

SAFETY INFORMATION NOTICE

SUBJECT: GENERAL

Possible aviation fuel contamination by FAME or EMAG

For the attention of		
Star Star		

AIRCRAFT	Version(s)	
CONCERNED	Civil	Military
EC120	В	
AS350	B, BA, BB, B1, B2, B3, D	L1
AS550		A2, C2, C3, U2
AS355	E, F, F1, F2, N, NP	
AS555		AF, AN, SN, UF, UN
EC130	B4, T2	
SA365 / AS365	C1, C2, C3, N, N1, N2, N3	F, Fs, Fi, K
AS565		AA, MA, MB, SA, SB, UB
SA366	G1	GA
EC155	B, B1	
SA330	J	Ba, Ca, Ea, L, Jm, S1, Sm
SA341	G	B, C, D, E, F, H
SA342	J	L, L1, M, M1, Ma
ALOUETTE II	313B, 3130, 318B, 318C, 3180, 3180B, 3180C	
ALOUETTE III	316B, 316C, 3160, 319B	
LAMA	315B	
EC225	LP	
EC725		AP
AS332	C, C1, L, L1, L2	B, B1, F1, M, M1
AS532		A2, U2, AC, AL, SC, UC, UE, UL
BO105	A, C (C23, CB, CB-4, CB-5), D (D, DS, DB, DBS, DB-4, DBS-4, DBS-5), S (CS, CBS, CBS-4, CBS-5), LS A-3	E-4, CBS-5 KLH
MBB-BK117	A-1, A-3, A-4, B-1, B-2, C-1, C-2	
EC135	T1, T2, T2+, P1, P2, P2+, 635 T1, 635 T2+, 635 P2+	



No. 2478-S-00

Since many years, aviation fuels are successfully transported in multiple-product pipelines. The quality insurance procedures for the treatment of the interfaces between products as well as the requirements relating to the tests in the laboratory are well established and quality incidents are rare.

In order to meet the recent changes in environmental and governmental requirements concerning diesel fuel, a bio-component of the "EMAG/FAME" type (a maximum of 7% by volume) which is a surfactant, is added to the conventional diesel during its production.

Note: FAME is the abbreviation for Fatty Acid Methyl Ester. The French translation of FAME is EMAG (Ester Méthylique d'Acide Gras).

These recent additions raise questions about possible contamination of aviation fuel by a bio-fuel component (bio-diesel).

When this bio-fuel (bio-diesel) is transported via multiple-product pipelines or other conventional means (ship, road, train), the bio-component "EMAG/FAME" sticks to the walls and may mix with the next product which may be an aviation fuel and thus contaminate it.

In sufficiently high concentrations EMAG/FAME may:

- have an effect on the thermal stability of fuel (correct thermal stability of the fuel is necessary to avoid deterioration of the fuel which could be indicated by deposits of coke particles which may cause clogging of the fuel systems and, in particular, of heat exchange systems and injectors);
- have an effect on the fuel freezing point;
- build up more easily if it is in contact with very hot surfaces of the fuel systems.

These conditions may have an effect on engine operation and can in certain cases lead to engine flame-out.

The fuel specifications determine that EMAG/FAME concentrations below the detectable limit of 5 ppm are permissible. Studies are currently conducted in order to examine the effect for an EMAG/FAME content of 30 ppm, as a first step, and with an objective of an EMAG/FAME content of 100 ppm.

Nevertheless, unless there is new information, EUROCOPTER informs you that fuel with an EMAG/FAME content above 5 ppm (equivalent to 5 mg of EMAG/FAME per kg of fuel) must not be used on the helicopters listed on page 1 and recommends that you confirm with your supplier that this condition be met.

If this limit is exceeded, please contact your usual EUROCOPTER Technical Support. Should you find this type of contamination, please inform the Authorities and your fuel supplier.

EUROCOPTER would like to remind you of the different publications issued on this subject:

- <u>Safety Information Bulletin (SIB) No. 2009-01</u>, issued by the EASA in January 2009: The EASA specifies that Jet-A1 containing more than 5 ppm of EMAG/FAME must not be used.
- <u>General Service Letter 2725/09</u>, issued by Turbomeca in May 2009: TURBOMECA permits a maximum amount of 5 ppm of EMAG/FAME in fuel.
- <u>Safety Airworthiness Service Bulletin (SAIB) No. NE-09-25R1</u>, issued by the FAA in August 2009: the FAA specifies that engine performance is not affected if the EMAG/FAME content does not exceed 30 ppm under conditions of restricted use and over a short period.