U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: MAINTENANCE PROGRAMS FOR U.S.-REGISTERED AIRCRAFT UNDER FAR PART 129

Date: 3/1/88 **Initiated by:** AFS-300 **AC No:** 129-4 **Change:**

1. PURPOSE. This advisory circular (AC) provides information and guidance about acceptable maintenance programs for U.S.-registered aircraft subject to Federal Aviation Regulations (FAR) Part 129.

2. FOCUS. The requirement for maintenance programs approved under FAR Part 129 applies to U.S.-registered aircraft listed on operations specifications issued under FAR Section 129.11. It further applies to each foreign person operating a U.S.-registered aircraft in common carriage within or outside the United States. The regulatory requirements for applicability of the maintenance programs described in this advisory circular are FAR Sections 129.1 and 129.14.

3. RELATED READING MATERIAL.

a. Advisory Circular 120-16C, Continuous Airworthiness Maintenance Programs.

b. Advisory Circular 120-17A, Maintenance Control by Reliability Methods.

c. Advisory Circular 121-22, Maintenance Review Board.

d. Advisory Circular 20-62C, Eligibility, Quality, and Identification of Approved Aeronautical Replacement Parts.

4. BACKGROUND.

a. FAR Part 129 was amended May 28, 1987, to require Federal Aviation Administration (FAA) approval of maintenance programs for U.S.-registered aircraft engaged in common carriage by foreign air carriers and other foreign persons. The standards for these programs are in International Civil Aviation Organization (ICAO) Annex 6, Part I; specifically Chapters 8 and 11. FAR Parts 43, 91, 121, and 125 were concurrently amended to accommodate the amendment to FAR Part 129.

b. Most foreign air carriers and foreign persons engaged in common carriage operations have aircraft maintenance program requirements adopted by their domestic governments which are consistent with the international standards in Part I of Annex 6 to the Convention on International Civil Aviation (ICAO). ICAO Annex 6 requires each operator to comply with the terms of the aircraft's certificate of airworthiness and to maintain the aircraft in an airworthy condition. To meet these requirements, each

foreign operator of a U.S.-registered aircraft used in common carriage must ensure that the aircraft is maintained by a qualified organization with a well-trained staff and adequate workshops, equipment, and facilities. That organization must also have appropriate maintenance manuals, records, and procedures regarding training, inspection, and release of the aircraft. However, some countries may not have requirements completely consistent with the ICAO aircraft maintenance program requirements. This means that U.S.-registered aircraft operated by foreign air carriers or persons from those countries might not meet these international standards. To allow operation of these aircraft would be inconsistent with U.S. obligations under international agreements for aircraft of its registry. These amendments will, therefore, require compliance with the United States' international airworthiness obligations. Further, this amendment extends FAR Part 129 to apply to each foreign operator of a U.S.-registered aircraft engaged in common carriage operating either into and out of or totally outside the United States.

5. DEFINITIONS.

a. Maintenance Program, or Maintenance Program Under FAR Part 129. The maintenance program as defined by ICAO Annex 6, Part I.

b. Aircraft Maintenance Program. That portion of the maintenance program described above that specifies the frequency, content, and description of maintenance tasks performed on a specified aircraft make and model. Refer to Appendix 1, Examples 1 and 2, for maintenance program layering.

c. Operator. The person identified in the applicability section of FAR Part 129.

d. Country of Operation. The country that issues the air carrier operating certificate or otherwise authorizing common carriage operations.

e. Assigned Inspector. The FAA inspector assigned compliance responsibility for maintenance programs approved under FAR Section 129.14.

6. DISCUSSION.

a. The standard for maintenance programs approved under FAR Part 129 is ICAO Annex 6, Part I. This annex prescribes, in broad terms, a continuous airworthiness maintenance program. Continuous airworthiness maintenance programs approved by the country of operation for aircraft on its register differ from maintenance programs approved by the FAA for U.S.-registered aircraft under FAR Part 129. The significant difference is that maintenance programs for aircraft registered to the country of operation usually include the authority to perform maintenance on those aircraft, whereas the FAA-approved programs for U.S.-registered aircraft under FAR Part 129 do not. Therefore, maintenance standards and administration of the maintenance function are approved under FAR Part 129 but performance of maintenance of the aircraft is governed by the provisions of FAR Part 43.

b. There is a strong safety advantage in enabling an operator to use a single maintenance program for a particular fleet rather than requiring that certain aircraft in that fleet be maintained according to a different program. The ideal situation is common administration, common manuals, common personnel qualification requirements, common parts, supplies, etc. In this situation, maintenance personnel at all levels are not required to adjust their procedures and standards for a particular aircraft in an operator's fleet because of its registration. To avoid or minimize special requirements for U.S.-registered aircraft, the assigned inspector should discuss any inadequacies of the existing maintenance programs with the operator and affected civil air authority. If an issue cannot be resolved, the program must be amended to include the FAA requirements.

7. ICAO ANNEX 6 MAINTENANCE PROGRAM REQUIREMENTS. This paragraph identifies and discusses the provisions of ICAO Annex 6 that pertain to maintenance programs for air carrier aircraft. These provisions are the standards expressed in Part I, Chapters 8 and 11, of the annex and are included as Appendix 3 to this AC. They are individually restated below in bold type followed by FAA's interpretation of how each standard applies to U.S.-registered aircraft under FAR Part 129.

a. ICAO Annex 6 Standard 8.1, General.

(1) **8.1.1. An operator shall ensure that there is provided an organization including trained staff, workshops and other equipment and facilities to maintain his aeroplanes in an airworthy condition when in use.**

This subparagraph assigns responsibility to the operator for maintenance of the aircraft it operates.

(2) **8.1.2. When the performance of the maintenance required in 8.1 is assigned, either partially or wholly, to a maintenance organization approved by the State of Registry of the aeroplane concerned, the operator's responsibility for compliance with Standards 8.2, 8.3 and 8.4, which follow, shall be modified according to the extent to which maintenance is assigned.**

This subparagraph allows an operator to contract for maintenance to another organization. It provides for maintenance of the U.S.-registered aircraft in the operator's fleet by an FAA-approved repair station.

b. ICAO Annex 6 Standard 8.2, Maintenance Manual.

(1) **8.2.1. An operator shall ensure that there is provided, for the use and guidance of maintenance organizations and personnel, a Maintenance Manual containing the information specified in 11.3.**

(2) **8.2.2. An operator shall ensure that the Maintenance Manual is amended or revised as is necessary to keep the information contained therein up to date.**

(3) 8.2.3. Copies of all revisions and amendments of a Maintenance Manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.

These subparagraphs require the operator to have a comprehensive and controlled manual system (details of referenced standard 11.3 are included later in this section).

- It is anticipated that the operator's existing manual system should satisfy this requirement except for unique requirements for U.S.-registered aircraft.

- There is no reason or requirement for a separate manual system for the U.S.-registered aircraft, but the operator's manual system should encompass the U.S.-registered aircraft. It should describe its relationship to the operator's repair station manual (if applicable) and manuals of other repair stations whose services the operator uses.

- Operators who contract for accomplishment of all or part of their maintenance under their own aircraft maintenance program should describe such arrangements in their manual system.

- Operators who contract to adopt another operator's approved aircraft maintenance program should include in their manual a description of how the contractual arrangement is controlled. Such contractual arrangements should also be described in the manual of the organization performing the maintenance. This may involve manuals approved under FAR Parts 129, 145, or both.

- The operator's manual should address all aspects of the maintenance program such as parts provisioning, operational performance monitoring, reliability functions, weight and balance control, etc.

- The operator's manual should address its training policies and procedures including training for personnel employed by repair stations whose services they utilize. For repair station personnel, this requirement may be satisfied by reference to the repair station manual.

- Certain manual content pertinent to maintenance of U.S.-registered aircraft may be required to be translated to the English language.

c. ICAO Annex 6 Standard 8.3, Training. An operator shall ensure that all maintenance personnel are instructed regarding the maintenance methods to be employed, in particular when new or unfamiliar equipment is introduced into service.

This requirement applies to personnel directly employed by the operator and to repair station personnel.

d. ICAO Annex 6 Standard 8.4, Inspection. **An operator shall ensure that there is provided a system of inspection to ensure that all maintenance, overhaul, modifications and repairs which affect airworthiness, are effected as prescribed in the Maintenance Manual.**

This standard requires a comprehensive inspection element. Although inspections of U.S.-registered aircraft are accomplished under FAR Part 43, the adequacy of the inspection function must be assured by the program approved under FAR Part 129. The inspection system prescribed by this paragraph does not include the FAR Part 121 required inspection item system. However, it should have sufficient scope to ensure proper accomplishment of critical maintenance items even though they may not be specifically addressed.

e. ICAO Annex 6 Standard 8.5, Qualification to certify as airworthy. **Each person charged with the responsibility of certifying as to the airworthiness of an aeroplane shall be qualified under Annex 1.**

That person must also be authorized under FAR Parts 43 and 145 to be eligible to certify U.S.-registered aircraft as airworthy.

f. ICAO Annex 6 Standard 8.6, Modification and repairs. **All modifications and repairs shall be effected in accordance with methods appropriate to the aeroplane concerned.**

In addition to the basic requirement of this paragraph, all data for major repairs and major alterations of U.S.-registered aircraft must be FAA-approved. FAR Part 43 prescribes who may accomplish major repairs and major alterations to U.S.-registered aircraft.

g. ICAO Annex 6 Standard 8.7, Maintenance Release. **A Maintenance Release shall be completed and signed by a person or persons qualified under Annex 1 to certify that the maintenance work has been completed satisfactorily and in accordance with the methods prescribed in the Maintenance Manual.**

That person must also be authorized under FAR Parts 43 or 145 to execute the maintenance release for U.S.-registered aircraft. Further, the operator must designate in its maintenance program approved under FAR Part 129 the persons who are authorized to sign the maintenance release.

h. ICAO Annex 6 Standard 8.8, Records.

(1) 8.8.1. **An operator shall ensure that the following records are kept:**

a) in respect of the entire aeroplane: the total time in service;

b) in respect of the major components of the aeroplane:

1) the total time in service;

2) the date of the last overhaul;

3) the date of the last inspection;

c) in respect of those instruments and equipment, the serviceability and operating life of which are determined by their time in service;

1) such records of the time in service as are necessary to determine their serviceability or to compute their operating life;

2) the date of the last inspection.

(2) 8.8.1.1. These records shall be kept for a period of 90 days after the end of the operating life of the unit to which they refer.

No FAA interpretation is necessary.

i. ICAO Annex 6 Standard 11.3, Maintenance Manual. A Maintenance Manual provided in accordance with 8.2 shall contain the following information in respect of the aeroplanes used:

a) procedures for servicing and maintenance;

This item includes the technical instructions and standards for all levels of maintenance for the aircraft including engines, propellers, and appliances, generally as manufacturers' publications, amended and supplemented as necessary to support the maintenance program. The description of the manual system should define the authority of each publication within the system. The maintenance manual provides the acceptable methods, techniques, and practices specified by FAR Section 43.13. It also includes the procedures and standards to support the work forms for the scheduled aircraft maintenance program.

b) the frequency of each check, overhaul or inspection;

The manual should describe or reference a description of their maintenance scheduling system. If a special schedule or a separate scheduling system for U.S.-registered aircraft is necessary, it should be described in the operator's manual.

c) the responsibilities of the various classes of skilled maintenance personnel;

This manual section should address any special responsibilities related to U.S.-registered aircraft. For example, an operator under FAR Part 129 performs maintenance on its U.S.-registered aircraft outside of the United States under its foreign repair station rating. Inside the United States, an operator must use a person authorized under FAR Part 43 because the foreign repair station rating does not authorize the performance of maintenance inside the United States.

d) the servicing and maintenance methods which may be prescribed by, or which require the prior approval of, the State of Registry.

This section should also include methods that require FAA approval. This subject is covered in paragraph 10 of this advisory circular.

e) the procedure for preparing the Maintenance Release, the circumstances under which this release is to be issued and the personnel required to sign it.

FAR Part 43 prescribes what persons are authorized to sign a maintenance release. This manual section should designate the persons authorized to sign the maintenance release.

j. ICAO Annex 6 Standard 11.4, Maintenance Release. A Maintenance Release shall contain a certification as to the satisfactory completion of maintenance work carried out in accordance with the methods prescribed in the Maintenance Manual.

FAR Part 43 is amended to accept the methods, procedures, and practices prescribed by a maintenance program approved under FAR Part 129 as it does for programs approved under FAR Part 121. This allows for the release as stated in this ICAO paragraph.

k. ICAO Annex 6 Standard 11.5, Journey Log Book.

(1) 11.5.1. Recommendation.- The aeroplane Journey Log Book should contain the following items and the corresponding roman numerals:

I - Aeroplane nationality and registration.
II - Date.
III - Names of crew members.
IV - Duty assignments of crew members.
V - Place of departure.
VI - Place of arrival.
VII - Time of departure.
VIII - Time of arrival.
IX - Hours of flight.
X - Nature of flight (private, aerial work, scheduled, or non-scheduled).
XI - Incidents, observations, if any.
XII - Signature of person in charge.

(2) 11.5.2. Recommendation.- Entries in the Journey Log Book should be made currently and in ink or indelible pencil.

(3) 11.5.3. Recommendation.- Completed Journey Log Book should be retained to provide a continuous record of the last six months' operations.

A journey log is not mandatory but is normally used as a continuous record of the maintenance status of aircraft. That section of the journey log should be considered part of the maintenance program and approved under FAR Part 129.

8. COMPLIANCE WITH TYPE CERTIFICATE STANDARDS. U.S.-registered aircraft with U.S. standard airworthiness certificates are required to be maintained in continuous conformity with their type certification requirements regardless of the country of operation. Two exceptions to this requirement are operation with inoperative equipment under the terms of an FAA-approved Minimum Equipment List (FAR Section 129.14) and operation under an FAA Special Flight Permit (FAR Section 21.197). The maintenance program under FAR Part 129 and the aircraft maintenance program should ensure continuous compliance with these requirements. Specific areas of concern are:

a. That major alterations and repairs are accomplished in accordance with FAA-approved data.

b. That replacement components and parts satisfy the same or equivalent certification basis as the components and parts they replace. Advisory Circular 20-62C, Eligibility, Quality, and Identification of Approved Aeronautical Replacement Parts, addresses this subject.

c. That materials used for repairs, such as cabin fabrics, must meet the flammability and emissions requirements applicable to the materials they replace. Certifications from the material manufacturers, laboratories, etc., that are acceptable to the Foreign Civil Aviation Authority (FCAA) as complying with the applicable certification standards are acceptable for inclusion in the FAA-approved maintenance program. However, if the FCAA has no requirement for such procedures, the methods used by the operator to determine compliance with flammability and emission requirements will be evaluated for approval as part of the maintenance program.

d. That FAA Airworthiness Directives are complied with and continuous compliance is maintained.

e. That limits for life-limited parts are adhered to.

f. That airworthiness limitations as prescribed by FAR Section 25.1529, for aircraft subject to that FAR section, are adhered to.

g. That other mandatory maintenance requirements from the type certification process, such as "certification maintenance requirements" published in the Maintenance Review Board (MRB) reports, are complied with.

9. MAINTENANCE PROGRAM UNDER FAR PART 129. The maintenance program under FAR Part 129 concerns the maintenance standards specified by ICAO Annex 6 (reference paragraph 7) that apply to all make and model U.S.-registered aircraft in the operator's fleet engaged in common carriage. It includes the quality control and quality assurance functions of the inspection system requirements of Annex 6, paragraph 8.4, and should include a system of continuous analysis of the effectiveness of the maintenance programs. It includes the mechanism for adjustment of the aircraft maintenance programs, reliability control (if applicable), and overall control of the aircraft maintenance programs. This program should be documented by the operator as discussed in paragraph 16.

10. AIRCRAFT MAINTENANCE PROGRAM.

a. An individual aircraft maintenance program for each aircraft make and model is an essential part of a maintenance program approved under FAR Part 129 (Reference Appendix 1, Examples 1 and 2). Following are elements of an aircraft maintenance program extracted from Advisory Circular 120-16C, Continuous Airworthiness Maintenance Programs, paragraph 4.

(1) Aircraft Inspection. This element deals with the routine inspections, servicing, and tests performed on the aircraft at prescribed intervals. It includes detailed instructions and standards (or references thereto) by work forms, job cards, etc., which also serve to control the activity, and to record and account for the tasks that comprise this element.

(2) Scheduled Maintenance. This element concerns maintenance tasks performed at prescribed intervals. Some are accomplished concurrently with inspection tasks that are part of the inspection element and may be included on the same form. Other tasks are accomplished independently. The scheduled tasks include replacement of life-limited items, components requiring replacement for periodic overhaul, special inspections such as X-rays, checks or tests for on-condition items, lubrications, etc. Special work forms can be provided for accomplishing these tasks or they can be specified by a work order or some other document. In any case, instructions and standards for accomplishing each task should be provided to ensure its proper accomplishment and that it is recorded and signed for.

(3) Unscheduled Maintenance. This element provides procedures, instructions, and standards for the accomplishment of maintenance tasks generated by the inspection and scheduled maintenance elements, pilot reports, failure analyses, or other indications of a need for maintenance. Procedures for reporting, recording, and processing inspection findings and operational malfunctions in conjunction with scheduled maintenance are an essential part of this element. Procedures for processing operational malfunctions and abnormal occurrences other than during scheduled inspections may be common to all make/model aircraft, but the instructions and standards for these activities are provided by the individual aircraft maintenance program.

(4) Engine, Propeller, and Appliance Repair and Overhaul. This element concerns shop operations which, although they encompass scheduled and unscheduled tasks, are remote from maintenance performed to the aircraft as a unit. As with the aircraft scheduled and unscheduled elements, instructions and standards should be provided along with a means for certifying and recording the work. Appropriate life-limited parts replacement requirements are included in this element.

(5) Structural Inspection Program/Airframe Overhaul. This element concerns the structural inspections identified as the D and E check level by MRB reports and/or airframe major overhaul. As with the aircraft inspection elements, detailed instructions and standards should be provided along with a work control and recording means. In addition to structural inspection, airframe major overhaul programs include extensive scheduled maintenance tasks.

b. The maintenance tasks, processes and frequencies for each aircraft maintenance program are originally derived from MRB reports developed under Airline/Manufacturer Maintenance Planning Documents. Advisory Circular 121-22, Maintenance Review Board, addresses this process.

c. The FAA will approve aircraft maintenance programs based on the appropriate MRB report. The aircraft maintenance program and the MRB report on which it is based must coincide with the aircraft configuration. If these differ, the operator should justify the affected portion of the program.

(1) Aircraft maintenance or inspection programs currently approved under FAR Sections 91.169 or 125.247 may be included in the aircraft maintenance program approved under FAR Part 129.

(2) Operators whose aircraft maintenance programs (or inspection parts of those programs) are not currently approved under FAR Sections 91.169 or 125.247 may be required to justify all maintenance task contents and frequency changes made to the maintenance program since its initial implementation under the MRB. The extent of justification will be determined by the assigned inspector with consideration of the operator's system for controlling the aircraft maintenance programs discussed in paragraphs 11 and 12.

d. The aircraft maintenance program should include the requirements of the Supplemental Structural Inspection Document (SSID), or requirements generated under the damage tolerance structural certification basis, as applicable.

e. The aircraft maintenance program should include biennial transponder tests and inspections required by FAR Section 91.172.

f. The methods and standards for accomplishing the maintenance tasks encompassed by the aircraft maintenance program are mainly provided by the manufacturers' maintenance manuals. These methods and standards may be

modified or altered by the operator as provided for by FAR Section 43.13(c). Procedures and requirements for such deviations are discussed in paragraph 11.

g. Inspection/Quality control for accomplishment of the aircraft maintenance program should be provided by a person authorized under FAR Part 43 who is further authorized by the operator. Except for minor items, this person is normally a repair station under FAR Part 145 which may or may not be the operator's organization. In either case, the repair station is required by FAR Part 145 to adhere to the operator's aircraft maintenance program. For minor items, a U.S.-certificated mechanic can perform maintenance according to the operators aircraft maintenance program under the performance rules of FAR Section 43.13(c).

11. AIRCRAFT MAINTENANCE PROGRAM ADJUSTMENT.

a. The operator's system for adjusting the aircraft maintenance programs, for both frequency and content, is an administrative function of the maintenance program under FAR Part 129.

b. The FAA requirements for adjustments to the operator's maintenance program will generally parallel the operator's civil aviation authority requirements for its locally-registered aircraft. This includes changes in task frequency, as well as changes in content, for both scheduled and unscheduled maintenance.

c. For program adjustments that require approval by the operator's authority, the justification data should be made available to the assigned inspector for review, or submitted for approval, as directed by the assigned inspector.

d. Extension of C and D check periods, and significant changes to their content will require prior FAA approval regardless of the approval requirements of the operator's civil aviation authority.

12. RELIABILITY CONTROL. A reliability control system is essential for controlling aircraft maintenance programs using the condition monitoring process (MSG 1/2) or programs based on task analysis (MSG-3). Advisory Circular 120-17A, Maintenance Control By Reliability Methods, is an acceptable basis for reliability control.

a. FAA will not accept aircraft maintenance program changes based on the operator's reliability control system that exceed the scope of the changes accepted by the operator's FCAA.

b. The separate reliability program document specified by AC 120-17A is not required provided equivalent requirements are contained elsewhere in the operator's manual system and the applicability of the reliability function to U.S.-registered aircraft is adequately defined.

c. The monthly report specified in AC 120-17A is not necessary if equivalent data is provided to the operator's civil aviation authority. The assigned inspector will determine what reports are to be supplied to him/her for effective monitoring. Also, the assigned inspector will be provided access to reliability control data, translated to English as necessary, and should have access to reliability related data on the operator's computer (if applicable). These arrangements should be incorporated in the operator's FAA program description.

13. SHORT-TERM ESCALATION.

a. Time limitations for aircraft inspections or component inspections, checks, or replacements may be individually extended under the following conditions:

(1) The need for escalation results from some unforeseen event that inhibits accomplishing the task at the scheduled period.

(2) The operator's FCAA allows short-term escalation.

(3) Short-term escalations shall not exceed 10 percent of the limit or 500 hours time in service (or equivalent cycles) without individual FAA approval.

(4) The escalation does not result in exceeding the following:

(i) Intervals specified by FAA Airworthiness Directives.

(ii) Life limits.

(iii) Limitations specified by Minimum Equipment Lists or Configuration Deviation Lists.

(iv) Structural sampling periods imposed by MRB.

(v) Special Structural Inspection Program or damage tolerance requirements.

b. The system for short-term escalation should be described in the operator's manual system.

14. PROGRAM ADOPTION.

Note: This paragraph does not apply to consortium operators. Consortiums are discussed in paragraph 15.

An operator under FAR Part 129 may adopt all or part of another operator's FAA-approved aircraft maintenance program. Programs eligible for adoption are those currently approved under FAR Parts 121, 129, or 135. The adopted program does not have to be re-approved provided:

a. The arrangement is subject to a contractual agreement between the adopting operator and the holder of the approved program.

b. The program is evaluated and adjusted as necessary for environmental and operational differences of the adopting operator and for differences in aircraft configuration.

c. Special tasks to phase the aircraft into the new program are accomplished prior to its operation.

d. The adopting operator's maintenance program under FAR Part 129 includes a system for ensuring that the adopted aircraft maintenance program is properly administered such as program adjustment, continuing analysis, recordkeeping, etc.

e. All maintenance of the adopting operator's aircraft is performed under the control of the operator with the approved program.

f. The adopting operator's maintenance program under FAR Part 129 includes procedures to ensure the arrangement satisfies ICAO Annex 6.

Note: Refer to Appendix 1, Example 3, for a schematic presentation of this arrangement.

15. CONSORTIUM OPERATIONS. The consortium operations provide a formal means for several operators to utilize a common maintenance program for each make and model aircraft and to apportion work among the consortium members. Normally, each member will assume technical program responsibility for one make and model aircraft. Consortium operations are complicated by the fact that the participants are based in, and certificated by, different countries. Accordingly, they are regulated by different civil aviation authorities. The arrangement is extensively documented and is sensitive to disruptions from outside requirements imposed on individual operators. For this reason, the FAA strives to avoid imposing such disruptions, but a situation may arise under the maintenance program approval where they will find it necessary to impose a conflicting requirement. If this occurs, the assigned inspector should discuss it with the appropriate civil aviation authority.

a. When one operator within the consortium controls the aircraft maintenance program for a particular make and model aircraft and that program is part of the maintenance program approved for that operator under FAR Part 129, the following provisions apply:

(1) Other operators within the consortium may adopt that program provided its use is included in their maintenance program approved under FAR Part 129. The aircraft maintenance program does not require additional approval. Refer to Appendix 1, Example 4, for a schematic display of this arrangement.

(2) If only part of the program is adopted, the arrangement should be described in the manuals of both the adopting operator and the operator with the approval for the program. For example, Operator No. 1

may adopt the aircraft maintenance program approved for Operator No. 2 except for the cabin, which Operator No. 1 maintains under a separate program. This arrangement is acceptable and should be described in the approval document for its maintenance program under FAR Part 129.

Note: Refer to Appendix 1, Example 5, for a schematic presentation of this arrangement.

b. Consortium members with FAA repair station certificates should request operations specifications authorization to perform maintenance on all U.S.-registered aircraft within the consortium for which they are rated at any location outside of the United States. This authorization should apply only to aircraft within the consortium agreement. Maintenance of other aircraft away from the repair station will be authorized by geographic authorizations as in the past.

c. KSSU and Atlas are the only consortiums recognized by the FAA for maintenance purposes. Use of the provisions of this paragraph by other consortiums or groupings is subject to FAA regional and headquarters office concurrence.

16. PROGRAM DESCRIPTIONS. As discussed earlier, the operator's manual system should describe the maintenance program under FAR Part 129 and the individual aircraft maintenance programs. These program descriptions serve to document the programs to show compliance with the FAR and to show the scope of the FAA approval.

a. The descriptions of the programs under FAR Part 129 may take the form of a separate manual, or a chapter, section, or appendix of an existing manual. Other manuals or documents may be included by reference:

(1) These descriptions and significant reference material must be in the English language.

(2) These program descriptions and significant referenced material require FAA approval.

(3) Revisions to the inspection quality control/assurance system, reliability control, consortium arrangements, and other critical aspects of the maintenance program under FAR Part 129 should be provided to the assigned inspector. If such revisions require approval by, or coordination with, the operator's FCAA, they will also require FAA approval.

b. Aircraft maintenance programs are identified by a schedule, listing, and description of job cards (or by a listing and the cards themselves) and the content of the tasks.

(1) The listings, forms, and content must be in the English language.

(2) Adopted aircraft maintenance programs must be approved and are authorized for the operator's use by inclusion in the operator's maintenance program under FAR Part 129 in the program description or manual content requiring FAA approval. In addition, the operator should submit evidence of the FAA approval of that aircraft program and a certified copy of the contractual agreement with the program holder.

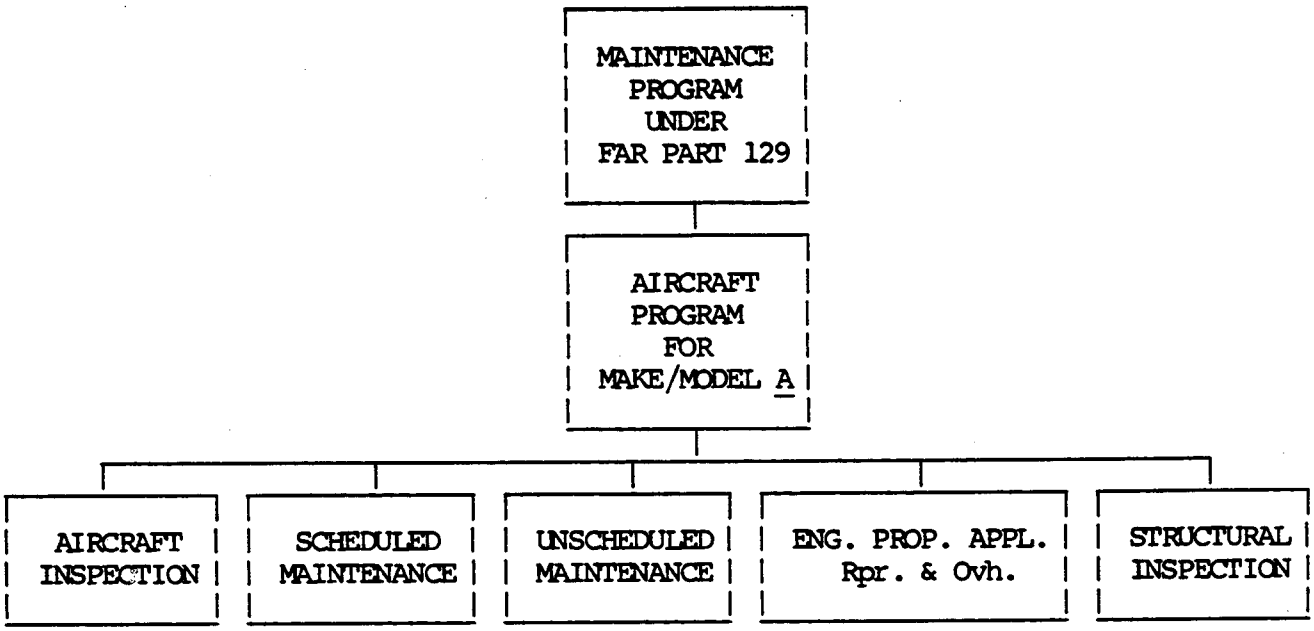
c. Appendix 2 depicts acceptable formats for program approval and revision approval documentation. This format is not mandatory and other documentation formats including this information are acceptable to the FAA. There should be an individual approval for each aircraft program except for adopted programs.

d. The assigned inspector should discuss the FAA programs with the FCAA and seek their concurrence with the FAA approval to ensure they have no objection to FAA program requirements. If the FCAA agent declines to sign concurrence with the FAA approval, the agent's name, title, and location should be included on the document for future reference. This concurrence is not intended to imply any responsibility by the FCAA for the U.S. program; its purpose is to ensure both parties are in agreement.

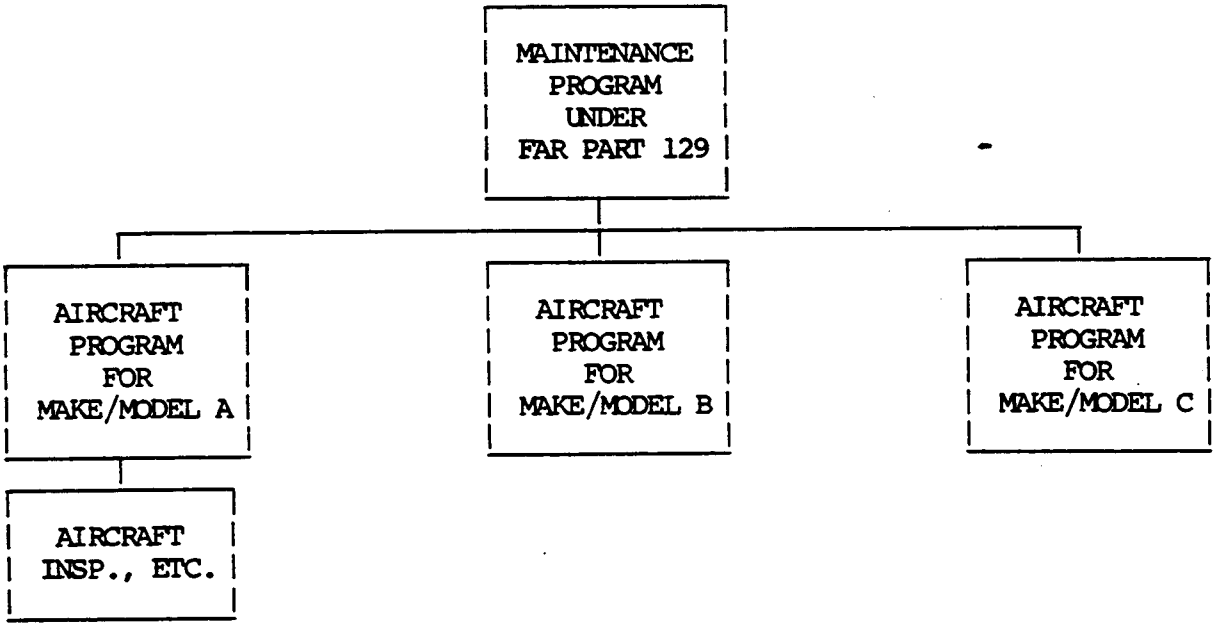
William T. Brennan
Acting Director of Flight Standards

APPENDIX 1. MAINTENANCE PROGRAM ARRANGEMENTS

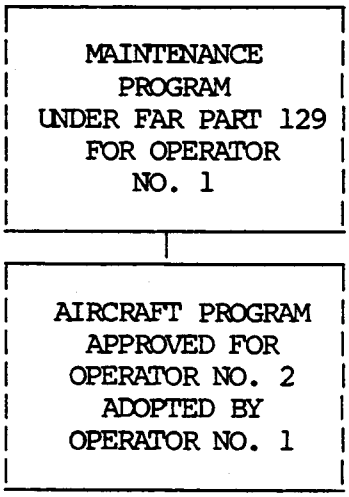
EXAMPLE 1. MAINTENANCE PROGRAM APPROVED UNDER FAR PART 129 FOR ONE MAKE/MODEL AIRCRAFT



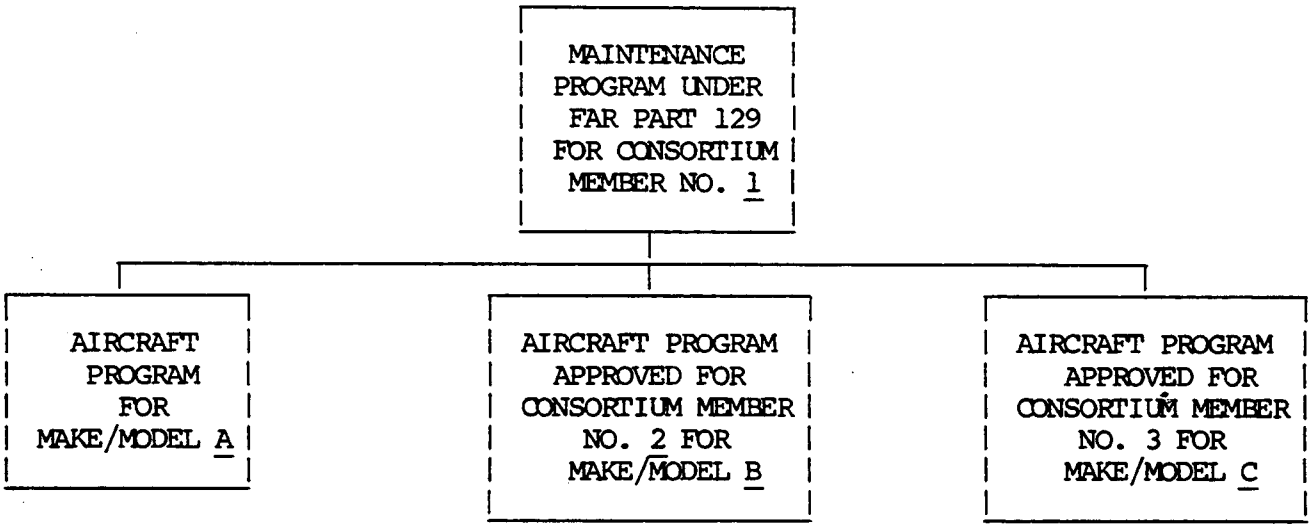
EXAMPLE 2. MAINTENANCE PROGRAM APPROVED UNDER FAR PART 129 FOR SEVERAL MAKE/MODEL AIRCRAFT



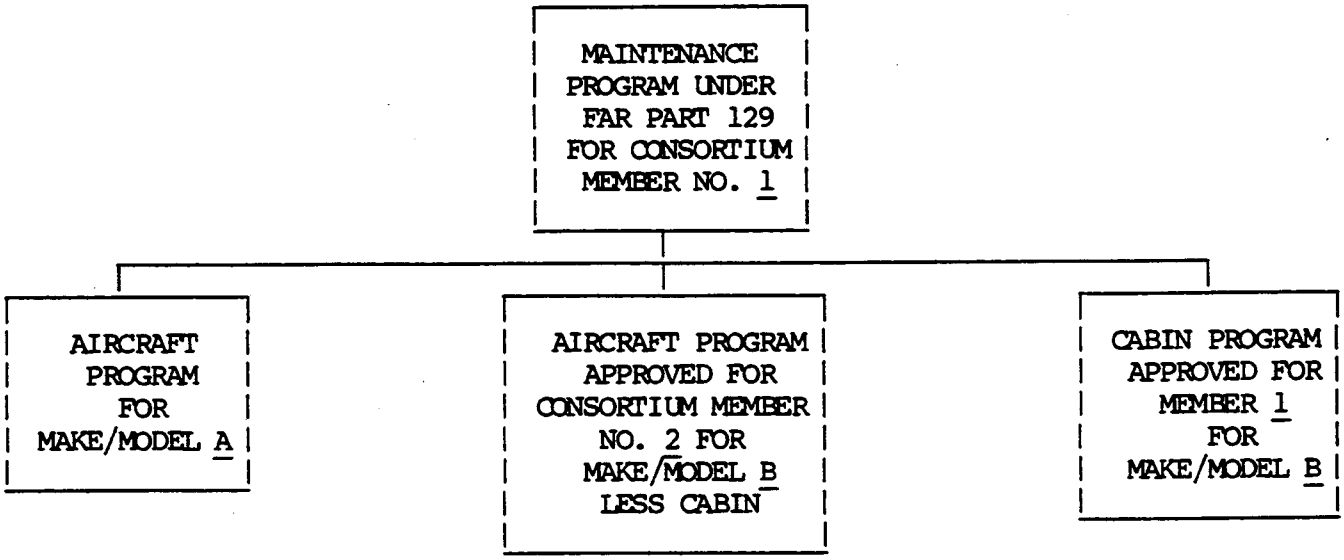
EXAMPLE 3. MAINTENANCE PROGRAM APPROVED UNDER FAR PART 129 WITH AN ADOPTED AIRCRAFT PROGRAM



EXAMPLE 4. MAINTENANCE PROGRAM APPROVED UNDER FAR PART 129 - BASIC CONSORTIUM ARRANGEMENT



EXAMPLE 5. MAINTENANCE PROGRAM APPROVED UNDER FAR PART 129 - CONSORTIUM - PARTIAL PROGRAM ADOPTION



APPENDIX 2. TYPICAL MAINTENANCE PROGRAM APPROVAL DOCUMENT

SECTION I. APPROVAL OF MAINTENANCE PROGRAM UNDER FAR PART 129

OPERATOR _____

PROGRAM IDENTIFICATION _____

Revision Control * _____

SUBMITTED BY ** _____
(name, title, signature, date, location)

FAA Approval _____
(name, title, signature, date, location)

FCAA Concurrence *** _____
(name, title, signature, date, location)

SECTION II. APPROVAL OF INDIVIDUAL AIRCRAFT MAINTENANCE PROGRAM

AIRCRAFT, ENGINE, AND PROPELLER MAKE AND MODEL _____

_____

PROGRAM IDENTIFICATION _____

Revision Control * _____

SUBMITTED BY ** _____
(name, title, signature, date, location)

FAA Approval _____
(name, title, signature, date, location)

FCAA Concurrence *** _____
(name, title, signature, date, location)

* Whatever program control references are subject to FAA approval)
(revision number, date, list of effective pages, etc.)

** Certification that this program is submitted to the FAA for approval for operations under FAR Part 129 on behalf of the above identified operator and I am authorized by that company to effect this submission.

*** Not mandatory.

APPENDIX 3. EXCERPTS FROM ICAO ANNEX 6

INTERNATIONAL STANDARDS
AND RECOMMENDED PRACTICES

OPERATION OF AIRCRAFT

ANNEX 6

TO THE CONVENTION
ON INTERNATIONAL CIVIL AVIATION

PART I
INTERNATIONAL COMMERCIAL AIR TRANSPORT

FOURTH EDITION OF PART I — JULY 1983

This edition incorporates all amendments adopted by the Council prior to 30 March 1983 and supersedes, on 24 November 1983, the third edition of Part I of Annex 6.

For information regarding the applicability of the Standards and Recommended Practices, *see* Foreword.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

CHAPTER 8. AEROPLANE MAINTENANCE

Note on the application of this chapter.— For the purpose of this chapter "aeroplane" includes: powerplants, propellers, components, accessories, instruments, equipment and apparatus including emergency equipment.

8.1 General

8.1.1 An operator shall ensure that there is provided an organization including trained staff, workshops and other equipment and facilities to maintain his aeroplanes in an airworthy condition when in use.

8.1.2 When the performance of the maintenance required in 8.1 is assigned, either partially or wholly, to a maintenance organization approved by the State of Registry of the aeroplane concerned, the operator's responsibility for compliance with Standards 8.2, 8.3 and 8.4, which follow, shall be modified according to the extent to which maintenance is assigned.

8.2 Maintenance Manual

8.2.1 An operator shall ensure that there is provided, for the use and guidance of maintenance organizations and personnel, a Maintenance Manual containing the information specified in 11.3.

8.2.2 An operator shall ensure that the Maintenance Manual is amended or revised as is necessary to keep the information contained therein up to date.

8.2.3 Copies of all revisions and amendments of a Maintenance Manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.

8.3 Training

An operator shall ensure that all maintenance personnel are instructed regarding the maintenance methods to be employed, in particular when new or unfamiliar equipment is introduced into service.

8.4 Inspection

An operator shall ensure that there is provided a system of inspection to ensure that all maintenance, overhaul, modifications and repairs which affect airworthiness, are effected as prescribed in the Maintenance Manual.

8.5 Qualification to certify as airworthy

Each person charged with the responsibility of certifying as to the airworthiness of an aeroplane shall be qualified under Annex 1.

8.6 Modifications and repairs

All modifications and repairs shall be effected in accordance with methods appropriate to the aeroplane concerned.

8.7 Maintenance Release

A Maintenance Release shall be completed and signed by a person or persons qualified under Annex 1 to certify that the maintenance work has been completed satisfactorily and in accordance with the methods prescribed in the Maintenance Manual.

8.8 Records

8.8.1 An operator shall ensure that the following records are kept:

a) in respect of the entire aeroplane: the total time in service;

b) in respect of the major components of the aeroplane:

1) the total time in service;

2) the date of the last overhaul;

3) the date of the last inspection;

c) in respect of those instruments and equipment, the serviceability and operating life of which are determined by their time in service:

1) such records of the time in service as are necessary to determine their serviceability or to compute their operating life;

2) the date of the last inspection.

8.8.1.1 These records shall be kept for a period of 90 days after the end of the operating life of the unit to which they refer.

v) operating instructions and information on climb performance with all engines operating, if provided in accordance with 4.2.2.3.

11.1.2-*NS* An Operations Manual which may be issued in separate parts corresponding to specific aspects of operations, provided in accordance with 4.2.1 shall contain at least the following:

a) instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations;

b) the flight crew for each type of operation to be conducted including the designation of the succession of command;

c) the maximum flight time and flight duty periods of flight crew members, determined in accordance with 4.2.9.3;

d) the in-flight and the emergency flight procedures including the in-flight and the emergency duties assigned to each crew member;

e) check-list of emergency and safety equipment and instructions for its use;

f) the method of determining minimum flight altitudes as required by 4.2.5.4-*NS* and 4.2.5.5-*NS*;

g) operating minima for each of the aerodromes that are likely to be used as destination or alternate aerodromes;

h) the circumstances in which a radio listening watch is to be maintained;

i) a list of the navigational equipment to be carried;

j) specific instructions for the computation of the quantities of fuel and oil to be carried having regard to all circumstances of the operation including the possibility of the failure of one or more powerplants while en route;

k) information which will enable the pilot-in-command to determine whether the flight may be continued should any instrument, equipment or system become inoperative;

l) instructions which will ensure that the pilot-in-command will have for each flight, detailed information in respect to communication facilities, navigation aids, aerodromes, and such other information as the operator may deem necessary;

m) the conditions under which oxygen shall be used;

n) procedures, as prescribed in Annex 12, for pilots-in-command observing an accident;

o) the ground-air visual signal code for use by survivors, as contained in Annex 12;

p) procedures, as prescribed in Annex 2, for pilots-in-command of intercepted aircraft;

q) visual signals for use by intercepting and intercepted aircraft, as contained in Annex 2;

r) for aeroplanes intended to be operated above 15 000 m (49 000 ft):

1) information which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation;

2) procedures in the event that a decision to descend is taken, covering:

i) the necessity to give the appropriate air traffic service (ATS) unit prior warning of the situation and of obtaining a provisional descent clearance,

ii) the action to be taken in the event that communication with the ATS unit cannot be established or is interrupted.

Note.— Guidance material on the information to be provided is contained in Circular 126.

s) information and instructions on the carriage of dangerous goods, including action to be taken in the event of an emergency;

t) emergency evacuation procedures;

u) safety precautions during refuelling with passengers on board;

v) operating instructions and information on climb performance with all engines operating, if provided in accordance with 4.2.2.3.

11.2 Aeroplane Flight Manual

Note.— The Aeroplane Flight Manual contains the information specified in Annex 8.

11.3 Maintenance Manual

A Maintenance Manual provided in accordance with 8.2 shall contain the following information in respect of the aeroplanes used:

a) procedures for servicing and maintenance;

b) the frequency of each check, overhaul or inspection;

c) the responsibilities of the various classes of skilled maintenance personnel;

d) the servicing and maintenance methods which may be prescribed by, or which require the prior approval of, the State of Registry;

e) the procedure for preparing the Maintenance Release, the circumstances under which this release is to be issued and the personnel required to sign it.

11.4 Maintenance Release

A Maintenance Release shall contain a certification as to the satisfactory completion of maintenance work carried out in accordance with the methods prescribed in the Maintenance Manual.

11.5 Journey Log Book

11.5.1 **Recommendation.**— *The aeroplane Journey Log Book should contain the following items and the corresponding roman numerals:*

I — *Aeroplane nationality and registration.*

II — *Date.*

III — *Names of crew members.*

IV — *Duty assignments of crew members.*

V — *Place of departure.*

VI — *Place of arrival.*

VII — *Time of departure.*

VIII — *Time of arrival.*

IX — *Hours of flight.*

X — *Nature of flight (private, aerial work, scheduled or non-scheduled).*

XI — *Incidents, observations, if any.*

XII — *Signature of person in charge.*

11.5.2 **Recommendation.**— *Entries in the Journey Log Book should be made currently and in ink or indelible pencil.*

11.5.3 **Recommendation.**— *Completed Journey Log Book should be retained to provide a continuous record of the last six months' operations.*

11.6 Records of emergency and survival equipment carried

Operators shall at all times have available for immediate communication to rescue co-ordination centres, lists containing information on the emergency and survival equipment carried on board any of their aeroplanes engaged in international air navigation. The information shall include, as applicable, the number, colour and type of life rafts and pyrotechnics, details of emergency medical supplies, water supplies and the type and frequencies of the emergency portable radio equipment.

Note.— The following additional manuals and records are associated with this Annex but are not included in this chapter:

Fuel and oil records — see 4.2.8

Maintenance records — see 8.8

Flight time records — see 4.2.9.3

Flight preparation forms — see 4.3

Operational flight plan — see 4.3.3.1 and 4.3.3.2-NS

Pilot route and aerodrome qualification records — see 9.4.3.5

11.7 Flight recorder records

11.7.1 An operator shall ensure, to the extent possible, in the event one of his aircraft becomes involved in an accident, the preservation of all related flight recorder records, and if necessary the associated flight recorders, and their retention in safe custody pending their disposition as determined in accordance with Annex 13.

11.7.2 **Recommendation.**— *An operator should ensure to the extent possible, in the event one of his aircraft becomes involved in an incident, the preservation of all related flight recorder records, and if necessary the associated flight recorders, and their retention in safe custody pending their disposition as determined in accordance with Annex 13.*