

Aviation Maintenance Technician Handbook – Powerplant



U.S. Department
of Transportation
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Administration



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Preface

The Aviation Maintenance Technician Handbook—Powerplant (FAA-H-8083-32B) is one of a series of three handbooks for persons preparing for certification as a powerplant mechanic. It is intended that this handbook provide the basic information on principles, fundamentals, and technical procedures in the subject matter areas relating to the powerplant rating. It is designed to aid students enrolled in a formal course of instruction, as well as the individual who is studying on his or her own. Since the knowledge requirements for the airframe and powerplant ratings closely parallel each other in some subject areas, the chapters which discuss fire protection systems and electrical systems contain some material which is also duplicated in the Aviation Maintenance Technician Handbook—Airframe (FAA-H-8083-31B).

This handbook contains an explanation of the units that make up each of the systems that bring fuel, air, and ignition together in an aircraft engine for combustion. It also contains information on engine construction features, lubrication systems, exhaust systems, cooling systems, cylinder removal and replacement, compression checks, and valve adjustments. Because there are so many different types of aircraft in use today, it is reasonable to expect that differences exist in airframe components and systems. To avoid undue repetition, the practice of using representative systems and units is carried out throughout the handbook. Subject matter treatment is from a generalized point of view and should be supplemented by reference to manufacturer's manuals or other textbooks if more detail is desired. This handbook is not intended to replace, substitute for, or supersede official regulations or the manufacturer's instructions. Occasionally the word "must" or similar language is used where the desired action is deemed critical. The use of such language is not intended to add to, interpret, or relieve a duty imposed by Title 14 of the Code of Federal Regulations (14 CFR).

The subject of Human Factors is contained in the Aviation Maintenance Technician Handbook—General (FAA-H-8083-30) (as revised).

This handbook is available for download, in PDF format, from www.faa.gov.

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