



The piston engine overhaul

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Should your aircraft engine(s) require overhaul during your ownership period, here are some common options and further information. Feel free to send along your questions, we'll be delighted to help.

OPTION ONE

The Factory Remanufactured Engine.

The born-again engine. Strictly speaking this isn't an overhaul at all, as it results in a zero-timed engine (engine with no hours on it, just as it would be new, for example). You send your time expired engine "core" to the factory, either Continental or Lycoming, and you get back an engine that is built to new engine standards. Some parts are re-used such as crankshafts and cases, but the top-end parts are generally replaced with new parts. Since the factory does the work, they can certify the engine as "zero time" and it counts as a brand-new engine as far as logbook times are concerned.

This option is the gold standard for high performance engines and a 'factory reman' has a noticeable effect on market demand and resale values.

A factory reman is also the highest priced option with the least flexibility in terms of options and finish. It's a good choice however, if you're planning to keep your aircraft for some time.

Read more about aircraft piston engines here [Lycoming Engines](#) or [Continental](#).

OPTION TWO

The Factory Overhauled Engine.

The factory overhauls the engine, but the engine is not zero timed. In theory a modern factory overhaul, where the factories have begun using newer parts, will result in exactly the same engine as a reman. The key differences are lower price but lack of a zero-timed logbook entry and the warranty is backed by the factory.

As an expert in the US recently stated "I think factory overhauls are hardly worth it, because you pay a premium, don't get a reman's patina of goodness, and you don't get a lot of flexibility in finish. If you're looking for a non-reman overhaul, I'd go with a name-brand shop".

One downside of factory overhauls and remans is that you generally won't get your own engine parts back. You'll get somebody else's used crankcase and crankshaft. If you know yours are no good, this can be advantageous because the factory will replace your worn-out parts, but if you have good parts, then you may want to keep them because you know the service history (since you flew them). A factory reman or overhaul does not give you the option to keep your original parts. You may or may not care.

OPTION THREE

The Overhaul Shop.

Probably the most common. These are local specialists in engine overhauls and should be the best you can find outside of the factory - some would argue they know more than those inside the factory! In Australia, a great example and recommendation would be Riverina Air Motive in Parafield - see www.aviationengines.com.au/

The cheapest overhaul from a custom shop is nowadays about the same price as a factory overhaul because the factories aggressively compete for overhaul business. The custom shops usually offer value-added services and customisation flexibility that the factory does not. Examples include in-house accessory overhaul, customised matching of parts by weight or fit to tolerances that are tighter than factory tolerances, dynamic balancing, specialized paint schemes and use of non-OEM parts sources such as Superior Air Parts. If any of these services are important to you, or you want to have more control over how your engine is built up, then a local overhaul shop is a good choice. These shops usually have staying power, support and a national reputation which is good for warranty claims and later resale value for your aircraft.

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