Note 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(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.

Incorporation by Reference

(k) Except as provided by paragraphs (a), (e), (f), and (g) of this AD; the actions shall be done in accordance with Boeing Service Bulletin 747–54A2196, Revision 1, dated August 17, 2000. 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.

Effective Date

(l) This amendment becomes effective on September 24, 2001.

Issued in Renton, Washington, on August 10, 2001.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01–20699 Filed 8–17–01; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000–NM–342–AD; Amendment 39–12377; AD 2001–16–09]

RIN 2120–AA64

Airworthiness Directives; Airbus Model A319, A320, and A321 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), which is applicable to all Model A320 series airplanes, that currently requires repetitive measurements of the deflection of the elevator trailing edge; inspections of the elevator servo controls and their attachments; and replacement of worn or damaged parts, if necessary. This amendment requires periodic inspection of the elevators for excessive freeplay, repair of worn parts if excessive freeplay is detected, and modification of the elevator neutral setting. It also revises the applicability to include additional airplane models. This amendment is prompted by additional reports of severe vibration in the aft cabin of Model A320 series airplanes and studies that indicate that the primary cause is excessive freeplay in the elevator attachments. The actions specified by this AD are intended to prevent excessive vibration of the elevators, which could result in reduced structural integrity and reduced controllability of the airplane.

DATES: Effective September 24, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 24, 2001.

ADDRESSES: The service information referenced in this AD may be obtained from Airbus Industrie, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France. 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: Tim Dulin, Aerospace Engineer, International Branch, ANM–116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (425) 227–2141; fax (425) 227–1149.

SUPPLEMENTARY INFORMATION: The FAA issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to supersede AD 92–04–06, amendment 39–8177 (57 FR 6068, February 20, 1992). (A correction of AD 92–04–06 was published in the **Federal Register** on April 1, 1992 (57 FR 11137).) AD 92–04–06 is applicable to all Airbus Model A320 series airplanes. The proposed AD was published in the **Federal Register** on March 1, 2001 (66 FR 12913). The action proposed to require periodic inspection of the elevators for excessive freeplay; repair or replacement of worn parts, if excessive freeplay is detected; replacement of the elevator servo controls with modified elevator servo controls; and modification of the elevator neutral setting. The action also proposed to revise the applicability to include additional airplane models.

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.

Support for Proposed AD

Several commenters, including the National Transportation Safety Board, support the proposed AD.

Request To Withdraw the Proposed AD

One commenter (the manufacturer) requests that the proposed AD be withdrawn. The commenter asserts that there is no unsafe condition due to limit cycle oscillation (LCO) of the elevator. The commenter disagrees with the FAA's conclusion that elevator LCO could result in reduced structural integrity and reduced controllability of the airplane. The commenter notes that because LCO is a fixed-frequency vibration with a constant amplitude, it is therefore not a stability problem. The commenter contends that such a phenomenon is well detectable, and the flight crew can determine the significance of the airframe vibration and initiate appropriate corrective action. The commenter claims that, during the period between LCO initiation and uncomfortable vibration, there is no structural concern. The commenter adds that extensive flight tests have been conducted by the manufacturer, with representative backlash configurations combined with low hinge moment, and no adverse effect on handling qualities was found. The commenter considers the actions included in existing tasks in the aircraft maintenance manual (AMM) and service bulletins to be sufficient to address any possible LCO phenomenon. In addition, the commenter does not consider that there would be any benefit from imposing corrective action on an airplane with no vibration reported.

The FAA does not concur with the request to withdraw the proposed AD. The FAA has determined that the A320 elevator LCO, as defined by Airbus, is actually an aeroelastic stability problem (i.e., self-excited and not damped with time), which, if not addressed, could result in reduced structural integrity and reduced controllability of the airplane. The FAA is aware of all of the analytical and experimental investigations conducted by Airbus that have shown that LCO is caused by a combination of low hinge moment and elevator freeplay. The FAA is also aware that the amplitude of the vibration increases with freeplay and airspeed. The FAA disagrees with the Airbus contention that the vibration will be felt by the flight crew, who can initiate the appropriate corrective action. The FAA notes that the modification of the elevator neutral setting would tend to

mask the presence of freeplay and associated vibration, and make the freeplay checks even more critical. The FAA also disagrees with the Airbus contention that there would be no benefit from imposing these actions on airplanes that have not had vibration problems. To address potential LCO events, Airbus has revised the AMM to reduce the allowable freeplay limits, and issued service bulletins to recommend installation of improved spherical bearings to reduce the wear rate, and modification of the elevator neutral setting to ensure that elevators have sufficient hinge moment loading under most flight conditions. The FAA agrees with these recommendations but considers that these actions, except as noted below, must be mandated to ensure the continued safe operation of the fleet, by reducing the likelihood of LCO events and ensuring that the amplitude of any LCO event that does occur is controlled to a level that will not result in reduced structural integrity of the airplane.

The FAA notes that this LCO phenomenon is not unique to Airbus airplanes; the actions required by this AD are consistent with actions taken on other airplanes. The FAA considers this final rule necessary to adequately address the identified unsafe condition.

Request To Remove Requirement To Replace Elevator Servo Controls

One commenter (the manufacturer) considers that the effect of replacing the elevator servo controls would merely improve the wear resistance of the servo control spherical bearings, and would not cure the root cause of the LCO phenomenon. The commenter asserts that mandating the servo control replacement would place an unnecessary financial burden on airlines. (The commenter subsequently clarified this comment as a request to remove this requirement from the proposed AD.)

The FAA concurs. The FAA has determined that replacing the servo controls with new improved controls, as proposed, would provide improved wear resistance but would not prevent wear from occurring. Therefore, the FAA has determined that mandatory replacement is not necessary. Paragraph (c) of the proposed AD has been removed from this final rule. The freeplay checks and rigging change required by this AD will adequately address the identified unsafe condition.

Request To Revise Unsafe Condition

One commenter (an operator) requests that the AD be revised to reflect the position that the identified unsafe condition is instead more a matter of passenger inconvenience. The operator has revised its airplane flight manual (AFM) to include a ''Vibration Section,'' which explains vibration types, methods of identifying vibrations, and specific reporting procedures.

The FAA does not concur. The FAA considers the LCO to be unsafe for the reasons identified in response to the previous comment. No change to the final rule is necessary in this regard.

Request To Extend Compliance Time of the Inspection

Two commenters request that the proposed AD be revised to extend the compliance time for the freeplay inspection. One commenter (an operator) requests that the compliance time be extended from 18 to 18.5 months to correspond to its ''L'' check. This commenter states that the inspection at 18.5-month intervals has proven to be effective at detecting deterioration before elevator-induced vibration is reported. Another commenter (also an operator) reports that, based on its experience, it takes significantly longer than 18 months for the Airbus elevator system components to degrade to a level at which the trailing edge freeplay would fail the test. The commenter suggests that 36 months is a more appropriate inspection interval.

The FAA does not concur with the requests to extend the inspection interval. The FAA has determined that 18 months is the maximum amount of time allowable for these airplanes to continue to safely operate between inspections. The FAA finds that the 18-month compliance time is consistent with the maintenance schedules of most operators. Further, the experience of a couple operators is not sufficient to indicate that the interval should be increased. In the absence of data to justify a longer interval, the FAA finds no reason to deviate from the 18-month interval, as proposed, to accommodate the special maintenance schedules of one operator. No change to the final rule is necessary in this regard.

Request To Extend Compliance Time for Replacement

One commenter (an operator) requests that the proposed AD be revised to extend the compliance time from 18 to 36 months to replace the elevator servo controls. The commenter states that the vendor turnaround time for nonroutine repair of the servo is 26 days, which does not support a servo replacement for its fleet within 18 months, and suggests 36 months for the compliance time for the servo replacement.

As stated previously, the proposed requirement to replace the elevator servo controls has been removed from this final rule. Therefore, no change to the final rule is necessary regarding this comment.

Request To Provide Credit for Actions Completed

One commenter (an operator) states that upgrading the elevator servo controls, uprigging the elevators, and accomplishing a trailing edge play check have been completed on nearly all its airplanes, and asserts that no value would be added by repeating the actions.

The FAA infers that the operator requests the addition of specific language to provide credit for prior accomplishment of those actions. The FAA notes that operators are given credit for work previously performed by means of the phrase in the ''Compliance'' section of the AD that states, ''Required as indicated, unless accomplished previously.'' Therefore, for this AD, if the modification has been accomplished prior to the effective date of the AD, this AD does not require that the action be repeated. No change to the final rule is necessary in this regard.

Request To Revise Cost Estimates

Two commenters request that the proposed AD be revised to indicate that required parts for elevator servo control replacement are not free of charge. One commenter (the manufacturer) notes that the elevator servo bearing replacement is free only on an attrition basis, and not to accommodate the required replacement on all affected airplanes. Another commenter (an operator) notes that removal and upgrade of the elevator servo controls resulted in nonroutine maintenance, costing in excess of $16,666 per airplane.

As stated previously, the proposed requirement to replace the elevator servo controls has been removed from this final rule. Therefore, no change to the final rule is necessary regarding this comment.

Request To Allow Alternative Tooling

Two commenters request that paragraph (a) of the proposed AD be revised to allow the use of ''equivalent tooling'' to perform the inspection for excessive elevator freeplay. One commenter (an operator) states that the proposed AD could be interpreted as requiring the use of the tooling identified in the AMM. The commenter contends that applying this interpretation would preclude credit for previous freeplay checks performed

with the alternative tooling, and that the AD would therefore require all of the operator's airplanes to be inspected within three months. The commenter asserts that use of a calibrated spring scale to apply force along with a pointer affixed to the trailing edge to measure the freeplay provides results equivalent to those provided by the AMM-specified tooling.

The commenter has correctly interpreted the AD as requiring the tooling specified in the AMM. The FAA does not concur with the request to revise the final rule to allow alternative tooling to accomplish the inspection. The commenter did not provide any data regarding this alternative tooling to substantiate that the alternative tooling would provide results equivalent to those intended by this AD. However, under the provisions of paragraph (d) of the final rule, the FAA may approve requests for alternative methods of compliance if data are submitted to substantiate that the use of such alternative tooling would provide equivalent results. No change to the final rule is necessary in this regard.

Request To Allow Alternative Materials

One commenter (an operator) requests that the proposed AD be revised to allow use of 535K001/930K016A primer instead of Mastinox 6856K primer for accomplishment of the elevator servo control replacement. The commenter reports that 535K001/930K016A primer was substituted for Mastinox 6856K primer during the modification because of environmental concerns.

As stated previously, the proposed requirement to replace the elevator servo controls has been removed from this final rule. Therefore, no change to the final rule is necessary regarding this comment.

Request To Refer to Future Revision of CMM

This same commenter requests that the proposed AD be revised to indicate a reference to a future revision of the Lucus CMM. Lucus has advised the commenter that CMM 34–52 misidentified the primer as ''Mastinox 5866K'' primer, which will be corrected to ''Mastinox 6856K'' in the next CMM revision.

As stated previously, the proposed requirement to replace the elevator servo controls has been removed from this final rule. Therefore, no change to the final rule is necessary regarding this comment.

Request To Allow Previous Versions of Service Bulletin

One commenter (an operator) requests that the proposed AD be revised to allow compliance with the modification requirement in accordance with Airbus Service Bulletin A320–27–1114, Revision 01, dated April 11, 1997; Revision 02, dated October 13, 1998; and Revision 03, dated December 3, 1998. Based on experience with this type of vibration, the commenter reports that the elevator neutral setting modification has already been accomplished on numerous airplanes, in accordance with Revisions 01, 02, and 03 of the service bulletin. The commenter adds that Revisions 02, 03, and 04 all state: ''No additional work required for previously accomplished aircraft.''

The FAA partially concurs with the request. (Although the commenter refers to ''item 'C' of the Replacement section,'' the FAA infers that the commenter intended to refer to the ''Modification'' requirement, which was paragraph (d) in the proposed AD.) The FAA agrees that airplanes modified in accordance with Revision 01, 02, or 03 should not be required to repeat the modification in accordance with Revision 04. However, the FAA notes that, after the effective date of the AD, only Revision 04 may be used to ensure that the most accurate information is being followed. This final rule has been revised to include new Note 2, which provides credit for the modification in accordance with Revisions 01, 02, and 03 of the service bulletin, if accomplished prior to the effective date of this AD.

Request To Allow Future Service Bulletin Revision

One commenter requests that the proposed AD be revised to specify a future revision to Airbus Service Bulletin A320–27–1114 (which was cited at Revision 04 as the appropriate source of service information for accomplishment of the modification specified by paragraph (d) of the proposed AD). The commenter notes that Airbus has advised that an upcoming revision of the service bulletin will include additional airplanes not included in Revision 04.

The FAA does not concur. Referring to documents that do not exist at the time the AD is published violates Office of the Federal Register (OFR) regulations regarding approval of materials ''incorporated by reference'' in rules. These OFR regulations require that either the service document be submitted for approval by the OFR as ''referenced'' material, in which case it may be simply called out in the text of an AD, or the service document contents be published as part of the actual AD language. An AD may reference only the specific service document that was submitted and approved by the OFR for ''incorporation by reference.'' In order for operators to use later revisions of the referenced document (issued after the publication of the AD), either the FAA must revise the AD to reference the specific later revisions, or operators must request the approval of their use as an alternative method of compliance (under the provisions of paragraph (d) of this AD). The FAA may consider additional rulemaking if it is determined that additional airplanes must be modified.

Request To Revise Repair Requirements

One commenter (an operator) requests that paragraph (b) of the proposed AD be revised to require that repair be accomplished ''as necessary,'' rather than in accordance with specific AMM task numbers. The commenter notes that those AMM tasks address only the servo control and the elevator, not the rod end bearings. The commenter reports that, for almost every check that revealed freeplay outside the AMM limits, it was necessary to replace the rod end bearings of the servo control to correct the deterioration.

The FAA partially concurs. The FAA notes that repair of rod end bearings is addressed under the AMM procedure referenced in the AD. However, the FAA agrees that the specific repair task number is not included in the AMM procedure. Therefore, paragraph (b) of the final rule has been revised to remove specific AMM task references and clarify that the repair must be accomplished in accordance with the AMM to bring freeplay within AMM-specified limits.

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 significantly increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

Approximately 352 airplanes of U.S. registry will be affected by this proposed AD.

Inspecting to detect elevator freeplay will take approximately 2 work hours, at an average labor rate of $60 per work

hour. Based on these figures, the cost impact of the initial inspection required by this AD on U.S. operators is estimated to be $42,240, or $120 per airplane.

Approximately 112 airplanes will require adjustment of the elevator neutral setting, which will take approximately 12 work hours, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the required adjustment on U.S. operators is estimated to be $80,640, or $720 per airplane.

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. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect 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, it is determined that this final rule does not have federalism implications under Executive Order 13132.

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 39–8177 (57 FR 11137, April 1, 1992); and by adding a new airworthiness directive (AD), amendment 39–12377, to read as follows:

2001–16–09 Airbus Industrie: Amendment 39–12377. Docket 2000–NM–342–AD. Supersedes AD 92–04–06, Amendment 39–8177.

Applicability: All Model A319, A320, and A321 series airplanes; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent excessive vibration of the elevators, which could result in reduced structural integrity and reduced controllability of the airplane, accomplish the following:

Inspection

(a) Within 18 months from the last inspection for excessive freeplay or within 3 months after the effective date of this AD, whichever occurs later: Inspect the elevators for excessive freeplay, using a load application tool and a spring scale assembly, in accordance with Airbus A319/A320 Aircraft Maintenance Manual (AMM) Task 27–34–00–200–001, including all changes through August 1, 2000. Thereafter, repeat the inspection at intervals not to exceed 18 months.

Repair

(b) If any inspection required by paragraph (a) of this AD indicates that the freeplay in the elevator exceeds 7 millimeters: Prior to further flight, repair the elevator or servo controls in accordance with the Airbus A319/A320 Aircraft Maintenance Manual, including all changes through August 1, 2000, to bring elevator freeplay within the limits specified by the AMM.

Modification

(c) For the airplanes listed in Airbus Service Bulletin A320–27–1114, Revision 04, dated December 7, 1999: Within 18 months after the effective date of this AD, shift the elevator neutral setting to minus 0.5 degree, nose-up, in accordance with Airbus Service Bulletin A320–27–1114, Revision 04, dated December 7, 1999.

Note 2: Accomplishment prior to the effective date of this AD of the modification in accordance with Airbus Service Bulletin A320–27–1114, dated December 12, 1996; Revision 1, dated April 11, 1997; Revision 2, dated October 13, 1998; or Revision 3, dated December 3, 1998; is acceptable for compliance with the requirements of paragraph (c) of this AD.

Alternative Methods of Compliance

(d) 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, International Branch, ANM–116, Transport Airplane Directorate, FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM–116.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM–116.

Special Flight Permits

(e) 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.

Incorporation by Reference

(f) The modification shall be done in accordance with Airbus Service Bulletin A320–27–1114, Revision 04, dated December 7, 1999. 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 Airbus Industrie, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France. 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.

Effective Date

(g) This amendment becomes effective on September 24, 2001.

Issued in Renton, Washington, on August 10, 2001.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01–20700 Filed 8–17–01; 8:45 am]

BILLING CODE 4910–13–P