

EASA	COMMENT RESPONSE DOCUMENT
	EASA PAD No. 15-018 [Published on 27 February 2015 and officially closed for comments on 13 March 2015]

Commenter 1: Avianca – Diogo Bertoldi Youssef – 27/02/2015

Comment # 1

In order to provide full document traceability and register cases of AD non-applicability would be better to have a line on the applicability field or paragraph on the Requirement Actions stating that Aircraft on which a MLG has not being replaced or reinstalled since first entry into service are not affected by AD Paragraphs (1) and (2).

EASA response:

Comment agreed. The Applicability paragraph of the Final AD has been amended accordingly.

Commenter 2: Air France – Baptiste Hericher – 27/02/2015

Comment # 2

The main reason to issue a new Airworthiness Directive (AD), which will supersede EASA AD 2014-0066, corrected version dated on March, 24th 2014, is the necessity to inspect the pin and nut's threads due to lack of jointing compound and inadequate sealant during installation of MLG.

However, "Applicability" paragraph does not take into account the replacement or re-installation criteria, it is only noted in "Required Action" paragraph.

- AFR requests that the "Applicability" paragraph be changed to take into account the above criteria to apply this inspection only on aircraft on which MLG have been replaced or removed, in service, on the effective date of the future AD.

- AMM task 32-11-16-400-801 revision 54 dated on January, 01st 2015, already requires to apply sealant to the upper cardan nut threads so what is the final fix of the future AD?

- In case of MLG replacement just before effective date of the future AD, this inspection will have to be performed within 8 years (compliance times whichever occurs later) while the adequate sealant will be applied in accordance with current AMM task 32-11-16-400-801 revision 54. Nevertheless an aircraft on which MLG will be replaced, with same current AMM task 32-11-16-400-801 revision 54, just after effective date of the future AD will not be concerned by this AD inspection.

Could you explain the difference between these both examples?

EASA response:

Point 1: Comment agreed. See answer to Comment # 1.

Point 2: Comment partially agreed. The applicable Airbus AMM task 32-11-16-400-801 was updated on 01 October 2014 to avoid incorrect (re-)installation. This Airbus AMM Revision is used to determine if an upper cardan pin on a MLG is affected and, if it is affected, the upper cardan pin on that MLG must be inspected in accordance with the instructions of the applicable Airbus SB.

The Applicability and RACT section of the Final AD have been amended in response to this comment.

Commenter 3: United Aviation (Singapore) Pte Ltd – Mok Shao Xian – 02/03/2015

Comment # 3

This PAD does not show the part number of the pin, nut and retainer. Please kindly advise.

EASA response:

Comment understood. The AD is applicable to all P/N of the pin, nut and retainer. Details are provided in the applicable Airbus SB.

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

Commenter 4: Cebu Pacific Air Inc.– Ryan John F. Cauntay – 02/03/2015

Comment # 4

Inspection on the upper cardan pin terminates EASA AD 2014-0066, however, due to the root cause analysis, it has been found out that the corrosion will not be visible during the DET.

Our questions:

- Will there be an extension on effectivity for A330-300 fleet?
- Shall we assume that Applicable aircraft/LG are listed on the respective SB (A330-32-3269, A340-32-4301 or 5115)? Or will there be a clause stating specific applicability (per MSN, LG SN etc).
- On the required action column, it will be very much appreciated if EASA can put a statement that doing the DET inspection per SB A330-32-3269, A340-32-4301 or 5115 will terminate the requirement of the AD per para 1?

EASA response:

Point 1: Comment not understood as this AD, which supersedes EASA AD 2014-0066, is already applicable to Airbus A330-300 aeroplanes. See Applicability paragraph.

Point 2: Comment understood. This AD is applicable to all aeroplanes as specified in the AD Applicability. On an aeroplane, the DET on an upper cardan

pin on a MLG is to be accomplished if it has been installed as replacement part, or re-installed, since first entry into service of the aeroplane and if this action was accomplished using the applicable Airbus AMM at a revision dated prior to 01 October 2014.

Point 3: There is no 'terminating' in this case, as the DET is a one-time action only and is applicable to all affected aircraft as explained above. For future upper cardan pin installations, operators are expected to use the AMM as revised by Airbus on 01 October 2014 or subsequent revisions.

The Applicability of the Final AD has been amended. See also Comment # 1.

Commenter 5: Air Mauritius – Choy Sen Chue Kee Cheung – 02/03/2015

Comment # 5

1. For aeroplanes on which, on the effective date of this AD, a MLG which has not been replaced or reinstalled since entry in service of aircraft, SB A330-32-3269 & SB A340-32-4301 are not applicable.
2. If you refer to the subject SBs, there is no mention of the above statement. Referring to the Accomplishment Timescale of SB A330-32-3269 Rev.00 & SB A340-32-4301 Rev.00 shown below, the applicability is a bit confusing with respect to the PAD 15-018's required action and compliance time.

(2) Accomplishment Timescale

Table 01: Detailed Inspection (DET) of the Upper Cardan Pin (UCP) and nut retainer assembly				
CONDITION	ACTION	COMPLIANCE TIME		REPETITIVE INTERVAL
		THRESHOLD	GRACE PERIOD	
All aircraft	Inspect the upper cardan pin and nut	8 years from installation of the MLG or 12 months from issue of this Service Bulletin	Whichever occurs later	None

3. Would it also be possible to include type of MLG affected (i.e. Basic, growth & Enhanced)?

EASA response:

Point 1: Comment understood. The AD Applicability has been amended to exclude aeroplanes on which an upper cardan pin on a Main Landing Gear (MLG) has never been replaced or re-installed since first entry into service of the aeroplane. See also Comment # 1.

Point 2: Please note that SB actions become mandatory only when an AD is issued. However based on the comments, a revision to the Airbus SB is being worked on to improve the wording in the 'Accomplishment Timescales' section and clarify the aircraft affected by the SB.

Point 3: As for the affected MLG types (P/N), this is applicable to all. Details are provided in the applicable Airbus SB.

No changes have been made to the Final AD in response to points 2 and 3 of this comment.

Commenter 6: Lufthansa Technik AG – Hedwig Irriger – 02/03/2015**Comment # 6**

1. Please clarify if a MLG that has been (partially or completely) detached and reattached for access (e.g. structures inspection) shall fall under the “reinstalled” MLGs and thus be affected by this AD. Or is it only MLGs that have been completely removed for shop visits that shall be considered affected by the AD?

=> Please include a clarification in the AD concerning the “level of MLG detachment” that is required to initiate the cardan pin issues.

2. Please clarify the technical reason for which MLGs replaced/reinstalled after AD-effective date are no longer affected by the cardan pin problem. LHT does not understand why a MLG that is installed 1 day before AD effective date will have the risk of a corroding pin, while installing the MLG 2 days later (so after AD effective date) will be safe.

=> We would not expect this explanation in the AD-text. But an e-mail with an explanation would help us greatly to understand the issue and plan corrective action for our customers sensibly.

3. In Paragraph (1) the due date is stated as “before 96mth since installation or 12mth after AD whichever later => inspect for corrosion”. But the AD does not give a threshold before which no inspection shall be performed.

=> So if the inspection is performed some days or weeks after MLG replacement, the AD will be legally accomplished.

=> LHT doubts that corrosion/pitting will be visible so soon after MLG installation and wonders why no threshold is defined.

=> Suggestion: “[before 96mth since installation or 12mth after AD whichever later], but not early than xx months after MLG replacement/reinstallation].

=> Should there be a technical reason why no threshold is required for this inspection, an e-mail with the explanation would help us greatly in understanding the technical intend of the AD.

EASA response:

Point 1: Comment partially agreed. The Applicability of the Final AD was amended and the affected part is now the upper cardan pin on a Main Landing Gear, if it has been replaced or re-installed. This should clarify the query.

Point 2: The reference of ‘on the effective date of this AD’ was introduced by mistake and it has been corrected in the Final AD. The determination is based on the use of Airbus AMM at a revision dated prior to 01 October 2014.

Point 3: Comment understood, but not agreed. In this case, no threshold is necessary, as the issue was caused by incorrect installation of an upper cardan pins on a MLG. Since that event, the applicable AMM task was amended to improve re-installation instructions for an upper cardan pin on a MLG. Therefore, if no corrosion discrepancy is detected during the required one-time DET, it is expected that re-installation of that upper cardan pin is done using these improved instructions, thereby preventing development of corrosion.

No changes have been made to the Final AD in response to point 3 of this comment.

Commenter 7: Cathay Pacific Airways Limited – Bharat Yadav – 03/03/2015**Comment # 7**

1. It seems the new AD inspection(stated in the AISB) is less than what was performed previously in the AOT. Please previously a dimension check was required and a corresponding Torque check before the DET inspection of the threads. The AISB inspection is only an inspection of the threads on the cardan pin and nut. No dimensional "gap check". There is no explanation on why these items are omitted.

2. This AD states it is only a 1 off inspection. CPA believes that this AD should be a repetitive inspection of the Cardan pin? How to mitigate the same issue occurring again in the future?

3. The timescales are too subjective

QUOTE

(1) For an affected MLG, before exceeding 96 months since its latest installation on an aeroplane, or within 12 months after the effective date of this AD, whichever occurs later, accomplish a DET of each affected MLG upper cardan pin and nut threads, in accordance with the instructions of Airbus SB A330-32-3269, or SB A340-32-4301, or SB A340-32-5115, as applicable to aeroplane type and model.

END QUOTE

(A) Going forward the AD should state the minimum time on wing before inspection can be performed e.g

For an affected MLG, before exceeding 96 months since its latest installation on an aeroplane but no less that 88 month, or within 12 months after the effective date of this AD, whichever occurs later, accomplish a DET of each affected MLG upper cardan pin and nut threads, in accordance with the instructions of Airbus SB A330-32-3269, or SB A340-32-4301, or SB A340-32-5115, as applicable to aeroplane type and model.

(B) The 96 month limit may not fall into a scheduled maintenance input and with no allowance either way will cause further unscheduled disruption for operators without access to a dedicated hangar

(C) What work is being performed to minimise installation issues in-service?

EASA response:

Point 1: Comment not agreed. The Reason section of the AD clearly states that "further investigation concluded that the reported MLG sidestay upper cardan pin migration event had been caused by corrosion, due to lack of jointing compound and inadequate sealant application during MLG installation". This explains the changed requirements.

Point 2: Comment not agreed. Once the DET is accomplished, it is expected that further (re-)installation of upper cardan pins on MLG is accomplished using the improved AMM task, see Airbus AMM revision dated 01 October 2014 (or subsequent revisions), thereby preventing further development of corrosion.

Point 3: Comment understood, but not agreed. See EASA answer to Point 3 of Comment # 6.

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

Commenter 8: SAS – Ali Yabandeh – 04/03/2015

Comment # 8

Quoting PAD 15-018, Introduction Paragraph in the Required Action(s) and Compliance Time(s):

QUOTE

For aeroplanes on which, on the effective date of this AD, a MLG has been replaced or reinstalled since first entry into service of the aeroplane

END QUOTE

Above quote is interpreted as follows:

Only applicable if the MLG has been replaced/reinstalled since EIS on the effective date and future replacement will not be affected.

1. Based on above interpretation, SAS would like to propose clarification on the quote given above to make sure future replacements are inspected if intended to.

And

2. Also to define MLG replaced/reinstalled more clearly. There are several other maintenance activities/tasks that affects the Upper Cardan Pin Installation in addition to complete MLG Unit replacement such as:

- a) Cardan Pin replacement/reinstallation? As per the above quote, such action does not make the AD applicable.
- b) Side Stay replacement/reinstallation? As per the above quote, such action does not make the AD applicable.

EASA response:

Point 1: Comment understood. SAS interpretation is correct. Once the DET is accomplished, it is expected that further (re-)installation of upper cardan pins on MLG is accomplished using the improved AMM task, see Airbus AMM revision dated 01 October 2014 (or later), thereby preventing further development of corrosion, and therefore does not require a repeat inspection. See also corresponding EASA answers to similar comments above.

No changes have been made to the Final AD in response to point 1 of this comment.

Point 2: Comment understood and partially agreed. Note that this is an aircraft AD, not a MLG AD. Actions on MLG when not installed on an aircraft are therefore outside the scope of this AD. Nevertheless, the Final AD has been amended to require on-aircraft action at the level of upper cardan pin on a MLG, which should provide clarity.