



Notification of a proposal to issue an Airworthiness Directive

PAD No.: 16-040

Issued: 15 March 2016

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

Design Approval Holder's Name:

AIRBUS

Type/Model designation(s):

A330 aeroplanes

Effective Date: [TBD - standard: 14 days after AD issue date]

TCDS Number: EASA.A.004

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2011-0062 dated 04 April 2011.

ATA 71 – Powerplant – Engine Air Intake Cowl Assembly / Piccolo Tube – Inspection

Manufacturer(s):

Airbus (formerly Airbus Industrie)

Applicability:

Airbus A330-243, A330-243F, A330-341, A330-342 and A330-343 aeroplanes, all manufacturer serial numbers.

Reason:

During shop visit, cracks were found in several primary structural parts of Rolls Royce (RR) Trent 700 engine air intake cowls, specifically in the forward bulkhead web, web stiffeners and outer boundary angles (OBA). In addition, several attachment links were found severely worn, and some became detached. In two cases, the thermal anti-ice (TAI) piccolo tube was found fractured. Investigation results show that the cracks are most likely due to acoustic excitation and vibration.

A broken piccolo, tube, if not detected and corrected, in conjunction with forward air intake cowl bulkhead damage, could lead to in-flight detachment of the outer barrel, possibly resulting in damage to the engine or reduced control of the aeroplane.



To address this potential unsafe condition, Airbus issued Service Bulletin (SB) A330-71-3025, making reference to RR SB RB.211-71-AG416, to provide inspection instructions, and, depending on findings, accomplishment of applicable corrective action(s).

Consequently, EASA issued AD 2011-0062 to require repetitive special detailed inspections (SDI) of the piccolo tube and affected mount links, the aft side of forward bulkhead, inner boundary angles (IBA) and OBA of the RR Trent 700 air intake cowl assemblies, and, depending on findings, accomplishment of applicable corrective action(s).

Since EASA AD 2011-0062 was issued, some occurrences were reported of finding attachment rivets of the IBA and OBA either pulled, loose or missing during inspection. It was determined that the affected IBA and OBA rivets may not have been previously inspected if operators accomplished the required inspection in accordance with the instructions of RR SB RB.211-71-AG416 at original issue.

To address this potentially missed inspection, Airbus published SB A330-71-3033, providing instructions for a one-time detailed inspection of the IBA and OBA attachment rivets, to be accomplished if the previous inspection was accomplished using the instructions of RR SB RB.211-71-AG416 at original issue. Airbus also published SB A330-71-3025 Revision 2, adding an inspection of the IBA and OBA attachment rivets, to be used if the previous inspection was accomplished using RR SB RB.211-71-AG416 at issue 1 or later. Airbus also published SB- A330-71-3032 to introduce a modification (mod) that would eliminate the need for repetitive inspections.

For the reasons described above, this AD partially retains the requirements of EASA AD 2011-0062, which is superseded, and requires an additional detailed inspection of IBA and OBA forward bulkhead attachment rivets. This AD also introduces an optional terminating action (Airbus mod 204615, embodied in production, which can be embodied in service with Airbus SB A330-71-3032) for the repetitive inspections required by this AD.

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

Required as indicated, unless accomplished previously:

For aeroplanes in pre-mod 204615 and pre-SB A330-71-3032 configuration:

- (1) **Repetitive Inspections:** Within the compliance time indicated in Table 1 of this AD, as applicable and, thereafter, at intervals not to exceed the values specified in Airbus SB A330-71-3025 Revision 02, for each engine on the aeroplane, accomplish a special detailed inspections (SDI) of the piccolo tube and affected mount links, the aft side of forward bulkhead, IBA and OBA of the air intake cowl assembly in accordance with the instructions of Airbus SB A330-71-3025 Revision 02.



Table 1 – SDI Threshold

Flight Cycles (FC) accumulated by the air intake cowl [on the effective date of this AD, since its first installation on an aeroplane]	Compliance Time
Less than 5 000 FC	Within 24 months after the air intake cowl accumulates 5 000 FC since its first installation on an aeroplane
5 000 FC or more	Within 24 months after the effective date of this AD

- (2) **Conditional Credit for Previous Action(s):** Inspections and corrective actions on an aeroplane, accomplished before the effective date of this AD in accordance with the instructions of Airbus SB A330-71-3025 original issue or Revision 01, are acceptable to comply with the initial requirements of paragraph (1) of this AD for that aeroplane, provided that, within 1 050 FC after the effective date of this AD, a one-time inspection of attachment rivets of the IBA and OBA of the forward bulkhead is accomplished in accordance with the instructions of Airbus SB A330-71-3033.

Corrective action(s):

- (3) If, during the one-time inspection as required by paragraph (2) of this AD, any discrepancy is detected, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of Airbus SB A330-71-3033.
- (4) If, during any inspection as required by paragraph (1) of this AD, any discrepancy is detected, within the compliance times specified in Airbus SB A330-71-3025 Revision 02, depending on findings, accomplish the applicable corrective actions (further inspections and/or affected air intake cowl replacement followed by repetitive inspections), in accordance with the instructions of Airbus SB A330-71-3025 Revision 02.
- (5) Accomplishment of corrective actions on an aeroplane, as required by paragraph (3) or (4) of this AD, as applicable, does not constitute terminating action for the repetitive inspections required by paragraph (1) of this AD for that aeroplane.
- (6) **Optional Terminating Action:** Modification of an aeroplane in accordance with the instructions of Airbus SB A330-71-3032 (introducing improved air intake primary structure and new piccolo tube supporting structure for each engine) constitutes terminating action for the repetitive inspections required by paragraph (1) of this AD for that aeroplane.

For all aeroplanes:

- (7) **Installation of Parts:** From the effective date of this AD, it is allowed to install on any aeroplane pre-mod 204615 parts, provided that, following installation, the pre-mod 204615 parts on that aeroplane are inspected as required by this AD.



Ref. Publications:

Airbus SB A330-71-3025 original issue dated 10 January 2011, or Revision 01 dated 24 October 2012, or Revision 02 dated 09 December 2015.

Airbus SB A330-71-3032 original issue dated 10 December 2014.

Airbus SB A330-71-3033 original issue dated 14 December 2015.

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

Remarks:

1. This Proposed AD will be closed for consultation on 12 April 2016.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – EIAL (Airworthiness Office), E-mail: airworthiness.A330-A340@airbus.com.

