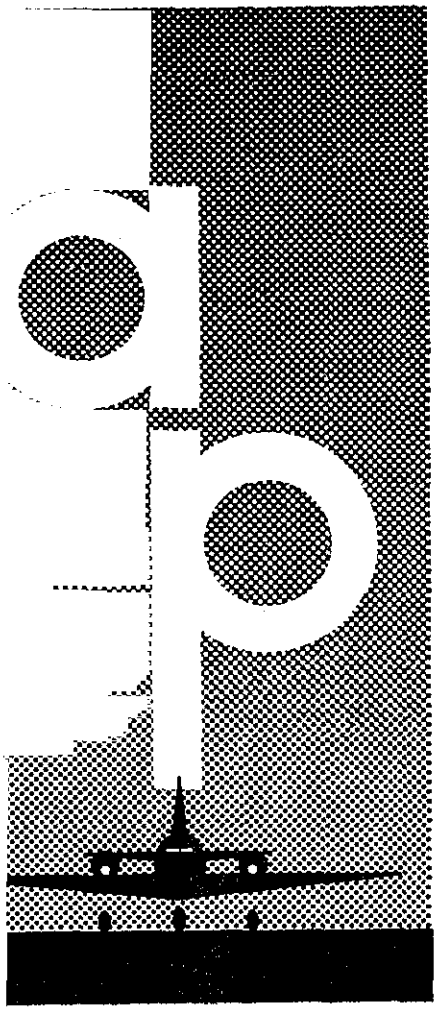

AC65-15A

Airframe & Powerplant MECHANICS

AIRFRAME HANDBOOK

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRFRAME AND POWERPLANT

MECHANICS

AIRFRAME HANDBOOK

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

FLIGHT STANDARDS SERVICE

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PREFACE

This handbook was developed and first printed in 1972 as one of a series of three handbooks for persons preparing for certification as an airframe or powerplant mechanic. It is intended that this handbook will provide basic information on principles, fundamentals and technical procedures in the subject matter areas relating to the airframe rating. It is designed to aid students enrolled in a formal course of instruction as well as the individual who is studying on his 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 Airframe and Powerplant Mechanics Powerplant Handbook, AC 65-12A.

This volume contains information on airframe construction features, assembly and rigging, fabric covering, structural repairs, and aircraft welding. The handbook also contains an explanation of the units which make up the various airframe systems.

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 manufacturers' manuals or other textbooks if more detail is desired. This handbook is not intended to replace, substitute for, or supersede official regulations or the manufacturers' instructions.

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

Bendix Energy Controls	Aircraft Wheels Aircraft Brakes
Rohm and Haas	Plastics
Douglas Aircraft Company	Portable Oxygen Generators in the DC–10
Aviation Maintenance Foundation, Inc.	Air Conditioning
BF Goodrich	Aircraft Tires Aircraft Wheels Aircraft Brakes
Puritan Equipment, Inc.	Portable Oxygen Generators

The advancements in aeronautical technology dictate that an instructional handbook must be under continuous review and brought up to date periodically to be valid. Flight Standards requested comments, from the certificated mechanic schools on the three handbooks. As a result, the handbooks have been updated to this extent: indicated errors have been corrected, new material has been added in the areas which were indicated as being deficient, and some material has been rearranged to improve the usefulness of the handbooks.

We would appreciate having errors brought to our attention, as well as receiving suggestions for improving the usefulness of the handbooks. Your comments and suggestions will be retained in our files until such time as the next revision will be accomplished.

Address all correspondence relating to these handbooks to:

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

The companion handbooks to AC 65–15A are the Airframe and Powerplant Mechanics General Handbook, AC 65–9A and the Airframe and Powerplant Mechanics Powerplant Handbook, AC 65–12A.

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