

COMMENT RESPONSE DOCUMENT

EASA PAD No. 21-182

[Published on 20 December 2021 and officially closed for comments on 17 January 2022]

Commenter 1: Cathay Pacific – Winggo Ng – 04/01/22

Comment # 1

In PAD 21-182, there is no dedicated “Credit” paragraph.

As the associated SBs were issued in Nov 2021, the initial inspections might have already been completed before the effective date of AD.

For any Groups to follow compliance time “A” or “B” in the PAD/AD, does it mean that, those initially inspected by the SBs will have to be inspected again within “A” or “B” regardless of previous results?

Or will EASA consider to create a dedicated “Credit” paragraph to explain?

EASA response:

Comment noted. The AD states “Required Action(s) and Compliance Time(s): Required as indicated, unless accomplished previously”. Any actions, accomplished before the effective date of the AD using the same instructions (i.e. SB issue) as required by the AD are acceptable to demonstrate compliance with the AD requirements. If the initial inspection has been accomplished before the AD effective date, the next inspection is due at the applicable interval as specified in the AD.

Note that a Credit paragraph usually supports actions different from the actions required by the AD.

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



Commenter 2: Deutsche Lufthansa AG – Walter Press – 05/01/22

Comment # 2

Paragraph (3):

(3) For Group A aeroplanes: The initial DET followed by ETM, as required by paragraph (2) of this AD can be postponed to the special compliance times specified in Table 4 of this AD, provided the conditions specified in Table 4 of this AD are met.

Despite, that the table 4 has the header “Table 4 – Group 2 Affected Parts – Initial DET / ETM” could you please identify in the text that only Group 2 windshields are affected by this relaxation only, this may give more clarity:

Proposal for Paragraph (3):

(3) For Group A aeroplanes: The initial DET followed by ETM, as required by paragraph (2) of this AD can be postponed **of each group 2 affected part** to the special compliance times specified in Table 4 of this AD, provided the conditions specified in Table 4 of this AD are met.

Paragraph (4), (6), (7) and (9):

(4) If, during any ETM as required by paragraph (2) of this AD, the results are found to be in the “amber area”, as identified in the SB, accomplish subsequent DET and ETM of that affected part at intervals not exceeding 800 FH or 4 months, whichever occurs first.

Within paragraph (3), a postponement of the DET/ETM inspection was allowed and therefore you should respect this relaxation in paragraph (4) also:

Proposal for Paragraph (4):

(4) If, during any ETM as required by paragraph (2) **or (3)** of this AD, the results are found to be in the “amber area”, as identified in the SB, accomplish subsequent DET and ETM of that affected part at intervals not exceeding 800 FH or 4 months, whichever occurs first.

The same applies to paragraph (6), (7) and (9), and the results of paragraph (4) needs to be taken into account.

(6) If, during any DET as required by paragraph (1), (2), **(3)** or (5) of this AD, as applicable, any defect, as identified in the SB, is found on an affected part, before next flight, replace that affected part with a serviceable part in accordance with the instructions of the SB.

(7) If, during any ETM as required by paragraph (1), (2), **(3) or (4)** of this AD, as applicable, the results are found to be in the “red area”, as identified in the SB, before next flight, replace that affected part with a serviceable part in accordance with the instructions of the SB.

(9) For Group A aeroplanes: Replacement on an aeroplane of each affected part with a windshield having a P/N not affected by the requirements of this AD constitutes terminating action for the repetitive inspections as required by paragraphs (1), (2), (3), (4) and (5) of this AD, as applicable for that aeroplane, provided that, following that replacement, no affected part is installed on that aeroplane.



Reporting paragraph (11), (12):

All operators understand that the reporting of the inspection results is crucial for this inspection program in order to manage the spare part situation within Airbus and SAINT-GOBAIN SULLY.

However, the integration of the reporting requirements within the Airworthiness Directive results in an extra maintenance burden for the operators, since the compliance time of each report needs also to be monitored, nowadays. Due to the relation with the retrofit program of SGS and Airbus (RIL LR56M21001080 as well as the limited spare situation, we are confident that Airbus/SGS will get the inspection results in timely manners even when a strict reporting will not be highlighted in the AD. Therefore, we propose to relax the AD requirements of the reporting and recommend to delete both paragraphs (11) and (12).

Furthermore, the reporting time frame of 90 days (three months) for the repetitive inspections seems not be well adjusted due to the very low inspection interval of 800 FH and 4 months (for group 1, group 2 with “amber” TSM inspection result and group 3 windshields). From an organizational point of view, there is now reason to differ between the first and repetitive inspection since both can affect the inspection campaign on the complete A330/A340 fleet. At a global view, we assume that due to different aircraft operation and staggering of the inspection an overlapping of first and second inspections could occur fleet-wide. In the event that EASA insists on the reporting requirement, we propose to combine paragraph 11 and 12 together in one paragraph. As previously noted, we would like to emphasize that the report itself does not establish the airworthiness of the aircraft.

EASA response:

Comments on paragraphs (3), (4), (6), (7) and (9) agreed.

Paragraph (3) has been amended in the final AD as follows:

- ***The initial DET followed by ETM of each Group 2 affected part, as required by paragraph (2) of this AD, can be postponed to the special compliance times specified in Table 4 of this AD, provided the conditions specified in Table 4 of this AD are met.***

Paragraph (4), (6), (7) and (9) have been amended in the final AD as follows:

- ***Paragraph (4): If, during any ETM as required by paragraph (2) or (3) of this AD, as applicable, the results are [...]***
- ***Paragraph (6): If, during any DET as required by paragraph (1), (2), (3) or (5) of this AD, as applicable, any defect [...]***
- ***Paragraph (7): If, during any ETM as required by paragraph (1), (2) or (3) of this AD, as applicable, the results are [...]***
- ***Paragraph (9): [...] constitutes terminating action for the repetitive inspections as required by paragraphs (1), (2), (3), (4) and (5) of this AD, as applicable for that aeroplane, provided that [...]***

Note that paragraph (3) does not actually require an action, but provides an optional deviating compliance time for the actions required by paragraph (2). The wording “as required by” is used in this AD also for paragraph (3) in order to simplify the text.



Comments on paragraphs (11) and (12) are disagreed.

Reporting paragraphs (11) and (12) are deemed necessary to organise the logistics for maximising the Ground Support Equipment availability and the reporting timeframes adequate considering the risk. No changes have been made to the final AD in response to this comment.

Commenter 3: Delta Air Lines – James Thompson – 18/01/22

Comment # 3

Reference:

- (A) EASA Proposed Airworthiness Directive: PAD No. 21-182, dated 20 Dec 21
- (B) Airbus Service Bulletin (SB) A330-56-3010 Rev Orig, dated 19 Nov 21
- (C) Saint-Gobain Sully (SGS) Service Bulletin (SB) SPSA340-56-001 Rev Orig, dated 25 Oct 21
- (D) In-Service Information (ISI) 00.00.00179, last updated on 16 May 18

Comment #1

Commenter Request: DAL requests additional verbiage in the Applicability statement addressing Saint-Gobain Sully (SGS) windshields and the affected part numbers.

Similar to:

“Applicability: A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342, A330-343, A330-743L, A330-841, A330-941 aeroplanes, all manufacturer serial numbers (MSN) with an affected part installed or installed with a Saint-Gobain Sully (SGS) windshield; and
A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, A340-542, A340-642 and A340-643 aeroplanes, all MSN with an affected part installed or installed with a Saint-Gobain Sully (SGS) windshield.”

Request justification: Ref (A) applicability statement addresses aircraft level as being applicability. However, during review of the definitions it is identified that only aircraft equipped with certain Saint-Gobain Sully (SGS) windshields MPNs are affected. Operators equipped with windshields from other manufactures or parts PNRs outside of Ref (A) Table 1 do not require maintenance inspection. Therefore, it is beneficial for clarify in the



applicability paragraph to include certain verbiage directing the required actions and part installation restrictions to be against the windshield affected part and manufacturer contain the unsafe condition.

List paragraphs that change; describe (nonobvious) changes: **Ref (A) Applicability statement**

Comment #2

Commenter Request: DAL requests clarification to be provided regarding the statement “a repair accomplishes by” to elaborate on this definition, and the criteria. Please address within the “new/repair part” definition if the following are to be included: a new/repared windshield from SAINT-GOBAIN SULLY (SGS) with paperwork containing an Authorized Release Certificate (ARC) (Form One) indicating “outer ply replacement” with a total of 0FH/0FC since new or repair.

Repairs are to be outsourced to be performed directly by SAINTGOBAIN SULLY (SGS) or from a SAINT-GOBAIN SULLY (SGS) repair station.

Request justification: During review of Ref (A), it was identified that within the “new/repared part” definition it defines this as any affected part which is new; or which has accumulated 0 flight hours (FH) since a require accomplished by SAINT-GOBAIN SULLY (SGS), including “Outer ply replacement”.

For some Removable Structural Components, parts are sent to the manufacturer for repair and maintenance, while others can be repaired in-house. During review of the SB identified in the SB definitions paragraph that the source documents contain repair instructions.

List paragraphs that change; describe (nonobvious) changes: **Clarification of “New/Repared part” definition**

Comment #3

Commenter Request: If in the event, windshields are proactively removed and routed to the shop for inspection and repair (if necessary). Please confirm the inspection/repair per Ref (B), that would meet the criteria of Ref (A) serviceable part could be installed, and can omit the on-wing PNR inspection and determination of whether the part was previously installed on another aircraft instructions.

Secondly, please confirm if the Ref (B) and Ref (C) inspection and repair (if necessary) are performed in shop environment, please confirm the Ref (B) Step 3.F Testing instructions, which are considered Required for Compliance (RC) steps, are not applicable to be performed until aircraft installation. Ref (B) Testing instructions are for aircraft maintenance; however, in a shop environment these maintenance actions Ref (B) Step 3.F Testing instructions are not applicable.

Request justification: Ref (A) provides a service bulletin list that include Ref (C), which addresses on-wing actions and shop actions. Since windshields are considered Removeable Structure Component (RSC) that are tracked, these parts have CMMs and shop assignments so that maintenance can be performed off-wing.



During review of Ref (B), it was identified that if a spare windshield is installed that is required determined if the part was installed on another aircraft and another PNR review. Additionally, prior to installed, if the spare windshield did have a previous “finding” it is not allowed to be installed. This instruction does not provide background in the word “finding” and is considered vague.

Also, while in the shop, parts may not be applicable to the AMM for aircraft level actions such as testing. If Ref (A) maintenance actions are proactively performed in a shop environment, accomplishment Ref (A) Testing instruction will not be applicable. However, Ref (B) Testing is considered RC and cannot be deviated from.

List paragraphs that change; describe (nonobvious) changes: **Shop Environment Inspections Clarifications**

Comment #4

Commenter Request: DAL requests verbiage be included to omit instructions to report inspection findings to Saint-Gobain Sully (SGS).

Request justification Ref (A) para (11) and (12) identifies inspection results must be reported to Airbus. During review of Ref (B) and Ref (C), it was identified that within Ref (B) RC paragraphs it directs the operator to accomplish in accordance with Ref (C).

Within Ref (C) contains instructions to complete an Inspection Report Sheet form and send the completed form to Airbus and to Saint-Gobain Sully (SGS). Since Ref (C) is a part of the RC instruction and is used with “in accordance with” this cannot be deviated from.

List paragraphs that change; describe (nonobvious) changes: **Shop Environment Inspections Reporting**

Comment #5

Commenter Request: During review of Ref (A) paragraphs (11) and (12) and Ref (B), DAL requests the additions to paragraphs (11) and (12) allowing use of Airbus Tech Request or Airbus World SB Reporting Application as an acceptable method to comply with the AD requirement.

If not possible, alternatively, Delta requests the following revision to paragraph (11) requiring reporting within 60 days lieu of 30 days or within 60 in lieu of 30 days after the effective date of the AD, whichever occurs later, to allow an operator to determine the how to appropriately input the data into the Airbus World SB Reporting Applications.

Additionally, to address the day limit, Delta requests the following revision to paragraph (11) and (12) requiring reporting within XX days (XX being a numerical value) of operation after inspection to address check environment maintenance.

Request justification: During review of Ref (A) paragraph (11) and (12) and Ref (B) reporting requirements, it was identified the reporting instructions throughout the Ref (B) utilize the “in accordance with” verbiage, and are located within the RC paragraphs, thus, these instructions cannot be deviated from. In addition, Ref (B) requires submission of the report sheet in accordance with Ref (D).



Ref (D) address for SB reporting to use the Airbus World SB Reporting Application. However, the SB Reporting Application is set-up at the A/C MSN level for reporting. For repetitive inspections on Removeable Structure Component (RSC) that can be moved between A/C MSN, where shop actions may be performed, and for spare parts in storage, this creates a complexity for reporting at A/C MSN level. Ref (B) reporting sheet also requires documenting the A/C flight cycle and flight hour, this criterion is not suited for spares or parts not installed on aircraft.

In addition, it is noted within para (11) and (12) that the reporting requirements are to be performed within XX day (XX being a numerical value) after accomplishment. In the event, an aircraft is inspected during heavy check (~45 days) and the inspection is accomplished at the beginning of the check and isn't reported until the aircraft check is near the end, this could exceed the XX requirement and would be considered a non-compliance. During the check visit time, the aircraft is not in operation contributing to the unsafe condition.

Delta request re-evaluation of the reporting requirement, as use of the Airbus World SB Reporting Application is set-up to support at the A/C MSN level and is not set-up to effectively reporting RSC parts particularly for repetitive inspections and an re-evaluation of the reporting requirement being based on "after accomplishment".

List paragraphs that change; describe (nonobvious) changes: **Ref (A) Paragraphs (11) and (12) SB Reporting Requirement – Report Method Evaluation and Timeframe Adjustment**

Comment #6

Commenter Request: DAL requests Ref (A) para (12) be amended to eliminate the reporting requirement after 5 years after the initial inspection or another quantity year limitation for reporting positive and negative findings. Alternatively, DAL requests Ref (A) para (12) be amended to only report positive findings for LHS and RHS.

Request justification: Ref (A) para (12) requires the inspection results to be reported within 90 days after each subsequent inspection. During review of Group 1, 2 and 3 repetitive inspection intervals, Group 1 has an 800 FH interval or 4 months interval, whichever occurs first. Group 2, excluding Ref (A) para (3), has a 10,000 FH or 24-month interval, whichever occurs first. Group 3 has an 800 FH interval or 4-month interval, whichever occurs first. Under the "whichever occurs first" criteria, subsequent inspections would perform within months of the last with mandatory reporting for the lifespan of the aircraft. After continuous reporting over years, the quantity of data gathered would be statistically sufficient from worldwide operators, with broad ranges in aircraft date of manufacture, for analysis.

Airbus contains data of aircraft date of manufacture and operator utilization data. Therefore, over a span of time with sufficient data, it would substantiate a reduction or elimination of the repetitive reporting requirement or alternatively after the report of the initial inspections for all findings, subsequent inspections requiring only positive findings, a no finding could then deduce.

List paragraphs that change; describe (nonobvious) changes: **Ref (A) Paragraph (12) SB Inspection Subsequent Reporting Data Collection**



Comment #7

Commenter Request: DAL requests confirmation that reporting to SAINT-GOBAIN SULLY is not required per the impending AD, and instructions within Ref (C) regarding reporting may be omitted.

Ref (A) and Ref (B) refer to accomplishing with “in accordance with” Ref (C). During review of Ref(C), it was identified that reporting to SAINT-GOBAIN SULLY is embedded into the accomplishment instructions to an email. However, Ref (A) paras (11) and (12) only address reporting directly to Airbus.

List paragraphs that change; describe (nonobvious) changes: **Ref (C) Reporting Requirement**

Comment #8

Commenter Request: DAL requests clarification if Ref (B) Task set A330-A-56-XX-3010-01000-93BA-A (A330-A-56-XX-3010-01ZZZ-93BZ-A) is required to be performed or can it be omitted since Ref (A) address this.

Based on the answer to the above, DAL requests the following clarifications:

- If no, if an operator has completed back to birth records and does individually track the windshields, please provide approval that an operator omit accomplishment Ref (B) Task set A330-A-56-XX-3010-01000-93BA-A (A330-A-56-XX-3010-01ZZZ-93BZ-A) on-wing part number inspection which is identified as a Required for Compliance (RC) Paragraph.

- If yes, if an operator does not have complete records, and during Ref (B) on-wing inspections the windshield part number cannot be identified on the part ID plate due to damage or other circumstances, please confirm if the part is to be considered a Group 1, 2 or 3.

Request justification: During review of Ref (B), it was identified that it service bulletin contains multiple tasks that are outside of the required DET and ETM inspection. Specifically, Task set A330-A-56-XX-3010-01000-93BA-A (A330-A-56-XX-3010-01ZZZ-93BZ-A) performs an on-wing part number inspection of the windshield to determine the group applicability, and its corresponding inspection threshold and interval. While Ref (A) also addresses PNR applicability, group applicability, and the corresponding inspection threshold and interval. Therefore, the PNR and group identification per Ref (A) would be performed and then Ref (B) Task set A330-A-56-XX-3010-01000-93BA-A (A330-A-56-XX-3010-01ZZZ-93BZ-A) the onwing PNR, and group identified would then be performed again.

Ref (A) only addresses the DET and the ETM, and however, does not directly state the on-wing activities of PNR identified to be performed as well through the appropriate service bulletins. However, to accomplish the applicable service bulletins in entirety, would requiring accomplishment of the PNR identification.

List paragraphs that change; describe (nonobvious) changes: **PNR Identification Clarification**



EASA response:

Comment #1 disagreed. The AD applies to all aeroplanes that could potentially install an affected windshield to ensure that the AD is tracked and, upon installation of an affected part, the inspections are accomplished as required. For Group B aeroplanes, the only action required by the AD is to record the Part Installation requirements.

Comment #2 disagreed. EASA confirm that only repairs performed by the part manufacturer or SGS accredited repair station are deemed acceptable, despite the repair instructions mentioned through the SB. No changes have been made to the final AD in response to this comment.

Comment #3 noted. Should a lack of data impair the determination of the windshield age/utilisation, operators may refer to the guidance specified in Airworthiness Limitations Section (ALS) Part 1 Section 1 Chapter 5.2 (traceability).

However, it is confirmed that credit may be taken from an off-wing inspection (please refer to note in SB Appendix B, Sheet 2).

Comment #4 disagreed. AD reporting requirements are deemed self-explanatory and unambiguous. This comment will be shared with Airbus and SGS for review and eventual update of their respective publications.

Comment #5 (on means of reporting) noted. Paragraphs (11) and (12) only state the compliance time for the reporting requirement, and indicate a possible way of reporting. The means of reporting is not mandated and any options can be used by the operator.

Comment #5 (on compliance time) disagreed. The reporting timeframes are adequately defined considering the risk.

Comment #6 partially agreed. The intention is to update, after some time, the reporting requirements of the AD to consider only reports of positive findings. This will be reflected through a future AD update. No changes have been made to the final AD in response to this comment.

Comment #7 noted. EASA confirm that the AD only requires reporting to Airbus. No changes have been made to the final AD in response to this comment.

Comment #8 noted. In principle :

- ADs do not detail the exhaustive list of technical task(s) included in a mandated SB, but rather require an action to be performed and cross refer to the associated SB to get the technical details on how to perform such an action. Therefore, for the particular item commented, the identification of the part shall be done (AD text), and the way the identification can be done is detailed through the SB.



- *Whenever a part is duly identified, it therefore complies with the approved part regulation. If, under specific circumstances, the installed part number cannot be identified, whether physically or through paperwork, this part has to be considered as ‘unapproved / unairworthy’ part and shall not be installed on an operating aircraft, until its traceability / identification is restored. Therefore, for the particular item commented, the non-identifiable part shall be considered a ‘Suspected Unapproved Part’, and not part of any Group as defined in this AD.*

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

