



適航指令發布單
Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2023-05-014	發布日期 Date issued	2023/6/1												
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	Airbus A330-841 and A330-941 aeroplanes, all manufacturer serial numbers.														
主旨摘要 Subject	Aircraft Flight Manual - Sections Limitations and Normal Procedures - Amendment / Master Minimum Equipment List - Amendment / Pneumatic - High Pressure Valve - Inspection / Replacement														
民航局 CAA <input type="checkbox"/> 本國產品 Native product <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authority <table style="width: 100%;"><tr><td><input type="checkbox"/> FAA</td><td><input type="checkbox"/> Germany LBA</td></tr><tr><td><input checked="" type="checkbox"/> EASA</td><td><input type="checkbox"/> CAA-NL</td></tr><tr><td><input type="checkbox"/> Brazil</td><td><input type="checkbox"/> UK CAA</td></tr><tr><td><input type="checkbox"/> Transport Canada Civil Aviation</td><td><input type="checkbox"/> Japan CAB</td></tr><tr><td><input type="checkbox"/> DGAC</td><td><input type="checkbox"/> CAA of Israel</td></tr><tr><td colspan="2"><input type="checkbox"/> Other _____</td></tr></table>			<input type="checkbox"/> FAA	<input type="checkbox"/> Germany LBA	<input checked="" type="checkbox"/> EASA	<input type="checkbox"/> CAA-NL	<input type="checkbox"/> Brazil	<input type="checkbox"/> UK CAA	<input type="checkbox"/> Transport Canada Civil Aviation	<input type="checkbox"/> Japan CAB	<input type="checkbox"/> DGAC	<input type="checkbox"/> CAA of Israel	<input type="checkbox"/> Other _____	
	<input type="checkbox"/> FAA	<input type="checkbox"/> Germany LBA													
	<input checked="" type="checkbox"/> EASA	<input type="checkbox"/> CAA-NL													
<input type="checkbox"/> Brazil	<input type="checkbox"/> UK CAA														
<input type="checkbox"/> Transport Canada Civil Aviation	<input type="checkbox"/> Japan CAB														
<input type="checkbox"/> DGAC	<input type="checkbox"/> CAA of Israel														
<input type="checkbox"/> Other _____															
設計國 AD 編號 Original AD number		2023-0111													
1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)															
備註 Note	This AD supersedes EASA AD 2022-0227(CAA-2023-05-015) dated 24 November 2022.														
<p>註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6330 / 6332, Fax：(02)2545-8464, e-mail： adcaa@mail.caa.gov.tw</p> <p>Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6330 / 6332, Fax： (02)2545-8464, e-mail：adcaa@mail.caa.gov.tw</p>															



Airworthiness Directive

AD No.: 2023-0111

Issued: 26 May 2023

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I Part M.A.301, or Annex Vb Part ML.A.301, as applicable, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I Part M.A.303, or Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

AIRBUS S.A.S.

Type/Model designation(s):

A330 aeroplanes

Effective Date: 02 June 2023

TCDS Number(s): EASA.A.004

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2022-0227 dated 24 November 2022.

ATA – Aircraft Flight Manual – Sections Limitations and Normal Procedures – Amendment

ATA – Master Minimum Equipment List – Amendment

ATA 36 – Pneumatic – High Pressure Valve – Inspection / Replacement

Manufacturer(s):

Airbus

Applicability:

Airbus A330-841 and A330-941 aeroplanes, all manufacturer serial numbers.

Definitions:

For the purpose of this AD, the following definitions apply:

HPV Clip: Engine bleed air system (EBAS) high pressure valve (HPV) clips, having Part Number 6764-222.

Serviceable HPV: EBAS HPV equipped with HPV clips which are new (not previously installed on any HPV), or which accumulated less than 4 000 flight hours (FH) and less than 600 flight cycles (FC) since first installation on an HPV.

The AOT: Airbus Alert Operators Transmission (AOT) A36L009-22 Revision (rev.) 02.



The AFM-TR 811: Airbus A330 Airplane Flight Manual (AFM) Temporary Revision (TR) 811 Issue 1.

The AFM-TR 813: Airbus A330 AFM TR 813 Issue 1.

The MMEL update: Airbus A330/A340 Master Minimum Equipment List (MMEL) items listed below, as provided in Airbus A330/A340 MMEL Major Event Revision (MER) dated 25 August 2022:

- Item 21-52-01 Air Conditioning Pack
- Item 36-11-01 Engine Bleed Air Supply System
- Item 36-11-06 Engine Bleed IP Check Valve
- Item 36-11-07 Engine Bleed HP Valve

Groups: Group 1 are aeroplanes equipped with Bleed Monitoring Computer (BMC) software (SW) 4.0.

Group 2 are aeroplanes equipped with BMC SW 4.1 or later approved SW standard. An aeroplane having Airbus modification 209292 or Airbus Service Bulletin (SB) A330-36-3050 embodied is Group 2, provided it remains in that configuration.

Reason:

Occurrences were reported of leaking HPV, apparently due to HPV clip failure and sealing ring damage. A leaking HPV may expose the Pressure Regulating Valve (PRV), which is installed downstream from the HPV, to high pressure, possibly damaging the PRV itself and preventing its closure, when required.

This condition, if not detected and corrected, could lead to high pressure and temperatures in the duct downstream from the PRV, with possible duct burst, damage to several systems and consequent loss of control of the aeroplane.

Airbus issued Flight Operations Transmission (FOT) 999.0062/22 to provide advance information and instructions to operators, and EASA issued Emergency AD 2022-0170-E to require amending the applicable AFM, and implementing dispatch restrictions. That AD also required reporting of specific maintenance messages to Airbus.

After that AD was issued, Airbus published AOT A36L009-22, the AFM-TR 811 and the MMEL update, providing additional instructions and maintenance procedures to address failures of the HPV, and EASA issued AD 2022-0181, superseding AD 2022-0170-E, to require accomplishment of maintenance actions, including repetitive replacement of the HPV clips; amendment of the applicable AFM; and implementation of the MMEL update.

After that AD was issued, Airbus issued AOT A36L009-22 rev. 01 to provide improved instructions (including a reduced list of 'Class 1 maintenance message associated to an HPV fault'), and comments to that AD had been received. Consequently, EASA issued AD 2022-0227, partially retaining the requirements of EASA AD 2022-0181, which was superseded, and providing additional criteria for installation of HPV and HPV clips.

Since that AD was issued, it has been determined that the interval for the HPV clip replacement must be based also on FC accumulated by the HPV clip, and additional instructions applicable depending on BMC SW configuration, have been identified. Airbus issued accordingly the AOT, as



defined in this AD, also including improved maintenance instructions, and the AFM-TR 813 and revised FOT 999.0062/22 (now at rev. 05).

For the reason described above, this AD retains the requirements of EASA AD 2022-0227, which is superseded, and provides additional criteria for the replacement of HPV clips, and additional instructions depending on BMC SW configuration, and requires accomplishment of tasks in accordance with the instructions of AOT A36L009-22 rev. 02.

This AD is still considered to be an interim action, and further AD action may follow.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

AFM Amendment:

- (1) For Group 1 and Group 2 aeroplanes Within 7 days after 05 September 2022 [the effective date of EASA AD 2022-0181], incorporate the AFM-TR 811 into the applicable AFM, inform all flight crews and, thereafter, operate the aeroplane accordingly.
- (2) For Group 2 aeroplanes: Within 7 days after the effective date of this AD, incorporate the AFM-TR 813 into the applicable AFM, inform all flight crews and, thereafter, operate the aeroplane accordingly.
- (3) For Group 1 aeroplanes: From the effective date of this AD, it is allowed to modify an aeroplane in accordance with the instructions of Airbus SB A330-36-3050, provided, before next flight after that modification, the AFM-TR 813 is incorporated into the applicable AFM; thereafter, inform all flight crews and operate the aeroplane accordingly (see Note 1 of this AD).

Note 1: Following modification of an aeroplane in accordance with the instructions of Airbus SB A330-36-3050, that aeroplane is considered to be a Group 2 aeroplane.

- (4) Concurrently with the AFM amendment as required by paragraph (1) of this AD, remove from the applicable AFM the additional limitations, previously inserted as required by paragraph (1) of EASA AD 2022-0181, as applicable.
- (5) For Group 2 aeroplanes: Concurrently with the AFM amendment as required by paragraph (2) or (3) of this AD, as applicable, remove from the applicable AFM the additional limitations, previously inserted as required by paragraph (1) of EASA AD 2022-0181, and the AFM-TR 811, previously inserted as required by paragraph (1) of this AD, as applicable.
- (6) Amending the applicable AFM by incorporating a later revision, which includes the AFM-TR 811 or the AFM-TR 813, as applicable, is an acceptable method to comply with the requirements of paragraph (1) to (3), as applicable, of this AD.

MMEL Amendment:

- (7) Concurrently with the AFM amendment as required by paragraph (1) of this AD, implement the instructions of the MMEL update, as defined in this AD, on the basis of which the



operator's MEL must be amended, inform all flight crews, and thereafter, operate the aeroplane accordingly. Implementing the MMEL update for an aeroplane cancels the dispatch restrictions, as required by paragraph (2) of EASA AD 2022-0181, as applicable, for that aeroplane (see Note 2 of this AD).

Note 2: Amending the applicable AFM of an aeroplane by incorporating the AFM-TR 813 does not allow removal of the MMEL update as required by paragraph (7) of this AD for that aeroplane.

HPV Seal Integrity Test:

- (8) For Group 1 and Group 2 aeroplanes: Before next flight after 05 September 2022 [the effective date of EASA AD 2022-0181], accomplish a Seal Integrity Test of each HPV in accordance with the instructions of the AOT.
- (9) For Group 1 aeroplanes: Before an HPV accumulates 1 000 FH since first installation on an airplane, or within 1 000 FH after the effective date of this AD, whichever occurs later, and, thereafter, at intervals not to exceed 1 000 FH, accomplish a Seal Integrity Test of that HPV in accordance with the instructions of the AOT.

Additional Maintenance Instructions:

- (10) For Group 1 and Group 2 aeroplanes: From 05 September 2022 [the effective date of EASA AD 2022-0181], before next flight after any Class 1 maintenance message associated to an HPV fault, as listed in the AOT, accomplish the HPV troubleshooting procedure and additional maintenance actions, as applicable, as identified in, and in accordance with the instructions of, the AOT.
- (11) For Group 1 and Group 2 aeroplanes: From 05 September 2022 [the effective date of EASA AD 2022-0181], before next flight after any Class 1 or Class 2 maintenance message associated to a PRV fault, as listed in the AOT, accomplish the HPV seal integrity test and the additional maintenance actions, as applicable, as identified in, and in accordance with the instructions of, the AOT.
- (12) For Group 1 and Group 2 aeroplanes: From 05 September 2022 [the effective date of EASA AD 2022-0181], before next flight after any failure of an HPV clip and/or any of the HPV butterfly sealing rings, visually inspect the EBAS in accordance with the instructions of the AOT.
- (13) For Group 1 aeroplanes: After the AFM amendment, as required by paragraph (1) of this AD, before next flight after any take-off or go-around, accomplished with 'packs OFF', or 'APU bleed ON', or 'engine bleed OFF', accomplish a Seal Integrity Test of each HPV in accordance with the instructions of the AOT.
- (14) For Group 2 aeroplanes: After the AFM amendment, as required by paragraph (2) or (3) of this AD, as applicable, within 10 FC after any take-off or go-around, accomplished with 'packs OFF', or 'APU bleed ON', or 'engine bleed OFF', accomplish a Seal Integrity Test of each HPV in accordance with the instructions of the AOT.



Corrective Action(s):

- (15) If, during the accomplishment of any action as required by paragraphs (8) to (14) of this AD, as applicable, any discrepancy is detected, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the AOT.
- (16) From 05 September 2022 [the effective date of EASA AD 2022-0181], if, during the first flight after any accomplishment of the HPV troubleshooting procedure, as identified in the AOT, any Class 1 maintenance message occurs associated to HPV fault as listed in the AOT, before next flight, contact Airbus for applicable instructions and accomplish those instructions accordingly.

HPV Clip Replacement:

- (17) For Group 1 and Group 2 aeroplanes: Within the compliance time as identified in Table 1 of this AD, and, thereafter, at intervals not to exceed 4 000 FH or 600 FC, whichever occurs first, replace each HPV clip of that HPV with a new (not previously installed on any HPV) HPV clip in accordance with the instructions of the AOT.

Table 1 – HPV Clip Replacement

	Compliance Time: A or B, whichever occurs first (see Note 3 of this AD)
A	Before exceeding 4 000 FH accumulated by an HPV clip since its installation on an HPV, or within 1 500 FH after 05 September 2022 [the effective date of EASA AD 2022-0181], whichever occurs later
B	(a) or (b), whichever occurs later (a) Before exceeding 600 FC accumulated by an HPV clip since its installation on an HPV (b) Within 60 days or 225 FC, whichever occurs first after the effective date of this AD

Note 3: For the initial replacement only, if the FH accumulated by the HPV clips are not known, the FH and the FC accumulated by the HPV can be used instead.

Terminating Action(s):

- (18) None.

Part(s) Installation:

- (19) For Group 1 and Group 2 aeroplanes: From 08 December 2022 [the effective date of EASA AD 2022-0227], it is allowed to install HPV clips on an aeroplane, provided they are new HPV clips and that, following installation, they are replaced in accordance with the instructions of the AOT before exceeding 4 000 FH or 600 FC, whichever occurs first since their installation on an HPV.
- (20) For Group 1 and Group 2 aeroplanes: From the effective date of this AD, it is allowed to install an HPV on an aeroplane, provided it is a serviceable HPV and that, following installation, the



HPV clips of that HPV are replaced with new HPV clips as required by paragraph (17) of this AD.

Credit:

- (21) Maintenance actions accomplished before 08 December 2022 [the effective date of EASA AD 2022-0227] in accordance with the instructions of AOT A36L009-22 original issue are acceptable to comply with the requirements of this AD, as applicable.
- (22) Maintenance actions accomplished before the effective date of this AD in accordance with the instructions of AOT A36L009-22 Revision 01 are acceptable to comply with the requirements of this AD, as applicable.

Reporting:

- (23) For Group 1 and Group 2 aeroplanes: From 05 September 2022 [the effective date of EASA AD 2022-0181], within 28 days after the accomplishment of any action as required by paragraph (8) to (14) of this AD, or after 05 September 2022 [the effective date of EASA AD 2022-0181], whichever occurs later, report any detected failure to Airbus. This can be accomplished in accordance with the instructions of the AOT.

Ref. Publications:

Airbus AOT A36L009-22 original issue dated 25 August 2022, Revision 01 dated 03 October 2022 or Revision 02 dated 15 May 2023.

Airbus AFM-TR 811 issue 1, EASA approval date 25 August 2022.

Airbus AFM-TR 813 issue 1, EASA approval date 10 May 2023.

Airbus A330/A340 MMEL MER dated 25 August 2022.

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#). This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or



may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.

5. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – 1IAL (Airworthiness Office), E-mail: airworthiness.A330-A340@airbus.com.

