Airworthiness Directive

**Federal Register Information**

**Header Information**
DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [60 FR 9621 NO. 34 2/21/ 95]

Docket No. 94-CE-12-AD; Amendment 39-9155; AD 95-04-03

**Preamble Information**
AGENCY: Federal Aviation Administration, DOT

ACTION: Final rule.

**SUMMARY:** This amendment supersedes Airworthiness Directive (AD) 92-08-07, which currently requires inspecting (one-time) the wing front spar carry-through frame structure for cracks on certain Beech 33, 35, and 36 series airplanes, and repairing or reinforcing any cracked wing front spar carry-through frame structure. This action would make this one-time inspection repetitive. This action was prompted by numerous (43) reports received by the Federal Aviation Administration (FAA) of cracks found on the wing front spar carry-through frame structure of the affected airplanes. These cracks were found during the inspection required by AD 92-08-07. The actions specified by the proposed AD are intended to prevent spar carry-through frame structure failure caused by cracking, which, if not detected and corrected, could result in severe structural damage to the wing.

The incorporation by reference of certain publications listed in the regulations was previously approved by the Director of the Federal Register as of March 18, 1992.

**DATES:** Effective April 7, 1995.

**ADDRESSES:** Service information that applies to this AD may be obtained from the Beech Aircraft Corporation, P.O. Box 85, Wichita, Kansas 67201-0085. This information may also be examined at the FAA, Central Region, Office of the Assistant
SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to certain Beech 33, 35, and 36 series airplanes was published in the Federal Register on November 2, 1994 (59 FR 54847). The action proposed to supersede AD 92-08-07 with a new AD that would require repetitively inspecting the wing front spar carry-through frame structure for cracks, and repairing or reinforcing any cracked wing carry-through frame structure. The proposed action would be accomplished in accordance with Beech Service Bulletin No. 2360, dated November 1990. The only difference between the proposal and AD 92-08-07 is that the initial inspection required by the existing AD would become repetitive.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received from four different commenters.

One commenter points out that the actual AD portion of the proposal specifies no directions for what to do if there are no cracks found, whereas the preamble specifies repetitive inspections, and the AD portion specifies these repetitive inspections after cracks are repaired. The commenter feels that this may have been an oversight on the FAA's part. The FAA concurs. The intent of the proposal was to make the inspection repetitive regardless of whether cracks are found. A paragraph has been added to the AD to ensure that the inspection is repetitive if no cracks are found.

This commenter also states that those owners/operators that have already inspected the airplane as required by AD 92-08-07 (superseded by this action) should not have to inspect again until the next annual inspection. The FAA concurs that a grace period should be given for those airplane owners/operators that have already inspected as required by AD 92-08-07. In addition, AD 92-08-07 superseded AD 91-14-13, which required repetitive inspections. The Compliance section of the AD has been revised to give credit to those airplane operators that have already inspected the wing front spar carry-through frame structure as required by one of the above-referenced AD's.

Two commenters state that AD action requiring a repetitive inspection of the wing front spar carry-through frame structure is unjustified because there are only reports of cracks in this structure on 43 out of over 10,000 affected airplanes. The FAA does not concur that AD action is unjustified. AD's are not issued based on the percentage of the airplanes that have reported problems, but are issued when an unsafe condition exists in a product, and when that condition is likely to exist or develop in other products of the same type design. The FAA reviewed all information relating to the wing front spar carry-through frame structure crack reports on the affected airplanes and determined that AD action was justified and the proposed actions, when accomplished correctly, would eliminate the unsafe condition and prevent it from re-occurring. The AD is
Three of the four commenters state that inspecting the wing front spar carry-through frame structure is part of the affected airplanes' annual inspection program, and thus no AD action is justified. The FAA concurs that a visual inspection of this structure is part of the annual inspection program. However, the airplanes referenced in the 43 cracked wing front spar carry-through frame structure reports utilize this annual inspection program. The FAA examined the information regarding these crack reports in determining that a dye penetrant inspection should be accomplished through AD action, as well as the visual inspection already required during the annual inspection. The proposal is unchanged as a result of these comments.

One commenter feels that the FAA has underestimated the financial impact the proposal would have upon U.S. operators of the affected airplanes. The commenter states that each inspection would cost each operator around $300-$400 per inspection. The FAA does not concur that it underestimated the cost impact. The FAA estimates that it will take approximately 8 workhours per airplane to accomplish the inspection, and that the average labor rate is $60 an hour. Based upon these figures, the inspection will cost $480 per airplane. Also, the FAA acknowledges the repetitive inspection cost, but has no way of determining the number of repetitive inspections an owner/operator may incur. The AD is unchanged as a result of this comment.

After careful review, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed except for the addition of the paragraph specifying when to accomplish the repetitive inspection if no cracks were found, the revision to the Compliance section of the AD, and minor editorial corrections. The FAA has determined that the addition, revision, and minor corrections will not change the meaning of the AD or add any additional burden upon the public than was already proposed.

The FAA estimates that 11,000 airplanes in the U.S. registry will be affected by this AD, that it will take approximately 8 workhours per airplane to accomplish the required action, and that the average labor rate is approximately $60 an hour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $5,280,000. This figure does not take into account the cost of repetitive inspections. The only difference between the cost analysis for this action and AD 92-08-07 (which would be superseded by this required action) is the cost of these repetitive inspections. The FAA has no way of determining the number of repetitive inspections an owner/operator may incur.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3)
will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption "ADDRESSES".

List of Subjects in 14 CFR Part 39
Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment
Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES
1. The authority citation for part 39 continues to read as follows:
Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

Section 39.13 - [AMENDED]
2. Section 39.13 is amended by removing AD 92-08-07, Amendment 39-8218 (57 FR 13004, April 15, 1992), and by adding a new airworthiness directive to read as follows:

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\text{Regulatory Information}
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95-04-03 BEECH AIRCRAFT CORPORATION: Amendment 39-9155; Docket No. 94-CE-12-AD. Supersedes AD 92-08-07, Amendment 39-8218.

Applicability: The following model and serial number airplanes, certificated in any category:

<table>
<thead>
<tr>
<th>Models</th>
<th>Serial Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-33, 35-A33, 35-B33, 35-C33, E33, F33, and G33</td>
<td>CD-1 through CD-1304</td>
</tr>
<tr>
<td>35-C33A, E33A, and F33A</td>
<td>CE-1 through CE-1192</td>
</tr>
<tr>
<td>E33C and F33C</td>
<td>CJ-1 through CJ-179</td>
</tr>
<tr>
<td>36 and A36</td>
<td>E-1 through E-2397</td>
</tr>
<tr>
<td>A36TC and B36TC</td>
<td>EA-1 through EA-471</td>
</tr>
</tbody>
</table>

Compliance: Required initially with whichever of the following is applicable, and thereafter as indicated:
• Upon the accumulation of 1,500 hours time-in-service (TIS) or within the next 100 hours TIS after the effective date of this AD, whichever occurs later, unless already accomplished;
• Within 500 hours TIS after the inspection required by superseded AD 92-08-07,
Amendment 39-8218, or within the next 100 hours TIS after the effective date of this AD, whichever occurs later; or

- Within 500 hours TIS after the last inspection required by AD 91-14-13, Amendment 39-7054 (superseded by AD 92-08-07), or within the next 100 hours TIS, whichever occurs later.

To prevent spar carry-through frame structure failure, which, if not detected and corrected, could result in severe structural damage to the wing, accomplish the following:

(a) Inspect the wing front spar carry-through frame (web) structure for cracks in accordance with the instructions in Beech Service Bulletin (SB) No. 2360, dated November 1990. Repair or reinforce any cracked wing front spar carry-through frame structure and reinspect as specified in the paragraphs that follow.

(b) If no cracks are found, reinspect as specified in paragraph (a) of this AD at intervals not to exceed 500 hours TIS as long as no cracks are found. When cracks are found, repair or reinforce the wing front spar carry-through frame structure and reinspect as specified in this AD.

(c) If cracks are found in the bend radius and not in the web face in the areas of the huckbolt fasteners during the inspection specified in paragraph (a) of this AD, accomplish the following at the time specified in accordance with the instructions in Beech SB No. 2360:

(1) For cracks up to 2.25 inches, accomplish one of the following, as applicable:

(i) If not more than one crack on either side of the wing forward spar carry-through frame structure bend radius is found, prior to further flight, stop drill each crack at the crack ends. Within the next 200 hours TIS and thereafter at intervals not to exceed 200 hours TIS, reinspect each crack for progression and repair accordingly. Upon the installation of the applicable P/N 36-4004 Kit, extend the repetitive inspection time to 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(ii) If more than one crack is found on either side of the wing forward spar carry-through frame structure bend radius, prior to further flight, install the applicable Beech P/N 36-4004 Kit, reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(2) For cracks between 2.25 and 4.0 inches, accomplish one of the following, as applicable:

(i) If not more than one crack on either side of the wing forward spar carry-through frame structure bend radius is found, prior to further flight, stop drill each crack at the crack ends, and within the next 100 hours TIS, install the applicable Beech P/N 36-4004 Kit. Reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.
(ii) If more than one crack is found on either side of the wing forward spar carry-through frame structure bend radius, prior to further flight, install the applicable P/N 36-4004 Kit, and reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(3) For cracks exceeding 4.0 inches, prior to further flight, install the applicable Beech P/N 36-4004 Kit, reinspect at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(d) If cracks are found in the web face in the area of the huckbolt fasteners but not in the bend radius during the inspections specified in paragraph (a) of this AD, accomplish the following at the time specified in accordance with the instructions in Beech SB No. 2360, but do not stop drill the cracks because it is possible to damage the structure behind the web face:

(1) For cracks less than 1.0 inch in length, accomplish one of the following, as applicable:

(i) If not more than one crack on either side of the wing forward spar carry-through frame structure web face is found, within the next 200 hours TIS and thereafter at intervals not to exceed 200 hours TIS, reinspect each crack for progression and repair accordingly. Upon the installation of the applicable P/N 36-4004 Kit, extend the repetitive inspection time to 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(ii) If more than one crack is found on either side of the wing forward spar carry-through frame structure web face, prior to further flight, install the applicable Beech P/N 36-4004 Kit, reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(2) For cracks more than 1.0 inch in length, accomplish one of the following, as applicable:

(i) If not more than one crack on either side of the wing forward spar carry-through frame structure web area is found, within the next 25 hours TIS, install the applicable Beech P/N 36-4004 Kit. Reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(ii) If more than one crack is found on either side of the wing forward spar carry-through frame structure bend radius, prior to further flight, install the applicable Beech P/N 36-4004 Kit, reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(3) If a crack passes through two fasteners but is less than 0.5 inches beyond either fastener, accomplish one of the following, as applicable:
(i) If not more than one crack on either side of the wing forward spar carry-through frame structure web area is found, within the next 25 hours TIS, install the applicable Beech P/N 36-4004 Kit, reinspect at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(ii) If more than one crack is found on either side of the wing forward spar carry-through frame structure bend radius, prior to further flight, install the applicable Beech P/N 36-4004 Kit, reinspect at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(4) If a crack passes through two fasteners but is more than 0.5 inches beyond either fastener, prior to further flight, install the applicable Beech P/N 36-4004 Kit. Reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(e) If cracks are found in both the web face in the area of the huckbolt fasteners and the bend radius during the inspections required in paragraph (a) of this AD, accomplish the following in accordance with the instructions in Beech SB No. 2360:

(1) If only one crack is found on either side of the airplane, prior to further flight, repair each crack in accordance with the criteria and instructions in paragraphs (c)(1) through (c)(3) or (d)(1) through (d)(4) of this AD, as applicable. Reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(2) If more than one crack is found on either side of the airplane, accomplish one of the following as applicable:

(i) For any crack that is 1.0 inch or more in length, prior to further flight, install the applicable Beech P/N 36-4004 Kit. Reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(ii) For any crack under 1.0 inch in length, within the next 200 hours TIS and thereafter at intervals not to exceed 200 hours TIS, reinspect each crack for progression and repair accordingly. Upon the installation of the applicable P/N 36-4004 Kit, extend the repetitive inspection time to 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(f) If a fuselage skin crack is found around the opening of the lower forward carry-through fitting, prior to further flight, obtain repair instructions from the manufacturer through the Wichita Aircraft Certification Office (ACO) at the address specified in paragraph (h) of this AD, and incorporate these instructions. Reinspect thereafter at intervals not to exceed 500 hours TIS, and repair or reinforce any cracked wing front spar carry-through frame structure as specified in this AD.

(g) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.
(h) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Wichita ACO, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Wichita ACO.

NOTE: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Wichita ACO.

(i) The inspections required by this AD shall be done in accordance with No. 2360, dated November 1990. This incorporation by reference was previously approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the Beech Aircraft Corporation, P.O. Box 85, Wichita, Kansas 67201-0085. Copies may be inspected at the FAA, Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(j) This amendment (39-9155) supersedes AD 92-08-07, Amendment 39-8218.

(k) This amendment becomes effective on April 7, 1995.