

COMMENT RESPONSE DOCUMENT

EASA PAD No. 20-041

[Published on 25 February 2020 and officially closed for comments on 24 March 2020]

Commenter 1: Virgin Atlantic Airways – Martin Downey – 26/02/2020

Comment # 1

A. Error in Required Compliance Section of SB A330-25-3743 REV 00 and SB A340-25-5241 REV 00

During review of the SB A330-25-3743 REV 00 and SB A340-25-5241 REV 00 at VIR, it was noted that there was a significant typographical error in the Required Compliance (RC) section of the SB.

The error relates to the required dimension of the distance between the blind rivet heads and the systems, wiring or structure of the aircraft; it is stated that the dimension shall be equal to or more than 30 mm (1.81 in).

1.81 inches equates to 46 millimeters, not 30 millimeters.

This error is in the following SB sections:

A330-25-3743 REV 00

Section 3.C.(6)(b)1, 3.C.(6)(b)2 of the SB accomplishment instructions and in Task set A330-A-25-XX-3743-02000-93BA-C Para C(2)(c).

A340-25-5241 REV 00

Section 3.C.(6)(b)1, 3.C.(6)(b)2 of the SB accomplishment instructions and in Task set A340-A-25-XX-5241-02000-93BA-C Para C(2)(c).

This error was reported to Airbus on 13 November 2019 through TechRequest Dossier 80709319. This dimension is critical in determining whether or not a panel that has been repaired (by installation of blind fasteners through the previous repair) may be reinstalled on the aircraft. The inconsistency in the SB instructions would be readily evident to the licensed aircraft maintenance engineer certifying the work on the aircraft. At best the engineer would take the more conservative dimension of 1.81 in, however the engineer could refuse to certify the work due to the need to vary the accomplishment of a Mandatory Service Bulletin. Moreover, as the clearances between the blind fasteners and systems/wiring/structure behind the panels are anticipated to be relatively small, particularly in the case of damage close to the edge of a panel, if the more conservative value was assumed, 1.81 in (= 46mm) rather than 30mm, it would result in undue replacement of panels where the clearance was less than 46mm but greater than 30mm.



As the error is in the RC section of the SB, the operator would need to apply the ASAC/AMOC process.

The initial response on 20 November 2019 confirmed that Airbus accepted that there was a typographical error relating to the dimension “30 mm (1.81 in)”, however there was no firm commitment given that the SB would be revised. We received a response from Airbus on 16 Jan 2020 confirming that the SB A330-25-3743 would be revised in Q3 of 2020.

On the basis of the errors in the Required Compliance (RC) sections of SB A330-25-3743 REV 00 and SB A340-25-5241 REV 00, the anticipated issues in applying/certifying these Service Bulletins on the VIR fleet, and the understanding that the SBs would be revised prior to the issue of an Airworthiness Directive, VIR has been awaiting receipt of the updated Service Bulletins.

We have reviewed the A350 SB (A350-50-P006 REV 00) and confirm that the error is not present; conversion between mm and inches has been correctly done, stating 30mm (1.18 in).

We have not reviewed the SB A380-50-8010 and SB A340-25-4378, as we do not operate these types.

B. Compliance Time

The requirement to comply with the AD within 23 months from the AD effective date is not compatible with the A330/A340 Maintenance programme – the ‘C Check’ interval is 24MO for the A330/A340 aircraft. Whereas VIR fully supports the timely resolution of the unsafe condition, we would like to emphasise that the best time and place to perform this type of maintenance is in the base maintenance (‘C Check’) environment. This considers human factors, tooling, manpower, facilities and ground time. The proposed compliance period will mean that a proportion of the fleet will require inspection/rectification outside the context of C Check inputs, potentially in a Line Maintenance environment.

VIR requests that EASA should consider adapting the AD compliance requirement such that it allows the work to be scheduled in base maintenance. We suggest that the compliance time could be set within 27 months from the AD effective date so that the necessary workcards can be established and the work planned so the SB can be accomplished at the next base maintenance input on each affected aircraft. With respect to the errors highlighted in the SB A330-25-3743 REV 00 and SB A340-25-5241 REV 00 (see above), as the SBs are judged not to be currently workable, the SBs should be revised prior to the issue of the AD.

EASA response:

A. Comment agreed. EASA contacted Airbus and it is confirmed that there is a typo in the mentioned SB for A330 and A340 aeroplanes. Airbus will correct the typo in the next revisions of the SBs. The international measuring system for distance is in meters. As the value in millimetres is correct, EASA consider that compliance with the AD is achievable and that no AMOC is necessary for covering that discrepancy.

B. Comment not agreed. AD compliance requirements are calculated independently of scheduled maintenance periods. Further, showing compliance with the AD does not require the aircraft to be on a C check.

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



Commenter 2: Evelop – Alberto Cidoncha – 26/02/2020**Comment # 2**

After reviewing the PAD 20-041, regarding Cargo Compartment Lining Panels - Inspection/Repair, one query has been raised out:

In the Reason part, it states literally:

This AD also prohibits (re)installation of certain repaired affected parts on an aeroplane, and prohibits repair of any affected part by using Speedpatch AF800.

Nevertheless in the Required Action(s) and Compliance Time(s), it only mentions NOT to install on damage-through repair:

From the effective date of this AD, do not repair any damage-through on an affected part by using 'Speedpatch AF800.

Our concern is: if it is allowed to install Speedpatch AF800 from the effective date of this AD for Damage NOT through repair?

This is important to us in order to take action over our stores, if applicable.

EASA response:

Comment acknowledged. The AD states that the unsafe condition is related to damage-through repairs using 'Speedpatch AF800. The requirement in paragraph (5) prohibits further repairs for damage-through using 'Speedpatch AF800.

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

Commenter 3: Saudia – Mohannad O. Sungouf – 03/03/2020**Comment # 3**

Regarding PAD No 20-041 Cargo Compartment Lining Panels – Inspection / Repair / Replacement, SVA only used speed patch AF800 one time and this one time occurrence has been eliminated by replacing the panel with a new one. SVA are kindly inquiring, if we still have to comply with requirement actions mentioned in the subject PAD.

EASA response:

Comment acknowledged. From the information above, it seems the mentioned aeroplane is a Group 2. For these planes, no physical action is to be accomplished, no need to comply with paragraph (1) and related paragraphs. In addition, the replacement of affected panels with serviceable panels is also covered by (3) of the AD. However, for that Group 2 aeroplane, paragraphs (4) [Parts Installation:] and (5) [Repair Prohibition:] of the AD apply.

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

Commenter 4: Delta Air Lines – James Thompson – 18/03/2020

Comment # 4

Reference:

- (A) EASA Proposed Airworthiness Directive: PAD No. 20-041, dated 25Feb2020
- (B) A330 Aircraft Maintenance Manual (AMM) 25-53-00-340-803-A
- (C) A350 Maintenance Procedure (MP) A350-A-50-13-XX-09001-685-A
- (D) Airbus Service Bulletin (SB) A330-25-3743 Rev Original, dated 23Sep2019
- (E) Airbus Service Bulletin (SB) A350-50-P006 Rev Original, dated 30Oct2019
- (F) Airbus TechRequest 80763376, 06Mar20

A. As documented in the Ref (A) Reason, this potential unsafe condition stems from a manual quality issue. DAL has inquired to Airbus when the applicable AMM manuals have allowed use of Speedpatch AF800, since it is possible an operator could have used an AMM repair during this time period. Airbus has confirmed that the A350 manuals were updated in November 2018, and the A330 manuals were updated April 2019 to remove CML 13XBD4 and required Gillpatch III. It is believed this date range could assist operators in determination of when this quality escape occurred. Therefore, DAL requests the incorporation of the date range in which the quality escape occurred into the impending AD reason.

B. Ref (A) provides definitions, including groups of aircraft, Group 1 aeroplanes are defined as those that have a (one or more) repaired affected part installed. Group 2 aeroplanes are defined as those that do not have any repaired affected part installed. Currently, the impending AD does not provide criteria in which how to determine if an aeroplane is Group 1 or Group 2. Some operators have taken delivery of A330 and A350 aircraft recently, after manuals were updated removing Speedpatch AF800. For other deliveries just prior to November 2018 (A350) and April 2019 (A330), a comprehensive log page review and/or records review could be used to identify this repair with the subject date range. Both scenarios addressed identify if an aircraft



is either “Group 1” or “Group 2”. Therefore, DAL requests a records review allowing to determine if an aircraft is Group 1 or Group 2 and state for any aeroplanes manufactured after November 2018 for the A350 and April 2019 for the A330, that no maintenance activities are required.

C. Within both Ref (D) and Ref (E) there are required activities for warehouse/shop/inventory. However, based on both reviews of the service bulletin, neither provides part numbers to inspect. Since this activity not being accomplishment on the aeroplane, and the work environment and applicability has changed to warehouse/shop/inventory and component level work, it seems the applicability should reflect applicable part numbers prompting the shop activities. DAL has inquired to Airbus on which part numbers to inspection and is pending an answer (as of 10Mar20). Therefore, DAL request the incorporation applicable cargo lining panel part numbers to be inspected within the applicability, groups, or definitions of the impending AD.

D. Ref (A) para (1) requires accomplishment of a one-time inspection within 23 months after the AD effective date. However, it was noted that Ref (D) has a required compliance threshold of 30 months after the release date of the SB original issue, and Ref (E) has a compliance threshold of 29 months after the release date of the SB original issue. Currently, the 23-month compliance threshold fallouts of the c-check schedule (every 3 years) for wide body aircraft, and the inspection of the all ceiling and sides lining panels located in the fwd/aft/bulk cargo compartments is a labor-intensive activity. In addition, DAL request awareness to EASA that due to global circumstances, some operators that have grounded/parked aeroplanes, these A/C that are not being operated, nor are having routine maintenance be performed. Therefore, DAL requests the compliance threshold of Ref (A) para (1) compliance threshold be revised to flight days in lieu of calendar days. For operators unaffected by global circumstances, the month compliance threshold does not change the intended compliance threshold with providing an equivalent level of safety.

E. Currently on the market, there are multiple types lining panels (different cover material/thickness, honeycomb material/thickness) that can be installed, or combinations of different types of panels. For example, some areas of a cargo compartment could have thicker panels and another thinner based on anticipated areas of impact. Airbus has not provided the type of material used on the cargo lining panel, if all lining panels accessible to operators, or if combinations of different types of panels have been tested. This result could greatly the applicability of affected lining panels. If a sample size of specific panel numbers have only been tested, then it is believed the unsafe safe condition has not been truly tested on this unknown variable. Airbus has confirmed that Airbus has only tested Airbus OEM parts and for the A330 locally manufactured panels based on A330 semi-finished materials qualified by Airbus. Therefore, DAL requests the part numbers and cargo liner materials that were tested be incorporated into Ref (A), and provide clarification if all specs of cargo lining panels were tested.

F. Per Ref (A) para (2), if during accomplishment of the required inspection, a repair with patches is found on both sides of the panel with Speedpatch AF800 being on at least one side then follow-up corrective actions are required before next flight, or within the time allowed by the operator’s Minimum Equipment List (MEL). Within Ref (D) and Ref (E), corrective actions are to repair the lining panel with blind rivets. Based on Ref (A) compliance threshold (within 23 months of AD effective date), this inspection will fallout of c-checks).

Typically, for blind rivet installation – standard tooling is needed (such as rivet gun, air sources), in order to correctly install blind rivets certain controls must be correct to ensure damage is not caused – such as air supply pressure, or the gun being turn up too high. In addition, installation cannot be checked afterwards to ensure contact with other systems, or wiring has occurred. Since this repair is only occurring to a lining panel with damage through the part, the improper installation of blind fasteners could cause more damage and cannot be checked, because the speed patch is covering



the area over where the speed patch is installed. Ref (D) and Ref (E) require a fixed value of blind fasteners based on the repair patch size, meeting a minimum distance between fasteners, and edge distance. Based on an operator's configuration, or the underlying structure, additional blind fasteners may be requiring. Airbus has confirmed it is technically acceptable to install more rivets per edge (i.e. below calculation provides the minimum required) providing that allowable limit for distance between the blind rivets, and the allowable limit for the distance to the edge are within below limits. Therefore, DAL requests the value for blind fastener installation become a minimum as an allotment within the impending AD.

G. Due to the Ref (A) para (1) compliance threshold and the para (2) corrective actions being before further flight or within the time allowed by the operator's Minimum Equipment List (MEL). As a temporary repair, DAL requests alternatives to blind fasteners be provided, in lieu of blind fasteners, and the installation of tape over the backside of the fastener (where there is a equal to or greater than 30mm distance criteria) to prevent chaffing or contact with systems or structures. This would facilitate stations do not have proper equipment within the 23-month requirement, and to allow operators to check installation afterwards to ensure there is no damage.

H. Some operators have proactively performed modifications or re-configured the bulk cargo crew rests via supplemental type certificates (STC). These configurations prevent access to the inspection areas and affect applicability due to these panels not being installed. These areas are typically not removed until heavy checks due to the labor-intensive maintenance actions, taking days to even remove. Therefore, DAL would like to bring this subject matter up for awareness, and request considerations be addressed for aeroplanes that have modified/re-configured their cargo compartments preventing access.

I. DAL understands that Speedpatch AF800 does not pass the flame penetrations tests during testing. DAL requests information regarding what element/component of Speedpatch AF800 failed during testing. For example, the patch adhesive test, tested temperature ranges, flame exposure, and flame consistency. The US Federal Aviation Administration (FAA) have policies regarding firing testing of aircraft materials and specifically the burn testing procedures of cargo liners, US operators do not have visibility of the specifics surrounding the failure of Speedpatch AF800 to determine if it meets or fails the FAA testing criteria. Ref (D) and Ref (E) do not address the details surround the failure, and DAL believes this information would allow the operator to understand criteria to review if other lining panels are installed that were not Airbus tested.

EASA response:

A. Comment not agreed. As the affected parts are rotatable, it is not possible to limit the AD to the dates where the manual was effective.

B. Comment acknowledged. See above EASA answer. The method for determining if an aeroplane is Group 1 or Group 2 is at the discretion of each operator. A record review is acceptable provided that objective can be met.

C. Comment not agreed. The affected panels are all cargo compartment lining panels with honeycomb core. The list of affected P/N of panels cannot be listed in the AD as almost each aeroplane has a different configuration of these panels. Listing all the P/N would lead to a too long list and could create discrepancies. However if DAL manage to obtain the list of affected panels from Airbus, that can be used for AD compliance.

D. Comment not agreed. Due to the multi-programme nature of the unsafe condition a calendar compliance time was calculated.



E. Comment acknowledged. EASA confirm that Airbus tested all combination of honeycomb core bonded lining material with a front and rear prepreg layer which are Airbus qualified and approved specifications which are at the end included in AMM/IPC etc. It is confirmed that Speedpatch in combination with Damage-through repairs is the critical issue – not the panel material itself.

F. Comment not agreed. The values for blind fastener installation are mentioned in the applicable Airbus SB and any action in the AD are accomplished in accordance with these SBs. For this reason, EASA consider that there no need to repeat that in the AD.

G. Comment not agreed. If during the DET as required by the AD, corrective actions must be accomplished, the compliance times as specified in the Operators MEL can be used which allows not grounding the aeroplane immediately.

H. Comment acknowledged. If operators have modified there aeroplanes with STC, this is no longer an issue for this AD and the operators are expected to contact the STC holders to determine if the unsafe condition is present or not after these modifications. If the unsafe condition is still present, STC holder are expected to develop their own instructions for addressing the situation.

I. Comment acknowledged. EASA confirm that the issue/unsafe condition identified by Airbus is related to Speedpatch AF800 in regard of damage-through repairs. In addition, when Airbus aeroplanes are approved by EASA and US Federal Aviation Administration (FAA), all requirements are fulfilled. This includes also FAA requirements regarding firing testing of aeroplanes materials and specifically the burn testing procedures of cargo liners. To obtain additional information about the use of Speedpatch AF800 and qualification for several other lining panels, the manufacturer of the manufactures of Speedpatch AF800 can be contacted.

No changes have been made in the AD in response to these comments.

