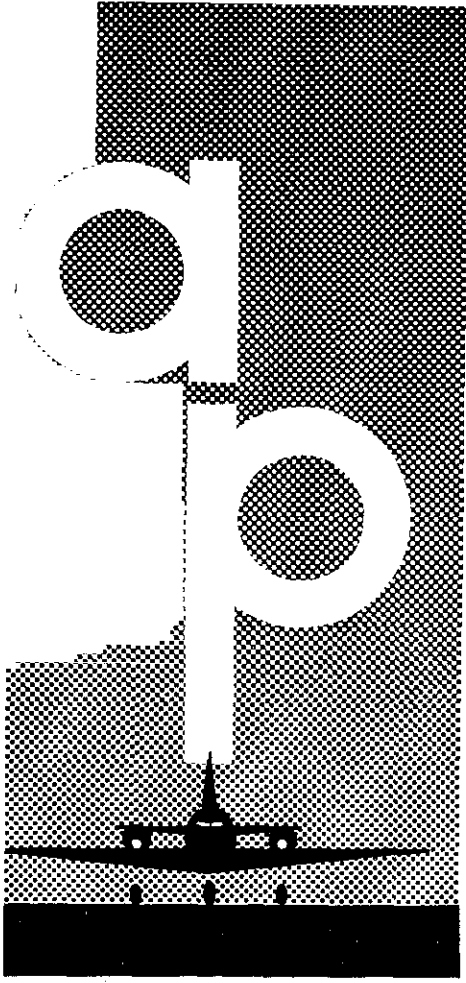


AC65-12A



Airframe & Powerplant
MECHANICS
POWERPLANT HANDBOOK



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRFRAME AND POWERPLANT

MECHANICS

POWERPLANT HANDBOOK



DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

Flight Standards Service

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PREFACE

This advisory circular is printed for persons preparing for a mechanics certificate with a powerplant rating. It is intended to provide basic information on principles, fundamentals, and technical procedures in the areas relating to the powerplant rating. This is designed to serve as a guide for students enrolled in a formal course of instruction, as well as the individual who is studying on his own.

This volume is devoted to an explanation of the units which 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 engines in use today, it is reasonable to expect minor differences to exist in like system components. To avoid undue repetition, the practice of using representative systems and units is carried out throughout the advisory circular. Subject-matter treatment throughout the text is from a generalized point of view and its use can be supplemented by reference to manufacturer's manuals and other textbooks if more detail is desired. This advisory circular is not intended to replace, substitute for, or supersede official regulations or manufacturer's instructions which should be consulted for final authority.

Grateful acknowledgement is extended to the manufacturers of engine, propellers, and powerplant accessories for their cooperation in making material available for inclusion in this handbook.

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The advancements in aeronautical technology dictate that this advisory circular be brought up-to-date periodically. It has been updated, errors have been corrected, new material has been added, and some material has been rearranged to improve the usefulness of the handbook. We would appreciate, however, having errors brought to our attention, as well as suggestions for improving its usefulness. Your comments and suggestions will be retained in our files until such time as the next revision is completed.

Address all correspondence relating to this handbook to:

Department of Transportation
Federal Aviation Administration
Flight Standards National Field Office
P.O. Box 25082
Oklahoma City, Oklahoma 73125

The companion advisory circulars to AC 65-12A are the Airframe and Powerplant Mechanics General Handbook, AC 65-9A, and the Airframe and Powerplant Mechanics Airframe Handbook, AC 65-15A.

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