
AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/CESSNA 400/40 Amdt 13 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Cessna 400 Series Aeroplanes

**AD/CESSNA 400/40
Amdt 14**

Wing and Airframe

13/2006

Applicability: All aircraft of the models listed in the Retirement Schedule below which are not maintained to Cessna's SID program.

(See Airworthiness Bulletin 02-007 on www.casa.gov.au)

Requirement:

1. Retire from service the wing main spar lower cap and the upper and lower attach fittings at the times shown in the Retirement Schedule below. Retire the parts when they reach the hours or flights, whichever occurs first.
2. Retire from service the whole airframe at twice the hours or flights, whichever occurs first, shown in the Retirement Schedule below.

Note 1: While Requirement 1 excludes the carry-through and its attachment fittings, we recommend replacement at the same time - or Cessna's SID program, which has found cracks in the carry-through and its attach fittings.

RETIREMENT SCHEDULE

Model	Hours	Flights
401, 402 Series (except 402C) *	8 200	12 600
402C *	7 700	13 200
411/411A	6 800	10 500
414	11 100	10 100
414A (S/N 0001 to 0200)	6 500	5 900
414A (S/N 0001 to 0200) fitted with "RAM" winglets (STC SA4943SW)	3 300	3 000
414A (S/N 0201 and on)	13 700	12 500
414A (S/N 0201 and on) fitted with "RAM" winglets (STC SA4943SW)	6 900	6 300

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421/421A *	8 500	7 700
421B *	8 000	7 300
421C (S/N 0001 to 0800) *	6 400	5 800
421C (S/N 0001 to 0800) fitted with “RAM” winglets (STC SA5811SW)	3 200	2 900
421C (S/N 0801 and on)	17 300	15 700
425	13 000	6 500

* Aircraft with the Hawker de Havilland (HdH) Australia spar strap are exempt from Requirement 1 if they stay on the inspection program. Requirement 2 still applies.

Note 2: Deleted.

Note 3: If the aircraft has had winglets for only part of its life, revise the hours and flights in the Retirement Schedule proportionally. For example, consider a late-production 414A that had winglets fitted at 2000 hours and 2500 flights. When the winglets were fitted, it had already used 2000/13700 (15%) of the spar’s hours. That leaves 85% of 6900 hours. So, retire the spar at $2000 + (0.85 \times 6900) = 7865$ hours. Do a similar calculation for the flights.

Note 4: If there is no record of time for a flight, assume this:

Model	Flight time
425	1.50 hours
401/402 (Except 402C)	0.50 hours
402C	0.45 hours
411/411A	0.50 hours
Others	0.80 hours

Compliance: This Amendment becomes effective on 21 December 2006.

Background: This Airworthiness Directive retires structure from service, before dangerous fatigue cracks are likely, if aircraft are not on Cessna’s SID program.

Amendment 8:

- Reduced lives for most ‘C’ models (testing did not confirm prediction);

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- Added the 414 and 414A;
- Added winglets for the 414A and early 421C; and
- Replaced 'Average Cruise Weight' by 'Average Ramp Weight'.

Amendment 9 gave operators more time to plan for Amendment 8's changes.

Amendment 10 exempted strapped and inspected spars from Requirement 1.

Amendment 11 increased the life for the stronger spars in later 414A aircraft.

Amendment 12:

- Reworded Requirement 2 to clarify that it applies to aircraft with strapped spars; and
- Added the Aeronautical Engineers Australia life extension program for the 402.

Amendment 13:

- Aligned the life of the wing attachment fittings with the main spar lower cap; and
- Limited lives by flights as well as hours.

Amendment 14:

- Exempts aircraft on Cessna's SID program (another way of managing fatigue);
- Changes Note 1 to a recommendation in Requirement 1;
- Deletes Note 2 (the SID is what it foreshadowed);
- No longer exempts Cessna 402s on Aeronautical Engineers Australia's life extension program from Requirement 2 (the program is no longer active); and
- Improves the style.



David Villiers
Delegate of the Civil Aviation Safety Authority

9 November 2006