



## EASA Safety Information Bulletin

**SIB No.:** 2010-20  
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- Subject:** EUROCOPTER helicopters - Main Gear Box - Monitoring of lubricating oils
- Ref. Publication:** Eurocopter Safety Information Notice (SIN) n° 2173-S-05, Eurocopter Service Bulletin (SB) Alouette n° 05.101 and Lama n° 05.43.
- Description:** Following a safety recommendation issued by the Spanish air accident investigation board, and following recent events, the TC Holder Eurocopter has issued SIN n° 2173-S-05 about monitoring of Main Gear Box (MGB) lubricating oils, and SB n° 05.101 and n° 05.43 for determining the amount of water in the MGB oil.  
 This EASA Safety Information Bulletin endorses Eurocopter recommendations, which aim to:
- 1 - Remind operators of the importance of the daily measures for monitoring the MGB lubricating oil:
- Checks of appearance, colour and smell of the lubricating oil, which are scheduled after the last flight of the day, when the oil level is checked and the magnetic plug is inspected, allow early detection of wear or damage inside the (MGB), which cannot be detected by the quantitative and qualitative examination of the metal particles recovered from the magnetic plug or the oil filter.
- Sudden or progressive change in the appearance of the oil: cloudiness with a change of colour (darkening or a reddish tint) or presences of an abnormal smell, as well as emulsion in the oil are all signs of potential wear or damage inside the MGB.
- If any anomaly is found, Eurocopter recommends specific measures, as detailed in the applicable maintenance documentation listed in paragraph 1 of Eurocopter SIN n° 2173-S-05.
- 2 - Recommend periodic checks for presence of water in the MGB lubricating oil:
- To prevent the development of corrosion inside the MGB and inside the free wheel, which can result from the presence of water in the oil, a periodic analysis to assess the amount of

water in the oil has been defined in SB n° 05.101 (for the helicopter models 3180, 318B, 318C, 3160, 316B, 316C, 319B) and SB n° 05.43 (for the helicopter model 315B). This periodic check will be also introduced in the maintenance manuals of the concerned helicopter models.

Eurocopter has defined a threshold of 1 000 ppm of water. Above this value it is recommended to disassemble the Free wheel/MGB coupling and check the teeth.

It is also recommended to repeat this check at intervals not exceeding 6 months and also before putting back into service a helicopter which has been grounded for a period of more than 1 month without adequate measures of preservation.

**Applicability:** Eurocopter helicopters, models SA 3180, SA 318B, SA 318C, SE 3160, SA 316B, SA 316C, SA 319B and SA 315B.

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