Federal Aviation Agency

(ANCORKED AC-120-16H AC NO: AC 120-16

AIR CARRIER AND COMMERCIAL OPERATORS

EFFECTIVE: 10/19/64



SUBJECT : CONTINUOUS AIRWORTHINESS PROGRAM

- PURPOSE. This advisory circular is intended to provide air carriers and commercial operators with guidance and information pertinent to certain provisions of Civil Air Regulations, Amendments 40-46, 41-11, 42-10, and 46-9, issued May 12, 1964, to become effective on October 19, 1964. The regulatory amendments are entitled "Requirements for Air Carrier Continuous Airworthiness Program."
- GENERAL. Essentially, the amended requirements deal with six areas of 2. maintenance management. These six areas can be identified as those provisions concerning: (1) responsibility for airworthiness of aircraft; (2) maintenance and inspection organization and program; (3) continuing analysis and surveillance; (4) airmen certificate requirements; (5) authority to perform and approve maintenance and alterations; and (6) airworthiness release or aircraft log entry. Reference to the preamble material contained in the foregoing amendments 40-46, 41-11, 42-10, and 46-9 as published in the Federal Register (29 F.R. 6522 May 20, 1964) will further amplify the derivation of and reasons for promulgating these new regulations. The words and the content of the regulations are quite clear and explicit, and the material contained in this advisory circular is not intended to change the requirements of the regulations in any way. Yet, since there have been numerous questions as to the mode to be used by the Agency in administering the requirements across broad spectrums which involve many operators, it is considered necessary to touch on some of the more important portions of the new regulations.

Notwithstanding the fact that there are other areas which are involved, the new regulations provide that every air carrier or commercial operator who operates under the provisions of Parts 40, 41, 42, or 46:

Must separate its maintenance organization from its inspection organization if it performs maintenance work and inspection (required inspection items) work;

- Must show in its manual where this organizational separation begins;
- Must evaluate its maintenance, inspection, and alteration program and designate those items that must be inspected (required inspections);
- d. Must establish ways to make certain that required inspection items are handled by properly authorized, certificated, qualified, and informed persons; and
- e. Must establish and maintain an analysis and surveillance system which will tell whether its maintenance and inspection program results in the operation of aircraft which are in a safe condition.
- ARRANGEMENTS WITH OTHER PERSONS FOR MAINTENANCE, INSPECTION, AND ALTERATIONS. CAR 40.241(d) and similar provisions of Parts 41, 42, and 46 require the operator to include in its manual a list of persons with whom it has made arrangements for performance of work on its aircraft. Also needed is a general description of the work to be performed. The name and address of the contractor and the use of such terms as "150 hour airframe inspection," "overhaul and repair autopilot," "overhaul hydraulic pump" and the like is acceptable in this respect. However, while the regulation prescribes under the listing for a general description of work to be performed by others, it is important to alert each operator to the fact that its manual must also include the "where." "what," "when," and "how" any maintenance and alterations are to be performed. Additionally, it has been brought to the Agency's attention that those cases exist where a manufacturer of a product is compelled, by virtue of its warranty, to work on its own products. In these cases, if the manufacturer does not perform maintenance or alterations but rebuilds or replaces the product, such arrangements need not be reflected in the operator's manual.

In the case of nonroutine maintenance, the Agency recognizes that there will be unplanned occasions where it will be necessary for the operator to make arrangements for maintenance. The operator may establish procedures where the pilot-in-command or other person can make on-the-spot arrangements for maintenance. However, the person making the arrangements should inform the management at the principal maintenance base of such arrangements. The operator's procedures should outline the steps that the person making the arrangement must take in order to determine that proper persons perform the work.

4. MAINTENANCE AND INSPECTION PROGRAMS. CAR 40.241(f) and similar provisions of Parts 41, 42, and 46 require that the operator's manual contain methods, procedures, and instructions which are to be followed

in conducting maintenance and alterations. There are many ways to accomplish this which may involve arrangement of the manual, format, indexing, use of production control workcards, jobcards, etc., which are not necessary to mention in this advisory circular. CAR 40.241(f)(2) and similar provisions of Parts 41, 42, and 46 deal with the designation of maintenance and alteration work which must be inspected (required inspection items). The Agency understands that an operator's present maintenance and inspection program includes numerous work items which are subject to an inspection. These work items may not be of a nature which requires all of them to be designated as a required inspection item. As stated in the regulation, the manual must contain A DESIGNATION OF THE ITEMS OF MAINTENANCE AND ALTERATION WHICH MUST BE INSPECTED (REQUIRED INSPECTION ITEMS) WHICH MUST INCLUDE AT LEAST THOSE OF MAINTENANCE AND ALTERATION WHICH COULD RESULT IN A FAILURE, MALFUNCTION, OR DEFECT ENDANGERING THE SAFE OPERATION OF THE AIRPLANE, IF NOT PERFORMED PROPERLY OR IF IMPROPER PARTS OR MATERIALS ARE USED. It is up to the operator to evaluate its work program and to identify required inspection items in a suitable manner. For example, such items may be identified with the abbreviation "RII," an asterisk, or any similar method. It is not the intention of the regulation to cause the deletion of any work items or inspection items which the operator has deemed necessary for proper maintenance of its aircraft.

The operator in determining the work items which are to be his required inspection items should consider the importance of, but not limit his consideration to, the following maintenance operations:

- Installation, rigging and adjustments of flight control and surfaces;
- b. Installation and repair of major structural components; and
- c. Installation of an aircraft engine, propellers, and rotor and overhaul or calibration of certain components such as engines, propellers, transmissions, and gearboxes, or navigational equipment, the failure of which would affect the safe operations of the aircraft.
- 5. LISTING OF INDIVIDUALS AUTHORIZED TO PERFORM REQUIRED INSPECTIONS. CAR 40.241(j) and similar provisions of CAR Parts 41, 42, and 46, require the operator to maintain or determine that each person with whom it arranges for the performance of its inspections maintains a current listing of individuals who have been trained, qualified, and authorized to inspect its required inspection items. In addition the regulation requires that the individuals must be identified by name, occupational title, and the inspections that the individual is authorized to perform.

As an acceptable means of compliance with these requirements, the operator's personnel roster (or the contractor's roster) which contains occupational titles such as mechanic, lead mechanic, inspector, and foreman, may be used. This roster should include a method of positive identification of those individuals who are trained, qualified, and authorized. The individuals who are authorized may be informed by a letter or a list which shows the extent of their responsibilities, authorities, and inspectional limitations. However, if only a list is used, it should be signed by each authorized individual.

- 5. ANALYSIS AND SURVEILLANCE SYSTEM. CAR 40.242(a) and similar provisions of CAR Parts 41, 42, and 46, require the operator to establish and maintain a system for continuing analysis and surveillance of its maintenance and inspection program. An acceptable system is one that provides for:
 - a. The analysis of the following to determine the effectiveness of the operator's maintenance and inspection programs and for the correction of any deficiency in these programs:
 - (1) Frequency of parts replacement;
 - (2) The degree and frequency of adjustment or calibration; and
 - (3) The deterioration or improvement of operational capability or reliability.
 - b. Surveillance of the capability of the entire system of maintenance management to assure any person connected with it is in compliance with the operator's manual and the applicable regulations; and
 - c. A method of conducting timely and corrective action on all deficiencies revealed as a result of internal surveillance.

George S. Moore

Director

Flight Standards Service

0-610C AC 120-16A

DATE:

9/11/69



ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: CONTINUOUS AIRWORTHINESS PROGRAM

- 1. This advisory circular is intended to provide air carriers and commercial operators with guidance and information pertinent to certain provisions of Federal Aviation Regulations Parts 121 and 127.
- CANCELLATION. Advisory Circular AC 120-16, dated 10/19/64, is canceled.
- GENERAL. Essentially, these requirements concern six areas of 3. maintenance management. These six areas can be identified as those provisions concerning: (1) responsibility for airworthiness of aircraft; (2) maintenance and inspection organization and program; (3) continuing analysis and surveillance; (4) airmen certificate requirements; (5) authority to perform and approve maintenance and alterations; and (6) airworthiness release or aircraft log entry. Reference to the preamble material contained in amendments 40-46, 41-11, 42-10, and 46-9 as published in the Federal Register (29 F.R. 6522 May 20, 1964) will further amplify the derivation of and reasons for promulgating these new regulations. The words and the content of the regulations are quite clear and explicit, and the material contained in this advisory circular is not intended to change the requirements of the regulations in any way. Yet, since there have been numerous questions as to the mode to be used by the agency in administering the requirements across broad spectrums which involve many operators, it is considered necessary to touch on some of the more important portions of the new regulations.

Notwithstanding the fact that there are other areas which are involved, the regulations provide that every air carrier or commercial operator who operates under the provisions of Parts 121 or 127:

- Must separate its maintenance organization from its inspection a. organization if it performs maintenance work and inspection (required inspection items) work:
- Mist show in its manual where this organizational separation begins;

- Must evaluate its maintenance, inspection, and alteration program and designate those items that must be inspected (required inspections);
- d. Must establish ways to make certain that required inspection items are handled by properly authorized, certificated, qualified, and informed persons; and
- e. Must establish and maintain an analysis and surveillance system which will tell whether its maintenance and inspection program results in the operation of aircraft which are in a safe condition.
- ARRANGEMENTS WITH OTHER PERSONS FOR MAINTENANCE, INSPECTION, AND ALTERATIONS. FAR 121.369(a) and similar provisions of Part 127 require the operator to include in its manual a list of persons with whom it has made arrangements for performance of work on its aircraft. Also needed is a general description of the work to be performed. The name and address of the contractor and the use of such terms as "150-hour airframe inspection," "overhaul and repair autopilot," "overhaul hydraulic pump," and the like is acceptable in this respect. However, while the regulation prescribes under the listing for a general description of work to be performed by others, it is important to alert each operator to the fact that its manual must also include the "where," "what," "when," and "how" any maintenance and alterations are to be performed. Additionally, it has been brought to the agency's attention that those cases exist where a manufacturer of a product is compelled, by virtue of its warranty, to work on its own products. In these cases, if the manufacturer does not perform maintenance or alterations but rebuilds or replaces the product, such arrangements need not be reflected in the operator's manual.

In the case of nonroutine maintenance, the agency recognizes that there will be unplanned occasions where it will be necessary for the operator to make arrangements for maintenance. The operator may establish procedures where the pilot-in-command or other person can make on-the-spot arrangements for maintenance. However, the person making the arrangements should inform the management at the principal maintenance base of such arrangements. The operator's procedures should outline the steps that the person making the arrangement must take in order to determine that proper persons perform the work.

MAINTENANCE AND INSPECTION PROGRAMS. FAR 121.369(b) and similar provisions of Part 127 require that the operator's manual contain methods, procedures, and instructions which are to be followed in conducting maintenance and alterations. There are many ways to accomplish this which may involve arrangement of the manual, format, indexing, use of production control workcards, jobcards, etc., which are not necessary to mention in this advisory circular. FAR 121.369(b)(2) and similar provisions of Part 127 deal with the designation of maintenance and alteration work which must be inspected (required inspection items). The agency understands that an operator's present maintenance and

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inspection program includes numerous work items which are subject to an inspection. These work items may not be of a nature which requires all of them to be designated as a required inspection item. As stated in the regulation, the manual must contain A DESIGNATION OF THE ITEMS OF MAINTENANCE AND ALTERATION WHICH MUST BE INSPECTED (REQUIRED INSPECTION ITEMS) WHICH MUST INCLUDE AT LEAST THOSE OF MAINTENANCE AND ALTERATION WHICH COULD RESULT IN A FAILURE, MALFUNCTION, OR DEFECT ENDANGERING THE SAFE OPERATION OF THE AIRPLANE, IF NOT PERFORMED PROPERLY OR IF IMPROPER PARTS OR MATERIALS ARE USED. It is up to the operator to evaluate its work program and to identify required inspection items in a suitable manner. For example, such items may be identified with the abbreviation "RII," an asterisk, or any similar method. It is not the intention of the regulation to cause the deletion of any work items or inspection items which the operator has deemed necessary for proper maintenance of its aircraft.

The operator in determining the work items which are to be its required inspection items should consider the importance of, but not limit its consideration to, the following maintenance operations:

- Installation, rigging, and adjustments of flight control and surfaces;
- b. Installation and repair of major structural components; and
- c. Installation of an aircraft engine, propellers, and rotor and overhaul or calibration of certain components such as engines, propellers, transmissions, and gearboxes, or navigational equipment, the failure of which would affect the safe operation of the aircraft.
- LISTING OF INDIVIDUALS AUTHORIZED TO PERFORM REQUIRED INSPECTIONS. FAR 121.371(d) and similar provisions of FAR Part 127 require the operator to maintain or determine that each person with whom it arranges for the performance of its inspections maintains a current listing of individuals who have been trained, qualified, and authorized to inspect its required inspection items. In addition the regulation requires that the individuals must be identified by name, occupational title, and the inspections that the individual is authorized to perform. As an acceptable means of compliance with these requirements, the operator's personnel roster (or the contractor's roster) which contains occupational titles such as mechanic, lead mechanic, inspector, and foreman, may be used. This roster should include a method of positive identification of those individuals who are trained, qualified, and authorized. The individuals who are authorized may be informed by a letter or a list which shows the extent of their responsibilities, authorities, and inspectional limitations. However, if only a list is used, it should be signed by each authorized individual.

- 7. ANALYSIS AND SURVEILLANCE SYSTEM. FAR 121.373 and similar provisions of FAR Part 127 require the operator to establish and maintain a system for continuing analysis and surveillance of its maintenance and inspection program. An acceptable system is one that provides for:
 - a. The analysis of the following to determine the effectiveness of the operator's maintenance and inspection programs and for the correction of any deficiency in these programs:
 - (1) Frequency of parts replacement;
 - (2) The degree and frequency of adjustment or calibration; and
 - (3) The deterioration or improvement of operational capability or reliability.
 - b. Surveillance of the capability of the entire system of maintenance management to assure any person connected with it is in compliance with the operator's manual and the applicable regulations; and
 - c. A method of conducting timely and corrective action on all deficiencies revealed as a result of internal surveillance.

Director

Flight Standards Service

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ENDERAL AVIATION ADMINISTRATION PORTAGE AND



Official Business

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION Washington, D.C. 20590

DATE 9/14/78

ADVISORY CIRCULAR



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Washington, D.C.

Subject: CONTINUOUS AIRWORTHINESS MAINTENANCE PROGRAMS

- 1. <u>PURPOSE</u>. This advisory circular is intended to provide information and guidance on continuous airworthiness maintenance programs for operators subject to the provisions of Federal Aviation Regulations (FAR), Parts 121 or 127.
- 2. CANCELLATION. Advisory Circular AC 120-16A, dated September 11, 1969, is canceled.
- 3. GENERAL. Subpart L of FAR Part 121, and Subpart I of FAR Part 127, in conjunction with FAR Part 43, afford the privilege of performing maintenance, inspections, and alterations to operators subject to FAR Parts 121 and 127 and provide for their use of continuous airworthiness maintenance programs. Concurrently, it assigns to them the responsibility for the airworthiness of the aircraft they operate and for compliance with the continuous airworthiness maintenance program approved under the operator's operations specifications. This publication deals with the elements of continuous airworthiness maintenance programs and the management areas associated with those programs; namely, (1) responsibility for airworthiness: (2) maintenance and inspection organization; (3) performance and approval of maintenance and alterations; (4) arrangements for maintenance and alterations performed by other persons; and (5) continuing analysis and surveillance. The regulations concerning this subject are explicit, and the material contained in this advisory circular is not intended to change the requirements of those regulations in any way. However, there have been numerous questions as to the content and administration of continuous airworthiness maintenance programs and their application across the broad spectrum of operators subject to the provisions of FAR Parts 121 and 127.
- 4. CONTINUOUS AIRWORTHINESS MAINTENANCE PROGRAM ELEMENTS. A continuous airworthiness maintenance program is a compilation of the individual maintenance and inspection functions utilized by an operator to fulfill his total maintenance needs. Authorization to use continuous airworthiness maintenance programs is documented by Operations Specifications Aircraft Maintenance, approved by the Federal Aviation Administration, for each user as provided for by FAR 121.25, 121.45 or 127.13. These

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specifications prescribe the scope of the program, including limitations, and they reference manuals and other technical data as supplements to these specifications. Following are the basic elements of continuous airworthiness maintenance programs:

- a. 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.
- b. 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 forms. Other tasks are accomplished independently. The scheduled tasks include replacement of life-limited items and 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.
- c. <u>Unscheduled Maintenance</u>. 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, operational malfunctions, or abnormal operations such as hard landings, are an essential part of this element. A continuous aircraft logbook can serve this purpose for occurrences and resultant corrective action between scheduled inspections. Inspection discrepancy forms are usually used for processing unscheduled maintenance tasks in conjunction with scheduled inspections. Instructions and standards for unscheduled maintenance are normally provided by the operator's technical manuals. The procedures to be followed in using these manuals and for recording and certifying unscheduled maintenance are included in the operator's procedural manual.
- d. 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 means for certifying and recording the work. Appropriate life-limited parts replacement requirements are included in this element.
- e. <u>Structural Inspection Program/Airframe Overhaul</u>. 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

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inspection program, detailed instructions and standards are provided along with a work control and recording means. In addition to structural inspection, airframe major overhaul programs schedule extensive maintenance tasks.

- f. Required Inspection Items (RII). This element concerns maintenance work items which, if improperly done or if improper parts are used, could endanger the safe operation of the aircraft. RII items appear in all elements of the operator's continuous airworthiness maintenance program. They receive the same consideration regardless of whether or not they are related to scheduled or to unscheduled tasks; i.e., the fact that an RII requirement arises at an awkward time or at an inconvenient location has no bearing on the need to accomplish it properly.
- (1) There are many tasks throughout each continuous airworthiness maintenance program which, although not in the RII category, are essential to a safe, reliable, and efficient aircraft. A responsible maintenance program specifies inspection of these tasks to ensure their proper accomplishment. The operator should designate the tasks that need to be inspected as a general requirement to assure the effectiveness of their program as well as the RII items. It is not the intent of the RII requirement to cause the deletion or degradation of any inspection tasks which the operator has deemed necessary for proper maintenance of its aircraft.
- (2) The distinction between tasks of this nature and RII items is, again, their critical effect on airworthiness. For example, a landing gear position indicating system might be designated for inspection due to the need for that system in normal operation. A retraction test conducted to check adjustment of the actuating mechanism and locks would be designated RII because improper adjustment might result in a wheels-up landing. The operator, in determining which tasks to designate as required inspection items should consider the importance of, but not limit its consideration to, the following:
- (i) <u>Installation</u>, rigging, and adjustments of flight controls and surfaces.
 - (ii) <u>Installation</u> and repair of major structural components.
- (iii) <u>Installation</u> of an aircraft engine, propeller, or rotor and overhaul or calibration of certain components; such as, engines, propellers, transmissions, and gearboxes, or navigational equipment, the failure of which would affect the safe operation of the aircraft.
- (3) The operator should identify required inspection items on work forms in a suitable manner. For example, such items may be identified with the abbreviation "RII," an asterisk, or any workable method.

- g. <u>Maintenance Manuals</u>. The operator's maintenance manual serves to define the continuous airworthiness maintenance program and to provide procedures and instructions for its use. It is comprised of three general categories: (1) policies and procedures; (2) detailed instructions for the accomplishment of the scheduled inspection program; and (3) technical manuals for maintenance standards and methods. These categories may be grouped in any usable manner.
- (1) The policies and procedures segment deals with organizational matters, the policies of the maintenance section, procedures for the administration of the continuous airworthiness maintenance program, test flight requirements, and many other subjects that are peculiar to each individual operator. It is a company publication and serves as an administrative tool for directing and controlling the total maintenance function and to define all facets of the maintenance operation and their interrelationship. Quality control is a major subject of this publication.
- (2) The segment of the maintenance manual system dealing with the scheduled inspection program is usually a company publication. It normally includes the work forms or job cards associated with scheduled inspections and detailed instructions (or specific references) for accomplishing the inspections. In addition, this segment usually includes forms and instructions (or references thereto) for recurring nonroutine requirements such as engine changes and abnormal landing inspections.
- (3) Technical manuals concern how to accomplish specific tasks. They specify methods, technical standards, measurements, operational tests, etc. These are usually manufacturers' publications, the applicability of which is designated in the policy and procedures manual. Technical manuals can be supplemented by the operator. It should be noted that the content of these manuals is the operator's responsibility regardless of who publishes them.
- (4) The manual system should accommodate work performed for the certificate holder by other persons. The policies and procedures segment of the manual should assign responsibilities and delineate procedures for the administrative aspect of contracted work. The technical material should be arranged for the use and guidance of the contract agency. A listing of agencies under contract and a brief description of the work contracted for should be included in the manual system. In all cases the operator's manuals must clearly designate who is authorized to certify the work performed and who is authorized to execute the airworthiness release.

5. RESPONSIBILITY FOR AIRWORTHINESS.

- a. <u>FAR 121.363</u> and corresponding sections of FAR 127, together with FAR Part 43, afford the following maintenance privileges to operators subject to FAR Parts 121 and 127:
- (1) To perform maintenance, preventative maintenance, inspection, repairs and alterations on the aircraft they operate.

- (2) To develop (or adopt) a continuous airworthiness maintenance program and to tailor and adjust that program and related practices and procedures to best suit the operator's need.
- b. With these privileges go the overall responsibility for the effectiveness of the program and for all work performed in accordance with the program. This responsibility applies to work performed by the operator as well as to work performed for the operator by other persons.
- 6. MAINTENANCE/INSPECTION ORGANIZATION. FARs 121.365 and 127.132 impose organizational requirements with regard to the administration of the continuous airworthiness maintenance program. This does not mitigate the applicability of FAR Part 43 nor does it waive initial aircraft certification requirements. The Required Inspection Item (RII) requirement causes the operator to separate the inspection organization from the remainder of its maintenance organization to ensure proper accomplishment of RII items. This separation applies to the following functions:
 - a. RII items performed by the operator's organization.
- b. Means to ensure RII items performed by other persons are subjected to RII inspection separation by the other person's organization and procedures.
- c. <u>Identification of RII items</u> by a means that is understood by the person performing the work.
- d. <u>Designation of persons authorized</u> to accomplish RII items and procedures to make them more aware of that designation and of the scope of the authorization. In the case of work performed by other persons, the operator can delegate the RII function to the other person's inspection organization. This arrangement should be documented and controlled by appropriate procedures.
- 7. PERFORMANCE AND APPROVAL OF MAINTENANCE AND ALTERATIONS. The significant difference between an operator subject to FAR 121 or 127 and other operators is that FAR 121.379 or 127.140, in conjunction with FAR Part 43, establishes them as maintenance entities.
- a. The operator is privileged to perform maintenance on its aircraft in accordance with its continuous airworthiness maintenance program and for other operators in accordance with their continuous airworthiness maintenance programs provided both operators are certificated under the same FAR Part. For example, a Part 121 certificate holder may perform maintenance for another FAR Part 121 certificate holder but not for a FAR Part 135 certificate holder with a FAR 135.2 authorization.
- b. The operator's manual prescribes acceptable methods, techniques and practices for performance of that maintenance. This is recognized by FAR 43.13(c).

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- c. The operator's aircraft can be released for service (airworthiness release, ref: FARs 121.709 and 127.319) following maintenance by an authorized person specifically designated by the operator. In effect, the person signing the release acts in the capacity of an authorized agent for the operator and is certifying the maintenance covered by the release as having been accomplished according to the operator's continuous airworthiness maintenance program. Responsibility for each step of the accomplished maintenance is born by the person signing for that step and the airworthiness release certifies the total maintenance package. This arrangement in no way mitigates the responsibility of certificated mechanics or repair stations for maintenance functions or tasks they perform or supervise. The operator should designate, by name or occupational title, each airman or organization authorized to execute the airworthiness release. In addition, the operator should designate when a release is needed. Normally, a release is needed following inspections prescribed by the operations specifications, maintenance activities involving RII inspections, and any other significant maintenance.
- 8. ARRANGEMENTS WITH OTHER FERSONS FOR MAINTENANCE. When an operator uses the services of another person to accomplish all or part of its continuous airworthiness maintenance program that person's organization becomes, in effect, an extension of the operator's organization. The operator should determine the person's capability to do the work and provide appropriate material from his maintenance manual for that work.
- a. The operator should execute contractual agreements with the persons performing work for him on a continuing basis to ensure the operator's interests are met. In the case of major operations such as engine overhaul, the agreement should denote a specification for the work and that specification should be included or referenced as part of the operator's manual system.
- b. There will be unplanned occasions where it will be necessary for the operator to make arrangements for maintenance away from his regular maintenance facilities. The operator can adopt procedures whereby the pilot-in-command or other person can make on-the-spot arrangements for maintenance. However, the person performing the work should be specifically authorized by a designated person in the operator's organization for that work. The operator's procedures should outline the steps to be taken in order for the operator to control the work performed.
- 9. CONTINUING ANALYSIS AND SURVEILLANCE. FAR 121.373 and similar provisions of FAR Part 127 require the operator to provide a system for continuing analysis and surveillance of its continuous airworthiness maintenance program including work performed according to that program by another person. This requirement, in effect, establishes a quality control or internal audit function.

- a. This system should provide for timely corrective action on the following:
- (1) Frequency of unscheduled parts replacement or need for unscheduled maintenance.
 - (2) Degree and frequency of adjustment and calibration of equipment.
 - (3) Changes in operational capability or reliability (delays, etc.).
- b. This system should provide a continuous audit of the total maintenance system to assure that everyone connected with it is in compliance with the operator's manuals and the applicable regulations. This should include, but not be limited to, the following:
- (1) All publications and work forms are current and readily available to the user.
- (2) Maintenance is, in fact, performed in accordance with the methods, standards and techniques specified in the operator's manuals.
- (3) Maintenance forms are screened for completeness and proper entries, and RII identification.
- (4) Records pertaining to tracked components are cross-referenced to stock issue records, etc., to minimize errors.
 - (5) <u>Indications</u> of inadequate training.
- (6) Airworthiness releases are executed by designated persons and in accordance with the procedures specified in the operator's manuals.
 - (7) Carryover items and deferred maintenance are properly handled.

J. A. FERRARESE

Acting Director

Flight Standards Service

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