
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/BEECH 18/17 Amdt 4 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.

Beechcraft 18 Series Aeroplanes

**AD/BEECH 18/17
Amdt 5**

**Aircraft Modification, Inspection
and Retirement**

1/2010

Applicability: All Model Beech 18 Series.

- Requirement:
1. Modify the wing by installing an external strap modification in accordance with FAA AD 75-27-09 R2 paragraph F.
 2. Inspect wing structure and strap components in accordance with FAA AD 75-27-09 R2 paragraphs A through C.
 3.
 - a. For aeroplanes incorporating the Dee Howard Company STCs SA832SW and SA895SW in combination visually inspect in situ the external strap modification for cracks and/or corrosion, using appropriate optical aids. Pay particular attention to welds at end fittings, bends in the strap, forward and aft edges and the strap sections normally covered by the locating clips.
 - b. For aeroplanes incorporating all other external strap modification STC's, visually inspect in situ for cracks and/or corrosion.
 4. Retire aircraft from service.

Note: This Directive is aimed at modifying and inspecting the wing so that a measure of main spar fail-safe capability is achieved. In order to maintain the necessary full limit load residual strength in the event of a spar truss tube failure it should be noted that the maximum gross weight of any Beech 18 variant is limited to 4490 Kg (9900 lb.). This does not endorse weight increases for aircraft certificated below this figure.

- Compliance:
1. Before issue of Certificate of Airworthiness.
 2.
 - a. For spar trusses with welded repair or modifications:

Within 300 hrs from the date of last inspection carry out the intent of requirement 2 and thereafter at 750 hour intervals.
 - b. For spar trusses without welded repair or modifications:

Within 300 hrs from the date of last inspection carry out the intent of requirement 2 and thereafter at 1500 hour intervals.

Beechcraft 18 Series Aeroplanes

AD/BEECH 18/17 Amdt 5 (continued)

3. a. At intervals not exceeding 100 hours time in service.
- b. At intervals not exceeding 300 hours time in service.
4. Before exceeding 10000 hours time in service after strap modification or before 20000 hours time in service after manufacture, whichever occurs first.

This Amendment becomes effective on 21 January 2010.

Background: The original issue of this directive mandated inspections of the most likely locations for cracking and damage, included a strap modification to provide fail-safe ability and introduced a fatigue life limitation.

Amendment 1. Added additional wing stations to the inspection to improve fail safe capability and included all possible locations instead of the most likely locations.

Amendment 2. Required an additional inspection of the strap installation. Also added a note on the Maximum weight of a Beech 18 variant.

Amendment 3. Following the cracking of some strap installations with foreign operators the threshold for strap inspections was amended. Calendar life limit was removed.

Amendment 4. Reduced the intervals for the strap inspection following the failure of a strap from an operator.

This Amendment refers to the State of Design directive for inspection requirements with the halving of intervals for welded repairs/modifications to the truss.



Peter Boyd
Delegate of the Civil Aviation Safety Authority

7 January 2010