

COMMENT RESPONSE DOCUMENT

EASA PAD No. 24-108

[Published on 04 September 2024 and officially closed for comments on 18 September 2024]

Commenter 1: SR Technics Services d.o.o. – Milos Tatic – 10/09/2024

Comment # 1

We are writing with reference to subject PAD – it includes In-Shop Inspection only as referenced in SB 72-0394, even though the same SB also provides for on-wing inspection (Remote Visual Inspection – Borescope) - paragraphs 5.A.(3) - 5.A.(5). Named inspection paragraphs are also marked as “RC” within SB itself – referring to compliance action.

Please clarify, is there an intent to include mentioned borescope inspection paragraphs (5.A.(3) – 5.A.(5)) into the accomplishment of Airworthiness Directive once it becomes a final rule.

EASA response:

Comment #1 not agreed. At time of issuance, SB 72-0394 issue 02 was targeting a wider population than PAD 24-108, to request an on-wing inspection of that wider population and, depending on findings, additional in-shop inspections.

By the time PAD 24-108 was issued, all engines from the wider population had already been inspected and the outcome of those inspections had also been shared with the engine manufacturer and with EASA.

For that purpose, the applicability of the AD was therefore restricted to a smaller population, only including engines that had failed the on-wing inspection.

As a result, the final AD will only require, as mandatory action, the in-shop inspection of engines having failed the on-wing inspection, as listed in the applicability section of the AD.

No changes have been made in the final AD in response to this comment.



Commenter 2: StandardAero – Zach Mellinger – 13/09/2024**Comment # 2****References:**

- 1) EASA PAD 24-108 (“The PAD”)
- 2) FAA NPRM 2024-1898 (“The NPRM”)
- 3) CFM SB LEAP-1B-72-00-0394-01A-930A-D, Issue 002-00 (“The SB”)

EASA released the proposed airworthiness directive to require some of the actions recommended by the SB. The PAD has been reviewed by StandardAero with the following comments to submit:

- [1] The PAD states the Foreign AD is “Not Applicable”. StandardAero notes that the FAA is ruling on the same subject using the NPRM referenced above. However, the FAA does not appear to have assigned an AD number yet.
- [2] The SB states in paragraph 3.E. that certain paragraphs labeled as “RC” must be done to comply with the AD, however some of those paragraphs are not listed in the PAD. The paragraphs not listed in the PAD are namely the BSI instructions. StandardAero requests that EASA work with CFM to prevent confusion regarding what the actual required actions are for regulatory compliance. This will help avoid confusion in the repair stations where the instructions of paragraph 5.B. of the SB will be carried out.

In general, StandardAero would prefer OEMs/Type Certificate holders not attempt to highlight required actions in their SB for an AD, especially for ADs that do not yet exist, and allow the AD to spell out the required actions. With our collective goal of continuously improving safety in mind, StandardAero requests EASA consider this feedback in the future when working with OEMs.

Other than the comments listed above, StandardAero is in support of the PAD.

EASA response:

Comment #2 [1] disagreed. When the AD is issued by EASA acting on behalf of the EU State of Design, it is usual practice for EASA to state “Not applicable”. In all other cases, this field refers to the corresponding or related Foreign AD number and the State of Design Authority that issued it.

CFM LEAP engines are dual type-certificated and both EASA and FAA share State of Design responsibilities. See also EASA AD FAQ:

<https://www.easa.europa.eu/en/faq/47525>

No changes have been made in the final AD in response to this comment.

Comment #2 [2] noted. In the EASA system, the labelling of certain paragraphs as ‘RC’ in the SB is of an informative and non-binding nature only; Mandatory actions are those that are specified in the AD, which takes precedence over what may be labelled in the SB.

Commented [ML1]: I would suggest something along the lines of:
“CFM LEAP engine are dual type-certificated and both EASA and FAA share State of Design responsibilities”

Commented [DJ2R1]: Agreed and adjusted.



*Regarding the non-mandatory nature of the on-wing BSI inspection, see also EASA response to comment #1.
No changes have been made in the final AD in response to this comment.*

Commenter 3: Ryanair – Mark Connolly – 18/09/2024

Comment # 3

The subject PAD has been issued to prevent an uncontained failure/high-energy debris release of the High Pressure Compressor (HPC) Stage 3-4 Blisk on certain LEAP-1B engines due to a production error on adjacent hardware, specifically the High-Pressure Compressor (HPC) Stage 2 Stator Seals. As per paragraph (1) of the subject PAD, the proposed mandated/required action must be accomplished as per the SB which is predefined as CFM Service Bulletin LEAP-1B-72-00-0394-01A-930A-D Issue 02.

The operator notes that Engines ESN 60A676 and 60A669 listed in the Applicability had initiated a shop repair process, within the CFM Maintenance Repair & Overhaul (MRO) network, prior to issuance of CFM Service Bulletin LEAP-1B-72-00-0394-01A-930A-D Issue 02.

In anticipation of release of CFM Service Bulletin LEAP-1B-72-00-0394-01A-930A-D Issue 02 & subsequent procurement of the revised tooling to accomplish the proposed inspections, both Engines ESN 60A676 and 60A669 had the High-Pressure Compressor (HPC) Stage 3-4 Blisk and High-Pressure Compressor (HPC) Stage 2 Stator Seals replaced by new condition parts.

Due to replacement of the High-Pressure Compressor (HPC) Stage 3-4 Blisk and High-Pressure Compressor (HPC) Stage 2 Stator Seals on both engines, the unsafe condition as identified per the subject PAD is no longer present.

As the subject engines have not accomplished CFM Service Bulletin LEAP-1B-72-00-0394-01A-930A-D at Issue 02, in order to demonstrate compliance with the subject PAD proposed action per paragraph (1), the operator requests that either:

- a) LEAP-1B27 Engines ESN 60A676 and 60A669 are removed from the Applicability of the subject NPRM or,
- b) Replacement of the High-Pressure Compressor (HPC) Stage 3-4 Blisk and High-Pressure Compressor (HPC) Stage 2 Stator Seals by new condition parts as per Engine Shop Manual Procedure is added to paragraph (1) as an acceptable means of compliance to the subject PAD to mitigate against the unsafe condition.

Please advise if additional information is required to support analysis of this request.



EASA response:

Comment #3 agreed. Removal of the affected parts and replacement by serviceable parts is considered acceptable by EASA to address the unsafe condition of ESN 60A676 and 60A669 specifically. In addition, CFM informed that the removed HPC stage 2 seal segments are unserviceable, and no further action is considered required for the parts removed from those engines.

As a result, ESN 60A676 and ESN 60A669 have been removed from the applicability section of the final AD.

