

## Preventive Maintenance

■ Last month's *PILOT* brought home to do-it-yourselfers the advantages of performing maintenance on their aircraft under the supervision of qualified mechanics ("Cutting Costs with Owner-Assist Maintenance").

There is another avenue for owners to explore—without a mechanic guide—in their efforts to bring down aircraft maintenance costs. The holder of a pilot certificate issued under FAR Part 61 may perform "preventive maintenance" on any aircraft owned or operated by him (not used in air carrier service). So says FAR 43.3(h).

Preventive maintenance is defined in the FARs as "simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations." This definition takes on more meaning in paragraph (c) of Appendix A of Part 43 where 25 items are listed under the introductory phrase, "Work of the following type is preventive maintenance." This language indicates that the items listed are intended as examples, and other work may be considered preventive maintenance as long as it falls within the definition. FAA confirmed this interpretation when it authorized changing oil as a preventive maintenance item, although it isn't specifically listed in the appendix.

The 25 items are:

1. Removal, installation, and repair of landing gear tires;
2. Replacing elastic shock absorber cords on landing gear;
3. Servicing landing gear shock struts by adding oil, air, or both;
4. Servicing landing gear wheel bearings, such as cleaning and greasing;
5. Replacing defective safety wiring or cotter keys;
6. Lubrication not requiring disassembly other than removal of nonstructural items such as cover plates, cowlings, and fairings;
7. Making simple fabric patches not

requiring rib stitching or the removal of structural parts or control surfaces;

8. Replacing hydraulic fluid in the hydraulic reservoir;

9. Refinishing decorative coating of fuselage, wings, tail group surfaces (excluding balanced control surfaces), fairings, cowlings, landing gear, cabin, or cockpit interior when removal or disassembly of any primary structure or operating system is not required;

10. Applying preservative or protective material to components where no disassembly of any primary structure or operating system is involved and where such coating is not prohibited or is not contrary to good practices;

11. Repairing upholstery and decorative furnishings of the cabin or cockpit interior when the repairing does not require disassembly of any primary structure or operating system or interfere with an operating system or affect primary structure of the aircraft;

12. Making small simple repairs to fairings, nonstructural cover plates, cowlings, and small patches and reinforcements not changing the contour so as to interfere with proper airflow;

13. Replacing side windows where that work does not interfere with the structure or any operating system such as controls, electrical equipment, etc.;

14. Replacing safety belts;

15. Replacing seats or seat parts with replacement parts approved for the aircraft, not involving disassembly of any primary structure or operating system;

16. Troubleshooting and repairing broken circuits in landing-light wiring circuits;

17. Replacing bulbs, reflectors and lenses of position and landing lights;

18. Replacing wheels and skis where no weight-and-balance computation is involved;

19. Replacing any cowling not requiring removal of the propeller or disconnection of flight controls;

20. Replacing or cleaning spark plugs

and setting of spark plug gap clearance;

21. Replacing any hose connections except hydraulic connections;

22. Replacing prefabricated fuel lines;

23. Cleaning fuel and oil strainers;

24. Replacing batteries and checking fluid level and specific gravity; and,

25. Removing and installing glider wings and tail surfaces that are specifically designed for quick removal and installation and when such removal and installation can be accomplished by the pilot.

Preventive maintenance performed by the pilot is not required to be entered in the aircraft logbook, but it certainly won't hurt the resale value of the aircraft to log regular oil changes, cleaning and greasing of appropriate parts, replacing spark plugs, and all the other items which go to show the aircraft has been well maintained.

There is a caveat to our authority to do preventive maintenance. Section 43.13 requires that a person performing preventive maintenance must use methods, techniques and practices acceptable to the FAA. He must use the tools, equipment and test apparatus necessary to assure completion of the work in accordance with accepted industry practices. Further, he must do that work in such a manner and use materials of such a quality, that the condition of the aircraft, airframe, aircraft engine, propeller or appliance worked on will be at least equal to its original or properly altered condition.

AOPA believes that the scope of permissible maintenance should be extended for those aircraft owners who can demonstrate competency to perform specific tasks in connection with the maintenance, rebuilding and alteration of their aircraft. This is not a new idea. As early as 1962, an FAA official broached the subject of expanded owner maintenance privileges. After a meeting or two, the project quietly passed away. In 1975, at the first Operations Review Conference, AOPA proposed an "owner-limited repairman certificate." Unfortunately, it wasn't adopted. We are now trying to revive the idea in an overall effort to lower the cost of flying.

One last vital comment: The word "preventive" is used in the regulations, not "preventative." □

by JOHN S. YODICE

AOPA 199738

