AC 65-19C

US Department
of Transportation
**Federal Aviation
Administration**

INSPECTION AUTHORIZATION
STUDY GUIDE

Revised May 1987

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

PREFACE

INSPECTION AUTHORIZATION STUDY GUIDE

1. **PURPOSE.** This study guide provides guidance for persons who conduct annual and progressive inspections and approve major repairs and/or major alterations of aircraft. The guide is primarily intended for mechanics who hold or who are preparing to take the test for an inspection authorization (IA). The guide stresses the important role that certificated mechanics who hold an inspection authorization have in air safety.

2. **CANCELLATION.** Advisory Circular (AC) 65-19B, Inspection Authorization Study Guide, dated June 1978 is canceled.

3. **REFERENCES.** Federal Aviation Regulation (FAR) Part 65, Certification: Airmen Other Than Flight Crewmembers, sets forth the privileges of mechanics holding an inspection authorization. FAR Part 43, Maintenance, Preventive Maintenance, Rebuilding, and Alteration, sets forth maintenance rules and standards of performance.

4. **HOW TO GET THIS STUDY GUIDE.** Order AC 65-19C from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

William T. Brennan

William T. Brennan
Acting Director of Flight Standards

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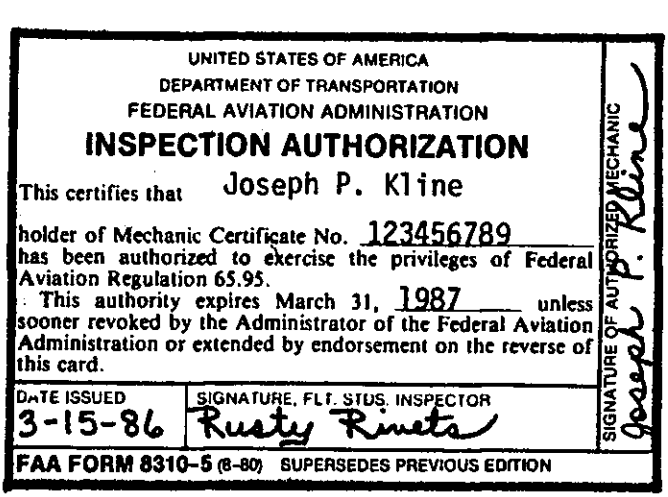


UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

INSPECTION AUTHORIZATION

This certifies that Joseph P. Kline

holder of Mechanic Certificate No. 123456789 has been authorized to exercise the privileges of Federal Aviation Regulation 65.95.

This authority expires March 31, 1987 unless sooner revoked by the Administrator of the Federal Aviation Administration or extended by endorsement on the reverse of this card.

DATE ISSUED 3-15-86

SIGNATURE, FLT. STDS. INSPECTOR Rusty Rivets

SIGNATURE OF AUTHORIZED MECHANIC Joseph P. Kline

FAA FORM 8310-5 (6-80) SUPERSEDES PREVIOUS EDITION

CHAPTER 1. ELIGIBILITY, ISSUANCE, RENEWAL, AND CHANGE OF FIXED BASE

1. **ELIGIBILITY.** Applicants are eligible for the Federal Aviation Administration (FAA) inspection authorization if they meet the requirements of FAR Section 65.91, which include the following:
   a. Hold a currently effective mechanic certificate with both an airframe and a powerplant rating, each of which is currently effective and has been in effect for a total of at least 3 years.
   b. Have been actively engaged, for at least the 2-year period before the date of application, in maintaining civil aircraft. (NOTE: Actively engaged means employed in the aviation industry and exercising the privileges of their mechanic certificate.)
   c. Have a fixed base of operations where they can be located in person or by telephone during the normal working week.
   d. Have the necessary equipment, facilities, and inspection data available to properly inspect airframes, powerplants, propellers, or any related parts or appliances.
   e. Pass a written test.

2. **ISSUANCE.** FAR Section 65.91 provides that an application for an inspection authorization (IA) is made on a form and in a manner prescribed by the FAA. (NOTE: Through the remainder of this text, an inspection authorization will be referred to as an IA.)
   a. Apply for an IA at the nearest FAA General Aviation or Flight Standards District Office. Applicants outside the United States should apply to the nearest International Field Office.

b. The applicant must fill out, in duplicate, FAA Form 8610-1, Mechanic's Application for Inspection Authorization. (See appendix 1, figure 1 for a sample application.) After reviewing the application, an FAA Aviation Safety Inspector (Airworthiness) will assign a date the IA test will be given to the applicant.

c. An applicant is required to have all the reference material needed for the test. A list of materials is located in appendix 2 of this study guide. The reference material must be "unmarked." Samples of IA test questions and answers from commercially available sources are not permitted to be used during the test.

d. An IA test usually takes a minimum of 5 hours. The test is designed to determine the ability of the applicant to accurately use the proper technical data while inspecting an aircraft, and approving major repairs and alterations. It is important that the applicant knows how to use the reference indexes in order to locate specific information.

e. An IA test is composed of three parts:

(1) Part I of the test consists of 10 multiple choice questions to be answered in 20 minutes. The questions are based on the issuance, privileges, and limitations of an IA (FAR Sections 65.91 through 65.95). No reference materials are permitted when taking Part I of the test.

(2) Parts II and III also have a 2-hour time limit for each part. They cover situations applicants are likely to encounter while doing annual and progressive inspections and while approving major repairs and major alterations. Some questions will relate to a specific aircraft assigned by the FAA inspector who administers the test. Applicants are expected to use or be familiar with the following:

(a) FAR's pertaining to aircraft maintenance and certification.

(b) Specifications: Aircraft, engine, and propeller.

(c) Type Certificate Data Sheets: Aircraft, engine, and propeller.

(d) Procedures for conducting annual and progressive inspections.

(e) Airworthiness Directives (AD's).

(3) The minimum passing grade on each part of the written test is 70 percent. Applicants must take the written test parts in sequence. Part II cannot be taken unless Part I has been passed, and Part III cannot be taken until Parts I and II have been passed. When an applicant passes all three parts of an IA test, the FAA inspector

will, prior to issuance of the IA, discuss any questions the applicant answered incorrectly to ensure that the applicant clearly understands the duties, privileges, and limitations of the authorization. If an applicant fails one part of an IA test, the FAA inspector will stop any further testing and issue FAA Form 8060-5, Notice of Disapproval of Application. The applicant may not apply for retesting until at least 90 days after the date the test is failed.

3. **DURATION.** Each IA expires on March 31 of each year. However, the holder may exercise the privileges of that authorization only while holding a currently effective mechanic certificate with both currently effective airframe and powerplant ratings. An IA ceases to be effective whenever any of the following occurs:
   a. The authorization is surrendered, suspended, or revoked.
   b. The holder no longer has a fixed base of operation.
   c. The holder no longer has equipment, facilities, and inspection data required for issuance of the authorization available to him/her.
   d. One or both of his/her mechanic rating(s) is surrendered, suspended, or revoked.

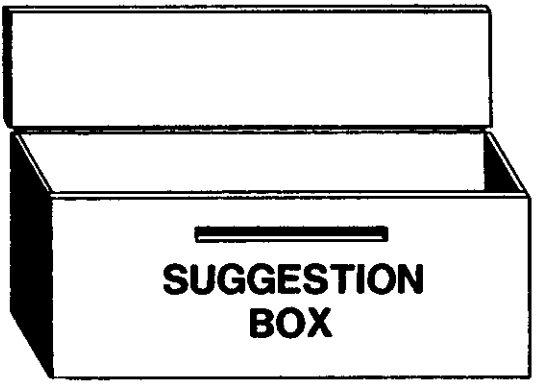
4. **RENEWAL.** To be eligible for renewal of an IA for a 1-year period, an applicant must present evidence annually during the month of March at an FAA General Aviation District Office, Flight Standards District Office, or International Field Office, that the applicant still meets the requirements of FAR Section 65.91 paragraphs (c)(1) through (4) and must show that during the current period the applicant held an IA certification the applicant has:
   a. Performed at least one annual inspection for each 90 days the applicant held the current authority; or
   b. Performed inspections of at least two major repairs or major alterations for each 90 days that the applicant held the current authority; or
   c. Performed or supervised and approved at least one progressive inspection; or
   d. Attended and successfully completed a refresher course, acceptable to the Administrator, of at least 8 hours of instruction; or
   e. Passed an oral test given by an FAA inspector.

   Acceptable training courses may be FAA sponsored renewal meeting courses designed to upgrade and standardize the IA holder or courses sponsored by industry and professional organizations that are designed to upgrade the IA's knowledge and skills in order to improve their performance.

When the applicant has satisfied all the renewal requirements, the FAA inspector will sign and date the reverse side of FAA Form 8310-5, Inspection Authorization. (See appendix 1, figure 2.)

5. **CHANGE OF FIXED BASE.** The holder of an IA may not exercise the privileges of the authorization following a change of address of a fixed base of operations until notification of the change has been made, in writing, to the FAA General Aviation or Flight Standards District Office or International Field Office for the area in which the new base is located.

CHAPTER 2



CHAPTER 2. TEN SUGGESTIONS FOR TAKING THE IA TEST

1. **STUDY** all the regulations and technical data listed in appendix 2.

2. **LEARN** to use the indexes in the publications in order to find the required reference quickly.

3. **MAKE SURE** all the publications have the latest revision date.

4. **STUDY FAR PART 43, APPENDIXES A, B, AND D** for detailed information regarding major repairs, major alterations, and annual inspections.

5. **LEARN TO USE** the graphs and tables in AC 43.13-1A, Acceptable Methods, Techniques and Practices – – Aircraft Inspection and Repair, and AC 43.13-2A, Acceptable Methods, Techniques, and Practices – – Aircraft Alterations.

6. **PRACTICE RESEARCHING AD'S AND TYPE CERTIFICATE DATA OR SPECIFICATION SHEETS** on different makes and models of aircraft, engines, and propellers.

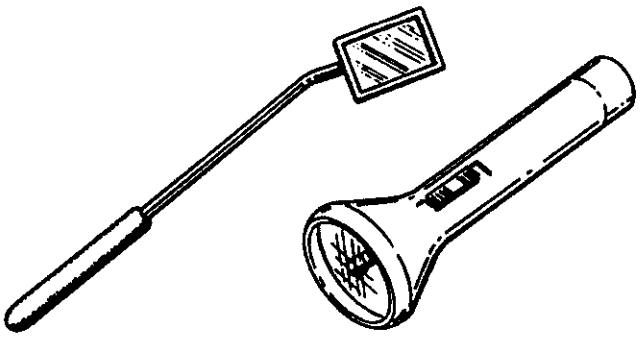
7. **PRACTICE FILLING OUT FAA FORM 337, MAJOR REPAIR AND MAJOR ALTERATION (AIRFRAME, POWERPLANT, PROPELLER, OR APPLIANCE).** AC 43.9-1E, or subsequent revision, Instructions for Completion of FAA Form 337, will provide guidance in this area.

8. **PRACTICE FILLING OUT MAINTENANCE AND INSPECTION RECORD ENTRIES** in accordance with FAR Section 43.11.

9. **A NONPROGRAMMABLE, HAND-HELD CALCULATOR** is an excellent aid in solving weight and balance problems.

10. **PRACTICE** making changes to an aircraft weight and balance report by simulating installing or removing equipment and then computing the forward, aft, and empty weight center of gravity (c.g.).

CHAPTER 3



CHAPTER 3. BASIC FUNCTIONS OF AN IA

1. **GENERAL.** The basic functions of the holder of an IA are set forth in FAR Section 65.95. An IA can inspect and approve for return to service any aircraft or related part or appliance, perform an annual inspection, and perform or supervise a progressive inspection in accordance with the standards and procedures set forth in FAR Part 43.

   The holder of an IA **MAY NOT APPROVE** major repairs or major alterations on any aircraft maintained in accordance with a continuous airworthiness program under FAR Part 121 or 127.

2. **APPROVING MAJOR REPAIRS AND MAJOR ALTERATIONS.** A primary responsibility of the holder of an IA is to determine airworthiness by inspecting repairs or alterations for conformity to approved data, and assuring that the aircraft is in a condition for safe operation. During inspection of major repairs or major alterations, the holder of an IA should also determine that they are compatible with previous repairs and alterations that have been made to the aircraft.
   a. The holder of an IA must personally perform the inspection. The regulations do not provide for delegation of this responsibility.
   b. Approving major repairs and major alterations is a serious responsibility. The approval action should consist of a detailed investigation to establish, at least that:
      (1) The materials or parts are approved.
      (2) Workmanship meets the requirements of FAR Section 43.13.

(3) The data used are appropriate to the aircraft certification rule (e.g. CAR 3, FAR Part 23).

(4) Work is complete and compatible with other structures or systems.

(5) The aircraft or product is equal to its original or properly altered condition.

c. The holder of an IA **CANNOT** approve the DATA for major repairs or major alterations. They may, however, inspect to see that alterations conform to data PREVIOUSLY APPROVED BY THE ADMINISTRATOR (FAR Section 65.95). This means the holder of an IA must assure that approved data are available and are used as a basis for the approval. This availability determination should be made prior to beginning the repair or alteration. If data are unavailable, or if the holder of an IA is unsure of the acceptability of the available data, the local FAA inspector should be consulted. The FAA inspector may, as the circumstances warrant, be able to:

(1) Establish an acceptable basis for approval;

(2) Approve the data; or

(3) Recommend application for a supplemental type certificate.

d. Quite often major repairs are performed that are eventually covered by fabric, metal skin, or another structure. When this situation exists, the holder of an IA should have a clear understanding with the mechanic performing the repair that a precover inspection is necessary. The inspection should assure that the repair was made in accordance with acceptable methods, techniques, and practices prescribed by FAR Part 43 and the structure to be covered is free from defects, corrosion, or wood dry rot, and is protected from the elements. In addition, the holder of an IA should inspect other affected areas for hidden damage, if the aircraft has been involved in an accident or incident. An entry is required to be made in the maintenance record and FAA Form 337 must be completed. (See appendix 1, figure 4, back side FAA Form 337 showing typical entries.)

e. Minor deviation from approved data is permissible IF the change is one that could be approved as a minor alteration when considered by itself. Be sure to list the deviations on FAA Form 337 and the maintenance record entry when completing the aircraft records. When in doubt, contact the local FAA inspector who may decide the change is not minor and would need specific approval or amendment of the original approval.

f. Approved data to be used for major repairs and major alterations may be one or more of the following.
   (1) TYPE CERTIFICATE DATA SHEETS
   (2) AIRCRAFT SPECIFICATIONS
   (3) SUPPLEMENTAL TYPE CERTIFICATES (STC'S)
   (4) AIRWORTHINESS DIRECTIVES
   (5) FAA FIELD APPROVAL (FAA FORM 337)
   (6) MANUFACTURER'S FAA APPROVED DATA (DOA)
   (7) DESIGNATED ENGINEERING REPRESENTATIVE (DER) APPROVED DATA WITH FAA FORM 8110-3, STATEMENT OF COMPLIANCE
   (8) DESIGNATED ALTERATION STATION (DAS) APPROVED DATA
   (9) APPLIANCE MANUFACTURER'S MANUALS (even though they are not specified FAA approved).

g. AC 43.13-1A may be used as approved data when appropriate to the product being repaired; directly applicable to the repair being made, and not contrary to manufacturers data.

h. Inspecting repairs or alterations consists of these basic operations:
   (1) Determine that the repair or alteration data has FAA approval.
   (2) Inspect to determine that the repair or alteration conforms to the approved data in configuration and the performance standards of FAR Part 43. At the same time, the aircraft should still comply with applicable airworthiness requirements and the repair or alteration should be compatible with all other installations.
   (3) All operating limitations affected by an alteration should be appropriately revised. Sometimes limitations are in the form of flight manual supplements, instrument range markings, placards, or combinations of these. See the local FAA inspector for limitations on changes which can be made.
   (4) Determine that aircraft record entries have been made and the weight and balance data and equipment list revised, when appropriate. There should be a statement on the FAA Form 337 to the effect that the weight and balance data and equipment list have been revised. When an alteration results in a change in the c.g. position, the affected c.g. limit should be investigated under adverse loading conditions unless the new c.g. falls within an approved empty c.g. range. For instance, if the c.g. has shifted aft, the loading conditions should be computed to see that the aircraft does not exceed the aft c.g. limit. It is the pilot's responsibility to have the aircraft correctly loaded. However,

when approving an alteration, it is the IA's responsibility to see that weight and balance data have been revised. The aircraft record entries may refer to the FAA Form 337 for details such as: "Installed STOL kit in accordance with STC SA 940 CE drawing number 5084 dated April 24, 1986. See FAA Form 337 this date for details."

(5) Indicate approval in Block 7 of FAA Form 337, and return both copies to the person who performed the work for disposition in accordance with appendix B of FAR Part 43.

3. **ANNUAL AND PROGRESSIVE INSPECTIONS.** The procedures and scope for annual inspections are set forth in appendix D of FAR Part 43, and should be followed in detail. The scope and detail for a progressive inspection must be set by the owner/operator in accordance with FAR Section 91.169(d). There are additional requirements for annual and progressive inspections listed in FAR Section 43.15. The scope and detail of 100 hour and annual inspections are the same. Record entries are very important as they are the only evidence an aircraft owner has to show compliance with the inspection requirements of FAR Section 91.169 (see appendix 1, figure 5). The following reminders should help in determining that the aircraft complies with all airworthiness requirements (ref. FAR Section 43.15(a)).

a. **Configuration.** The aircraft should conform to the aircraft specification or type certificate data sheet. When the aircraft does not conform, use the "unairworthy" procedures of FAR Section 43.11(a)(5).

(1) Alterations to the product may have changed some of the operating limitations.

(2) Unrecorded alterations or repairs may have been made in the past and warrant one of the following:

(a) Contact owner for pertinent information.

(b) If approved data is available, conduct inspection and personally approve for return to service by completing FAA Form 337.

(c) Contact local FAA inspector for assistance.

(3) The aircraft specification or data sheet indicates when a flight manual is required. It also identifies limitations which must be displayed in the form of markings and placards.

(4) Type certificate data sheets do not contain a list of equipment approved for a particular aircraft as did the specifications. The list of required and optional equipment can be found in the equipment list furnished by the manufacturer of the aircraft. Sometimes a later issue of the list is needed to cover recently approved items. Serial number eligibility should always be considered.

b. **Condition.** The holder of an IA may use the checklist in FAR Part 43, appendix D, the manufacturer's inspection sheets, or a checklist designed by the holder of an IA, that includes the scope and detail of the items listed in appendix D, to check the condition of the entire aircraft. This includes checks of the various systems listed in FAR Section 43.15.

(1) Routine servicing is NOT a part of the annual inspection. The inspection itself is essentially a visual evaluation of the condition of the aircraft and its components and certain operational checks. The manufacturer may recommend certain services to be performed at various operating intervals. These can often be done conveniently at this time, and in fact should be done, but are not considered to be a part of the inspection itself.

(2) It is very important that the holder of an IA be familiar with the manufacturer's service manuals, bulletins, letters, etc., for the product being inspected. Use these publications to avoid overlooking problem areas.

(3) AC 43-16, FAA General Aviation Airworthiness Alerts, is also an important source of service experience. The alerts are selected service difficulties reported to the FAA on FAA Form 8010-4, Malfunction or Defect Reports. Monthly copies of the alerts are provided free of charge to all holders of IA, repair stations, air taxis, and FAA certificated aviation maintenance technician schools.

(4) When the holder of an IA approves an aircraft for return to service, he/she will be held responsible for the condition of the aircraft AS OF THE TIME OF APPROVAL.

c. **Airworthiness Directives (AD's).** The holder of an IA should determine that all applicable AD's for aircraft, powerplant, propeller, instruments, and appliances have been accomplished.

(1) If the maintenance records indicate compliance with an AD, the holder of an IA should make a reasonable attempt to verify. It is not uncommon for a component to have an AD complied with and properly recorded then later be replaced by another component on which the AD has not been accomplished. The holder of an IA is not expected to disassemble major components such as cylinders or crankcases, etc., if adequate records of compliance exist.

(2) When the maintenance records DO NOT contain indications of AD compliance, the holder of an IA should:

(a) Make the AD note an item on a discrepancy list provided to the owner in accordance with FAR Section 43.17(b);

(b) With the owner's concurrence, do whatever disassembly is required to determine the status of compliance; or

(c) Obtain concurrence of the owner to comply with the AD.

(3) Often an AD calls for an inspection at one time with a modification or inspection required at a later date. It is very important to identify, in the maintenance record entry, the portion of the AD complied with and the exact method of compliance.

(4) FAR Section 91.173(a)(2)(v) requires each registered owner or operator to keep a record of the current status of applicable AD's. This status includes, for each, the method of compliance, AD number, and revision date. If the AD involves recurring action, the time and date should be recorded when the next action is required. As a vital part of the services performed, the holder of an IA may wish to provide the information an owner is expected to keep. (See appendix 1, figure 6.)

(5) The owner should also be informed if there are subsequent requirements of an AD or that reinspection is required at operating intervals other than at annual inspections. Often the subsequent requirements are at 100-hour intervals and will need to be done whether or not the aircraft is required to have 100-hour inspections.

d. All malfunctions or defects that come to the attention of a holder of an IA should be reported on FAA Form 8010-4. (See appendix 1, figure 7.) Copies of the form are available at all FAA district offices, are easy to fill out, and need no addressing or postage. Prompt reporting will contribute much toward improving air safety by helping correct unsafe conditions.

e. Paperwork Review. The owner/operator is responsible for maintaining the equipment list, c.g. and weight distribution computations, and loading schedules, if necessary.

(1) The holder of an IA should determine that the required placards and documents set forth in the aircraft specification or data sheet are available and current. The aircraft should be reported as "unairworthy" if these placards and documents are not available.

Missing, incorrect, or improperly located placards should be regarded as a discrepancy and the owner/operator should be informed that under FAR Section 91.31 the aircraft should not be operated until they are available.

(2) The holder of an IA should refer to the registration and airworthiness certificates for the owner's name and address and for the aircraft make, model, registration, and serial numbers needed for recording purposes. Be sure not to use manufacturers' trade names as they do not always coincide with the actual model designation (Cessna Skylane is 182, Piper Seneca III is PA 34 220T, etc.). If registration and airworthiness certificates are not available, the aircraft need not be reported unairworthy; however, the owner/operator should be informed that the documents must be in the aircraft and the airworthiness certificate displayed as required in FAR Section 91.27 WHEN THE AIRCRAFT IS OPERATED.

(3) Another document which is often needed but not a part of the airworthiness requirement might be a State registration. The owner/operator is responsible for the proper display of this document. However, the holder of an IA will be performing an appreciated service by informing the operator of any deficiencies in the display and carriage of this document.

(4) On aircraft for which no approved flight manual is required, the operating limitations prescribed during original certification, and as required by FAR Section 91.31, must be carried in or be affixed to the aircraft. Range markings on the instruments, placards, and listings must be worded and located as specified in the type certificate data. (See appendix 1, figure 8.)

f. Aircraft Markings. Required aircraft identification markings are discussed in FAR Part 45. It is the owner/operator's responsibility to have the nationality and registration markings properly displayed on the aircraft (FAR Section 91.31(c)). The holder of an IA can, and should, offer advisory service to owners and operators in regard to any deficiencies in markings; however, such deficiencies are not cause to report an aircraft "unairworthy."

g. Unairworthy Aircraft. If the aircraft is not approved for return to service after a required inspection, use the procedures specified in FAR Section 43.11. This will permit an owner to assume responsibility for having the discrepancies corrected prior to operating the aircraft.

(1) The discrepancies can be cleared by a person who is authorized by FAR Part 43 to do the work. Preventive maintenance items, could be cleared by the owner/pilot.

(2) The owner may want the aircraft flown to another location to have repairs completed, in which case the owner should be advised that issuance of FAA Form 8130-7, Special Airworthiness Certificate, commonly called a ferry permit, is necessary. The certificate may be obtained at an FAA Flight Standards district office or Aircraft Certification Office.

(3) If the aircraft is found to be "unairworthy," this means that the aircraft will be eligible to be operated, and airworthy, when the list of items on the discrepancy list is corrected. (See appendix 1, figures 9 and 10.)

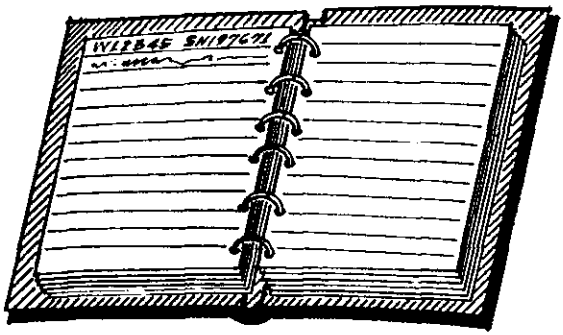
h. Incomplete Inspection. If an annual inspection is not completed, the holder of an IA should:

(1) Indicate in the aircraft records any discrepancies found.

(2) NOT indicate that an annual inspection was conducted.

(3) Indicate in the aircraft records the extent of the inspection and all work accomplished.

CHAPTER 4



CHAPTER 4. MAINTENANCE RECORDS

1. **MAINTENANCE RECORDS.** The holder of an IA and other maintenance personnel or agencies are required to record maintenance, inspections, or alterations performed or approved in accordance with the requirements of FAR Sections 43.9 and 43.11. The owner/operator is required by FAR Section 91.173 to keep maintenance records. The holder of an IA is also required to indicate the time in service when a required inspection is done.

   Significance of Maintenance Record Entries. Responsibility for maintenance work performed rests with the person whose name is entered on the appropriate maintenance record and/or forms. The responsibility for annual and progressive inspections and approval for return to service of major repairs or major alterations is assumed by the holder of an IA whose signature appears on the appropriate maintenance records.

2. **COMPLETION OF FAA FORM 337.** FAA Form 337 serves two purposes. One is to provide owners/operators a record of major repairs and major alterations, indicating details and approval. The other purpose is to provide the FAA with a copy for the aircraft records. A sample of a typical completed FAA Form 337 is provided in appendix 1, figures 3 and 4.
   a. The person who performed or supervised the major repair or major alteration prepares the original FAA Form 337 (two copies). The holder of an IA then further processes the forms when they are presented for approval.
   b. Instructions for the completion of FAA Form 337 appear in AC 43.9-1E, or subsequent revisions.

c. Disposition of FAA Form 337.

(1) The holder of an IA who has found a major alteration or a major repair to be in conformity with FAA approved data, should review the FAA Form 337 for completeness and accuracy, and complete Item 7.

(2) The person performing a major repair or major alteration shall:

(a) Give a signed copy of FAA Form 337 to the aircraft owner.

(b) Make the proper entry in the maintenance records.

(c) Forward the duplicate copy to the local FAA district office within 48 hours.

(3) The holder of an IA should ensure that the duplicate copy is an exact and legible reproduction of the original. The signatures should not be carbon copies but original signatures written in ink.

(4) If the FAA Form 337 has been completed for spare parts or components, both copies of the form, with the approval portion completed, should be attached to the part or component until it is installed on an aircraft.

(a) The mechanic who makes the installation will complete both copies of the FAA Form 337 by filling in Blocks 1 and 2 and sign for the installation in the aircraft records, making reference to the FAA Form 337 in the record entry.

(b) Give a copy to the owner and forward a copy to the FAA district office for the area where the installing mechanic is operating.

3. **WEIGHT AND BALANCE.** Weight and balance data are no longer required to be entered on the FAA Form 337. It is imperative that weight and balance checks and computations be made very carefully. Since practically every aircraft manufacturer uses a different method of weight and balance control, it would be impossible to provide a universally adaptable method. The example provided in appendix 1, figure 11, is general in nature and can be modified or revised as needed to fit the aircraft involved. When revising weight and balance data, these general guidelines should be followed:

a. The weight and balance data should be kept together in the aircraft records.

b. When making revisions, use a permanent, easily identified method, with full-size sheets of paper large enough to contain complete computations and minimize the possibility of becoming detached or lost.

c. Each page should be identified with the aircraft by make, model, serial number, and registration number.
d. The pages should be signed and dated by the person making the revision.
e. The nature of the weight change should be described.
f. The old weight and balance data should be marked "superseded" and dated.
g. A new page should show the date of the old figures it supersedes.
h. Appropriate fore and/or aft extreme loading conditions should be investigated and the computations shown.
i. Sample loading computations may be helpful.
j. On large aircraft, be careful to distinguish between empty weight and operating weights that may include items such as commissary supplies, spare parts, lavatory water, etc.
k. On small aircraft it is often convenient to post a placard in the aircraft indicating the empty weight, useful load, and empty c.g., along with sample loadings or general instructions, to cover the most likely used loading conditions. (Ref. FAR Section 91.31(b)(3).) AC 120-27A, Aircraft Weight and Balance Control, and AC 91-23A, Pilot's Weight and Balance Handbook, contain useful information applicable to the functions performed by the holder of an IA on general aviation aircraft.

CHAPTER 5

CHAPTER 5. SUGGESTIONS FOR DEVELOPING GOOD OWNER/IA RELATIONS

1. **GET IT STRAIGHT.** Be sure to come to a mutual agreement with the aircraft owner concerning exactly what work is to be performed. Misunderstandings usually result from a lack of clear communications. Attention to the following details will usually avoid the ill-will a later disagreement may generate.
   a. Itemize the work to be done so the owner will have a clear understanding of the work order.
   b. Establish a firm understanding about the cost, or range of cost, anticipated for the job.
   c. If an annual inspection is involved, indicate that certain maintenance is required to perform the inspection, such as:
      (1) Removing cowling and fairing, opening inspection plates, etc.
      (2) Cleaning the aircraft and engine.
      (3) Disassembling wheels and other components to determine their condition.
   d. Advise the owner that an annual inspection involves determination of compliance with aircraft specifications and AD's.
   e. Agree whether routine servicing is to be included as part of the inspection or is to be performed separately. Such servicing is not a part of the inspection, but may be conveniently done while conducting the inspection. Such items might be:
      (1) Cleaning spark plugs.
      (2) Servicing landing gear shock struts.
      (3) Changing oil.

(4) Making minor adjustments.
(5) Servicing the brakes.
(6) Dressing nicked propeller blades.
(7) Lubricating where necessary.
(8) Stop drilling small cracks and minor patching of cowling and baffles.

f. Make a written list of all discrepancies found on the aircraft indicating if and how corrected. Give the list to the owner and record the discrepancies in the maintenance records. The owner should be informed that the aircraft should not be operated until the discrepancies are corrected.

g. Establish a reasonable time period to accomplish the inspection.

h. Request the owner to supply the complete aircraft records (airframe, engines, and propellers) for study, review, and entries. Point out that this is necessary to properly conduct an annual inspection.

i. Complete the inspection as soon as practicable. Often an aircraft will sit around the shops waiting for parts, etc., even though the inspection was actually finished. In these cases it is advisable to officially report the aircraft unairworthy. (Ref. FAR Section 43.11(a)(5).) When the parts arrive, the repairs can be completed and the aircraft approved for return to service in the usual manner by the person who makes the repairs. The time lapse may represent several weeks, or even months, and things can deteriorate on the aircraft. Also, there is the chance that an AD involving some part of the aircraft may have been issued in the interim. In these cases, it might be unwise to complete the repairs originally intended and sign off the aircraft as "airworthy" without doing another complete inspection.

j. Complete the aircraft record entries as required by FAR Sections 43.9 and 43.11 and provide sufficient information for the owner to comply with FAR Section 91.173(a)(2)(i). Make adequate descriptions of repairs or alterations if accomplished along with the inspection.

k. Record compliance with all AD's actually accomplished. Provide sufficient information for the owner to comply with FAR Section 91.173(a)(2)(v). A general statement such as "All AD's complied with" is ***NOT*** an adequate entry and should be avoided. Many owners keep a separate record of AD compliance in the back of the logbook or a specially provided section. This is a good place to identify the AD's of a recurring nature and show when the next compliance is required. (See appendix 1, figures 12 and 13, for typical entries.)

l. When approving repairs and alterations, the holder of an IA should be available as work progresses on major jobs. This way, affected areas and structures can be seen more readily than after completion of the entire job. In many cases the workmanship can be inspected and improved more easily during the process of the job rather than having to redo it later.

m. Remind the owners/operators that they are responsible for operational requirements such as:

(1) VOR equipment checked in accordance with FAR Section 91.25.

(2) Altimeter and altitude reporting equipment test and inspections in accordance with FAR Section 91.171.

(3) ATC transponder inspection in accordance with FAR Section 91.172. These tests and inspections are not part of the annual inspection.

APPENDIX 1
FIGURES

APPENDIX 1. FIGURE 1, FAA FORM 8610-1, MECHANIC'S APPLICATION FOR INSPECTION AUTHORIZATION

No certificate may be issued unless a completed application form has been received (14 C.F.R. 61).

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
MECHANIC'S APPLICATION FOR INSPECTION AUTHORIZATION

Form Approved
OMB No. 04-R0110

1. NAME (Last, first, middle)	2. MECHANIC CERTIFICATE NO.
Kline, Joseph Paul	A&P 123456789

3. MAILING ADDRESS (Number, street, city, State/County, ZIP Code) (Place at which you desire to receive Airworthiness Directives, etc.)	4a. FIXED BASE OF OPERATIONS (Place at which you may be located in person during normal working week)	4b. TELEPHONE NO. (Place at which you may be located by telephone during normal working week)
1450 E. Cheltenham Ave. Philadelphia, PA 19115	Meridian Aviation North Philadelphia Airport 1600 Grant Ave. Philadelphia, PA 19114	(212) 555-1212

	YES	NO
5. HAVE YOU HELD A MECHANIC CERTIFICATE WITH BOTH AIRFRAME AND POWERPLANT RATINGS FOR THE 3 YEARS PRECEDING THE DATE OF THIS APPLICATION?	X	
6. HAVE YOU BEEN ACTIVELY ENGAGED, FOR AT LEAST THE 2-YEAR PERIOD BEFORE THE DATE OF APPLICATION IN MAINTAINING AIRCRAFT CERTIFICATED AND MAINTAINED IN ACCORDANCE WITH THE FARS?	X	
7. HAS YOUR MECHANIC CERTIFICATE AND/OR RATINGS BEEN REVOKED OR SUSPENDED DURING THE 3-YEAR PERIOD PRECEDING THIS APPLICATION?		X
8. HAS AN INSPECTION AUTHORIZATION BEEN DENIED YOU WITHIN 90 DAYS PREVIOUS TO THIS APPLICATION? (IF ANSWER IS "YES", EXPLAIN IN REMARKS.		X
9. HAVE YOU MET THE MINIMUM REQUIREMENTS FOR RENEWAL OF INSPECTION AUTHORIZATION? (For Renewal Only)		

10. BASIS FOR RENEWAL (Number Performed)

ALTERATIONS	REPAIRS	ANNUAL INSPECTIONS	PROGRESSIVE INSPECTIONS	RECENT ISSUANCE—IN EFFECT LESS THAN 90 DAYS BEFORE EXPIRATION DATE

11. AIRCRAFT MAINTENANCE ACTIVITY DURING LAST 2 YEARS

DATES	NAME AND ADDRESS OF REPAIR STATION, FACILITY, MANUFACTURER, OPERATOR, ETC.	DESCRIPTION OF ACTIVITY
FROM June 6, 1975 TO PRESENT June 1986	Meridian Aviation North Philadelphia Airport 1600 Grant Ave. Philadelphia, PA 19114	Inspection, repair and overhaul of single-engine and multiengine aircraft.
FROM TO		
FROM TO		
FROM TO		

12. REMARKS

13. CERTIFICATION: *I certify that the statements made above and in all attachments hereto are correct and true.*

DATE	SIGNATURE OF APPLICANT
June 1, 1986	Joseph P. Kline

14. RECORD OF ACTION (For FAA use only)

☐ ISSUANCE ☐ VOLUNTARY SURRENDER ☐ ENDORSEMENT ☐ RENEWAL	INSPECTOR'S SIGNATURE	OFFICE IDENTIFICATION

FAA Form 8610-1 (2-79) SUPERSEDES PREVIOUS EDITION * U.S. GOVERNMENT PRINTING OFFICE : 771-908/444

APPENDIX 1. FIGURE 2, FAA FORM 8310-5, INSPECTION AUTHORIZATION

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

INSPECTION AUTHORIZATION

This certifies that JOSEPH P. KLINE

holder of Mechanic Certificate No. 123456789 has been authorized to exercise the privileges of Federal Aviation Regulation 65.95.

This authority expires March 31, 1986 unless sooner revoked by the Administrator of the Federal Aviation Administration or extended by endorsement on the reverse of this card.

DATE ISSUED	SIGNATURE, FLT. STDS. INSPECTOR
3-15-85	Rusty Rinetz

SIGNATURE OF AUTHORIZED MECHANIC Joseph P. Kline

FAA FORM 8310-5 (6-80) SUPERSEDES PREVIOUS EDITION

FRONT VIEW

SHOWING INITIAL DATE OF AUTHORIZATION

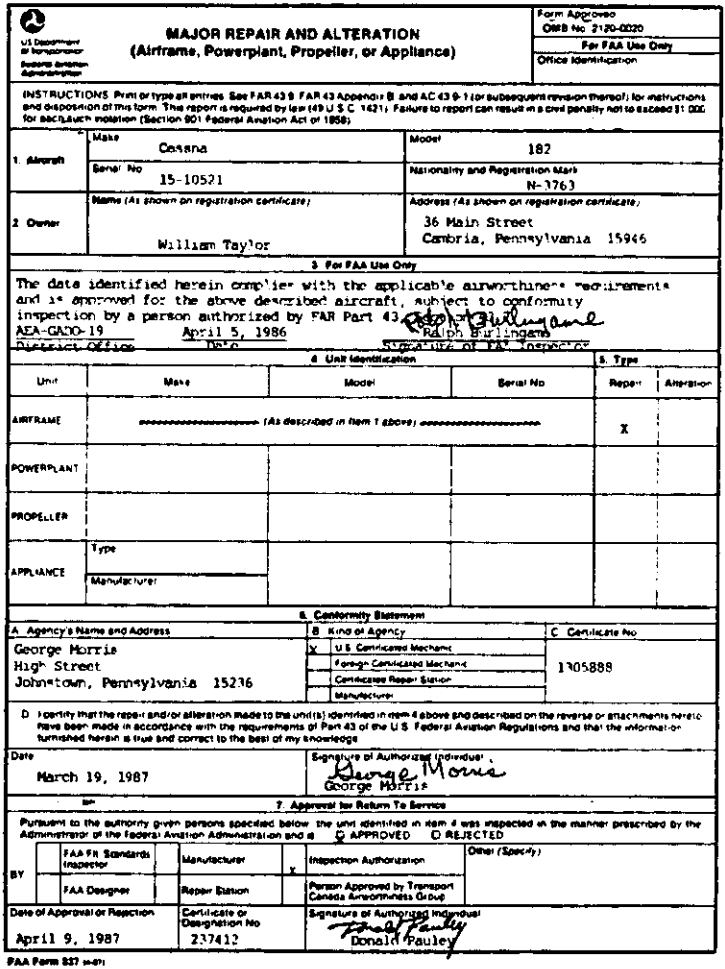
Authority to exercise the privileges of FAR 65.95 has been endorsed or renewed to expire on the date shown below.

EXPIRATION DATE	ENDORSED BY INSPECTOR	FAA OFFICE
3-30-87	Clutch Cargo	AEA-FSDO-62

BACK VIEW

SHOWING NEW EXPIRATION

APPENDIX 1. FIGURE 3, FAA FORM 337, MAJOR REPAIR AND ALTERATION (AIRFRAME, POWERPLANT, PROPELLER, OR APPLIANCE) (FRONT)



U.S. Department of Transportation — Federal Aviation Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020
For FAA Use Only
Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. The report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make: Cessna	Model: 182
	Serial No.: 15-10521	Nationality and Registration Mark: N-1763
2. Owner	Name (As shown on registration certificate): William Taylor	Address (As shown on registration certificate): 36 Main Street, Cambria, Pennsylvania 15946

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized by FAR Part 43.

AEA-GADO-19 — District Office
April 5, 1986 — Date
Ralph Burlingame — Signature of FAA Inspector

4. Unit Identification

Unit	Make	Model	Serial No.	5. Type: Repair	Alteration
AIRFRAME	---------- (As described in item 1 above) ----------			X	
POWERPLANT					
PROPELLER					
APPLIANCE	Type / Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
George Morris High Street Johnstown, Pennsylvania 15236	X U.S. Certificated Mechanic Foreign Certificated Mechanic Certificated Repair Station Manufacturer	1305888

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date: March 19, 1987
Signature of Authorized Individual: George Morris
George Morris

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is: X APPROVED ☐ REJECTED

BY					
	FAA FR Standards Inspector		Manufacturer	Inspection Authorization: X	Other (Specify)
	FAA Designee		Repair Station	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
April 9, 1987	237412	Donald Pauley

FAA Form 337 (6-87)

Sample completed front of FAA Form 337, showing FAA inspector's data approval for a major repair (Block 3). Detailed instructions for the use of this form are in FAR Part 43, and Advisory Circular 43.9-1E, or subsequent revision.

APPENDIX 1. FIGURE 4, FAA FORM 337, MAJOR REPAIR AND ALTERATION (AIRFRAME, POWERPLANT, PROPELLER, OR APPLIANCE) (BACK)

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished
(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

1. Removed right wing from aircraft and removed skin from outer 6 feet. Repaired buckled spar 49 inches from tip in accordance with attached photographs and figure 1 of drawing dated March 6, 1987.

   DATE: March 15, 1987, inspected splice in Item 1 and found it to be in accordance with data indicated. Splice is okay to cover. Inspected internal and external wing assembly for hidden damage and condition.

   Donald Pauley

   Donald Pauley, A&P 237412 IA

2. Primed interior wing structure and replaced skin P/Ns 63-0085, 63-0086, and 63-00878 with same material, 2024-T3, .025 inches thick. Rivet size and spacing all the same as original and using procedures in Chapter 2, Section 3, of AC 43.13-1A, dated 1972.

3. Replaced stringers as required and installed 6 splices as per attached drawing and photographs.

4. Installed wing, rigged aileron, and operationally checked in accordance with manufacturer's maintenance manual.

5. No change in weight or balance.

END

☐ Additional Sheets Are Attached

Back side of FAA Form 337, showing typical entries. Note the specific references in identifying FAA approved or acceptable data. Also note entry regarding inspection of the repair by the holder of an IA prior to the cover being applied and an inspection of the wing assembly for hidden damage and condition.

APPENDIX 1. FIGURE 5, SAMPLE MAINTENANCE RECORD ENTRY

January 18, 1986. Total aircraft time 1853.00 hours tach reading 975.42. Replace right main landing gear wheel bearing PN-W77414, replaced eight sparkplugs REM 40E, replaced both brake linings on right wheel. I certify that this aircraft has been inspected in accordance with an annual inspection and was determined to be in an airworthy condition.

Joseph P. Kline

Joseph P. Kline, A&P 123456789 IA

Sample maintenance record entry for an ***annual inspection*** that resulted in an "airworthy" aircraft. Note that the date, aircraft total times, and tach or recorder reading are included. The tach or recorder readings should not be confused with the total time and should only be shown in ADDITION to the total time entry. Note the mechanic's certificate number is suffixed by the letters "IA" indicating that the mechanic is the holder of an inspection authorization. Note also that maintenance done in conjunction with the inspection is also recorded.

AD NOTES COMPLIANCE RECORD

Page 1 of 1 Date 2-20-86 Tach 424 T.T. 424

Reg # N12345 A/C Make/Model/Popular Name Piper PA-28-181 S/N 78-12345

A/C Cert. Date 12-78 Eng. Model O-360-A4M Prop. Model 76EM8S5

S/N 28-7690001 S/N 28-7790606

AD#	Rev. Date	Applicable S.B.# & Subject	Date & Hours @ Comp.	Method of Compliance	One Time	Recurring	Next Comp. @ Hrs/Date	Authorized Signature & Number
80-24-03 39-3978	12-80	Washer inspection	4-4-79 25 hrs.	replace washer	X		NA	Joseph P. Kline 123456789
84-26-02 39-4966	2-84	filter inspection	2-15-85 1150 hrs.	replace filter		X	1250	Joseph P. Kline 123456789

1. REGISTRATION NO. N 6999

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
MALFUNCTION OR DEFECT REPORT

OMB No. 2120-003
USE EXPIRES 3/31/84

	A. MAKE	B. MODEL	C. SERIAL NO.
2. AIRCRAFT	Condor	172 B	1722036
3. POWERPLANT	National	O-470T	L63279
4. PROPELLER	Hartz	HCC34	YCZ4L2

5. APPLIANCE/COMPONENT (any that includes part)

A. NAME	B. MAKE	C. MODEL	D. SERIAL NO.
Alternator	Preston	AL4608	B625

6. SPECIFIC PART (of component) CAUSING TROUBLE

A. NAME	B. NUMBER	C. PART/DEFECT LOCATION
Bearing	35K493V	Slip ring end

D. PART TT	E. PART TSO	F. PART CONDITION	7. DATE SUB.
2756	314	disentegrated	3-15-86

8A. COMMENTS (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)

Inspection revealed slip ring end bearing failed due to lack of lubrication. Cause of lack of lubrication unknown. Engine TT3872 Engine TSO 314

SUBMITTED BY: Mary Brown

REP. STA.	OPER.	C. O.	MECH.	E. AIR TAXI	F. MFG.	G. FAA	H. OTHER	L
			X					

FAA Form 8010-4(5-81) SUPERSEDES PREVIOUS EDITIONS

This is a typical FAA Form 8010-4, Malfunction or Defect Report. Holders of IA are urged to use this form for all malfunctions or defects that cannot be attributed to poor maintenance procedures. Provide the information requested on the form. It is not necessary to furnish models and serial numbers when they are not pertinent. Note that Item 8A requests information concerning how the defect can be corrected.

APPENDIX 1. FIGURE 8, SAMPLE OPERATING LIMITATIONS PLACARD

Operating Limitations	Zeph-Air 63-1A N40023
RPM	Do not exceed 2300
Oil Temp	212° max.
Airspeed limits do not exceed:	
Level flight or climb	95 m.p.h.
Glide or dive	129 m.p.h.
Gross weight	1,220 lbs.
Empty C.G.	14.4" aft of datum
Useful load	453 lbs.
Kinds of operation	VFR-Day
Maximum baggage:	40 lbs. solo front
	20 lbs. solo rear

Sample operating limitations placard for a typical light aircraft certificated under FAR Part 23.

APPENDIX 1. FIGURE 9, SAMPLE RECORD ENTRY FOR AN ANNUAL INSPECTION IN WHICH THE AIRCRAFT WAS FOUND TO BE UNAIRWORTHY

May 30, 1986. Total aircraft time 1853.00 hours. Tach reading 975.80. I certify that this aircraft has been inspected in accordance with an annual inspection and a list of discrepancies and unairworthy items dated May 30, 1986, have been provided for the aircraft owner.

Joseph P. Kline

Joseph P. Kline, A&P 123456789 IA

APPENDIX 1. FIGURE 10, SAMPLE DISCREPANCY LIST PROVIDED TO AN AIRCRAFT OWNER WHEN REPORTING AN AIRCRAFT UNAIRWORTHY AFTER COMPLETING AN ANNUAL INSPECTION

Academy Aviation
Hangar 4
North Philadelphia Airport
Philadelphia, PA 19114

Mr. Morris McCell
1450 W. Cheltenham Ave.
Philadelphia, PA 19125

Dear Mr. McCell:

This is to certify that on May 30, 1986, I completed an annual inspection on your aircraft, Condor 191B, S/N 3946, N1234, and found it to be in an unairworthy condition for the following reasons:

1. Compression in number 3 cylinder read 30 over 80, which is below the manufacturer's recommended limits.
2. The muffler has a broken baffle plate which is blocking the engine exhaust outlet.
3. There is a six-inch crack on bottom of left wing just aft of main landing gear attach point.

Joseph P. Kline

Joseph P. Kline
A&P 123456789 IA

APPENDIX 1. FIGURE 11, SAMPLE WEIGHT AND BALANCE REVISION FOR A TYPICAL LIGHT, TWIN-ENGINE AIRCRAFT

Weight & Balance
Zeph-Air 680
N5436E
S/N 680 - 628-1

4-2-86
Supersedes computation on
FAA Form 337 of 7/30/82

Installed item 412C, RCA AVQ-50 Weather Radar.

	Weight	Arm	Moment
Aircraft	3990 lbs.	174.6	696654.0
Radar	120 lbs.	124.0	14880.0
	4110 lbs.		711534.0

ECG = $\frac{711534}{4110}$ = 173.1

Forward Loading Condition

	Weight	Arm	Moment
Aircraft	4110 lbs.	173.1	711441.0
2 pilots	340 lbs.	94.0	31960.0
2 passengers	340 lbs.	128.0	43520.0
8.5 gal. oil	64 lbs.	191.0	12224.0
Min. fuel, 53.3 gal.	320 lbs.	187.0	59840.0
	5174 lbs.		858985.0

CG = $\frac{858985}{5174}$ = 166.0

Forward CG limit = 166.0"

	Weight	Arm	Moment
Corrected Empty Weight	4110 lbs.	173.1	711
Usable oil 8.5 gal.	64 lbs.	191.0	12
Pilot	170 lbs.	94.0	16
	4344 lbs.		739

(Use these subtotal figures when checking aircraft loading on loading chart.)

Joseph P. Kline

Joseph P. Kline
A&P 123456789 IA

Note that computations are shown. Form is signed, dated, and identifies the computations or figures it supersedes. It is recommended that manufacturer's weight and balance data forms be used for specific aircraft.

APPENDIX 1. FIGURE 12, SAMPLE — ONE TIME AD COMPLIANCE ENTRY

April 15, 1986. Aircraft total time 740 hours. Complied with AD 84-27-2, rubber float and float bowl screw by inspection of float, 84 stamped on name plate.

Joseph P. Kline

Joseph P. Kline, A&P 123456789 IA

APPENDIX 1. FIGURE 13, SAMPLE — RECURRENT AD COMPLIANCE ENTRY

April 1, 1986. Engine total time 720 hours. Complied with AD 82-27-03, Roto-Masters turbo chargers by inspection and found satisfactory. Next inspection due at 920 hours.

Joseph P. Kline

Joseph P. Kline, A&P 123456789 IA

APPENDIX 2
PUBLICATIONS

1. **STATUS OF FEDERAL AVIATION REGULATIONS (FAR'S).** Parts of FAR's which are most frequently amended are sold on subscription-service basis (subscribers receive changes automatically as issued), while the less active parts are sold on a single-sale basis.

   Changes to single-sale parts will be sold separately as issued. Information concerning these changes will be furnished by the FAA through AC 00-44, Status of Federal Aviation Regulations. Instructions for ordering this free-status list are given in front of each single-sale FAR Part.

2. **FEDERAL AVIATION REGULATIONS.**

FAR PART NUMBER	TITLE
1	Definitions and Abbreviations
21	Certification Procedures for Products and Parts
23	Airworthiness Standards: Normal, Utility, and Acrobatic Category Airplanes
33	Airworthiness Standards: Aircraft Engines
35	Airworthiness Standards: Propeller
39	Airworthiness Directives
43	Maintenance, Preventive Maintenance, Rebuilding and Alterations
45	Identification and Registration Markings
47	Aircraft Registration
65	Certification: Airmen Other Than Flight Crewmembers
91	General Operating and Flight Rules

3. **TECHNICAL DATA.** The following technical data should be available when taking an IA written test:
   a. Aircraft Type Certificate Data Sheets and Specifications. Type certificate data sheets and specifications are separated into six volumes. Volume titles and the contents of the five volumes required for an IA test are:
      (1) Volume I (Single-Engine Airplanes) contains material for all single-engine, fixed-wing airplanes regardless of maximum certificated takeoff weight.

(2) Volume II (Small Multiengine Airplanes) contains material for multiengine, fixed-wing airplanes of 12,500 pounds or less maximum certificated takeoff weight.

(3) Volume IV (Rotorcraft, Gliders, and Balloons) contains material for all rotorcraft, gliders, and manned balloons.

(4) Volume V (Aircraft Engines and Propellers) contains material for engines and propellers of all types and models.

(5) Volume VI (Aircraft Listing and Aircraft Engine and Propeller Listing) contains information pertaining to older aircraft, engines, and propellers which is not subject of frequent revision.

b. Subscription Service — Volumes 1 through IV are sold in both paper and microfiche editions.

Paper copies of Volumes I through V are sold by subscription only. Subscription service includes the basic volume and monthly supplements for a 2-year period.

Paper copies of Volume VI are sold separately, because of infrequent change to the material therein.

Michrofiche copies are sold by subscription consisting of one consolidated file of the six type certificate data sheets. The subscription, which includes all revisions, lasts for 1 year.

Mail orders for all volumes should be forwarded to: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

For additional information on ordering, see AC 21-15, Aircraft, Aircraft Engines, and Propeller Type Certificate Data Sheets and Specifications.

4. **ACCEPTABLE METHODS, TECHNIQUES, AND PRACTICES.** These advisory circulars replace the policy material formerly contained in Civil Aeronautics Manual (CAM) 18. Order from the Superintendent of Documents or Government Printing Office (GPO) bookstores located throughout the United States.
   a. AC 43.13-1A, Acceptable Methods, Techniques and Practices -- Aircraft Inspection and Repair.
   b. AC 43.13-2A, Acceptable Methods, Techniques, and Practices -- Aircraft Alterations.

5. **SUMMARY OF AIRWORTHINESS DIRECTIVES FOR SMALL AIRCRAFT (VOLUME I).** Presents in volume form all the AD's for small aircraft issued through December 31 of each year. AD's for engines, propellers, and equipment are included in each volume. Each volume is arranged alphabetically by product manufacturer.

NOTE: The Summary of Airworthiness Directives is sold and distributed for the Superintendent of Documents by the Oklahoma City office of the Federal Aviation Administration. Requests for subscriptions should be sent to: U.S. Department of Transportation, Federal Aviation Administration, AAC-23, P.O. Box 25461, Oklahoma City, Oklahoma 73125.

Subscription service will consist of the summary and automatic biweekly updates to each summary for a 2-year period. Make certified check or money order payable to the Federal Aviation Administration.

6. **ADVISORY CIRCULARS.** Free advisory circulars may be obtained by writing to the U.S. Department of Transportation, Utilization and Storage Section, M-443.2, Washington, D.C. 20590. If you wish to be placed on the mailing list to obtain future free AC's, send your request to M-443.2. The request must specify the subject matter area in which you may be interested, such as:

AC 00	**General**
AC 10	**Procedural**
AC 20	**Aircraft (includes 30 and 40)**
AC 60	**Airmen**
AC 70	**Airspace**
AC 90	**General Operations**
AC 120	**Air Carrier and Commercial Operators**

7. **ORDERING INFORMATION.** Refer to AC 00-2, Advisory Circular Checklist, for ordering instructions for both free and for-sale AC's. The checklist also gives stock numbers and prices for AC's sold by the Superintendent of Documents. AC 00-2 may be referred to in any FAA district office or may be ordered free from: U.S. Department of Transportation, Utilization and Storage Section, M-443.2, Washington, D.C. 20590.