



U.S. Department
of Transportation

**Federal Aviation
Administration**

Advisory Circular

**Subject: AGING AIRPLANE INSPECTIONS
AND RECORDS REVIEWS**

Date: 10/22/04

AC No: 120-84

Initiated By: AFS-309

Change:

1. PURPOSE. This advisory circular (AC) provides guidance pertaining to aging airplane inspections and records reviews accomplished to satisfy the requirements of the Aging Airplane Safety Final Rule. This information represents an acceptable way, but not the only way, for an aging airplane inspection and records review to be conducted. However, if you use the means described in this AC, you must follow it in all important aspects.

2. WHO SHOULD USE THIS AC. This AC is for air carriers operating airplanes under Title 14 of the Code of Federal Regulations (14 CFR) part 121, foreign air carriers or persons operating U.S.-registered, multiengine airplanes under 14 CFR part 129, and persons operating multiengine airplanes with nine or fewer seats in scheduled operations under 14 CFR part 135.

3. EFFECTIVE DATE. December 8, 2003.

4. BACKGROUND.

a. The Aging Aircraft Safety Act of 1991.

(1) To address aging aircraft concerns, Congress enacted Title IV of Public Law 102-143, the Aging Aircraft Safety Act of 1991 (the Act). This act was subsequently codified as § 44717 of Title 49 of the United States Code. The Act instructs the Administrator to prescribe regulations that ensure the continuing airworthiness of aging aircraft. The Act requires the Administrator to conduct inspections and review the maintenance and other records of each aircraft an air carrier uses to provide air transportation. The Act also requires the Administrator to establish procedures for performing such inspections. These inspections and records reviews enable the Administrator to decide whether an aging aircraft is in a safe condition and maintained properly for operation in air transportation.

(2) In addition to imposing obligations on the Administrator, the Act requires air carriers to demonstrate as part of these inspections that the maintenance of the aircraft's structure, skin and other age sensitive parts and components has been adequate and timely enough to assure the highest degree of safety. The Act also requires air carriers to make their aircraft and aircraft records available for inspection and review.

b. The Aging Airplane Safety Final Rule.

(1) On December 6, 2002, the Federal Aviation Administration (FAA) published the Aging Airplane Safety Interim Final Rule (67 FR 72726). On February 2, 2005, the FAA published the Aging Airplane Safety Final Rule (69 FR 5518). The final rule specifies mandatory aging airplane inspections for certain airplanes according to their years in service, as well as requiring damage-tolerance-based inspections and procedures to be included in the maintenance programs of certain airplanes. The Aging Airplane Safety Rule also prohibits operation of these airplanes after specified deadlines unless damage-tolerance-based inspections and procedures are included in the maintenance programs under which the airplanes are maintained. The FAA implemented this requirement to assess the damage tolerance of older airplane structures and to ensure the continuing airworthiness of aging airplanes operated in air transportation.

(2) The Aging Airplane Safety Rule permits certain appropriately authorized representatives of the Administrator to conduct required aging airplane inspections and records reviews. These required inspections and records reviews may be carried out by aviation safety inspectors (ASI), Designated Airworthiness Representatives (DAR), and Organizational Designated Airworthiness Representatives (ODAR).

5. GENERAL PROVISIONS OF THE AGING AIRPLANE SAFETY RULE REGARDING AGING AIRPLANE INSPECTIONS AND RECORDS REVIEWS.

a. Aging Airplane Safety Rule Requirements. The Aging Airplane Safety Rule requires that after their 14th year in service (the calendar time elapsed since an airplane was issued its first U.S. or first foreign airworthiness certificate), certain airplanes must undergo inspections and records reviews by the Administrator. This action ensures the maintenance of the airplanes' age-sensitive parts and components has been adequate and timely. These airplanes include all airplanes operated under part 121, all U.S.-registered multiengine airplanes operated under part 129, and all multiengine airplanes used in scheduled operations under part 135. To ensure the maintenance is adequate and timely, the FAA will conduct structural spot inspections and review applicable airplane records. To satisfy the intent of the rule, the FAA will sample the tasks and records for each airplane, and performs continued surveillance of an air carrier's maintenance program.

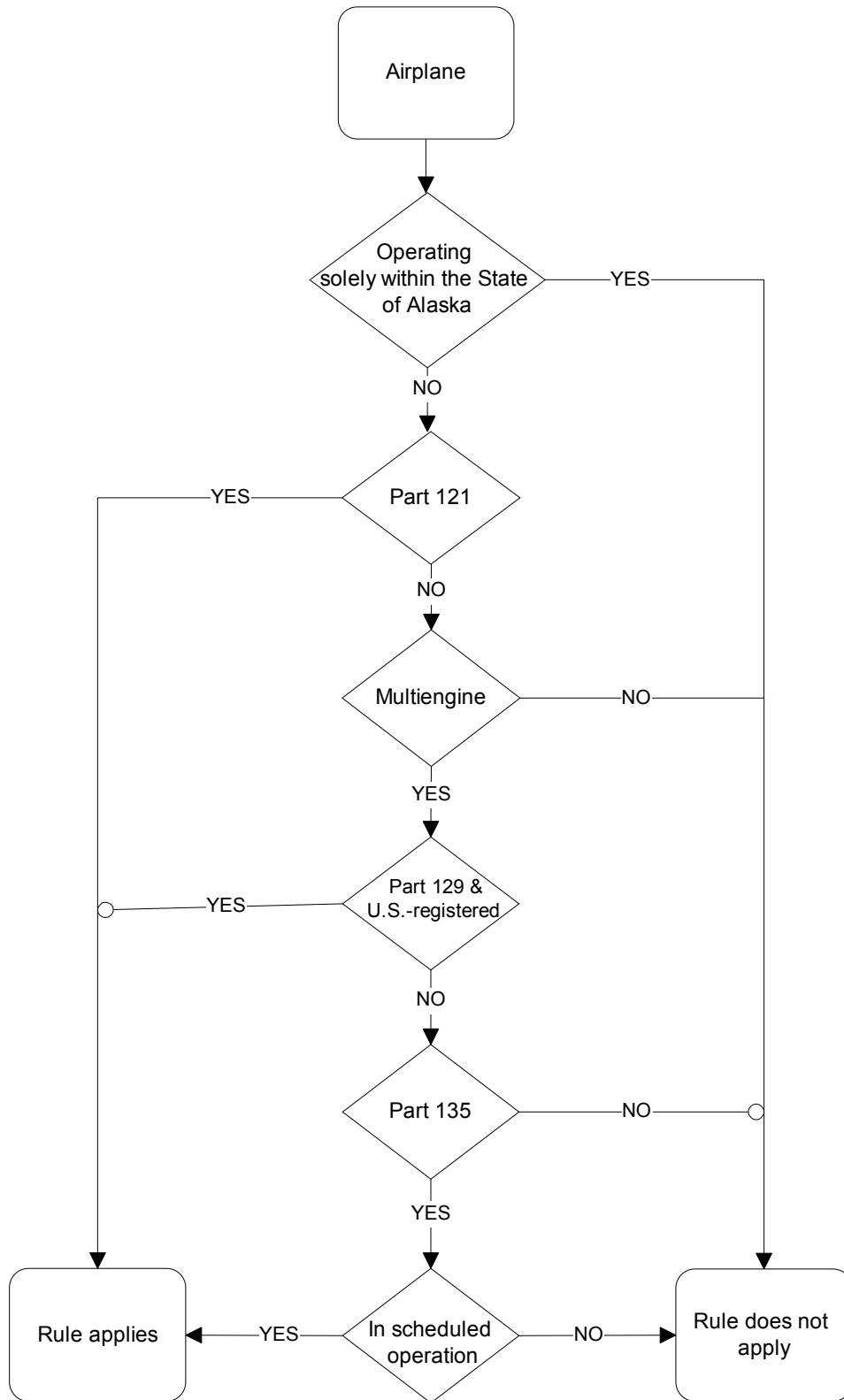
b. Airplanes and Operations Affected. To determine which airplanes must undergo inspections and records reviews required by the Aging Airplane Safety Rule, an affected operator should use Figure 1, Decision Logic-Applicability of Inspections and Records Reviews. If an airplane is operated under part 121, then § 121.368 applies. Multiengine airplanes operated under part 129 and smaller airplanes operated under part 135 may also be subject to the Aging Airplane Safety Rule. If the airplanes are U.S.-registered and operate under part 129, then § 129.33 applies. Multiengine airplanes in scheduled operations under part 135 must comply with § 135.422. Airplanes not being used to conduct operations under these parts of 14 CFR are not subject to aging airplane inspections and records reviews. The Aging Airplane Safety Rule also does not apply to an airplane operated between any point within the state of Alaska and any other point within the state of Alaska.

c. Inspections and Records Reviews Due Date. After the operator determines which of its airplanes are affected by the Aging Airplane Safety Rule, it should refer to Figure 2, Decision Logic-Initial Inspections and Records Review Due Date, to determine when each airplane's initial inspection and records review is due. Although the aging airplane inspection and records review is only required after an affected airplane's 14th year in service, the Aging Airplane Safety Rule requires airplanes past their 24th year in service as of December 8, 2003, to be inspected no later than December 5, 2007. This ensures the oldest airplanes are inspected first and distributes the FAA's workload for initial inspections. An airplane that has passed its 14th year in service but not its 24th year in service as of December 8, 2003, must be inspected no later than December 4, 2008. An airplane that has not passed its 14th year in service must have its first aging airplane inspection and records review within 5 years after the start of its 15th year in service. In all cases, subsequent inspections and records reviews are required at no more than seven-year intervals after the initial inspection and records review. The Aging Airplane Safety Rule prohibits persons from operating an affected airplane under parts 121, 129, and 135 unless the airplane has undergone the required inspection and records review. However, an operator still could operate an airplane under part 91 or part 125.

d. Extensions. As specified in the Aging Airplane Safety Rule, the Administrator may approve an extension of up to 90 days on the threshold and repeat interval of an aging airplane inspection and records review to accommodate an unforeseen scheduling conflict. The operator should submit a request for extension to its principal maintenance inspector (PMI), along with justification for the extension. An air carrier may submit its request through electronic mail, facsimile, or other means acceptable to its PMI.

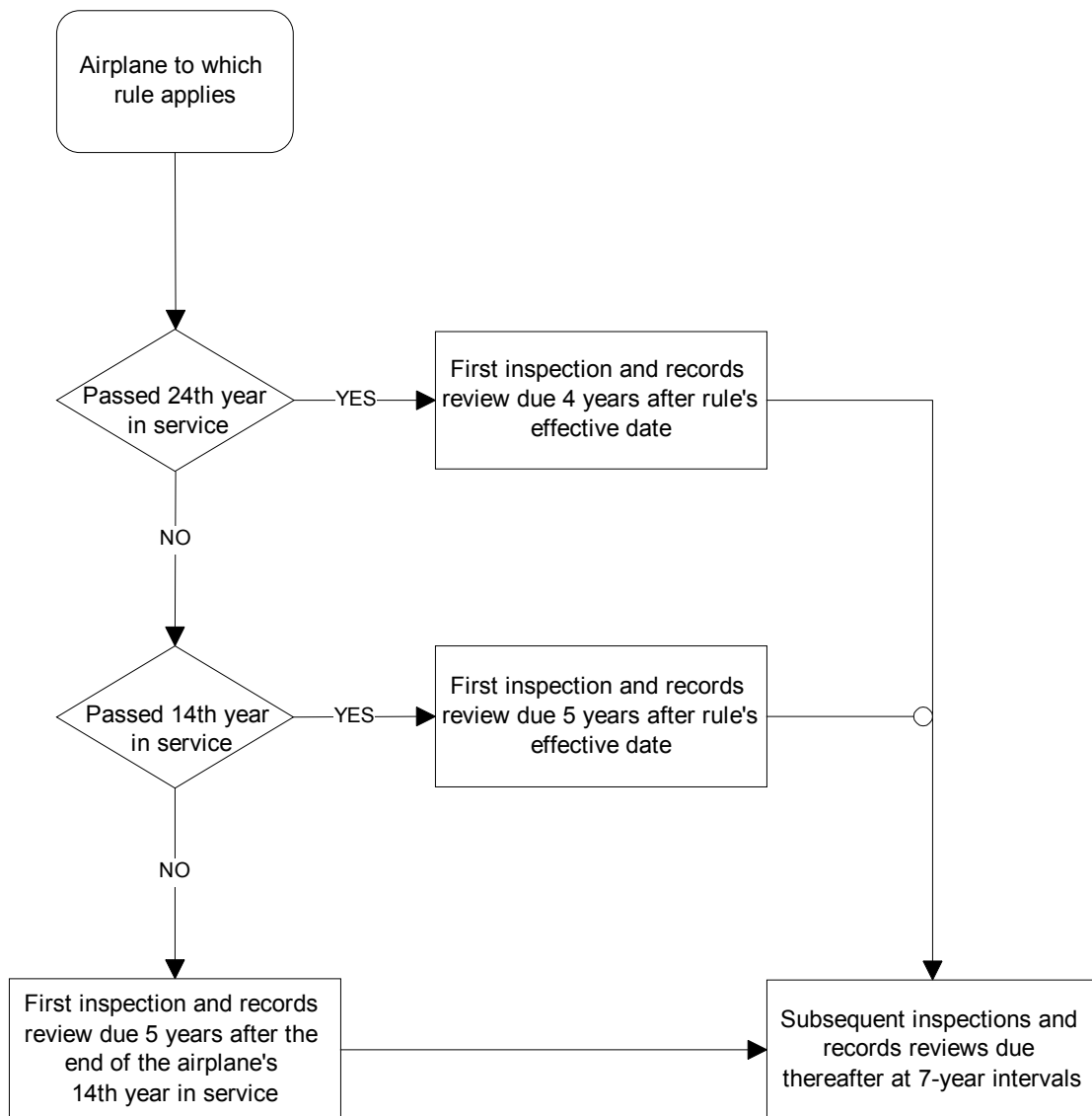
NOTE: Even though a DAR or ODAR may conduct the inspection and records review, only an air carrier's certificate holding district office may grant an extension of the threshold and repeat intervals. Without an extension an air carrier must not operate an airplane after it has reached its threshold until the inspection and records review is complete.

**FIGURE 1. DECISION LOGIC
APPLICABILITY OF INSPECTIONS AND RECORDS REVIEW**



**FIGURE 2. DECISION LOGIC-
INITIAL INSPECTIONS AND RECORDS REVIEW DUE DATE**

NOTE:
Scheduling of inspections and records reviews may be adjusted by 90 days for unforeseen circumstances.



6. CONDUCT OF AGING AIRPLANE INSPECTIONS AND RECORDS REVIEWS.

a. General Information About Inspections and Records Reviews. An airplane's inspection and records review should be carried out during an airplane's heavy maintenance check. A heavy maintenance check is a "C" check or segment thereof, a "D" check or segment thereof, or other scheduled maintenance visit where structural inspections are accomplished. Air carriers should schedule their inspections and records reviews early and provide their PMI with advance-planning schedules for their airplanes' heavy maintenance checks. PMIs should work closely with their air carrier to address any issues that may delay an airplane's inspection and records review or prevent the airplane from returning to service as scheduled. The certificate holding district office also may get help from geographically assigned ASIs to assist in performing these inspections and reviews. The inspections and records reviews may be conducted by an ASI, DAR, or ODAR. In addition, an airplane's inspection and records review may take place in different locations and be accomplished by different inspectors/designees.

NOTE: An air carrier cannot operate an airplane after it has reached the threshold unless the air carrier requests an extension and the FAA approves the extension.

b. FAA Notification. Each air carrier must provide the FAA with notification at least 60 days before each airplane will be available for its inspection and records review. The notification should be provided to the PMI in a form agreed to by the PMI and air carrier. An air carrier may make a single notification to cover several airplanes. The notice should identify each airplane by make, model, serial number, and registration number. It should also provide each airplane's scheduled inspection date and location. Because most records reviews will be carried out separately from the aircraft inspections, the air carrier also should provide the FAA with the location of each airplane's records that are required to be reviewed as specified in § 121.368(d), 129.33(c), 135.422(d).

c. Airplane Inspections.

(1) For each inspection, the FAA will coordinate with the air carrier as to the scope and extent of its planned inspection. To meet the intent of the Act, the FAA will conduct structural spot inspections as specified in FAA Order 8300.10, Airworthiness Inspector's Handbook, volume 3, chapter 2. The FAA will select structural inspections, corrosion prevention and control program tasks, and/or major repairs/modifications on parts of the airplane for review that will be accessible during the heavy maintenance check. The FAA also will sample job task cards to assure their completeness. These cards should indicate the task, method of compliance, and required tooling and signoffs. The air carrier should provide the ASI, DAR, or ODAR conducting the inspection with the supporting documentation for these tasks before the planned inspection. The FAA will attempt not to disrupt the air carrier's scheduled operations. However, the FAA may require additional access to the airplane based on its records review and findings during the airplane inspection.

(2) For the Administrator to ensure air carriers demonstrate that the maintenance of the aircraft's structure, skin and other age-sensitive parts and components have been adequate and timely enough to assure the highest degree of safety, the FAA will focus each inspection and records review on existing aging airplane requirements. These requirements consist of aging airplane structural modifications, corrosion prevention and control programs, supplemental structural inspections programs (including airworthiness limitations inspections), and structural repair requirements.

(3) During the inspection, the ASI, DAR, or ODAR may also observe the accomplishment of maintenance tasks to ensure-

(i) Work instructions provide sufficient detail to accomplish the scope of required maintenance tasks,

(ii) Required tooling and materials are available and used, and

(iii) Properly trained and qualified personnel perform the work.

d. Airplane Records Review.

(1) The records review usually will be accomplished separately from the airplane inspection. The ASI, DAR, or ODAR will review/sample the records identified in this section using FAA Order 8300.10, volume 3, chapters 41, 42, or 75, as applicable, to evaluate the air carrier's records.

(2) As required in § 121.368(d), 129.33(c), 135.422(d), the air carrier must make the following records available to the FAA for the aging airplane records review:

(i) Total years in service of the airplane;

(ii) Total time in service of the airframe;

(iii) Total flight cycles of the airframe (not required under §135.422(d));

(iv) Date of the last inspection and records review required by the Aging Airplane Safety Rule;

(v) Current status of life-limited parts of the airframe;

(vi) Time since the last overhaul of all structural components required to be overhauled on a specific time basis;

(vii) Current inspection status of the airplane, including the time since the last inspection required by the inspection program under which the airplane is maintained;

(viii) Current status of applicable Airworthiness Directives (AD), including the date and method of compliance and if the AD involves recurring action the time and date when this action is required:

- (ix) A list of major structural alterations; and
 - (x) A report of major structural repairs and the current inspection status for those repairs.
- (3) The air carrier may provide actual hard copies, electronic versions of the records, or summaries of compliance.
- (4) In addition, the ASI, DAR, or ODAR may need to verify current airframe status information. Therefore, the air carrier should coordinate with the FAA, so that if necessary, the ASI, DAR, or ODAR may review the appropriate records.
- (5) If the inspection and records review are conducted at separate locations and/or different times, the air carrier must make available to the FAA a summary of any additional records made at the time of the aircraft inspection, such as ADs accomplished and major repairs accomplished. Normally the records review should be accomplished prior to the aircraft inspection.

e. Aging Airplane Supplemental Inspections. The Aging Airplane Safety Rule prohibits certain airplanes from operating unless damage-tolerance-based inspections and procedures are included in the maintenance or inspection program for each airplane in accordance with a specified schedule. Although the Aging Airplane Safety Rule specifies dates by which the FAA requires air carriers to develop and incorporate damage-tolerance-based inspections and procedures into their approved maintenance program, the program may not require inspections to be completed until a later date. That date depends on the damage-tolerance assessment of the airplane's structure.

f. Reporting.

(1) Notifying the Air Carrier's PMI. Upon completion of the inspection or records review for a specific airframe, the ASI, DAR, or ODAR who accomplished the inspection or records review will notify the air carrier's PMI of any discrepancies found during the inspection/records review. A report will also be submitted to the certificate holding district office that includes the airplane's registration number, total years in service, total flight hours, and date of last inspection and records review required by the Aging Airplane Safety Rule as well as a statement that the inspection or review, as applicable, is complete for that airplane (see Appendix 1, Sample Reporting Form). The ASI, DAR, or ODAR also may give the report to the air carrier to forward to its PMI. The PMI then notifies the air carrier using electronic, facsimile, or another accepted form of notification that the inspection or records review is complete. Because the inspection and records review may have been completed on different dates, the date the PMI notifies the air carrier that both the inspection and records review are complete is the date used to determine the due date of the next required inspection and records review.

(2) Including Information in the Air Carrier's Operations Specifications.

(i) The air carrier's inspection and records review will be recorded using Operations Specifications, nonstandard paragraph D485. Entries will be auto filled from paragraph D485 and include the airplane's registration number, serial number, nose number, and make, model, and series. In addition, the air carrier or PMI will enter the airplane's date of manufacture, the date the air carrier was notified the airplane inspection was complete, the date the air carrier was notified the records review was complete, and the date the air carrier was notified the inspection and records review was complete.

NOTE: The airplane's date of manufacture has to be entered when paragraph D485 is activated.

(ii) The air carrier or PMI will update paragraph D485 for airplanes not due inspections or to which the rule is not applicable, as follows:

(A) If the airplane is in storage, enter "storage" in columns six and seven and "N/C" (for not complete) in column eight.

(B) If the airplane has not reached the inspection threshold, enter "below threshold" in columns six and seven and "N/C" (for not complete) in column eight.

(C) If the airplane is used in part 135, non scheduled operations, enter "non-scheduled" in columns six and seven and "N/C" (for not complete) in column eight.

(D) If the airplane is used solely within the State of Alaska, enter "Alaska Intrastate" in columns six and seven and "N/A" (for not applicable) in column eight.

7. DESIGNATED AIRWORTHINESS REPRESENTATIVES. As specified in 14 CFR part 183, the Administrator may designate individuals to act on behalf of the Administrator to conduct functions by FAA personnel. The Aging Airplane Safety Rule revised § 183.33(a) to expand the authority of DARs by authorizing them to conduct inspections and records reviews on behalf of the Administrator. An air carrier may have its aging airplane inspections and records reviews performed by a DAR, ODAR or an FAA inspector.


8. REQUESTS FOR INFORMATION. Requests for information about this AC should be directed to Russell Jones, AFS-309, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591, telephone (202) 267-7228.

9. COMMENTS INVITED. Comments regarding this AC should be directed to the Airworthiness Maintenance Division, AFS-300, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591, telephone (202) 267-7228.

James J. Ballough
Director, Flight Standards Service

APPENDIX 1. SAMPLE REPORTING FORM

RESULT OF AGING AIRPLANE SAFETY INSPECTION
(in accordance with 14 CFR § 121.368, 129.33, or 135.422)

 <p>U.S. Department of Transportation Federal Aviation Administration</p>		<p align="center">RESULT OF AGING AIRPLANE SAFETY INSPECTION (in accordance with 14 CFR § 121.368, 129.33, or 135.422,)</p>	
INSTRUCTIONS: <i>Print or type all entries.</i>			
1. Airplane	Make	Model	
	Serial No.	Registration Mark	
2. Air Carrier	Name	Address	
	Certificate No.		
3. Completion of records review and airplane inspection			
<p>A. The airplane inspection and records review have been completed in accordance with the following regulations:</p> <p><input type="checkbox"/> § 121.368 <input type="checkbox"/> § 129.33 <input type="checkbox"/> § 135.422</p>			
<p>B. Have discrepancies been identified during this inspection?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>			
Name			
Signature of Authorized Individual		Date	

Sample Reporting Form

APPENDIX 2. RELATED PUBLICATIONS

1. FAA Order 8100.8, Designee Management Handbook.
2. FAA Order 8300.10, Airworthiness Inspector's Handbook.
3. Operations Specifications, nonstandard paragraph D485.