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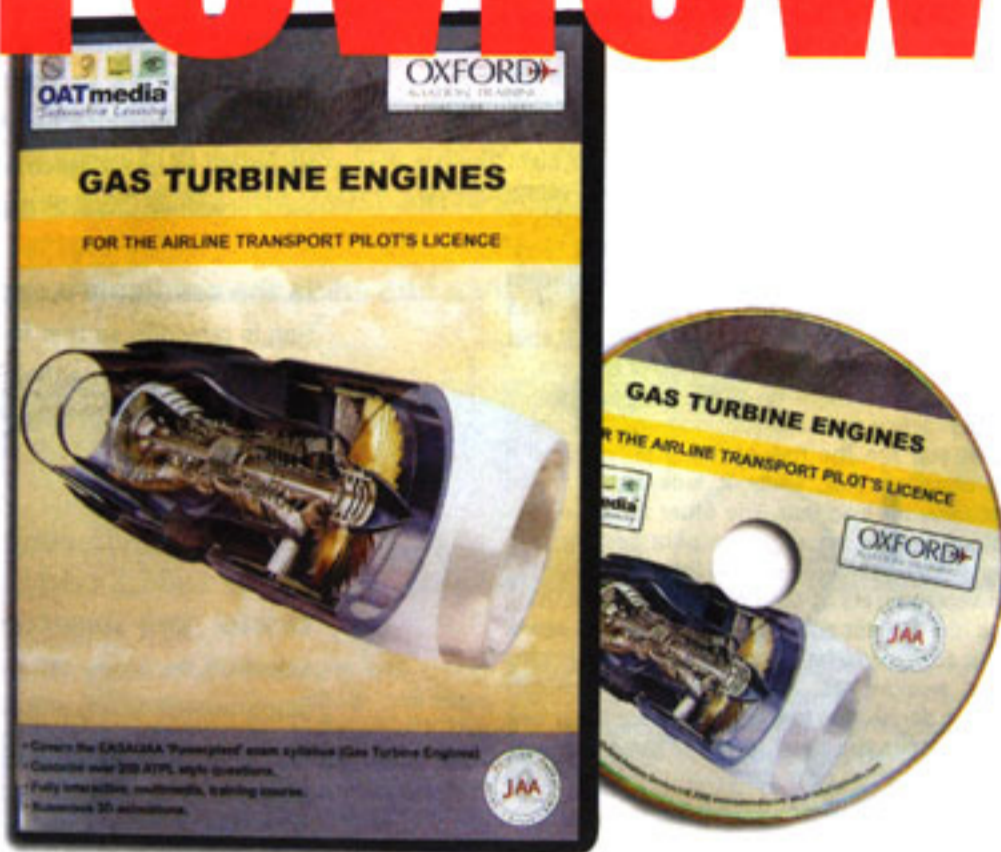
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ftn review



OATMedia – Gas Turbine Engines

I have never met a professional pilot who has claimed "Well, actually, I'd much rather fly piston-engined aircraft," although I'm sure they exist. But the fact is, most professional pilots expect to fly turbine-powered aircraft, and would opt for jets if given a choice. So, apart from the requirement to pass the relevant ATPL exams on the subject, most would-be pilots are highly motivated to learn about gas turbine engines. Here, then, is an ideal medium to achieve that.

There are a number of books about gas turbine engines, including some excellent and classic titles such as Rolls Royce's "The Jet Engine" which could scarcely get closer to source if it had been written by Sir Frank Whittle himself. The fundamental disadvantage all such books have is their lack of animation, which is precisely the reason why this CD-Rom should do so well. If you, like me, have difficulty imagining the direction of air flows through an axial compressor (the angle of compressor and stator sections relative to each other is very counter-intuitive) then an animated diagram is worth any number of pages of text, or skilful illustrations. If a picture is worth a thousand words, then surely in this context an animation is worth a score of pictures.

Sections include detailed physical descriptions of the basic elements of the engine - air intakes, compressors, combustion chambers, turbines and exhaust, plus ancillary systems such as bleed-air, fuel systems, thrust augmentation, control systems, reverse-thrust systems, ignition and starting, and associated elements such as gearboxes and auxiliary drives. Each section deals not only with the physical characteristics, but also operational considerations associated with that system, for example, the section on compressors describes not only the various different types of compressor design, but also considerations of engine handling and management associated with stall and surge conditions, and the various systems used to ameliorate these.

There is a section on propellers which is also common to the Piston Engines CD-Rom from the same stable, and the CD-Rom also covers turboshaft designs and helicopter applications, with the admitted exception of intake design for helicopters. The subject material is dealt with thoroughly and with meticulous attention not only to the examination criteria, but also to real-world engine handling. There is also a comprehensive self-test section, as you'd expect. The 2-D and 3-D graphics are, as we have come to expect from OATMedia's offerings, absolutely beyond reproach. If I have one criticism, it is that the voiceover adds little, but does tend to force the pace of study, sometimes a little too quick, sometimes too slow for me. It's a very minor quibble, there are some easy and useful navigation tools for pausing, rewinding or fast-forwarding and skipping if necessary, not to mention OATMedia's excellent bookmarking function.

In all that, this is not only a thorough exam preparation tool, but also an invaluable resource for anybody required to operate gas-turbine powerplants of almost any description. So if you're a prospective ATPL, an engineering student, if you're just interested in technical matters like this, or perhaps if you've just put a deposit on a TBM700 or a Eurocopter EC135, you would do well to invest another £60 in this CD-Rom.

OATMedia, Gas Turbine Engines
Typically £59.95 available from pilot shops.