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ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

SUBJECT: USE OF MANUFACTURERS' MAINTENANCE MANUALS

1. PURPOSE. This Advisory Circular informs owners and operators about the usefulness of manufacturers' maintenance manuals for servicing, repairing, and maintaining aircraft, engines, and propellers.

2. REFERENCE. Federal Aviation Regulations, Part 43, Sections 43.13, 43.15, and 43.16; Part 91, Section 91.171; and Part 123, Section 123.45.

3. BACKGROUND. The majority of aircraft built today are more complex than those built in the past. New materials and fabrication methods are used and sophisticated equipment is being installed, all of which require maintenance instructions and techniques which are not common knowledge or used on older aircraft. This complexity makes it more and more important that the owner and operator consider the manufacturer's information and recommendations concerning servicing, repairing, and maintaining aircraft, engines, and propellers. The FAR sections referenced in paragraph 2 concern requirements for inspection and maintenance of aircraft. Owners and operators should find the information contained in manufacturers' maintenance manuals and invaluable source of data to meet these requirements.

4. MAINTENANCE MANUAL CONTENTS. Maintenance manuals which are issued under the FARs Part 23, Section 23.1529 and Part 25, Section 25.1529, and some earlier manuals, will contain information the manufacturer considers essential for proper maintenance of the aircraft, engines, and propellers. Some manuals may contain a complete recommended detailed continuous maintenance program that the owner/operator may choose to adopt. In general, the manuals are likely to be structured as follows:

   a. A step-by-step recipe format that should provide for continuity of recommended work schedules.

   b. Information logically sequenced to make it easy to find and use.

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c. Easy to follow expanded view drawings, charts or photographs supported by text..

d. Subject matter likely to be displayed in the manner of a, b, and c above are:

(1) Description of systems such as electrical, hydraulic, fuel controls, etc.

(2) Lubrication instructions setting forth the manufacturer's recommended frequency and the lubricants and fluids which are to be used in the various systems.

(3) Pressures and electrical loads applicable to the various systems.

(4) Tolerances and adjustments the manufacturer considers necessary for proper functioning of the aircraft.

(5) Methods of leveling, raising, and towing.

(6) Methods of balancing control surfaces.

(7) Identification of primary and secondary structures.

(8) Frequency and extent of inspections the manufacturer considers necessary for proper maintenance of the aircraft.

(9) Special repair methods applicable to the aircraft.

(10) Special inspection techniques such as X-ray, ultrasonic, magnetic particle inspection, etc.

(11) List of special tools.

5. MANUAL CHANGES. The FAA recognizes that maintenance practices and requirements are not static and may change as information is developed during the service life of an aircraft. Manufacturers may provide a systematic manual revision system to implement changes to their maintenance instructions. Owners and operators should make allowances for such changes.

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