

Oil Changes

Four important factors should be considered



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.

Four Important Factors

Changes to a different oil brand do take place. As such time the following four factors should be considered.

- “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.
- Oil deposits produced by the lubricant in service prior to the change 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 so prominent if the change over is made slowly.
- The oil in the engine prior to the change should be satisfactory for continued use. For both ecological reasons and for cost effectiveness, this oil should not be drained from the system.
- 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.

Calculating Actual Time

Under these circumstances, the oil system will typically contain more than 95 percent of the new oil in a few hundred hours of engine operation. The actual time can be calculated by ExxonMobil Aviation Lubricants from the engine oil system capacity and top up data, or more accurately by analytically determining the percentage of different oils in the engine.

ExxonMobil Aviation Lubricants strongly recommends that when a change to a different brand of oil does take place, the change over should be achieved by topping up the engine system with the new oil.