COMMONWEALTH OF AUSTRALIA CIVIL AVIATION SAFETY AUTHORITY SCHEDULE OF AIRWORTHINESS DIRECTIVES

AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/S-PUMA/78 Amdt 1 and issues the following 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.

Eurocopter AS 332 (Super Puma) Series Helicopters

AD/S-PUMA/78 Main Rotor Blade De-Icing System Clamps 4/2009 Amdt 2 DM

Applicability: EUROCOPTER AS332 C, C1, L and L1 helicopters, fitted with main rotor blade

de-icing system distributor retaining clamps, P/N 225000-18454 or P/N D18454.

Requirement: 1. Perform the inspections detailed in paragraph 2.B. of Eurocopter AS332 Alert Service Bulletin (ASB) No. 30.00.66 revision 1 or later approved revision.

2. If there is a risk of interference between the screw head and the clamp, rework the clamp.

If there is a crack in the screw shank, replace the screw.

If there is no lock-wiring hole in the screw head, produce a hole and lock the screw.

- 3. Do not install a main rotor blade de-icing system distributor retaining clamp fitted with an attachment screw on a helicopter, unless it has been inspected and corrected in accordance with the Requirements 1 and 2 of this AD, as applicable.
- 4. Lock-wire the clamp attachment in accordance with paragraphs 2.B.1 and 2.B.5 of Eurocopter AS332 ASB No. 30.00.66 revision 2 or later approved revision.
- 5. Pending compliance with Requirement 6 Accomplish the following:
 - a) Inspect the attachment screw for integrity in accordance with paragraph 2.B.7 of Eurocopter AS332 ASB No. 30.00.66 revision 2 or SA330 ASB No. 30.20 revision 2, as applicable to the helicopter version; and
 - b) Lockwire the clamp attachment in accordance with paragraph 2.B.5 of Eurocopter AS332 ASB No. 30.00.66 revision 2 or SA330 ASB No. 30.20 revision 2, as applicable to the helicopter version.
- 6. On helicopters equipped with a clamp which has no batch number marked after its part number, return the clamp to conformity in accordance with a) or b) below:

COMMONWEALTH OF AUSTRALIA CIVIL AVIATION SAFETY AUTHORITY SCHEDULE OF AIRWORTHINESS DIRECTIVES

Eurocopter AS 332 (Super Puma) Series Helicopters

AD/S-PUMA/78 Amdt 2 (continued)

- a) Replace the attachment screw (variant with non-welded screw to its barrel) or the complete clamp (variant with welded screw to its barrel) with a serviceable part in accordance with paragraphs 2.B.1, 2.B.2, 2.B.3.d and 2.B.4 of Eurocopter AS332 ASB No. 30.00.66 revision 2.
- b) Verify that the hardness of the attachment screw is correct in accordance with paragraphs 2.B.1, 2.B.2 and 2.B.3.c of Eurocopter AS332 ASB No. 30.00.66 revision 2. In the case of non-conformity, before next flight, comply with Requirement 4 of this AD and thereafter with Requirement 5 and, without exceeding the compliance time limit of Requirement 6, replace parts as stated in Requirement 6a) of this AD.
- 7. Do not install a main rotor blade de-icing system distributor retaining clamp or an associated attachment screw on a helicopter, unless its conformity has been established in accordance with the requirements of this AD.

After accomplishment on a helicopter of Requirement 6 the actions detailed in Requirements 4 and 5 are no longer required for that helicopter.

Note: EASA AD 2009-0003R1 dated 13 January 2009 refers.

Compliance:

For Requirement 1 - Remains unchanged as detailed in the original issue of this AD as:

On helicopters equipped with a main rotor blade de-icing system distributor retaining clamp fitted with an attachment screw that is <u>not welded</u> to the barrel - Within 50 flight hours (FH) or 3 months after 25 June 2008, whichever occurs first, unless previously accomplished.

On helicopters equipped with a main rotor blade de-icing system distributor retaining clamp fitted with an attachment screw that is <u>welded</u> to the barrel - Within 20 FH or 1 month after 25 June 2008, whichever occurs first, unless previously accomplished.

For Requirement 2 - Before further flight.

For Requirement 3 - From the effective date of this AD.

For Requirement 4 - Within 10 FH after the effective date of this AD.

For Requirement 5a - At intervals not exceeding 10 FH.

For Requirement 5b - Each time a main rotor blade de-icing system distributor is installed.

For Requirement 6 - Within 8 months after the effective date of this AD.

COMMONWEALTH OF AUSTRALIA CIVIL AVIATION SAFETY AUTHORITY SCHEDULE OF AIRWORTHINESS DIRECTIVES

Eurocopter AS 332 (Super Puma) Series Helicopters

AD/S-PUMA/78 Amdt 2 (continued)

For Requirement 7 - From the effective date of this AD.

This Amendment becomes effective on 6 February 2009.

Background:

This AD was issued in response to two cases of failure of the screw that secures the main rotor blade de-icing system distributor retaining clamp. The examinations carried out on these screws have revealed that these failures were the result of assembly stress in the screw head.

In addition, in some cases, it was found that the lock-wiring hole was missing from the screw head, making it impossible to ensure additional security using lock-wiring between the screw head and the nut.

Failure of the clamp attachment screw can lead to damage to the main or tail rotor blades, and is a risk for persons on the ground.

Amendment 1 included a change to the applicability section to include those attachment screws that are welded to the barrel, and to cover the absence of a part number on some clamps.

More recently, a new case of failure of the clamp attachment screw has been reported after having complied with the instructions in a previous amendment of this AD and the lock-wire which is intended to secure the attachment screw, retained the clamp until the screw failure was discovered. Later examinations showed this failure was caused by non-conformity of the hardness of the affected screw.

This amendment requires the installation of a supplementary lock-wire to ensure the clamp is retained pending replacement of the screw or the screw hardness condition has been verified to be correct.

Pending corrective action on the screw, this AD also requires repetitively inspecting the integrity of the affected screws and retaining clamps.

The original issue of this AD became effective 25 June 2008.

Amendment 1 of this AD became effective on 29 August 2008.

James Coyne

Delegate of the Civil Aviation Safety Authority

3 February 2009