
AIRWORTHINESS DIRECTIVE

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.

Eurocopter AS 332 (Super Puma) Series Helicopters**AD/S-PUMA/80****Coupling Shaft Hardware****12/2008**

Applicability: Eurocopter (formerly Eurocopter France; Aerospatiale) Model AS 332 C, AS 332 C1, AS332 L, AS 332 L1 and AS 332 L2 helicopters, fitted with engine/main gearbox (MGB) coupling shaft flange threaded attachment bolt assemblies Part Number (P/N) 332A54.2009.01.

Note 1: Engine/MGB coupling shaft P/N 332A54.0216.06, serial number 2803 is a spare assembly that has been supplied along with the threaded attachment bolt assemblies P/N 332A54.2009.01.

- Requirement:**
1. For helicopters on which the affected threaded bolt assemblies have been installed on the engine side on both engine/MGB coupling shafts - Replace the 6 threaded attachment bolt assemblies P/N 332A54-2009-01 with 6 airworthy threaded attachment bolt assemblies with another P/N in accordance with paragraph 2.B.2 Eurocopter AS332 ASB No.01.00.71 revision 1 or later approved revision.
 2. For helicopters on which the affected threaded bolt assemblies have been installed on the engine side on only one engine/MGB coupling shaft - Replace the 6 threaded attachment bolt assemblies P/N 332A54-2009-01 with 6 airworthy threaded attachment bolt assemblies with another P/N in accordance with paragraph 2.B.2 of Eurocopter AS332 ASB No.01.00.71 revision 1 or later approved revision.
 3. For spare assemblies and parts as listed in paragraph 1.A.2 of the referenced Eurocopter ASB, as applicable to type: spare P/N 332A54-2009-01 threaded attachment bolt assemblies may no longer be installed on any helicopter; and no person may install a spare engine/MGB coupling shaft on any helicopter, unless it has been verified that any installed threaded attachment bolt assemblies with P/N 332A54-2009-01 have been replaced in accordance with paragraph 2.B.2 of Eurocopter AS332 ASB No.01.00.71 revision 1 or later approved revision.
 4. Return the threaded attachment bolt assemblies P/N 332A54-2009-01 to Eurocopter Marignane.

Note 2: EASA AD 2007-0134 dated 14 May 2007 refers.

Eurocopter AS 332 (Super Puma) Series Helicopters

AD/S-PUMA/80 (continued)

Compliance: For Requirement 1 - Within the next 50 flight hours (FH), after the effective date of this AD, unless previously accomplished.

For Requirement 2 - Within the next 100 FH after the effective date of this AD, unless previously accomplished.

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

For Requirement 4 - Within 7 days after removal from service.

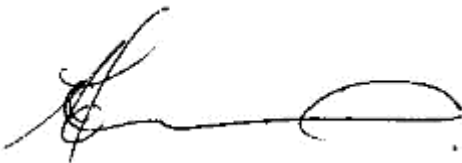
This Airworthiness Directive becomes effective on 20 November 2008.

Background: From 5 July 2006, Eurocopter delivered engine/MGB coupling shaft flange threaded attachment bolt assemblies P/N 332A54.2009.01, with new bolt definition. The intent was to provide a longer threaded section to the bolt as an improvement of the previous threaded bolt assemblies P/N 332A54.2009.00 on which a few anomalies without safety risk were reported (see EUROCOPTER Service Letter No. 1542-63-01 for further details).

However, the feedback of information concerning first installations of the new threaded bolt assemblies has revealed a manufacturing non-conformity (additional length of the plain bolt shaft section). All the threaded bolt assemblies with P/N 332A54.2009.01 have this non-conformity.

It is impossible to tighten the flange on the MGB side of the engine/MGB coupling shaft with those wrong assemblies while their installation on the flange on the engine side remains possible, but with an uncertainty about the torque tightness efficiency. Therefore, on the engine side only, where their assembly could have been made, this may lead to early tightening torque loss and subsequent failure of the threaded bolt assemblies attaching the engine, the flange, and the engine/MGB coupling shaft, which, in time, could result in the loss of the corresponding MGB input drive. The loss of torque tightness and resulting play in the coupling may be indicated by abnormal noise which can be detected by the flight crew.

This AD requires replacement of all P/N 332A54.2009.01 engine/MGB coupling shaft flange threaded attachment bolt assemblies.



Charles Lenarcic
Delegate of the Civil Aviation Safety Authority

9 October 2008