



Tech topic

Oil changes

Four important factors to consider when changing to a new oil

Key insight

The oil system will typically contain more than

95%

of new oil in a few hundred hours of engine operation.

Introduction

Oil changes due to excessive lubricant deterioration are not normally necessary for approved jet engine oils in airline operation. This is due to the stability of today's oils and to regular oil additions.

Calculating actual times

The oil system will typically contain more than 95 percent of the new oil in a few hundred hours of engine operation. ExxonMobil aviation can calculate the actual time from the engine oil system capacity and top-up data, or more accurately by analytically determining the percentage of different oils in the engine. Always consult with the engine OEM when changing engine oil types or brands.



>95%
New oil

<5%
Used oil

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Oil changes

Four important factors

Occasionally there is a need to change an engine to a different oil. The following factors should be considered before making a change.

- 1** O-ring elastomer seals in the engine should have achieved an acceptable equilibrium between the compression set and the lubricant swelling action. A sudden change to a lubricant with a different formulation can disturb that equilibrium. The slow introduction of the new oil will lessen these effects. For additional information, please refer to the ExxonMobil aviation tech topic "O-ring elastomeric seals."
- 2** Oil deposits produced by the previous lubricant can be removed from the formulation site by a different oil. Due to the very wide range of deposit types encountered, it is not possible to fully predict that effect. It has been noted that the deposit loosening effect is not as prominent if the change-over is made slowly.
- 3** The previous oil should be satisfactory for continued use. For both ecological reasons and for cost effectiveness, this oil is not typically drained from the system.
- 4** All engine-approved oils are miscible and compatible with each other in all proportions. This is a mandatory test requirement in the equipment manufacturers' approval procedures.



For more information

Please contact your ExxonMobil aviation sales representative.