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## AIRWORTHINESS DIRECTIVE

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For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

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### Eurocopter AS 332 (Super Puma) Series Helicopters

**AD/S-PUMA/86**

**Life-Raft Inflation Control System**

**10/2009  
DM**

Applicability: AS 332 C, AS 332 C1, AS 332 L and AS 332 L1 helicopters, all serial numbers, equipped with life-rafts with part numbers listed in Table 1.

**Table 1**

245533-0	219236-0	205379-5	204360-2
245534-0	204359-1	205379-6	205380-5
219235-0	204359-2	204360-1	205380-6

- Requirement:
1. Check the electrical resistance of each life-raft inflation cylinder frangible disc and test the electrical harnesses insulation of the life-raft inflation control system in accordance with the instructions of paragraphs 2.B.1, 2.B.2 and 2.B.3 of Eurocopter AS332 Alert Service Bulletin (ASB) No. 25.02.11 dated 15 July 2009.
  2. If any electrical harness insulation test result is non-compliant, accomplish the following actions:
    - a. Repair the non-compliant harness in accordance with an approved repair solution, and
    - b. Replace the corresponding life-raft in accordance with the instructions of paragraph 2.B.5 of ASB No. 25.02.11.
  3. If any life-raft inflation cylinder frangible disc resistance value is noncompliant, replace the corresponding life-raft in accordance with the instructions of paragraph 2.B.5 of ASB No. 25.02.11.
  4. If the electrical harness and/or the life-raft cannot be repaired or replaced (e.g. due to lack of available spare units), install a placard on the instrument panel, in accordance with the instructions of paragraph 2.B.4 of ASB No. 25.02.11, stating the following:

**THE USE OF THE SPONSON-MOUNTED  
LIFE RAFTS IS PROHIBITED**

## Eurocopter AS 332 (Super Puma) Series Helicopters

AD/S-PUMA/86 (continued)

After accomplishment of the required replacement(s), as applicable, the placard may be removed from the helicopter.

The use of later revisions of ASB No. 25.02.11 approved by the European Aviation Safety Agency (EASA) are acceptable for compliance with this Directive.

*Note: EASA AD 2009-0162 refers.*

**Compliance:** For Requirement 1 - Within the next 110 hours time in service or one month, whichever occurs first, after the effective date of this Directive.

For Requirements 2, 3 and 4 - Before the next flight requiring operation with the life-rafts aboard.

This Airworthiness Directive becomes effective on 3 August 2009.

**Background:** During overhaul of one of the life-rafts (i.e. sponson-mounted optional kit) on an AS 332 L1 helicopter, it was reported that the life-raft inflation cylinder was empty and that there was a leak at the frangible disc of the cylinder. It was further reported that the helicopter electrical harness dedicated to the inflation control system of the life-rafts had signs of deterioration.

The technical analysis has shown that residual current in the electrical harness of the life-raft inflation control system causes damage to the life-raft inflation cylinder frangible disc, which explains the progressive pressure drop in the cylinder. This condition, if not corrected, might lead to life-rafts deployment unavailability in case of emergency ditching, possibly preventing the occupants to escape safely from the helicopter.

This Directive requires the check of the life-rafts inflation control system and, depending on findings, repair and/or replacement action(s).



James Coyne  
Delegate of the Civil Aviation Safety Authority

30 July 2009