EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2010-0021 **Date: 09 February 2010** 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 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].

Type Approval Holder's Name :	**Type/Model designation(s) :**
AIRBUS	A330-300 and A340-200/-300 aeroplanes

TCDS Number :	EASA.A.004, EASA.A.015
Foreign AD :	Not applicable
Supersedure :	This AD supersedes EASA AD 2009-0156 dated 17 July 2009

ATA 55	**Stabilizers – Rudder Side Shell Skin – Inspection**
Manufacturer(s):	Airbus (formerly Airbus Industrie)
Applicability:	Airbus A330 aeroplanes, models -301, -302, -303, -321, -322, -323, -341, -342 and -343, all manufacturer serial numbers, and Airbus A340 aeroplanes, models -211, -212, -213, -311, -312 and -313, all manufacturer serial numbers, if equipped with Carbon Fiber Reinforced Plastic (CFRP) rudders having part numbers (P/N) and serial numbers (S/N) as listed in the Appendix A to this AD.
Reason:	Surface defects were visually detected on the rudder of an A319 and an A321 in-service aeroplane. Investigation has determined that the defects reported on both rudders corresponded to areas that had been reworked in production. The investigation confirmed that the defects were as a result of de-bonding between the skin and honeycomb core. Such reworks were also performed on some rudders fitted on A330-300 and A340-200/-300 aeroplanes. An extended de-bonding, if not detected and corrected, may degrade the structural integrity of the rudder. The loss of the rudder leads to degradation of the handling qualities and reduces the controllability of the aeroplane.

	EASA AD 2009-0156 required inspections of specific areas and, depending on findings, the application of corrective actions for those rudders where production reworks have been identified. This AD retains the requirement of EASA AD 2009-0156, which is superseded, and in addition requires for the vacuum loss hole restoration: - a local ultrasonic inspection for reinforced areas instead of the local thermography inspection, which is maintained for non-reinforced areas, and - an additional work for aeroplanes on which this thermography inspection has been performed in the reinforced area.
Effective Date:	23 February 2010
Required action(s) and Compliance Time(s):	Required as indicated: For the purpose of this AD a Reference Date is 31 July 2009 [effective date of EASA AD 2009-0156] or the date when the rudder will accumulate 13 000 Flight Cycles (FC) from its first installation on an aeroplane, whichever occurs later. **Depending on the locations of the areas to be inspected as defined in Airbus All Operators Telex (AOT) A330-55A3040 Revision 02 or AOT A340-55A4036 Revision 02, as applicable, do the following actions:** (1) <u>Reinforced area location:</u> Unless already accomplished, within 1 800 Flight Hours (FH) from the Reference Date, perform Vacuum Loss inspection on the rudder reinforced area in accordance with instructions defined in Airbus AOT A330-55A3040 Revision 02 or AOT A340-55A4036 Revision 02, as applicable. (2) <u>Trailing edge area location:</u> (2.1) Unless already accomplished, within 21 months from the Reference Date, perform Elasticity Laminate Checker inspection on the rudder trailing edge area in accordance with instructions defined in Airbus AOT A330-55A3040 Revision 02 or AOT A340-55A4036 Revision 02, as applicable. (2.2) In case of no findings, repeat two further times the inspection defined in paragraph (2.1) of this AD at intervals not to exceed 4 500 FC but not less than 4 000 FC from the last inspection. (3) <u>Other areas locations (lower rib/upper edge/leading edge/other locations):</u> (3.1) Unless already accomplished, within 1 800 FH from the Reference Date, perform Elasticity Laminate Checker inspection on the other areas (lower rib/upper edge/leading edge/other locations) in accordance with instructions defined in Airbus AOT A330-55A3040 Revision 02 or AOT A340-55A4036 Revision 02, as applicable. (3.2) Repeat the inspection defined in paragraph (3.1) of this AD at intervals not to exceed 1 800 FH from the last inspection. (3.3) In case of no findings during the inspection defined in paragraph (3.1) or (3.2) of this AD, unless already accomplished, within 21 months from the Reference Date, perform Vacuum Loss inspection on these areas (lower rib/upper edge/leading

edge/other locations) in accordance with instructions defined in Airbus AOT A330-55A3040 Revision 02 or AOT A340-55A4036 Revision 02, as applicable.

(3.4) Accomplishment of the inspection required by paragraph (3.3) of this AD cancels the initial and repetitive inspections required by paragraphs (3.1) and (3.2) of this AD.

(4) In case of findings during the inspection defined in paragraph (1), (2.1), (2.2), (3.1), (3.2) or (3.3) of this AD, before next flight, contact Airbus for further instructions and apply the associated instructions and corrective actions in accordance with the approved data provided.

(5) In case of no findings during the inspection defined in paragraphs (1) and (3.3) of this AD, before next flight, restore the vacuum loss holes as per the selected option (temporary restoration with self adhesive patches, temporary restoration with resin or permanent restoration) in Airbus AOT A330-55A3040 Revision 02 or AOT A340-55A4036 Revision 02, as applicable, and apply the associated instructions until performance of permanent restoration.

(6) Within 10 days after accomplishment of each inspection in accordance with paragraphs (1), (2) or (3) of this AD, report the results, including no findings, to Airbus.

(7) All rudders that have passed the inspection, before 31 July 2009 [effective date of AD 2009-0156], in accordance with the instructions of Airbus AOT A330-55A3040 at original issue or AOT A340-55A4036 at original issue, are compliant with the associated requirements of paragraph (1), (2), (3) or (5) of this AD for the areas inspected. Additional areas requiring inspection are defined in Airbus AOT A330-55A3040 Revision 01 or AOT A340-55A4036 Revision 01. For these additional areas the requirements of this AD are applicable. For all areas, the repetitive inspections required by this AD remain applicable.

(8) All rudders that have passed the inspection, before the effective date of this AD, in accordance with the instructions of Airbus AOT A330-55A3040 Revision 01 or AOT A340-55A4036 Revision 01, as applicable, are compliant with the associated requirements of paragraph (1), (2), (3) or (5) of this AD for the areas inspected. The repetitive inspections required by this AD remain applicable.

(9) For rudders on which temporary vacuum loss hole restoration with resin or permanent vacuum loss hole restoration has been performed before the effective date of this AD in reinforced area as per paragraph (5) of this AD and in accordance with the instructions of Airbus AOT A330-55A3040 at original issue or Revision 01 or AOT A340-55A4036 at original issue or Revision 01, as applicable, within 21 months from restoration date perform an ultrasonic inspection in accordance with the instructions of Airbus AOT A330-55A3040 Revision 02 or AOT A340-55A4036 Revision 02, as applicable.

(10) After the effective date of this AD, no person shall install any rudder listed in Appendix A to this AD on an aeroplane, unless in compliance with the requirements of paragraph (1), (2), (3), (5) or (9) of this AD.

Ref. Publications:	Airbus All Operators Telex A330-55A3040 Revision 02, Airbus All Operators Telex A340-55A4036 Revision 02. The use of later approved revisions of these 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. This AD was published as PAD 09-130 on 09 November 2009 for consultation until 07 December 2009. No comments were received during the consultation period. 3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management & Research Section, Certification Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any questions concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – EAL, E-mail: airworthiness.A330-A340@airbus.com .

EASA AD No. 2010-0021: Appendix A

Rudder Part Number	Rudder Serial Number
F554-70000-000-00	TS-2013
F554-70000-000-00	TS-2015
F554-70000-000-00	TS-2016
F554-70000-000-00	TS-2017
F554-70000-000-00	TS-2018
F554-70000-000-00	TS-2020
F554-70000-000-00	TS-2021
F554-70000-000-00	TS-2024
F554-70000-000-00	TS-2026
F554-70000-000-00	TS-2035
F554-70000-000-00	TS-2036
F554-70000-000-00	TS-2040
F554-70000-000-00	TS-2042
F554-70000-000-00	TS-2055
F554-70000-000-00	TS-2056
F554-70000-000-00	TS-2058
F554-70000-000-00	TS-2059
F554-70000-000-00	TS-2061
F554-70000-000-00	TS-2062
F554-70000-000-00	TS-2063
F554-70000-000-00	TS-2065
F554-70000-002-00	TS-2074
F554-71000-000-00	TS-3003
F554-71000-000-00	TS-3004
F554-71000-000-00	TS-3005
F554-71000-000-00	TS-3006
F554-71000-000-00	TS-3007
F554-71000-000-00	TS-3008
F554-71000-000-00	TS-3011
F554-71000-000-00	TS-3015
F554-71000-000-00	TS-3033
F554-71000-000-00	TS-3061
F554-71000-000-00	TS-3064
F554-71000-000-00	TS-3066
F554-71000-000-00	TS-3071
F554-71000-000-00	TS-3072
F554-71000-000-00	TS-3075
F554-71000-000-00	TS-3079
F554-71000-000-00	TS-3084
F554-71000-000-00	TS-3087
F554-70005-000-00	TS-3100
F554-70005-000-00	TS-3106
F554-70005-000-00	TS-3107
F554-70005-000-00	TS-3119
F554-70005-000-00	TS-3124