| EASA | AIRWORTHINESS DIRECTIVE |
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| | **AD No.: 2013-0094**<br><br>**Date: 16 April 2013**<br><br>Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation. |

This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, 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 [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

| **Design Approval Holder's Name:** | **Type/Model designation(s):** |
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| AIRBUS | A330 aeroplanes |

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| TCDS Number: | EASA.A.004 |
| Foreign AD: | Not applicable |
| Supersedure: | None |

| **ATA 71** | **Power Plant – Upper Aft Mount Bolts – Inspection / Repair** |
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| Manufacturer(s): | Airbus (formerly Airbus Industrie) |
| Applicability: | Airbus A330-201, A330-202, A330-203, A330-301, A330-302 and A330-303 aeroplanes, all manufacturer serial numbers. |
| Reason: | During a scheduled replacement of a CF6-80E1 engine#1 on an A330 aeroplane, one bolt on the aft engine mount upper beam was found totally broken. That bolt is one of the four bolts that attach the upper beam to the pylon.<br><br>The subsequent analyses of the broken bolt and the upper beam identified the following:<br><br>- a fatigue origin area with crack propagation from the boundary of the bolt,<br>- a spiral groove with cold work and microstructural distortion underlying that extended axially along the shank, and<br>- a score mark on counter-bore edge of the upper beam.<br><br>The preliminary root-cause investigation shows that an unusual contact with the counter-bore edge of the beam induced a significant groove on the bolt during its installation in production. It is suspected that this groove led to a fatigue crack initiation and subsequent quick propagation leading to the complete fracture of the bolt.<br><br>As the root-cause is still under investigation, including the installation sequence specific to this aeroplane - engine model, the other A330 propulsion systems are not affected.<br><br>This condition, if not detected and corrected, could lead, in conjunction with a second fractured bolt, to the loss of engine mount structural integrity and potential |

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| | engine detachment in flight as the remaining bolts would not be able to sustain the residual fatigue and limit loads.<br><br>For the reasons described above, this AD requires a one-time ultrasonic inspection of the four aft mount-pylon bolts of both engines for detection of completely sheared bolts through the bolt section and, depending on finding, accomplishment of applicable corrective actions.<br><br>This AD is considered as an interim action, pending the results of the ongoing investigations, and further AD action may follow. |
| Effective Date: | 23 April 2013 |
| Required Action(s) and Compliance Time(s): | Required as indicated, unless accomplished previously:<br><br>(1) Within 1 000 flight hours after the effective date of this AD, inspect all four aft mount-pylon bolts of both engines in accordance with the instructions of Airbus Alert Operators Transmission (AOT) A71L002-13.<br><br>(2) If, during the inspection as required by paragraph (1) of this AD, a fractured bolt is detected, before next flight, contact Airbus for approved repair instructions and accomplish those instructions within the therein defined compliance times.<br><br>(3) Within 10 days after the accomplishment of the bolt inspections as required by paragraph (1) of this AD, report the results (including no findings) to Airbus. |
| Ref. Publications: | Airbus AOT A71L002-13 dated 08 April 2013.<br><br>The use of later approved revisions of this document 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.<br><br>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.<br><br>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu.<br><br>4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – EIAL; E-mail: airworthiness.A330-A340@airbus.com. |