

Piper PA-23 (Apache and Aztec) Series Aeroplanes

**AD/PA-23/66
Amdt 2**

Wing Structural Fatigue Limitation

12/89

Applicability: All models certificated at a MTOW of 4800 lb or greater.

Requirement: Retire the main spar lower cap assembly from service.

Compliance:

1. For aircraft certificated at a MTOW of 5200 lbs, prior to exceeding 13000 hours component time in service.
2. For aircraft certificated at a MTOW of 4940 lbs, prior to exceeding 20700 hours component time in service.
3. For aircraft certificated at a MTOW of 4800 lbs, prior to exceeding 27300 hours component time in service.
4. For aircraft certificated at a MTOW of 5200 lbs and fitted with Met-Co-Aire wing tip fuel tanks, prior to exceeding N hours component time in service where N is given by the expression:

$$N = 13000 + (13000 - T) \times 0.593 \text{ hours,}$$

where T = lower main spar cap time in service at which tip tanks were fitted.

Note: The available fatigue data covers wing main spars only. The durability of other parts of the airframe has not been evaluated, and is therefore unknown.

Based on experience, the Authority is prepared to credit unevaluated structure with a retirement life equal to double the life for the lower main spar cap.

An extension may be available, but any application must be supported by a fatigue substantiation covering all the remaining primary structure. This should include empennage, wing centre section, wing rear spar, control surfaces, fuselages, etc. The substantiation may take the form of a safe life assessment, or a sufficiently rigorous revised inspection schedule to ensure that any fatigue cracking which could occur in service will be detected before the aircraft is endangered.

Background: The retirement lives promulgated by this Directive have been determined on the basis of information provided by the manufacturer. Operation beyond the promulgated lives carries an unacceptable risk of the spar cap developing fatigue cracks.

This Amendment introduces retirement lives for 4800 and 4940 lb MTOW aircraft, as well as aircraft fitted with Met-Co-Aire wing tip fuel tanks.