of safety. The superior cycle life of this alternate de-ice boot is demonstrated in the attached report, 15-33-008. Despite trying to bring this alternate de-ice boot to the attention of the Saab 340 OEM there has been no opportunity provided for any alternate de-ice boot to be considered.

#### **EASA response:**

**Noted.**

***In line with comment #1, this design solution seems to be a good candidate for the process mentioned above (AMOC).***



**Comment # 3**

Rex is extremely concerned at the lack of operator consultation and input that has been undertaken by the OEM during the investigation of the horizontal stabiliser de-ice boot ruptures because there are a number of other factors which Rex believe have not been adequately taken into account. These include;

1. The de-ice boot ruptures have occurred since de-ice boot operating procedures were amended in 2008 (EASA AD 2008-0022). These changes have resulted in the aerofoil de-ice systems being operated similar to anti-ice systems and have for most operators meant that de-ice boot usage has increased from approx. 30% of flight time to approx. 70 – 80% of flight time. The resulting effect on de-ice boot life has effectively resulted in a safety reduction for the following reasons;
  - a. increases the likelihood of failure of the de-ice system,
  - b. increases the likelihood of the STAB boot failure resulting in flapless landings and associated adverse operational implications,
  - c. increases the likelihood of rupture and loss of pitch control in the landing configuration,
2. Any mandate which prevents the use of an alternate de-ice boot will stifle ongoing safety developments which could ultimately benefit the global Saab 340 community.
3. There has been absolutely no technical data provided by the OEM to support an improved level of safety for the de-ice boot proposed by this PAD.

**EASA response:**

**Point 1 : Noted (this issue is known, and currently under review by EASA)**

**Point 2 : Disagreed – see the answer provided to comment #1.**

**Point 3 : Disagreed – the mandated design has been certified, and the qualification tests together with the new ‘double stitch’ design present some benefits (rupture propagation mitigation, for instance) improving the level of safety.**

**Comment # 4**

Rex believes that the existing mitigation actions for a horizontal stabiliser boot rupture provided by EASA AD 2015-0129 & Saab SB 340-30-094 are sufficient to prevent flight quality critical de-icer failure because Rex has not experienced a horizontal de-ice boot rupture affecting flight quality since complying with this AD & SB and therefore this option should not be excluded by a further mandate. Allowing this option to remain would then allow the continuation of product development for alternate de-ice boots that could provide the same or better level of safety.

**EASA response:**

**Disagreed.**



***Whenever a safety issue has to be addressed by mandated action, it is EASA policy to require a final design fix rather than endless repetitive inspections. The inspections mandated through EASA AD 2015-0129 were a mitigating measure allowing time to certify a design improvement, in order to achieve a final design modification.***

***Requiring this design modification enhancement does not prevent continuing the product development of alternate de-ice boots that could provide the same or a better level of safety (refer to the answer provided to comment #1).***

***Comment # 5***

Included with this response is a letter that Saab 340 Operators have written to EASA trying to highlight concerns that these Operators consider exist with the current de-ice boot operating procedures of the Saab 340. The Saab 340 operated for more than 15 million flight hours before experiencing horizontal stabiliser de-ice boot rupture and the Operators who contributed to the attached letter have all individually accumulated many years and flight hours of Saab 340 operation in icing conditions, therefore Rex urges EASA to give due consideration to the concerns and feedback that is provided by this letter.

***EASA response:***

***Noted.***

