

COMMENT RESPONSE DOCUMENT

EASA PAD No. 22-020

[Published on 01 March 2022 and officially closed for comments on 29 March 2022]

Commenter 1: Qantas Airways Limited – Wayne Nelson – 07/03/2022

Comment # 1

QANTAS have reviewed the subject PAD and have a query in relation to Requirement 1 & 2 of the AD.

QANTAS recently assessed the SB 71-3041 & VSB CF6-80E1-NAC-71-054 and initiated provisional actions in anticipation of the pending AD.

Given that we have no measure for the % of Cowls that will be affected, the fact that corrective actions will require removal of the affected Cowls (in our case to be dispatched to an external workshop) and that availability of Spare Cowls is limited, at this time QANTAS has launched a provisional inspection (on-wing) aimed at inspecting and identifying affected brackets with findings being reported to QF Engineering.

For instances where affected brackets are identified, a 2nd task is initialised which requires removal of the affected Cowl and affected brackets to be replaced, within the compliance time as stated in Table 1.

Given the background above, would it be acceptable to for corrective actions to be deferred to the next Maintenance opportunity provided it is within the applicable compliance times specified in Table 1 of the PAD?

EASA response:

Comment not agreed: The required inspection does not allow to determine whether corrosion and/or cracking are actually present; in other words, that inspection cannot support operating the aeroplane with a part determined to be an affected one. No changes have been made to the Final AD in response to this comment.

Commenter 2: Deutsche Lufthansa AG – Jann Rauschenberger – 25/03/2022

Comment # 2A

Please find below the Comments to the PAD from DLH:



Inspection:

Note 1: Inlet time in service is time accumulated on the effective date of this AD by the inlet since the date of first installation on an aeroplane. If unknown, the date of transfer of title (ownership) of the aeroplane at the time of first delivery to an operator (i.e., the date of manufacturing of the aeroplane), which is referenced in Airbus documentation, can be used instead.

Comment: According to SBC CF6-80E1-NAC-71-054 para E., a readout of the manufacturing date, printed on the aft Bulkhead of the air intake is also suitable to determine the age of the air intake. This is in most cases a more practical way as the first flight or ToT where the air intake has originally been delivered. This is in most cases hard to find as the air intake cowl have been replaced in the past. DLH Engineering would like that reading of the manufacturing date would also be an acceptable alternative.

Comment # 2B**Corrective Action(s)**

Comment: Inspection is established only to determine the material of the fitting, not to find any corroded or damaged fitting.

At this time until 3 years (or more) no one will ever inspect the 36 fittings for damage. Therefore it can be considered that these fittings will withstand 3 or more years of further flights and there could be a potential unsafe condition present due to cracks or corrosion.

A more technical approach on this item can be, to give an inspection threshold for the inspection for damages and to determine the material specification of the fittings.

If no damages are found, the replacement can be postponed to the compliance time (3, 4 or 6 years) depending on inlet cowl age.

If findings are made during one-time inspection, e.g. cracks or corrosion, the rectification can be postponed to compliance time (3, 4 or 6 years), depending on inlet cowl age, but with repetitive inspections on the damaged fitting e.g. 1000FC for damage propagation.

For DLH Engineering it is not clear why these fittings can withstand 3-6 years of further operation, but if you determine the material specification, the inlet cowl is considered as “not serviceable”.

Furthermore the postponement of the fitting replacement after inspection of the findings, to the compliance time, give operators the chance for better planning and therefore to order, store and provide the correct amount of fittings. This way operators have to calculate with approximately 120.000 USD per air intake (36 fittings has to be ordered, stored and paid per air intake beforehand) as nobody can tell at this time how many fittings are necessary for modification. This is a heavy burden for all operators and also for the manufacturer to provide in a short time the needed amount fittings. Therefore AOG and longer layover during High Maintenance Layover are to be expected. The Vendor SB also describes: in para. 1. E. Compliance “Note: Accomplishment of the inspection portion of Service Bulletin may be done proactively to allow sufficient time to order replacement brackets and plan work as required.” This is not considered in Aircraft SB, see 1. E. Compliance: Conditions: If one or more inlet attach fittings are not of 7175-T74 material, then the threshold is “before next flight.” Also Airbus-Tech Request (80993305) confirms that a proactive inspection is not foreseen by the Aircraft OEM. This Airbus requirement not matching Component OEM Requirement is not comprehensible to DLH.



DLH is of the opinion that a part replacement before further flight should only be necessary for damaged/corroded fittings if they are out of an allowable damage range. For all other affected parts without damage the replacement should be done before the compliance time stated in the PAD.

Comment # 2C

Part(s) Installation

After accomplishment of the inspection as required by paragraph (1) of this AD for an aeroplane, do not install an inlet cowl having an affected part installed on that aeroplane.

Comment: DLH Engineering understands that a statement on the Form 1 or the modification accomplishment marked on Modification Plate is suitable for identification; therefore, the inspection according to this AD is not necessary prior to each installation of an air intake to fulfill the requirement. Please confirm.

EASA response:

Comment 2A: Comment agreed. Final AD has been updated accordingly

Comment 2B: See EASA answer to comment 1

Comment 2C: EASA confirm that the AD does not require inspection prior to each installation. Any method to determine that no affected parts are installed on an inlet cowl can be used, provided it is acceptable to the NAA in charge for AD enforcement. No changes have been made to the Final AD in response to this comment

Commenter 3: KLM Royal Dutch Airlines – Cierel Janssen – 28/03/2022

Comment # 3

Regarding PAD 22-020, Power Plant Attach Fittings, KLM (Koninklijke Luchtvaart Maatschappij N.V.) has the following comment:

KLM found contradicting information in the Service Bulletins released by Airbus (SB A330-71-3041) and Goodrich (Rohr) (SB CF6-80E1-NAC-71-054). Both documents are acceptable for compliance with the requirements of this (to be released) AD as stated in EASA PAD 22-020.

The Goodrich (Rohr) Service Bulletin allows to separate the inspection to determine the material of the brackets from replacing the brackets if non-conforming material is found during the inspection. This is explicitly described in the Note of Paragraph 1. E. The Airbus Service Bulletin requires to replace brackets made of non-conforming material before next flight when found as described in 1.E.(2).

This PAD adopted the compliance method as described in the Airbus Service Bulletin.



KLM prefers the compliance method as shown in the Service Bulletin released by Goodrich (Rohr). This allows the operator sufficient time to order the correct number of brackets, plan work as required and identify brackets susceptible to SCC as soon as possible after the release of the AD.

KLM does not understand the rationale of immediately replacing the brackets when brackets made from the non-confirming material are found. (When SCC is found on the brackets during the inspection the brackets will always be replaced before the next flight.) If the compliance method as described in the Airbus SB will be used in the AD and thus KLM must replace non-confirming brackets before next flight when non-confirming material is found, KLM is forced to spread (and thus postpone) the inspections to identify the material of the brackets as much as possible (within the limits of the AD) to control the workload.

KLM proposes EASA to adopt the compliance method from Goodrich (Rohr). This allows time to order replacement brackets and plan work as required. This also allows KLM to perform the inspection within a minimum amount of time after the release of the AD and thus contributes to a higher level of safety.

EASA response:

See EASA answer to comment 1

Commenter 4: Delta Air Lines – Alexandra Kidd – 29/03/2022

- (A) EASA Proposed Airworthiness Directive: PAD No. 22-020, dated 01 Mar 22
- (B) Airbus Service Bulletin (ABS): A330-71-3041, Rev 00, dated 10 Nov 21
- (C) Goodrich (Rohr) Service Bulletin (VSB): CF6-80E1-NAC-71-054, dated 31 Oct 21

Comment # 4A

DAL requests to modify Ref. (A) to add a note to paragraph (2) to clarify that during accomplishment of VSB Ref. (C) the paragraph 3.C. in these accomplishment instructions is Required for Compliance (RC) or confirming that the ASB Ref (B) Paragraph 3 Notes identified below are applicable VSB Ref (C).

PAD states to accomplish ASB Ref. (B). ASB Ref (B) Paragraph 3 contains standard notes which define the paragraphs Required for Compliance (RC) as Paragraphs 3.C and 3.E, define the usage of “refer to” and “in accordance with” verbiage, as well as confirm that the access and close-up instructions do not constitute or affect the technical intent of the Service Bulletin.



Paragraph 3.C requires accomplishment of work in accordance with VSB Ref. (C).

During review of VSB Ref. (C), it was noted that the document does not include definition of the RC paragraphs, the “refer to” and “in accordance with” verbiage, nor does it provide guidance on limitation the access and close-up instructions

Based on the “in accordance” with verbiage used in ASB Ref. (B) and the omission of standard notes in VSB Ref. (C), the instructions in Ref. (C) can not be deviated from (including gaining access and close-up). The omission of these notes does not permit work of spare parts that may already be removed from the aircraft and located within a shop.

The addition of this note would allow the operators to rework spare components while off wing in addition to components being removed from the aircraft for this inspection.

Comment # 4B

DAL requests to modify Ref. (A) to add a note to paragraph (2) allowing the installation of alternate fasteners per A330 SRM 51-43-00 during installation of the brackets during accomplishment of VSB Ref. (C).

Upon review VSB Ref. (C), it was identified that alternate fasteners per A330 SRM is not authorized. This could lead to delays in the workflow due to sourcing of these fasteners.

The installation of the brackets using alternate fasteners does not change the intent of the Service Bulletin but allows operators to easily procure the required fasteners by allowing more options to purchase.

Comment # 4C

DAL requests to modify Ref. (A) to add a note to (4) and/or (5) to clarify that per paragraph (4), no affected part may be installed on any aeroplane, however, per paragraph (5) if the aeroplane is Pre-SB, can an inlet assembly be installed without knowledge if an affected part (attach fitting) is installed on this inlet (no inspection required).

Upon review Ref. (A) DAL found paragraphs (4) and (5) to be confusing as paragraph (4) prohibits the installation of an affected part on any aeroplane but paragraph (5) clarifies that an inlet with an affected part can not be installed after accomplishment of the inspection SB.

EASA response:

Comment #4A

Comment not agreed. The AD does not regulate reworking of spare parts. To be noted that the “RC marking” is not recognized in the EASA AD system.

Comment #4B

Comment noted and forwarded to Airbus. It is expected that the required amendment will be considered for inclusion at the next Airbus SB revision. To be noted that, iaw AD paragraph (3), replacing the inlet cowl with an inlet cowl having no affected parts installed (which includes inlet cowls reworked off-wing iaw Airbus instructions) is an acceptable method to comply with paragraph (2) of the AD.



Comment #4C

Comment agreed: Paragraph (4) of the AD has been amended to clarify that the intent of paragraph (4) is to prohibit further installation of affected parts on any inlet cowl of an aeroplane, at any moment after the effective date of the AD – preventing so expanding (at fleet level) the potential unsafe condition addressed the AD. The intent of paragraph (5) is to prevent that an aeroplane, which is (no longer) equipped with an affected part, could become affected again by the potential unsafe condition, reducing, as possible, the operational burden on operators.

The AD does not regulate how an operator will comply with paragraph (5): inspection of any inlet cowl iaw with Airbus SB before installation is a possible method for compliance, as also a review of production/maintenance records of that inlet cowl. Any method, which is acceptable to the Competent NAA, is acceptable for compliance with paragraph (5) of the AD.

Commenter 5: Lufthansa Technik – John Donegan – 30/03/2022
Comment # 5

PAD §2 states that corrective action be performed "before further flight" in case of findings from the inspection §1.

- LHT requests that the corrective action compliance time for this corrective action be "no later than the compliance time, as identified in Table 1 of this AD". This would reflect the compliance time justification published in Table 1, with the risk assessment for worst case scenario defining the absolute latest accomplishment of any of the actions. This would also align with the logic published in Goodrich (Rohr) SB CF6-80E1-NAC-71-054 §1.E: [quote] "Note: Accomplishment of the inspection portion of Service Bulletin may be done proactively to allow sufficient time to order replacement brackets and plan work as required. "
- Alternatively, LHT requests a grace period to perform the corrective actions within 12 months of findings from §1 inspection, not to exceed the compliance time identified in Table 1. This will ensure that the condition will be addressed in a timely manner, while remaining well within the justified AD compliance period.

Note: It may be the aim of EASA to rectify the condition as early as it is identified, even if it is not yet reached the full compliance limit. However, introducing the restriction to mandate the corrective actions before further flight may have the unintended effect that operators may delay incorporation of the AD and SBs to the latest possible time.

EASA response:

See EASA answer to comment 1

