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(**Note:** The issue date of Revision H is indicated only on the title page; no other page of the document is dated.) This incorporation by reference was 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 Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the FEDERAL REGISTER, 800 North Capitol Street, NW., suite 700, Washington, DC.

(l) This amendment becomes effective on June 23, 1998.

Issued in Renton, Washington, on May 12, 1998.

D. L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 96–NM–264–AD; Amendment 39–10531; AD 98–11–04]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 737–100 and –200 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to all Boeing Model 737–100 and –200 series airplanes, that currently requires that the FAA-approved maintenance inspection program be revised to include inspections that will give no less than the required damage tolerance rating for each Structural Significant Item, and repair of cracked structure. That AD was prompted by a structural re-evaluation by the manufacturer which identified additional structural elements where, if damage were to occur, supplemental inspections may be required for timely detection. This amendment requires additional and expanded inspections, and repair of cracked structure. This amendment also expands the applicability of the existing AD to include additional airplanes. The actions specified by this AD are intended to ensure the continued structural integrity of the entire Boeing Model 737–100 and –200 fleet.

DATES: Effective June 23, 1998.

The incorporation by reference of certain publications is approved by the Director of the Federal Register as June 23, 1998.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Greg Schneider, Aerospace Engineer, Airframe Branch, ANM–120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Washington; telephone (425) 227–2028; fax (425) 227–1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding airworthiness directive (AD) 91–14–20, amendment 39–7061 (56 FR 30680, July 5, 1991), which is applicable to all Boeing Model 737–100 and –200 series airplanes, was published in the **Federal Register** on August 7, 1997 (62 FR 42433). That action proposed to supersede AD 91–14–20 to continue to require that the FAA-approved maintenance program be revised to include inspections that will give no less than the required damage tolerance rating for each Structural Significant Item (SSI). That action also proposed to require additional and expanded inspections, and repair of cracked structure. In addition, that action proposed to expand the applicability of the existing AD to include additional airplanes. [A similar proposal applicable to all Boeing Model 727 series airplanes also was published in the **Federal Register** on May 29, 1997 (62 FR 29081).]

Comments

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

The FAA has received comments in response to the two NPRM's discussed previously (i.e., Docket Nos. 96–NM–263–AD and 96–NM–264–AD). Because in most cases the issues raised by the commenters are generally relevant to both NPRM's, each final rule includes a discussion of all comments received.

Two commenters support the proposed rule.

Delete Repairs and Type Certificate Holder Modifications

Several commenters request that, for the reasons stated below, the FAA delete the requirements that address repairs and Boeing modifications (i.e., modifications specified in service bulletins or other technical data issued by Boeing), as specified in paragraphs (d) and (f) of the proposed AD.

Several commenters contend that the intent of the Boeing Supplemental Structural Inspection Program (SSIP) was to evaluate the original structure of candidate fleet airplanes using the latest damage tolerance methods, not to bring all airplanes up to damage tolerance design. They note that the Boeing Supplemental Structural Inspection Document (SSID) explicitly excluded SSI's that had been modified or repaired, because they were no longer considered to be representative of the configuration of the fleet. One of these commenters also states that Boeing should retain the authority to determine whether repaired SSI's are representative.

The FAA infers that the commenters believe that the purpose of the SSIP for Boeing airplanes is limited to protecting the original airplane structure. As discussed in the notice of proposed rulemaking (NPRM), FAA Advisory Circular (AC) No. 91–56, Change 2, dated April 15, 1983, states that assessments should be accomplished on modified or repaired structure to determine whether special inspections are needed to ensure continued airworthiness, regardless of whether the structure continues to be ''representative'' of the original structure. Consistent with this policy, the FAA has previously issued other SSIP AD's that effectively require assessment of repairs and modifications:

- For McDonnell Douglas Model DC–8 series airplanes: AD 93–01–15, amendment 39–8464 (58 FR 5576, January 22, 1993);
- For McDonnell Douglas Model DC–9 series airplanes: AD 96–13–03, amendment 39–9671 (61 FR 31009, June 19, 1996); and
- For McDonnell Douglas Model DC–10 series airplanes: AD 95–23–09, amendment 39–9429 (60 FR 61649, December 1, 1995).

One of the purposes of this AD is to correct this deficiency in the Boeing SSIP. The commenters have not provided any information to call this basic policy into question. The FAA finds that repaired or modified SSI's should be included in the Boeing SSIP

to ensure timely detection of cracking in those areas. Boeing does retain the authority to determine whether repaired or modified SSI's are ''representative,'' but that determination will no longer have the effect of deleting repaired or modified SSI's from the Boeing SSIP.

Several commenters also state that, in consideration of their request to delete repaired SSI's or Boeing modifications from the SSIP, reducing the inspection thresholds specified in the proposed AD would offset the FAA's concern regarding the reduction in the number of inspected SSI's. One of these commenters suggests that the FAA reduce the inspection thresholds specified in the proposed AD by an incremental amount to increase the inspected fleet by 10 percent. Such a reduction would compensate for the subject deletions. Another commenter states that lowering the threshold would require less time and lower labor costs than that required to develop special inspections for repairs and modifications. The FAA does not concur. As discussed previously, the purpose of the SSIP is to ensure the continued airworthiness of all airplanes, including those that have been repaired or modified. The commenters' proposal would not achieve this objective.

In contrast to the previous comments, several commenters state that SSI's affected by standard repairs or Boeing modifications do not need to be included in the Boeing SSIP, because the original structure is ''representative'' of the durability of repaired or modified structure. The FAA does not concur. Although repaired or modified structure may be similar to original structure, operators must accomplish an assessment to determine if the inspection program specified in the SSID is effective. It should be noted that, if the assessment indicates that the applicable inspection specified in the SSID is effective, no change to the Boeing SSIP is required.

Several commenters state that paragraphs (d) and (f) of the proposed AD are unnecessary because other airworthiness programs and documents, such as the proposed repair assessment program (RAP) for pressurized fuselages, will require operators to assess repairs and modifications. [The FAA has issued Notice No. 97–16, Docket No. 29104 (63 FR 126, January 2, 1998) that would require operators of certain transport category airplanes, including the Model 737, to adopt RAP's into their maintenance or inspection programs.] Two of these commenters state that the 737 Structures Task Group (STG) (a group consisting of 737 operators and Boeing) has taken the position that only repairs to the fuselage skins and pressure webs need to be assessed for damage tolerance, not repairs to other areas of the airplane structure (e.g., wing and empennage SSI's).

For two reasons, the FAA does not concur that the proposed RAP is adequate to address potential fatigue cracking of modified or repaired SSI's. First, the proposed RAP does not address either the damage tolerance characteristics of SSI's in supplemental type certificate (STC) modified structure that has not been repaired, or the effects of such modifications on original SSI's.

Second, the FAA does not concur with the commenters that only the pressure boundary should be subject to a damage tolerance assessment. The STG's conclusion that only repairs to the pressure boundary need to be assessed is based on a small sampling of existing repairs and on an assumption that those repairs are representative of all repairs. This approach would not give any consideration to repairs that are internal to the fuselage skin, or repairs to the wings or empennage. The FAA is aware that a significant number of these types of repairs have been installed on Model 737 airplanes, and that these repairs have not been assessed, to the extent practicable, in accordance with the principles of the current damage tolerance standards (14 CFR 25.571, Amdt. 25–45). For those repairs that affect SSI's, the failure of which could be catastrophic, reliance on an assumption that these repairs are free of fatigue cracking is inappropriate.

Therefore, reliance on the proposed RAP is inconsistent with the policy of AC No. 91–56, which does not draw a distinction between original structure and modified or repaired structure in describing the need for damage tolerance assessments of SSI's to ensure the structural integrity of the airplane. As discussed in the NPRM, the FAA continues to consider that appropriate damage tolerance based inspections are a necessary means to ensure long-term structural integrity of all SSI's, including those that have been modified or repaired. It should be noted that this AD and the proposed RAP are complementary for the structure associated with fuselage skins and pressure webs. Compliance with the SSID may be facilitated by use of the repair assessment guidelines developed in conjunction with the proposed RAP; and, assuming that the FAA adopts the proposed RAP, compliance with this AD will facilitate compliance with the requirements of the proposed RAP.

One commenter states that the existing Corrosion Prevention and Control Program (CPCP), in concert with the proposed RAP, makes the inspections specified in the proposed AD unnecessary and redundant. In addition, this commenter states that the CPCP requires 100 percent (visual) inspections of all SSI's, including repaired or modified SSI's.

The FAA does not concur. The relationship of this AD to the proposed RAP is discussed previously. The CPCP AD's require visual inspections to detect corrosion of SSI's. In contrast, the SSIP AD's require various inspection methods (e.g., visual, eddy current, ultrasonic) to detect fatigue cracks in SSI's. Because the purposes of the two programs are different, in many cases, the corrosion inspections would not be adequate to detect fatigue cracking. In conclusion, the FAA has determined that the Boeing SSIP is necessary to maintain the airworthiness of the Boeing Model 737 fleet, and that it is not redundant with the proposed RAP and CPCP.

Extend Compliance Time for Assessing Existing Repairs and Boeing Modifications

Several commenters request that the FAA revise paragraph (d) of the proposed AD to extend the compliance time of 18 months for existing repairs and Boeing modifications. The commenters state that repairs and Boeing modifications are likely to have fatigue characteristics that are similar to the original structure and, therefore, are not of immediate concern. These commenters also state that compliance within 18 months would cause an undue burden on operators because of the size of the fleet, the number of repairs and modifications on each airplane that would need to be identified and evaluated, the difficulty of accessing the affected structure, and the total number of work hours necessary to comply with the requirement. The commenters state that, because the purpose of the inspections is to identify potential unsafe conditions, rather than address known unsafe conditions, the level of effort necessary to comply within 18 months is unjustified. One commenter states that there is a shortage of sufficiently trained personnel to develop necessary non-destructive test (NDT) procedures to conduct the required inspections within the proposed compliance time. Another commenter proposes that operators be able to address repairs during the required SSID inspections.

The FAA concurs that an extension of the compliance time is appropriate. The FAA agrees that Boeing repairs and modifications are likely to have fatigue

characteristics that are similar to the original structure and, therefore, are not of immediate concern. For other repairs, although their fatigue characteristics may be different, the FAA recognizes that the records and data necessary to identify and evaluate these repairs may not be readily available.

Therefore, the FAA has revised the final rule to include a new paragraph (e) to specifically address repairs and design changes other than STC's. Operators are required to identify each repair or design change to an SSI at the time of the first inspection of each SSI after the effective date of the AD in accordance with Revision D of the SSID. Within 12 months after such identification, operators are required to assess the damage tolerance characteristics of each SSI created or affected by each repair or design change to determine the effectiveness of the applicable SSID inspection for each SSI and, if not effective, revise the FAA-approved maintenance or inspection program to include an inspection method and compliance times for each new or affected SSI. This change will enable operators to identify these repairs and modifications at the time of the required SSID inspection, so that no additional inspections will be necessary. This change also will allow for the timely development of NDT procedures. The requirement to revise the maintenance or inspection program within 12 months after identification of each repair or design change is consistent with both the guidance of AC No. 25–1529–1, dated August 1, 1991, and the long-standing practice under the McDonnell Douglas SSIP's.

Evaluation of Existing STC Design Changes

Several commenters state that paragraph (d) of the proposed AD should retain the requirement to revise the maintenance or inspection program to address STC design changes within 18 months after the effective date of this AD. The commenters state that the durability of individual airplanes is affected by STC design changes, which affect existing SSI's and create new SSI's. Thus, the inspection times for these SSI's might need to be revised to account for changes in durability. The commenters also state that the STC documentation should be readily available. This would permit a timely paperwork evaluation of the effect on the Boeing SSIP without an extensive airplane inspection. In contrast, another commenter requests an extension of the 18-month compliance time to 5 years for implementing program revisions for addressing STC's. This commenter notes that STC holders are not equipped to perform the assessments of affected SSI's.

The FAA concurs partially. Although most of these commenters support the proposed requirements of paragraph (d) for STC design changes, the FAA has revised paragraph (d) of the final rule to limit its applicability to airplanes on which STC's have been incorporated, and to provide an option that would extend the compliance time for identifying and evaluating SSI's created or affected by STC's and revising the maintenance or inspection programs to reflect those evaluations. The FAA has recently reviewed several STC's regarding the installation of cargo doors on 727 airplanes and determined that the substantiating data for many of these STC's do not include internal loads data. Without the internal loads data for the modified structure, it would be difficult to perform an adequate damage tolerance assessment.

In accordance with the guidance provided in AC No. 91–56, external (flight, pressure, and ground) loads are necessary to complete a structural damage tolerance assessment and must be obtained from the type certificate (TC) holder or be developed by another source. Those external loads must then be applied to the structure and resolved into an internal distribution within the STC structural components (this includes original structure that is not modified but could be affected by the STC design change). All STC structural parts, whose failure could reduce the structural integrity of the airplane, then must be identified (as SSI's), and a damage tolerance assessment must be performed. Subsequently, the inspection methods compliance times (i.e., thresholds and repetitive intervals) must be developed for these SSI's and added to the operator's maintenance or inspection program. Therefore, the FAA has determined that operators may need more time to assess STC design changes on their airplanes.

To avail themselves of the option of extending the 18-month compliance time, operators are required to accomplish the following three actions:

1. Within 18 months after the effective date of this AD, submit a plan to ensure that they are developing data, as described above, that supports their revision to the FAA-approved maintenance or inspection program (i.e., compliance times and inspection methods for new or affected SSI's), and to demonstrate that they are able to complete the required tasks within 48 months after the effective date of this AD.

2. Within 18 months after the effective date of this AD, and thereafter at intervals not to exceed 18 months, accomplish a detailed visual inspection of all structure identified in Revision D of the SSID that has been modified in accordance with an STC (this repetitive inspection will be terminated by accomplishment of the third action). The detailed visual inspection and the repair of any crack shall be accomplished in accordance with a method approved by the Manager of the Seattle Aircraft Certification Office (ACO).

3. Within 48 months after the effective date of this AD, revise the maintenance or inspection program to include an inspection method for each new or affected SSI and to include the compliance times for initial and repetitive accomplishment of these inspections.

The plan that an operator submits to the FAA for approval should include a detailed description of the: (1) STC; (2) methodology for identifying new or affected SSI's; (3) method for developing loads and validating the analysis; (4) methodology for evaluating and analyzing the damage tolerance characteristics of each new or affected SSI (see discussion below); and (5) proposed inspection methods. The plan would not need to include all of these elements if the operator can otherwise demonstrate that its plan will result in implementation of an acceptable program within 48 months after the effective date of this AD. For this option, the final rule requires that the plan be submitted to the Manager of the Seattle ACO within 18 months after the effective date of the AD.

As indicated by the commenters, STC modifications may pose a greater risk of fatigue cracking than standard repairs or Boeing modifications. However, STC holders normally do not have access to Boeing type certification data. Therefore, STC modified structure may not have the same durability as the original structure or structure that has been subject to standard repairs or Boeing modifications. In order to ensure the structural integrity of STC modified structure during the 48-month compliance time provided for the development of a revision of the maintenance or inspection program to address STC's, the FAA considers it necessary to require repetitive detailed visual inspections of that structure.

These visual inspection methods are required to be approved by the Manager of the Seattle ACO to ensure that adequate access is provided and that the inspection area is adequately defined. In addition, the repair of any crack must be

approved by the Manager of the Seattle ACO. This contrasts with the repair provision of paragraph (f) of the final rule, which requires that cracks be repaired in accordance with any FAA-approved method. Seattle ACO approval for these repairs is necessary because, as discussed previously, the durability of these STC's is unknown, and findings of cracks may indicate the need for additional corrective action. The FAA has revised paragraph (f) of the final rule to reference the ACO approval as an exception to the general provisions allowing repairs in accordance with an FAA-approved method. The FAA selected an 18-month inspection interval to coincide with most operators' normal maintenance schedules. It should be noted that these visual inspections would not be required for operators who adopt a damage tolerance based revision to the maintenance or inspection program to address STC modifications within 18 months after the effective date of this AD, as proposed in the NPRM.

One commenter also requests that the FAA develop guidelines to assist operators in assessing STC's. The FAA does not consider that there is a need for further guidance at this time. As discussed previously, AC No. 91–56 provides extensive guidance on methods for assessing the airplane structure using damage tolerance principles to the extent practicable. This guidance is also applicable to STC's.

Revise Compliance Time to Assess Future Repairs and Modifications

Several commenters concur with the requirements of paragraph (f) of the proposed AD.

Several other commenters request that paragraph (f) be revised to extend the compliance time for assessment of repairs and modifications installed after the effective date of this AD. Rather than completing a damage tolerance assessment within 12 months after installation of the repair or modification, as proposed in the NPRM, these commenters suggest that operators should be required to complete an assessment within 12 months after accomplishment of the next SSID inspection of the SSI following such an installation.

The FAA does not concur. The FAA has determined that delaying the assessment until after the next SSID inspection is not appropriate. At the time of the installation, operators have all the data necessary to define the repair or modification that would be used in an assessment. Delaying the assessment until after the subsequent SSID inspection may result in loss of these data. Requiring an assessment within 12 months after installation of the repair or modification provides sufficient time and ensures that the inspection program accurately reflects the actual airplane structure. As stated previously, the requirement to revise the maintenance or inspection program within 12 months after installation is consistent with both the guidance of AC No. 25–1529 and the long-standing practice under the McDonnell Douglas SSIP's.

Clarify What ''Affected'' Means

One commenter requests clarification of the meaning of the word ''affected'' in paragraphs (d) and (f) of the proposed AD. The commenter states that the definition provided in the proposed AD is vague. As an example, the commenter states that it was not clear whether an operator needs to obtain a new inspection method and threshold or interval for a corrosion blend-out repair that does not include a doubler to reinforce the structure.

The FAA concurs that clarification is necessary. As defined in paragraphs (d) and (f) of the proposed AD, the term ''affected'' means that an SSI has been changed such that the original structure has been physically modified or that the loads acting on the SSI have been increased or redistributed.

For existing altered or repaired SSI's, the FAA has determined that it is evident when an SSI is ''affected'' because of a physical change to the structure. For existing changes where the loads acting on the SSI have been increased or redistributed, the FAA has determined that it may not be readily evident that an SSI is ''affected'' because there has not been a physical change to the structure. Because of this, it may not be possible for operators to identify all ''affected'' SSI's without performing a damage tolerance assessment. For these reasons, the FAA has changed paragraph (d) to require identification of structure that has been ''physically altered,'' rather than ''affected,'' in accordance with an STC; and has added a new paragraph (e) to require identification of other structure that has been ''physically altered or repaired.''

In the cited example of a corrosion blend-out to an SSI not requiring reinforcement, the operator would be required to assess whether the repair reduced the effectiveness of the original SSID inspection method and repetitive interval. However, a blend-out would not normally reduce the effectiveness of the original inspection method, because the structure is essentially unchanged. The repetitive interval would continue to be appropriate because the blend-out would not appreciably affect the durability of the structure.

After the effective date of this AD, when SSI's are altered or repaired or when the loads acting on an SSI are increased or redistributed, it should be evident to the operator that SSI's are ''affected.'' The FAA has determined that, at the time of the installation, operators should have all the data necessary to define the repair or modification that would be used in an assessment. For this reason, the FAA has determined that the word ''affected'' in paragraph (g) [proposed paragraph (f)] is appropriate.

If an SSI is determined to be ''affected,'' an operator must perform an assessment of the damage tolerance characteristics of the SSI to determine the effectiveness of the applicable SSID inspection for that SSI. It is only if that inspection is determined not to be effective that the operator must revise the FAA-approved maintenance or inspection program to include an inspection method and compliance times for that SSI. Accordingly, the FAA has revised paragraph (d)(1) of the final rule [which corresponds to paragraph (d) of the proposed AD as it applied to STC modified structure] to require the operator to assess the damage tolerance characteristics of each SSI created or affected by each repair or design change to determine the effectiveness of the applicable SSID inspection for each SSI. If it is not effective, the operator is required to revise the FAA-approved maintenance or inspection program to include an inspection method and compliance times for each new or affected SSI. The FAA will monitor operators' compliance with these provisions to determine whether future revisions to this AD are necessary to fulfill the intent of AC No. 91–56.

Threshold for STC Modified Airplanes

One commenter questions whether airplanes that have been converted from a passenger configuration to an all-cargo configuration by the STC process are subject to the requirements of paragraph (c)(1) or (c)(2) of the proposed AD. (This comment specifically addresses Model 727 airplanes identified in NPRM Docket No. 96–NM–263–AD; however, the comment also applies to this AD.) The commenter's concern appears to result from the fact that, when some passenger airplanes were converted to cargo airplanes, the modifier revised the airplane records to reflect a different model number (e.g., a –200 may be reidentified as –200C). The FAA's intent is that the references to model numbers in the AD correspond to the model numbers specified on the type

certificate data sheet (TCDS). Because these converted airplanes are not identified as Model 737–200C series airplanes on the TCDS, paragraph (c)(1) does not apply, and paragraph (c)(2) does. As discussed previously, for SSI's altered by the conversion, operators also must consider the provisions of paragraph (d) of this AD, which require a damage tolerance evaluation to determine what structure needs to be inspected, what inspection methods are needed, and when the inspections are to occur. The FAA has revised the final rule to include a new NOTE following paragraph (c)(1) that clarifies this point.

Candidate Fleet Approach

One commenter suggests that the FAA delete the threshold approach defined in paragraph (c) of the proposed AD and retain the candidate fleet approach defined in AD 84–24–05 and the SSID. The commenter proposes that the candidate fleet be updated annually to reflect changes in the fleet (e.g., when an airplane is modified from a passenger configuration to a cargo configuration). (This comment specifically addresses Model 727 airplanes identified in NPRM Docket No. 96–NM–263–AD; however, the comment also applies to this AD.)

The FAA does not concur. As stated in the NPRM, the policy established in AC No. 91–56 anticipated that all SSIP's would establish thresholds. The candidate fleet approach was originally based on an understanding that the airplanes in the candidate fleet would continue to represent the entire fleet and would have the highest number of flight cycles in the fleet. This would be achieved by periodic updates to the candidate fleet. In practice, this approach has not fulfilled the intent of AC No. 91–56. Because of the extensive modifications and repairs of both candidate fleet airplanes and non-candidate fleet airplanes, the candidate fleet is no longer representative.

In addition, the FAA finds that the candidate fleet no longer includes all of the highest time airplanes in the fleet. Even if the SSID were updated annually to reflect changes to the fleet, this approach would be impractical for both operators and the FAA. Because of the frequency of modifications and changes in utilization of the affected airplanes, even annual updates would quickly be rendered obsolete. Annual changes in the composition of the candidate fleet would deprive operators of the predictability needed for long-term maintenance planning provided by the approach of defining the thresholds as adopted in this AD. For these reasons, the FAA has determined that the 737 SSIP must contain inspection thresholds for all Model 737 series airplanes to ensure the timely detection of fatigue cracks in the SSI's.

Extend Compliance Time for Revising the Maintenance or Inspection Program

Several commenters request that the compliance time of 12 months in paragraph (b) of the proposed AD be extended to provide operators more time to incorporate Revision D of the SSID into their FAA-approved maintenance or inspection program. These commenters state that an operator should not be required to revise its FAA-approved maintenance or inspection program to incorporate Revision D of the SSID until its airplanes are at or near the threshold specified in paragraph (c) of the proposed AD. The commenters state that, as paragraph (b) of the proposed AD is currently worded, all operators are required to incorporate the change regardless of the cycle age of an airplane. This requirement poses an undue burden (cost and time) to those operators that are not required to inspect until much later. Several other commenters also state that the safety of the fleet is not increased by requiring incorporation of Revision D of the SSID into an inspection program on low-cycle airplanes.

The FAA concurs with the commenters' requests to extend the compliance time of paragraph (b) to prior to reaching the threshold specified in paragraph (c) of the AD, or within 12 months after the effective date of this AD, whichever occurs later. The FAA has revised the final rule accordingly. However, as discussed previously in this AD, operators are required to comply with the requirements of paragraphs (d) and (g) of this AD, which may necessitate action before reaching the threshold.

Extend Grace Period for Initial Inspections

Several commenters request that the 18-month grace period specified in paragraph (c) of the proposed AD be extended to provide operators that are near or over the threshold more time to accomplish the initial inspection. Many inspections included in the SSID require several work hours to accomplish. These commenters point out that the proposed AD allows 12 months to implement Revision D of the SSID, but allows only 6 months thereafter to accomplish inspections (18 months total from the effective date). The commenters contend that accomplishment of all the inspections within the 18-month grace period will significantly affect an operator's planned maintenance schedule and program, especially operators of large fleets.

Several of these same commenters state that the original SSID AD 91–14–20 permitted the initial compliance time to be the repeat interval (after incorporation of the revision into a maintenance or inspection program). Several commenters also state that other AD's that mandate maintenance type programs, such as the CPCP for aging airplanes, give operators one repeat interval to come into compliance; therefore, the initial inspection should be similar in concept to such maintenance type programs (i.e., the grace period should be 18, 36, 48, 60, and 72-month intervals depending on the inspection).

One commenter states that no service, test, or engineering analysis could justify the inspection of new SSI's within 18 months. Another commenter states that the approach used in the proposed AD appeared to be the same as for a service bulletin with a known fatigue problem. This commenter also states that this approach was not appropriate for damage tolerance based inspections contained in the Boeing SSID, which are exploratory inspections and are not intended to address identified problems. Another commenter states that the SSID threshold is somewhat arbitrary, because it is based on a reliability analysis rather than a true fatigue analysis. The threshold is derived from calculations that ensure that a statistically accurate representation of the fleet is being inspected, rather than a true crack growth analysis. One of these commenters suggests that the grace period be based on flight cycles instead of calendar time because the SSID addresses structural fatigue. Several commenters state that a major maintenance check would be a more appropriate grace period for accomplishing the inspections specified in the SSID.

The FAA concurs that more time should be provided to accomplish the initial inspections specified in paragraph (c) of the proposed AD. However, the FAA does not concur that the grace period should be tied to the repeat interval established in the Boeing SSID because some of the repeat inspections have extremely long compliance times. The existing Boeing SSID is not like the CPCP document which establishes an initial compliance time (threshold) within the document. As discussed in Item 3. of the ''Action Since Issuance of Previous AD'' Section of the NPRM, the FAA has determined that a grace period based on a repeat

interval does not ensure that the SSI inspections are accomplished, and that fatigue cracks in SSI's are detected, in a timely manner.

The FAA finds that it would be appropriate to base the grace period on the number of accumulated flight cycles rather than calendar time, because the Boeing SSIP is based on fatigue and crack-growth analyses. In addition, the FAA concurs that the grace period should begin at the time when operators are required to have revised their maintenance or inspection programs to incorporate Revision D of the SSID. The FAA has determined that such a grace period would provide operators with more time to accomplish the inspection; yet it also would ensure that the SSI inspections are accomplished, and that fatigue cracks in SSI's are detected, in a timely manner. As a result, the FAA has revised the final rule to specify a grace period of 4,000 flight cycles measured from the date 12 months after the effective date of the AD. The 4,000-flight cycle grace period corresponds to a typical maintenance interval for most operators and, therefore, minimizes the need for special maintenance scheduling.

Modify Criteria for Adjusting the Threshold

Several commenters request that the criteria for adjusting the thresholds specified in paragraph (c) of the proposed AD (discussed in Item 3 of the ''Actions Since Issuance of Previous AD'' Section of the NPRM) should allow for the threshold to be reasonably adjusted. These commenters suggest that the FAA allow operators to use the rate of risk methodology to extend the threshold in the future.

The FAA concurs. The rate of risk methodology is a means of determining the probability that cracks will be detected in the inspected fleet before they initiate on other airplanes that have not been inspected. As discussed in the NPRM, in accordance with paragraph (i)(1) of the final rule, the FAA would approve threshold increases if it can be shown by sufficient data that the increase in the threshold does not result in an increased risk that damage will occur in the uninspected fleet before it is detected in the inspected fleet.

Some of these commenters state that the following statement in the NPRM is unreasonable: ''* * * the FAA may approve requests for adjustments to the compliance time * * * provided that no cracking is detected in the airplane structure.'' Confirmed fatigue cracks should not restrict the ability to adjust the SSIP threshold. The commenters state that the present philosophy for addressing an SSI with a confirmed fatigue crack is to remove that SSI from the SSID and to issue a service bulletin to correct the problem. The FAA then issues an AD to mandate the action, if the FAA deems it necessary. Once this SSI has been removed from the SSID, it should not affect the ability to adjust the SSIP threshold. The FAA concurs. In evaluating requests for extension of thresholds, the FAA would consider whether identified cracking has been addressed in accordance with the philosophy described by the commenters.

One commenter expresses concern that eventually all Model 737 airplanes would be subject to the Boeing SSIP. This commenter suggests that the threshold be defined in the SSID and managed by the STG. The FAA does not concur. As discussed previously, if data are submitted substantiating extension of the threshold, the FAA will approve such extensions, which may have the effect of excepting relatively low-time airplanes. The FAA would be receptive to proposals of threshold extensions from any source that submits sufficient data, including the STG. Because the thresholds are specified in the AD itself, there is no need for the SSID to be revised to incorporate the threshold.

Compliance Time for Initial Inspection

One commenter requests that the compliance time for the initial inspection requirements of paragraphs (c), (d), and (f) of the proposed AD be clarified. The commenter asks if there is anything in the proposed AD that would establish a threshold for inspections other than the 46,000-flight cycle compliance time specified in paragraph (c)(1) of the proposed AD. The commenter states that it has Model 727–100C series airplanes that have accumulated less than 27,000 total flight cycles, but are more than 30 years old. (This comment specifically addresses Model 727 airplanes identified in NPRM Docket No. 96–NM–263–AD; however, the comment also applies to this AD.)

The FAA finds that no change to the final rule is necessary. The age of an airplane is irrelevant to the inspection threshold. Because the inspections are related to fatigue, only the number of flight cycles that have accumulated on an airplane are relevant to the inspection threshold. If an airplane has been modified, altered, or repaired, such as an STC cargo conversion, the results of an assessment in accordance with either paragraph (d) or (g) of the AD could indicate that the initial inspections are required prior to the thresholds specified in paragraph (c) of the AD.

Limit Applicability of the Transferability Requirement

One commenter concurs with paragraph (g) of the proposed AD, which addresses the inspection schedule for transferred airplanes, provided that it is limited to airplanes that have exceeded the threshold established by paragraph (c)(1) or (c)(2). Paragraph (h) of the final rule [proposed paragraph (g)] is limited as stated by the commenter, and paragraph (h) is adopted as proposed.

Clarification of FAA-Approved Method

One commenter requests that paragraph (e) of the proposed AD be clarified so that there is no confusion regarding the level of FAA approval required for repairs to SSI's. The commenter states that it interprets paragraph (e) to mean that any Designated Engineering Representative (DER) with delegated authority would still have the authority to approve repairs to SSI's based on a static strength analysis. The commenter also interprets that an operator would have 12 months after the repair to develop an alternative inspection plan, or to demonstrate that the existing inspection program provides an acceptable level of safety.

The commenter is correct that DER's still have the authority to approve repairs to SSI's based on a static strength analysis. Except as discussed under the heading ''Evaluation of Existing STC Design Changes,'' paragraph (f) of the final rule [proposed paragraph (e)] is unchanged from the corresponding paragraph of AD 91–14–20. The commenter also is correct that operators are allowed 12 months after installation of the repair to revise their FAA-approved maintenance or inspection program to include new inspections for the affected SSI's. The new inspection method and compliance times must be approved by the Manager of the Seattle ACO.

Delegate Approval Authority to DER's

Several commenters request that the FAA delegate approval authority to the DER's to approve new inspections and compliance times specified in paragraphs (d) and (f) of the proposed AD. These commenters state that this delegation would decrease the time required to obtain such approvals. These commenters question whether the FAA will be able to process a substantial number of requests that will be generated because of the proposed AD. This question arises from one commenter's past experience with the

CPCP in which the approval process took a long period of time.

In the broader context of delegation of AD required approvals, the FAA has recently issued guidance on this subject and will be implementing this guidance in the near future. Because this request may be accommodated through FAA management of designees, no revision to the final rule is needed.

Credit for Previous Inspections

Several commenters request that paragraph (c) of the proposed AD positively reflect that an operator is in compliance if inspections have been accomplished in accordance with Revision D of Boeing Document No. D6–37089 prior to the effective date of the AD. These commenters state that paragraph (c) of the proposed AD is not clear with regard to whether or not credit is to be given and when the next inspection would be required. These commenters point out that the phrase ''Compliance: Required as indicated, unless accomplished previously,'' as stated in the proposed AD, allows the necessary credit for previously accomplished inspections.

The FAA does not consider that a change to the final rule is necessary. Operators are given credit for work previously performed by means of the phrase in the AD that was referenced by the commenters. In the case of this AD, if the initial inspection has been accomplished prior to the effective date of this AD, this AD does not require that it be repeated. However, the AD does require that repetitive inspections be conducted thereafter at the intervals specified in the Boeing SSID, and that other follow-on actions be accomplished when indicated.

Further FAA/Industry Discussions

Several commenters request that the FAA have further discussions with Boeing, operators, and other regulatory agencies prior to issuing the final rule because the proposed AD reflects a major change in FAA policy and extends well beyond the original concept of the Boeing SSIP. The FAA does not concur. As discussed in the NPRM and the preceding discussion of comments, this AD is consistent with the FAA's long-standing policy, as expressed in AC No. 91–56. As demonstrated by the breadth and depth of comments received, the public has had an ample opportunity to comment on the merits of the proposal.

Cost Estimate

Several commenters request that the FAA revise the Cost Impact information of NPRM Docket No. 96–NM–263–AD (for Model 727 airplanes) and NPRM Docket No. 96–NM–264–AD (for Model 737 airplanes) to accurately reflect the costs associated with accomplishing the requirements of both proposed AD's.

One commenter states that all affected 737 airplanes worldwide should be included in the cost estimate in NPRM Docket No. 96–NM–264–AD. The FAA does not concur. Airworthiness directives that are issued by the FAA directly affect only U.S.-registered airplanes; therefore, the cost estimate in an AD is limited only to U.S.-registered airplanes.

Several commenters to NPRM Docket No. 96–NM–263–AD (applicable to Model 727 series airplanes) state that 1,030 Model 727 airplanes (U.S.-registered) are affected by the proposed AD, not just 74 airplanes, as specified in NPRM. One of these commenters states that the cost estimate in the NPRM does not reflect the cost for all 727 operators to incorporate Revision H of the SSID into an FAA-approved maintenance or inspection program. Similarly, several commenters also state that the cost estimate in NPRM Docket No. 96–NM–264–AD does not reflect comparable costs for all 737–100 and –200 airplanes.

The FAA concurs with the commenters in that the NPRM proposed that every affected U.S. operator must revise their maintenance or inspection programs to incorporate Revision H (for Model 727 airplanes) or Revision D (for Model 737 airplanes) of the SSID within 12 months after the effective date of the applicable AD. As discussed previously under the heading ''Extend Compliance Time for Revising the Maintenance or Inspection Program,'' the FAA has revised both final rules so that the maintenance or inspection program revision is only required for any airplane prior to its reaching the applicable threshold.

In addition, the FAA has revised the Cost Impact information of Final Rule Docket No. 96–NM–263–AD to address a total of 1,001 airplanes, which includes 223 airplanes (35 operators) that are estimated to exceed the thresholds specified in the AD within the next 10 years. For this final rule, the FAA also has revised the Cost Impact information to address a total of 404 airplanes, which includes 158 airplanes (39 operators) that are estimated to exceed the thresholds specified in the AD within the next 10 years. As discussed previously under the heading ''Modify Criteria for Adjusting the Threshold,'' if sufficient substantiating data are submitted to justify extending the threshold, the FAA will grant such extensions so that the operators of some relatively low utilization airplanes may never be required to revise their maintenance or inspection program to incorporate the SSIP.

One commenter estimates that it will take 1,700 work hours per airplane (for Model 727 airplanes) to identify previously installed repairs, which will require at least 10 days of downtime to survey each airplane at a total cost to the commenter of $8.9 million. This commenter also estimates that its cost due to lost revenue would be $10.2 million, for a total cost of $19.1 million over 6 months (identification and lost revenue). This commenter further estimates that it will cost $110.5 million to survey existing repairs on all 727 airplanes.

Another commenter estimates that it will cost $240 million to accomplish the initial inspection to determine if there are existing repairs on the 727 airplanes. This task will take over 4,000 work hours per airplane to accomplish (2,000 work hours to open and close; 500 work hours to inspect, map, assess, etc.; and 1,500 work hours to complete non-routines generated by this special inspection).

Similar comments were submitted to NPRM Docket No. 96–NM–264–AD; however, the commenters did not provide specific cost figures for performing assessments on existing repairs.

As discussed under the heading ''Extend Compliance Time for Assessing Existing Repairs and Boeing Modifications,'' the FAA has revised both final rules to postpone the requirement to assess existing repairs of SSI's until after the applicable SSID inspection. This revision eliminates the need for any special inspection in order to comply with the requirement to assess repairs.

Several commenters also state that the cost estimate in the NPRM's did not reflect the costs of developing inspection programs for repairs and Boeing modifications that are installed prior to the effective date of the AD. The FAA concurs and has revised the Cost Impact information of both final rules to include (within the total costs) $258,000 per airplane over the next 10 years to account for these costs.

Several commenters assert that the cost of the proposed AD is over $100 million, which is more than 20 times the FAA's estimate in the NPRM Docket No. 96–NM–263–AD (for Model 727 airplanes). As discussed below in the Cost Impact information, the FAA estimates that the total cost over the next 10 years associated with this final rule is $98,044,800, or an average of $9,804,480 per year. The FAA also

estimates that the highest total cost during any one of the next 10 years associated with this final rule is $23,916,000. The difference between these estimates is at least in part attributable to the changes in the final rule discussed previously, which provide significant relief to operators. (Similar comments were submitted to NPRM Docket No. 96–NM–264–AD; however, the commenters did not provide a total cost estimate for these actions.)

Additional Clarifications

In reviewing the comments submitted to the NPRM, questions arose regarding the relationship of the inspection threshold requirements of paragraph (c) of the proposed AD and the provisions of the Boeing SSID that allow for sampling of specified percentages of the affected fleet. As explained in the NPRM, the FAA's intent in paragraph (c) is to require that all airplanes that exceed the threshold be inspected in accordance with the Boeing SSID. To the extent that there is any potential for conflict between paragraph (c) and the Boeing SSID, the provisions specified in this AD would prevail. Therefore, even if Revision D would permit operators to omit inspections of SSI's based on a sampling approach, this AD requires that those inspections be performed on all airplanes exceeding the specified thresholds. The FAA has revised the final rule to include a new NOTE following paragraph (c) to clarify this point.

Similarly, the FAA notes that paragraph (b) of the proposed AD would have required that the revision to the maintenance or inspection program include certain SSID provisions that were proposed to be overridden by other paragraphs of the proposed AD. The FAA has revised the requirements of paragraph (b) to clarify that the AD overrides these SSID provisions.

The FAA has added a parenthetical clarification in the applicability of the final rule to point out that Model 737–200C series airplanes also are subject to the requirements of the AD.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 1,007 Boeing Model 737–100 and –200 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 404 airplanes of U.S. registry and 43 U.S. operators (over 10 years) will be affected by this AD.

Incorporation of the SSID program into an operator's maintenance or inspection program, as required by AD 91–14–20, takes approximately 1,000 work hours per airplane (6 affected airplanes) to accomplish, at an average labor rate of $60 per work hour. Based on these figures, the cost of incorporating the revised procedures (specified in Revisions B and C of the SSID) into the maintenance or inspection program is estimated to be $360,000, or $60,000 per airplane.

The recurring inspections, as required by AD 91–14–20, take approximately 500 work hours per airplane to accomplish, at an average labor rate of $60 per work hour. Based on these figures, the recurring inspection cost to the 6 U.S.-registered candidate fleet airplanes is estimated to be $180,000, or $30,000 per airplane, per inspection cycle.

The incorporation of Revision D of the SSID into an operator's maintenance or inspection program, as required by this new AD, takes approximately 1,200 work hours (per operator) to accomplish, at an average labor rate of $60 per work hour. The FAA estimates that within 10 years, 39 operators will be required to incorporate Revision D of the SSID. Based on these figures, the cost of incorporating the revised procedures (specified in Revision D of the SSID) into the maintenance or inspection program is estimated to be $2,808,000, or $72,000 per operator.

The recurring inspections, as required by this new AD, take approximately 600 work hours per airplane to accomplish, at an average labor rate of $60 per work hour. The FAA estimates that after 10 years, 39 operators will be required to inspect 146 airplanes and assess the damage tolerance characteristics of each repaired SSI or each SSI that is physically altered by an existing design change other than an STC. The cost impact of this inspection and assessment required by this AD on U.S. operators is estimated to be $71,328,000 over 10 years, or an average of $48,855 per airplane, per year. During the 10 years, the FAA also conservatively estimates that 43 operators of 404 airplanes will be required to assess the damage tolerance characteristics of each SSI on which the structure identified in Revision D of the SSID has been physically altered in accordance with an STC prior to the effective date of this AD. The cost impact of this assessment required by this AD on U.S. operators is estimated to be $21,000,000 over 10 years, or an average of $5,198 per airplane, per year.

In summary, the FAA estimates that the actions, as required by this new AD, will cost $98,044,800 over 10 years, or an average of $9,804,480 per year. The FAA also estimates that the average cost per airplane over 10 years is $242,685, or an average of $24,269 per year. The highest total cost during any one of the 10 years is $23,916,000. (The FAA has included in the Rules Docket a detailed description of cost estimates related to the actions required by this AD.)

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. However, it can reasonably be assumed that the majority of the affected operators have already initiated the original SSID program (as required by AD 91–14–20), and many may have already initiated the additional inspections required by this new AD action.

Regulatory Impact

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 final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from 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. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39–7061 (56 FR 30680, July 5, 1991), and by adding a new airworthiness directive (AD), amendment 39–10531, to read as follows:

98–11–04 Boeing: Amendment 39–10531. Docket 96–NM–264–AD. Supersedes AD 91–14–20, Amendment 39–7061.

Applicability: All Model 737–100 and –200 series airplanes (including Model 737–200C series airplanes), certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To ensure the continued structural integrity of the total Boeing Model 727 fleet, accomplish the following:

Note 1: Where there are differences between the AD and the Supplemental Structural Inspection Document, the AD prevails.

(a) For airplanes listed in Section 3.0 of Boeing Document No. D6–37089, ''Supplemental Structural Inspection Document'' (SSID), Revision B, dated February 18, 1987, and Revision C, dated January 1990: Within 12 months after August 9, 1991 (the effective date of AD 91–14–20, amendment 39–7061), incorporate a revision into the FAA-approved maintenance inspection program which provides no less than the required damage tolerance rating (DTR) for each Structural Significant Item (SSI) listed in that document. (The required DTR value for each SSI is listed in the document.) The revision to the maintenance program shall include and shall be implemented in accordance with the procedures in Sections 5.0 and 6.0 of the SSID. This revision shall be deleted following accomplishment of the requirements of paragraph (b) of this AD.

Note 2: For the purposes of this AD, an SSI is defined as a principal structural element that could fail and consequently reduce the structural integrity of the airplane.

(b) Prior to reaching the threshold specified in paragraph (c) of this AD, or within 12 months after the effective date of this AD, whichever occurs later, incorporate a revision into the FAA-approved maintenance or inspection program that provides no less than the required DTR for each SSI listed in Boeing Document No. D6–37089, ''Supplemental Structural Inspection Document'' (SSID), Revision D, dated June 1995 (hereinafter referred to as ''Revision D''). (The required DTR value for each SSI is listed in the document.) Except as provided to the contrary in paragraphs (c), (d), and (g) of this AD, the revision to the maintenance or inspection program shall include and shall be implemented in accordance with the procedures in Section 5.0, ''Damage Tolerance Rating (DTR) System Application'' and Section 6.0, ''SSI Discrepancy Reporting'' of Revision D. Upon incorporation of the revision required by this paragraph, the revision required by paragraph (a) of this AD may be deleted.

(c) Except as provided in paragraph (d), (e), or (g) of this AD, perform an inspection to detect cracks in all structure identified in Revision D at the time specified in paragraph (c)(1) or (c)(2) of this AD, as applicable.

(1) For Model 737–200C series airplanes: Inspect prior to the accumulation of 46,000 total flight cycles, or within 4,000 flight cycles measured from the date 12 months after the effective date of this AD, whichever occurs later.

Note 3: The requirements specified in paragraph (c)(1) of this AD only apply to airplanes listed as 737–200C on the type certificate data sheet. Paragraph (c)(1) does not apply to airplanes that have been modified from a passenger configuration to an all-cargo configuration by supplemental type certificate (STC). Paragraphs (c)(2) and (d) apply to those airplanes.

(2) For all airplanes, except for those airplanes identified in paragraph (c)(1) of this AD: Inspect prior to the accumulation of 66,000 total flight cycles, or within 4,000 flight cycles measured from the date 12 months after the effective date of this AD, whichever occurs later.

Note 4: Notwithstanding the provisions of paragraphs 5.1.1, 5.1.2, 5.1.6(e), .1.11, 5.1.12, 5.1.13, 5.2, 5.2.1, 5.2.2, 5.2.3, and 5.2.4 of the General Instructions of Revision D, which would permit operators to perform fleet and rotational sampling inspections, to perform inspections on less than whole airplane fleet sizes and to perform inspections on substitute airplanes, this AD requires that all airplanes that exceed the threshold be inspected in accordance with Revision D.

Note 5: Once the initial inspection has been performed, operators are required to perform repetitive inspections at the intervals specified in Revision D in order to remain in compliance with their maintenance or inspection programs, as revised in accordance with paragraph (b) of this AD.

(d) For airplanes on which the structure identified in Revision D has been physically altered in accordance with an STC prior to the effective date of this AD: Accomplish the requirements specified in paragraph (d)(1) or (d)(2) of this AD.

(1) Within 18 months after the effective date of this AD, assess the damage tolerance characteristics of each SSI created or affected by each STC to determine the effectiveness of the applicable Revision D inspection for each SSI and, if not effective, revise the FAA-approved maintenance or inspection program to include an inspection method for each new or affected SSI, and to include the compliance times for initial and repetitive accomplishment of each inspection. Following accomplishment of the revision and within the compliance times established, perform an inspection to detect cracks in the structure affected by any design change or repair, in accordance with the new inspection method. The new inspection method and the compliance times shall be approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

Note 6: For purposes of this AD, an SSI is ''affected'' if it has been physically altered or repaired, or if the loads acting on the SSI have been increased or redistributed. The effectiveness of the applicable inspection method and compliance time should be determined based on a damage tolerance assessment methodology, such as that described in FAA Advisory Circular AC No. 91–56, Change 2, dated April 15, 1983.

(2) Accomplish paragraphs (d)(2)(i), (d)(2)(ii), and (d)(2)(iii) of this AD.

(i) Within 18 months after the effective date of this AD, submit a plan that describes a methodology for accomplishing the requirements of paragraph (d)(1) of this AD to the Manager, Seattle ACO, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; fax (425) 227–1181.

Note 7: The plan should include a detailed description of the: STC; methodology for identifying new or affected SSI's; method for developing loads and validating the analysis; methodology for evaluating and analyzing the damage tolerance characteristics of each new or affected SSI; and proposed inspection method. The plan would not need to include all of these elements if the operator can otherwise demonstrate that its plan will enable the operator to comply with paragraph (d)(2)(iii) of this AD.

(ii) Within 18 months after the effective date of this AD, perform a detailed visual inspection in accordance with a method approved by the Manager, Seattle ACO to detect cracks in all structure identified in Revision D that has been altered by an STC.

(A) If no crack is detected, repeat the detailed visual inspection thereafter at intervals not to exceed 18 months.

(B) If any crack is detected, prior to further flight, repair it in accordance with a method approved by the Manager, Seattle ACO.

(iii) Within 48 months after the effective date of this AD, revise the FAA-approved maintenance or inspection program to include an inspection method for each new or affected SSI, and to include the compliance times for initial and repetitive accomplishment of each inspection. The inspection methods and the compliance times shall be approved by the Manager, Seattle ACO. Accomplishment of the actions specified in this paragraph constitutes terminating action for the repetitive

inspection requirements of paragraph (d)(2)(ii)(A) of this AD.

Note 8: Notwithstanding the provisions of paragraphs 5.1.17 and 5.1.18 of the General Instructions of Revision D, which would permit deletions of modified, altered, or repaired structure from the SSIP, the inspection of SSI's that are modified, altered, or repaired shall be done in accordance with a method approved by the Manager, Seattle ACO.

(e) For airplanes on which the structure identified in Revision D has been repaired or physically altered by any design change other than an STC identified in paragraph (d), prior to the effective date of this AD: At the time of the first inspection of each SSI after the effective date of this AD in accordance with Revision D, identify each repair or design change to that SSI. Within 12 months after such identification, assess the damage tolerance characteristics of each SSI created or affected by each repair or design change to determine the effectiveness of the applicable SSID inspection for each SSI and, if not effective, revise the FAA-approved maintenance or inspection program to include an inspection method and compliance times for each new or affected SSI. The new inspection method and the compliance times shall be approved by the Manager, Seattle ACO.

Note 9: For the purposes of this AD, a design change is defined as any modification, alteration, or change to operating limitations.

(f) Except as provided in paragraph (d)(2)(ii)(B) of this AD, cracked structure found during any inspection required by this AD shall be repaired, prior to further flight, in accordance with an FAA-approved method.

(g) For airplanes on which the structure identified in Revision D is affected by any design change (including STC's) or repair that is accomplished after the effective date of this AD: Within 12 months after that modification, alteration, or repair, revise the FAA-approved maintenance or inspection program to include an inspection method and compliance times for each new or affected SSI, and to include the compliance times for initial and repetitive accomplishment of each inspection. The new inspection method and the compliance times shall be approved by the Manager, Seattle ACO.

Note 10: Notwithstanding the provisions of paragraphs 5.1.17 and 5.1.18 of the General Instructions of Revision D, which would permit deletions of modified, altered, or repaired structure from the SIP, the inspection of SSI's that are modified, altered, or repaired shall be done in accordance with a method approved by the Manager, Seattle ACO.

(h) Before any airplane that is subject to this AD and that has exceeded the applicable compliance times specified in paragraph (c) of this AD can be added to an air carrier's operations specifications, a program for the accomplishment of the inspections required by this AD must be established in accordance with paragraph (h)(1) or (h)(2) of this AD, as applicable.

(1) For airplanes that have been inspected in accordance with this AD, the inspection of each SSI must be accomplished by the new operator in accordance with the previous operator's schedule and inspection method, or the new operator's schedule and inspection method, whichever would result in the earlier accomplishment date for that SSI inspection. The compliance time for accomplishment of this inspection must be measured from the last inspection accomplished by the previous operator. After each inspection has been performed once, each subsequent inspection must be performed in accordance with the new operator's schedule and inspection method.

(2) For airplanes that have not been inspected in accordance with this AD, the inspection of each SSI required by this AD must be accomplished either prior to adding the airplane to the air carrier's operations specification, or in accordance with a schedule and an inspection method approved by the Manager, Seattle ACO. After each inspection has been performed once, each subsequent inspection must be performed in accordance with the new operator's schedule.

(i)(1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 11: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(i)(2) Alternative methods of compliance, approved previously in accordance with AD 91–14–20, amendment 39–7061, are not considered to be approved as alternative methods of compliance with this AD.

(j) 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.

(k) The actions specified in paragraphs (b) and (c) shall be done in accordance with Boeing Document No. D6–37089, ''Supplemental Structural Inspection Document'' (SSID), Revision D, dated June 1995, which contains the following list of effective pages:

Page number shown on page	Revision level shown on page
List of Effective Pages Pages 1 thru 10.	D.

Note: The issue date of Revision D is indicated only on the title page; no other page of the document is dated.) This incorporation by reference was 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 Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(l) This amendment becomes effective on June 23, 1998.

Issued in Renton, Washington, on May 12, 1998.

D.L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 98–13078 Filed 5–18–98; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Airspace Docket No. 98–ACE–17]

Amendment to Class D and Class E Airspace; Fort Leonard Wood, MO

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Direct final rule; request for comments.

SUMMARY: This action amends the Class D and Class E airspace areas at Fort Leonard Wood, Forney Army Airfield, MO. The FAA has developed Global Positioning System (GPS) Runway (RWY) 14; GPS RWY 32; Localizer (LOC) RWY 14; Nondirectional Radio Beacon (NDB) RWY 14; NDB RWY 32; VHF Omnidirectional Range (VOR) RWY 14; and VOR RWY 32 Standard Instrument Approach Procedures (SIAPs) to serve Fort Leonard Wood, Forney Army Airfield, MO. The enlarged Class E surface area and Class E airspace area 700 feet Above Ground Level (AGL) will contain the new SIAPs within controlled airspace. A minor revision to the Airport Reference Point (ARP) coordinates is included in this document. The intended effect of this rule is to revise the ARP coordinates and to provide additional controlled Class E airspace for aircraft operating under Instrument Flight Rules (IFR).

DATES: Effective date: 0901 UTC, October 8, 1998.

Comments for inclusion in the Rules Docket must be received on or before July 1, 1998.

ADDRESSES: Send comments regarding the rule in triplicate to: Manager, Airspace Branch, Air Traffic Division, ACE–520, Federal Aviation