EASA	EMERGENCY AIRWORTHINESS DIRECTIVE
	AD No.: 2009 - 0223-E **Date: 13 October 2009** Note: This Emergency 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 Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive 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 and A340-200/300 aeroplanes

TCDS Number :	EASA.A.004, EASA.A.015
Foreign AD :	Not applicable
Supersedure :	None

ATA 29	**Hydraulic Power – High Pressure Manifold Check Valve – Inspection**
Manufacturer(s):	Airbus (formerly Airbus Industrie)
Applicability:	Airbus A330 aeroplanes, models -201, -202, -203, -223, -243, -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.
Reason:	An A330 operator experienced a low level of the Yellow hydraulic circuit due to a loose of check valve part number (P/N) CAR401. During the inspection on the other two hydraulic systems, the other three CAR401 check valves were also found to be loose with their lock wire broken in two instances. A340 aeroplanes are also equipped with the same high pressure manifold check valves. Investigations are on-going to determine the root cause of this event. Additional cases of CAR401 check valve loosening have been experienced in service on aeroplanes having accumulated more than 1 000 flight cycles (FC). The check valve fitted on the Yellow hydraulic system is more affected, probably due to additional system cycles induced by cargo door operation.

	The loss of torque due to pressure cycles could contribute to check valve loosening, resulting in a leak and finally the loss of the associated hydraulic system and, in the worst case, of the three hydraulic systems of the aeroplane. This AD requires to perform the following inspection programme to detect any check valve loosening and, if necessary, apply the associated corrective actions: 1st Step: on yellow and blue hydraulic circuits: lock wire inspection, inspection for traces of seepage or black deposit, check valve torque and red marking application. 2nd Step: on green hydraulic circuit: same inspections as required in 1st Step and on yellow and blue hydraulic circuits: inspection of check valves for condition. Finally: on green, yellow and blue hydraulic circuits: repetitive inspection of check valves for condition.
Effective Date:	15 October 2009
Required action(s) and Compliance Time(s):	Required as indicated: **(1) For aeroplanes which have neither embodied Airbus modification 54491 in production nor embodied Airbus Service Bulletin (SB) A330-29-3101 nor Airbus SB A340-29-4078 in service:** Unless already accomplished, within 100 FC or 28 days after the effective date of this AD, whichever occurs first, do a visual inspection of the check valves on Blue, Green and Yellow hydraulic systems in order to identify their P/N, in accordance with the instructions of Airbus All Operators Telex (AOT) A330-29A3111 Revision 01 or AOT A340-29A4081 Revision 01, as applicable. (1.1) If check valves P/N CAR401 are installed on all three hydraulic systems: (1.1.1) Before next flight, apply the instructions defined in paragraph (2.1) of this AD. (1.1.2) After the accomplishment of paragraph (1.1.1) of this AD, apply the instructions defined in paragraphs (2.2) and (2.3) of this AD within the associated thresholds and interval. (1.2) If check valves P/N CAR401 are not installed on all three hydraulic systems, no immediate further action is required by paragraph (1) of this AD. However after any check valve P/N CAR400 replacement by a check valve P/N CAR401, the aeroplane configuration must be inspected to determine if all three hydraulic systems are equipped with check valve P/N CAR401, in which case the requirements of paragraph (1.1) of this AD must be accomplished. **(2) For aeroplanes which have embodied Airbus modification 54491 in production or embodied Airbus Service Bulletin (SB) A330-29-3101 or Airbus SB A340-29-4078 in service:** For aeroplanes having accumulated more than or equal to 700 FC since the aeroplane first flight or since SB A330-29-3101 or SB A340-29-4078 embodiment, as applicable.

	(2.1) Unless already accomplished, before the accumulation of 1 000 FC since the aeroplane first flight or since Airbus SB A330-29-3101 or SB A340-29-4078 embodiment, as applicable, or within 100 FC or 28 days after the effective date of this AD, whichever occurs first, whichever occurs latest: perform the inspection programme on yellow and blue high pressure manifolds and apply the associated corrective actions in accordance with the instructions of paragraph 4.1.1 of Airbus AOT A330-29A3111 Revision 01 or AOT A340-29A4086 Revision 01, as applicable. (2.2) Within 900 Flight Hours (FH) after accomplishment of paragraph (2.1) of this AD, perform the inspection programme on green, yellow and blue high pressure manifolds and apply the associated corrective actions in accordance with the instructions of paragraph 4.1.2 of Airbus AOT A330-29A3111 Revision 01 or AOT A340-29A4086 Revision 01, as applicable. (2.3) Within 900 FH after accomplishment of paragraph (2.2) of this AD and thereafter at intervals not to exceed 900 FH, inspect the green, yellow and blue high pressure manifolds and apply the associated corrective actions in accordance with the instructions of paragraph 4.1.3 of Airbus AOT A330-29A3111 Revision 01 or AOT A340-29A4086 Revision 01, as applicable. (2.4) Aeroplanes which have been inspected, prior to the effective date of this AD, in accordance with the instructions of Airbus AOT A330-29A3111 at original issue or AOT A340-29A4086 at original issue are compliant with the requirements of paragraph (2.1) of this AD. (3) Within 30 days after accomplishment of the inspection programme required by paragraphs (1) and (2) of this AD, report all inspection results to Airbus.
Ref. Publications:	Airbus All Operators Telex A340-29A4086 Original issue or Revision 01. Airbus All Operators Telex A330-29A3111 Original issue or Revision 01. 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. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification. 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.