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| <b>EASA</b>   | <b>AIRWORTHINESS DIRECTIVE</b>  |
|    | <p><b>AD No.: 2012-0053</b></p> <p><b>Date: 30 March 2012</b></p> <p>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.</p>  |
| This AD is issued in accordance with EC 1702/2003, Part 21A.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]. |   |
| <b>Type Approval Holder's Name :</b><br>AIRBUS  | <b>Type/Model designation(s) :</b><br>A330 and A340 aeroplanes  |
| TCDS Numbers: EASA.A.004, EASA.A.015  |   |
| Foreign AD: Not applicable  |   |
| Supersedure: This AD supersedes EASA AD 2011-0040 dated 08 March 2011.  |   |
| <b>ATA 32</b>   | <b>Landing Gear – Main and Center Landing Gear Bogie Pivot Pins – Inspections</b>   |
| Manufacturer(s):  | Airbus (formerly Airbus Industrie)  |
| Applicability:  | <p>Airbus A330 aeroplanes, models A330-201, A330-202, A330-203, A330-223, A330-223F, A330-243, A330-243F, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342 and A330-343 aeroplanes, all manufacturer serial numbers (MSN).</p> <p>Airbus A340 aeroplanes, models A340-211, A340-212, A340-213, A340-311, A340-312, A340-313, A340-541, A340-542, A340-642 and A340-643 aeroplanes, all MSN.</p>   |
| Reason:   | <p>During removals of A330/340 Main Landing Gear (MLG) Bogie Beams and A340-500/600 Center Landing Gear (CLG) Bogie Beams, cracks in the bogie pivot pin were found.</p> <p>Investigations indicated that these findings were the result of material heating, caused by friction between bogie pivot pin and bush, leading to chrome detachment and stress corrosion cracking.</p> <p>This condition, if not detected and corrected, could lead to collapse of the main or center landing gear, possibly resulting in damage to the aeroplane and/or injury to occupants.</p> <p>As a precautionary measure, EASA issued AD 2011-0040 to require a one-time inspection of the MLG (all types of A330 and A340 aeroplanes) and CLG (A340-500/600 aeroplanes only) to detect degradation or cracking of the bogie pivot pin, as applicable to aeroplane model, and the reporting of inspections results.</p> <p>Following issuance of EASA AD 2011-0040, several operators reported finding</p> |

|  | <p>chrome detachment or chrome dragging on bogie pivot pin. New cases of cracks were also reported. It has been confirmed as well that, due to similar design, the enhanced MLG bogie pivot pin (Airbus modification 54500) could also be affected by this condition.</p> <p>Prompted by these findings, Airbus have developed an inspection programme consisting of repetitive inspections of the bogie pivot pin and applicable corrective actions.</p> <p>For the reasons described above, this AD, which supersedes EASA AD 2011-0040 and extends the applicability to all A330 and A340 aeroplanes, requires accomplishment of repetitive inspections of the MLG and CLG (for A340-500 and A340-600 aeroplanes) bogie pivot pins and pivot pin bushes, and corrective actions, depending on findings.</p>   |                           |                 |  |   |  |   |   |
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| Effective Date:  | 13 April 2012  |                           |                 |  |   |  |   |   |
| Required Action(s) and Compliance Time(s):   | <p>Required as indicated, unless already accomplished:</p> <p>(1) Initially within the threshold indicated in Table 1 of this AD and, thereafter, at intervals not to exceed 26 months, accomplish a detailed visual inspection of the bogie pivot pins on the MLG and CLG (for A340 aeroplanes only) and pivot pin bushes in accordance with the instructions of Airbus Service Bulletin (SB) A330-32-3240 Revision 02 or Airbus SB A340-32-4281 Revision 01 or Airbus SB A340-32-5096 Revision 01, as applicable to aeroplane model.</p> <p style="text-align: center;">Table 1 – Initial Inspection</p> <table border="1"> <thead> <tr> <th>Bogie pivot pin condition</th><th>Compliance time</th></tr> </thead> <tbody> <tr> <td> <p>Bogie pivot pin fitted on MLG installed on A330, A340-200 and A340-300 <b>not having</b> embodied:</p> <ul style="list-style-type: none"> <li>- Airbus modification 54500 in production or,</li> <li>- Airbus SB A330-32-3212 in service or,</li> <li>- Airbus SB A340-32-4256 in service.</li> </ul> </td><td rowspan="2"> <p>Within 26 months after 22 March 2011 [the effective date of EASA AD 2011-0040] or since the aeroplane first flight, whichever occurs later, but not before the accumulation of 12 months after the aeroplane first flight.</p> </td></tr> <tr> <td> <p>Bogie pivot pin fitted on MLG and CLG installed on A340-500 and A340-600.</p> </td></tr> <tr> <td> <p>Bogie pivot pin fitted on MLG <b>having</b> embodied:</p> <ul style="list-style-type: none"> <li>- Airbus modification 54500 in production or,</li> <li>- Airbus SB A330-32-3212 in service or,</li> <li>- Airbus SB A340-32-4256 in service.</li> </ul> </td><td> <p>Within 26 months after the effective date of this AD or since the aeroplane first flight, whichever occurs later, but not before the accumulation of 12 months after the aeroplane first flight.</p> </td></tr> </tbody> </table> <p>Note: Accomplishment of an overhaul of the landing gear does not substitute the accomplishment of an inspection as required by paragraph (1) of this AD.</p> <p>(2) If, during any inspection as required by paragraph (1) of this AD, any bush is found cracked or damaged, before next flight, accomplish the applicable corrective actions in accordance with the instructions of Airbus SB A330-32-3240 Revision 02 or Airbus SB A340-32-4281 Revision 01 or Airbus SB A340-32-5096 Revision 01, as applicable to aeroplane model.</p> <p>(3) If, during any inspection as required by paragraph (1) of this AD, degraded chrome plating on a bogie pivot pin is found, before next flight, perform a Non-Destructive Test (NDT) inspection of the affected bogie pivot pin in</p> | Bogie pivot pin condition | Compliance time | <p>Bogie pivot pin fitted on MLG installed on A330, A340-200 and A340-300 <b>not having</b> embodied:</p> <ul style="list-style-type: none"> <li>- Airbus modification 54500 in production or,</li> <li>- Airbus SB A330-32-3212 in service or,</li> <li>- Airbus SB A340-32-4256 in service.</li> </ul> | <p>Within 26 months after 22 March 2011 [the effective date of EASA AD 2011-0040] or since the aeroplane first flight, whichever occurs later, but not before the accumulation of 12 months after the aeroplane first flight.</p> | <p>Bogie pivot pin fitted on MLG and CLG installed on A340-500 and A340-600.</p> | <p>Bogie pivot pin fitted on MLG <b>having</b> embodied:</p> <ul style="list-style-type: none"> <li>- Airbus modification 54500 in production or,</li> <li>- Airbus SB A330-32-3212 in service or,</li> <li>- Airbus SB A340-32-4256 in service.</li> </ul> | <p>Within 26 months after the effective date of this AD or since the aeroplane first flight, whichever occurs later, but not before the accumulation of 12 months after the aeroplane first flight.</p> |
| Bogie pivot pin condition  | Compliance time  |                           |                 |  |   |  |   |   |
| <p>Bogie pivot pin fitted on MLG installed on A330, A340-200 and A340-300 <b>not having</b> embodied:</p> <ul style="list-style-type: none"> <li>- Airbus modification 54500 in production or,</li> <li>- Airbus SB A330-32-3212 in service or,</li> <li>- Airbus SB A340-32-4256 in service.</li> </ul> | <p>Within 26 months after 22 March 2011 [the effective date of EASA AD 2011-0040] or since the aeroplane first flight, whichever occurs later, but not before the accumulation of 12 months after the aeroplane first flight.</p>  |                           |                 |  |   |  |   |   |
| <p>Bogie pivot pin fitted on MLG and CLG installed on A340-500 and A340-600.</p>   |  |                           |                 |  |   |  |   |   |
| <p>Bogie pivot pin fitted on MLG <b>having</b> embodied:</p> <ul style="list-style-type: none"> <li>- Airbus modification 54500 in production or,</li> <li>- Airbus SB A330-32-3212 in service or,</li> <li>- Airbus SB A340-32-4256 in service.</li> </ul>  | <p>Within 26 months after the effective date of this AD or since the aeroplane first flight, whichever occurs later, but not before the accumulation of 12 months after the aeroplane first flight.</p>  |                           |                 |  |   |  |   |   |

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|                    | <p>accordance with the instructions of Airbus SB A330-32-3240 Revision 02 or Airbus SB A340-32-4281 Revision 01 or Airbus SB A340-32-5096 Revision 01, as applicable to aeroplane model.</p> <p>(4) If, during any NDT inspection as required by paragraph (3) of this AD, the bogie pivot pin base metal is found corroded, before next flight, accomplish the applicable corrective actions in accordance with the instructions of Airbus SB A330-32-3240 Revision 02 or Airbus SB A340-32-4281 Revision 01 or Airbus SB A340-32-5096 Revision 01, as applicable to aeroplane model.</p> <p>(5) Accomplishment of corrective actions as required by paragraph (2) or (4) of this AD does not constitute terminating action for the repetitive inspection requirements of paragraph (1) of this AD.</p> <p>(6) Inspections and corrective actions, accomplished before the effective date of this AD in accordance with the instructions of Airbus SB A330-32-3240 at original issue or Revision 01 or Airbus SB A340-32-4281 at original issue or Airbus SB A340-32-5096 at original issue, as applicable to aeroplane model, are acceptable for compliance with the requirements of paragraphs (1), (2), (3) and (4) of this AD, as applicable.</p> <p>After the effective date of this AD, repetitive inspections and applicable corrective actions as required by this AD must be accomplished in accordance with the instructions of Airbus SB A330-32-3240 Revision 02 or Airbus SB A340-32-4281 Revision 01 or Airbus SB A340-32-5096 Revision 01, as applicable to aeroplane model.</p> <p>(7) Within 90 days after accomplishment of each inspection as required by paragraphs (1) and (3) of this AD, as applicable, report the inspection results (including no findings) to Airbus, in accordance with the instructions of Airbus SB A330-32-3240 Revision 02 or Airbus SB A340-32-4281 Revision 01 or Airbus SB A340-32-5096 Revision 01, as applicable to aeroplane model.</p> |
| Ref. Publications: | <p>Airbus SB A330-32-3240 Revision 02 dated 02 December 2011.</p> <p>Airbus SB A340-32-4281 Revision 01 dated 02 December 2011.</p> <p>Airbus SB A340-32-5096 Revision 01 dated 02 December 2011.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>  |
| Remarks :          | <ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. This AD was posted on 16 February 2012 as PAD 12-016 for consultation until 15 March 2012. The Comment Response Document can be found at <a href="http://ad.easa.europa.eu">http://ad.easa.europa.eu</a>.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact: Airbus – Airworthiness Office – EIAL; E-mail: <a href="mailto:airworthiness.A330-A340@airbus.com">airworthiness.A330-A340@airbus.com</a>.</li> </ol>  |