EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2009-0271R1 **Date: 08 July 2011** 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) :**
EUROCOPTER	AS 332 and SA 330 helicopters

TCDS Number:	EASA.R.002
Foreign AD:	Not applicable
Revision:	This AD revises EASA AD 2009-0271 dated 21 December 2009.

ATA 25	**Equipment & Furnishings – Hydraulic Hoist – Limitation / Modification**

Manufacturer(s):	Eurocopter (formerly Eurocopter France, Aerospatiale, Sud Aviation)
Applicability:	AS 332 C, AS 332 C1, AS 332 L, AS 332 L1 and AS 332 L2 helicopters, all serial numbers, if equipped with a hoist beam Part Number (P/N) 330A87-2345 (dash numbers -00 to -06 inclusive), in combination with a tray-mounted single or double hoist, and which do not embody modification (MOD) 332A081113.00 or MOD 0726676. SA 330 J helicopters, all serial numbers, if equipped with a hoist beam P/N 330A87-2345 (dash numbers -00 to -06 inclusive), in combination with a tray-mounted single hoist or MOD 0727216. **Note:** The hoist beam P/N is engraved in the centre of the strut assembly.
Reason:	An incident has been reported of a hydraulic hoist cable jamming against the base of the supporting strut of a dual hoist tray installation. The jamming occurred during a hoisting operation, while the load was lifted and subject to large oscillations. The load was transferred to the back-up electrical hoist and safely brought onboard. However, when jamming against the hoist supporting strut, the hydraulic hoist cable damaged the back-up electrical hoist power supply harness which is routed through that area, resulting in a short circuit that fused and ruptured the hydraulic hoist cable. This condition, if not corrected, could lead to further incidents of hoist cable jamming and consequent cable failure, possibly resulting in personal injuries and/or damage to the helicopter.

EASA initially issued Emergency AD 2008-0222-E, which required the implementation of a temporary limitation on hoist operation in case of cable jamming and required installation of a hoist beam lower fitting protector to prevent the hoist cable jamming against the base of the supporting strut.

Since AD 2008-0222-E was published, a detailed configuration review showed that some civilian SA 330 helicopters may also be fitted with hoist beam P/N 330A87-2345 (dash numbers -00 to -06 inclusive). In addition, it has been noticed that some helicopters (SA 330 or AS 332) may have their hoist control electrical harness routed in the same area of the supporting strut where the hoist cable jammed during the first incident. Should this electrical harness be damaged due to hoist cable jamming, this other condition, if not corrected, could lead to untimely firing of the hoist pyrotechnic squib, thereby shearing the cable, possibly resulting in personal injuries and/or damage to the helicopter.

EASA published AD 2009-0178-E, superseding AD 2008-0222-E whose requirements for AS 332 helicopters were retained, to extend the applicability to include SA 330 helicopters and to also require disabling the hoist pyrotechnic shear function of some helicopters and the implementation of an additional limitation, pending modification. The AD also allowed, under certain conditions, continued operation of the helicopter without modification.

When AD 2009-0178-E was published, the installation of a hoist beam lower fitting protector to prevent the hoist cable jamming as per MOD 332A081113.00 offered by Eurocopter for terminating action to the AD, was not available for all the helicopters specified in AD applicability paragraph (i.e. for the SA 330 and some AS 332). EASA expected the availability of similar protector to be installed not later than 31 December 2009, otherwise prohibiting in-flight operation of the hoist after this date. Inadvertently, the AD did not apply this particular requirement to AS 332 helicopters equipped with a Right Hand (RH) side sliding door P/N 332A22-1165-01, although those helicopters were subject to the other AD requirements.

Meanwhile, Eurocopter proceeded to design alternative hoist beam lower fitting protectors for all helicopters, but such technical solutions would not have been ready for installation to meet the AD deadline of 31 December 2009. Considering that the rest of the AD is still complied with, it has been determined as acceptable to extend the compliance time for installation of protections on helicopters for which a Eurocopter modification is not available yet.

Therefore, EASA AD 2009-0271 was published, superseding EASA AD 2009-0178-E whose requirements were retained, to add action(s) for AS 332 helicopters equipped with a RH side sliding door P/N 332A22-1165-01, and extended the compliance time to install an approved protection of the base of the hoist assembly for those AS 332 helicopters and for the SA 330 J helicopters to 30 June 2010. The AD applicability was also amended to delete SA 330 F and G helicopters, as no helicopters of this design are being operated any longer. Consequently, EASA agreed to the request of the TC holder to remove these models from the associated Type Certificate (Data Sheet).

Since the issuance of AD 2009-0271, Eurocopter developed new hoist beam lower fitting protectors for AS 332 helicopters equipped with a RH sliding door P/N 332A22-1165-01, and for the SA 330 J helicopters: MOD 0726676 and MOD 0727216 respectively. The installation of these optional modifications terminates the hoist operation prohibition.

For the reasons described above, AD 2009-0271 is revised to allow the embodiment MOD 0726676 and MOD 0727216 as alternative method of compliance with the actions required by this AD. The AD is also revised to remove from the applicability AS 332 helicopters equipped with a RH sliding door P/N 332A22-1165-01 which embody MOD 0726676 and SA 330 J helicopters which embody MOD 0727216.

Effective Date:	Revision 1: 22 July 2011 Original issue: 04 January 2010
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: (1) **For all helicopters as identified in the Applicability of this AD, pending installation of a hoist beam lower fitting protector:** (1.1) Before the next hoist operation after 11 August 2009 [the effective date of AD 2009-0178-E], install a placard in full view of the hoist operator, stating the following: **IN CASE OF CABLE JAM AGAINST STRUT** **DO NOT ATTEMPT TO RAISE OR LOWER LOAD** **Note:** If the cable jams against the supporting strut following large oscillations, no attempt should be made to raise or lower the load, in order to minimize the risk of damaging the cable and potentially severing it. (1.2) In case cable jamming occurs, before the next hoist operation, check the condition of the cable in accordance with the instructions of the applicable Component Maintenance Manual and, in case damage is found, take corrective actions accordingly. (1.3) For those helicopters with a hoist control electrical harness routed at the base of the hoist supporting strut, before the next hoist operation after the effective date of this AD: (1.3.1) Disable the hoist pyrotechnic shear function, in accordance with the instructions of paragraph 2.B.3 of Eurocopter AS332 Alert Service Bulletin 25.02.08 Revision 2 or 3 or Eurocopter SA330 ASB 25.39 Revision 2 or 3, as applicable to helicopter version, and (1.3.2) Insert a copy of the Appendix 1 of the applicable ASB into the applicable Rotorcraft Flight Manual (RFM); and (1.3.3) Install 2 placards, in full view of the flight crew and the hoist operator respectively, stating the following: • on the instrument panel, **HOIST PYROTECHNIC SHEAR FUNCTION DISABLED** • near the hoist operator station, **HOIST PYROTECHNIC SHEAR FUNCTION DISABLED** **IN CASE OF NECESSITY, CUT THE HOIST CABLE** **WITH THE SHEARS LOCATED IN THE CABIN** (2) **For AS 332 helicopters:** (2.1) On AS 332 helicopters equipped with a tray-mounted double hoist with the back-up electrical hoist power supply harness routed at the base of the hoist supporting strut, before next flight after 11 August 2009 [the effective date of AD 2009-0178-E], accomplish either (2.1.1) or (2.1.2) below: (2.1.1) Install a protection of the base of the hoist strut assembly in accordance with the instructions of paragraph 2.B.2 of Eurocopter AS332 ASB 25.02.08 Revision 2 or 3 (MOD 332A081113.00).

(2.1.2) Install placards in full view of the flight crew and the hoist operator, stating the following:

IN-FLIGHT OPERATION OF THE HOIST IS PROHIBTED

After modification of a helicopter in accordance with paragraph (2.1.1.), remove the placards, including the one required by paragraph (1.1) of this AD.

(2.2) On all other AS 332 helicopters, except if equipped with a RH side sliding door P/N 332A22-1165-01, not later than 31 December 2009, accomplish either (2.2.1) or (2.2.2) below:

(2.2.1) Install a protection of the base of the hoist strut assembly in accordance with approved instructions,

OR

Modify the helicopter (embodiment of MOD 332A081113.00) in accordance with paragraph 2.B.2 of Eurocopter AS332 ASB 25.02.08 Revision 2 or 3 is an acceptable method of compliance with this requirement.

(2.2.2) Install placards in full view of the flight crew and the hoist operator, stating the following:

IN-FLIGHT OPERATION OF THE HOIST IS PROHIBTED

After modification of a helicopter in accordance with paragraph (2.2.1.), remove the placards, including the one required by paragraph (1.1) of this AD.

(2.3) On all other AS 332 helicopters, if equipped with a RH side sliding door P/N 332A22-1165-01, not later than 30 June 2010, accomplish either (2.3.1) or (2.3.2) below:

(2.3.1) Install a protection of the base of the hoist strut assembly in accordance with approved instructions,

OR

Modify the helicopter (embodiment of MOD 0726676) in accordance with the instructions of paragraph 2.B.5 of Eurocopter AS332 ASB 25.02.08 Revision 3.

(2.3.2) Install placards in full view of the flight crew and the hoist operator, stating the following:

IN-FLIGHT OPERATION OF THE HOIST IS PROHIBTED

After modification of a helicopter in accordance with paragraph (2.3.1.), remove the placards, including the one required by paragraph (1.1) of this AD.

(3) **For SA 330 J helicopters:** Not later than 30 June 2010, accomplish either (3.1) or (3.2) below:

(3.1) Install a protection of the base of the hoist strut assembly in accordance with approved instructions,

OR

Modify the helicopter (embodiment of MOD 0727216) in accordance with the instructions of paragraph 2.B.5 of Eurocopter AS332 ASB 25.02.08 Revision 3.

	(3.2) Install placards in full view of the flight crew and the hoist operator, stating the following: **IN-FLIGHT OPERATION OF THE HOIST IS PROHIBTED** After modification of a helicopter in accordance with paragraph (3.1), remove the placards, including the one required by paragraph (1.1) of this AD. (4) **For helicopters operated in accordance with paragraph (1.3) of this AD:** After modification of a helicopter in accordance with paragraph (2.1.1), (2.2.1), (2.3.1) or (3.1), as applicable, before the next hoist operation, remove the RFM changes (paragraph 1.3.2 of this AD) and the placards (paragraph (1.3.3) of this AD) and re-establish the hoist pyrotechnic shear function of that helicopter in accordance with the instructions of paragraph 2.B.2.e of Eurocopter AS332 ASB 25.02.08 Revision 2 or 3 or Eurocopter SA330 ASB 25.39 Revision 2 or 3, as applicable to helicopter version.
Ref. Publications:	Eurocopter AS332 ASB 25.02.08 Revision 2 dated 18 December 2009 and Revision 3 dated 06 July 2011. Eurocopter SA330 ASB 25.39 Revision 2 dated 18 December 2009 and revision 3 dated 06 July 2011. 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 required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact: EUROCOPTER (STDI) – Aéroport de Marseille Provence 13725 Marignane Cedex, France; telephone +33 (4) 12 85 97 97; facsimile +33 (4) 85 99 66; E-mail: Directive.technical-support@eurocopter.com.