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## Oils

Posted by djpacro - 2007/01/23 12:46

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Thanks for offering help on this forum - this should become a popular website as a result.

One of my pet subjects. We have a regulation telling pilots to follow the Flight Manual. My mechanic keeps telling me that CASA is pedantic on him following the book but he goes quiet when I ask him why he didn't follow the book when he does an oil change in winter.

Lycoming SI-1014 includes a statement that some judgement must be exercised but the same table of oil grades is in the POH with no weasel words. i.e. SAE 40 is the only correct answer for Melbourne throughout the year and the POH doesn't give any choice in winter except to go to SAE 30. I often follow up a discussion on the CASA Single Engine Piston Aeroplane Endorsement Questionnaire with a direction to then go ahead and ask the guy on the fuel truck for a bottle of SAE 40. "But he only gave me this, that's all he has, what do I do?"

Then further discussion.

So, some advice on oils would be good - not just limited to my pet subject above. eg multigrade vs single grade; premium oils eg Shell W100 Plus although I wouldn't expect comment on one brand vs another; Lycoming additive LW 16702.

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## Re:Oils

Posted by Blue Seal Technical Help - 2007/01/23 14:34

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Thanks for the first curly question djpacro.

We're getting a little out of my area of expertise here and I can only offer my opinion. I suggest that CASA should be consulted to properly answer this one. For what it's worth, I'll give you my thoughts anyway.

Your maintenance provider has to follow 'maintenance data' when working on your aircraft. Your Flight Manual is not maintenance data and thus cannot be used for maintenance. Your flight manual should not have conflicting information in it and so I suggest there needs to be an amendment made to correct the inconsistency.

I'll make a new post for the oil question.

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## Re:Oils

Posted by Blue Seal Technical Help - 2007/01/23 17:39

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Probably the most important thing with oil is to change it regularly. Oil will hold in suspension the contaminants that the engine produces and water moisture that can cause the engine to corrode and the camshafts to fail. Changing the oil at the manufacturer's recommended periods is most important to make your engine last longer, 25 hourly if you run a pressure screen system or 50 hourly if you have a full flow system (e.g. can filter).

As for the type of oils, it really depends on where, what and how you operate your aircraft. Aeroshell have some interesting frequently asked questions on their web site on [http://www.shell.com/home/Framework?siteId=aviation-en&FC2=/aviation-en/html/iwgen/leftnavs/zzz\\_lhn3\\_4\\_0.html&FC3=/aviation-en/html/iwgen/aeroshell\\_site/frequently\\_asked\\_questions.html#11](http://www.shell.com/home/Framework?siteId=aviation-en&FC2=/aviation-en/html/iwgen/leftnavs/zzz_lhn3_4_0.html&FC3=/aviation-en/html/iwgen/aeroshell_site/frequently_asked_questions.html#11)

AirBP (Castrol) have information available on <http://www.castrol.com/castrol/faq.do?categoryId=9001946&contentId=7005219>

And Mobile on <http://www.exxonelite.com/Lubes/Exxon/elite/FAQ.html>

I have asked the oil companies to provide some more data on choosing oils and will post it here as soon as it comes in. :blink:

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## Re:Oils

Posted by Blue Seal Technical Help - 2007/01/30 11:10

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Expanding on my previous post where djpacro asked a question on the selection of oils.

If you have a normally aspirated engine that operates under ideal conditions - with constant use (every day or two) - in stable temperature zones - and is not a Lycoming 76 series engine, then you can use straight oil without any concerns.

If you don't use your engine constantly, but still operate a normally aspirated engine in stable temperature zones then you will need the corrosion preservatives and additives that a premium oil offers.

If you use a turbocharged engine, or operate in low or high temperature zones, then a multigrade oil would be your choice.

However some multigrade oils do not scavenge lead too well, so if you do a lot of circuits or operate in full rich conditions, then perhaps a straight or premium oil will be better. As a guide, if your lead ppm in an oil analysis is above 4000, then I recommend against multigrade.

If you fly into a remote airstrip and cannot use the same oil that is in your engine then don't be too concerned. It is a requirement that all oils are compatible with one another and all it will do is to dilute the synthetic portion and the additives within your oil.

Regarding Lycoming additive LW 16702, this was designed years ago for use with the straight oils. The advise given to me is instead of using this additive, use a premium oil that already contains all the necessary additives you need.

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## Re:Oils

Posted by djpacro - 2007/05/22 12:18

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The latest Avflash provides some useful info: [http://www.avweb.com/news/maint/answers\\_about\\_oil\\_195194-1.html](http://www.avweb.com/news/maint/answers_about_oil_195194-1.html)

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## Re:Oils

Posted by mgiannelis - 2007/11/06 09:24

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You need to find a speak to a fellow by the name of Jeff thomas  
You answers are with him

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