CHAPTER 1. INTRODUCTION

1. PURPOSE. This order contains guidance related to—

a. Production approvals and certificate management (CM) of manufacturers of type-certificated products, technical standard order articles, and replacement and modification parts, to ensure fair and uniform administration of Title 14, Code of Federal Regulations (14 CFR).

b. The Certificate Management Information System (CMIS). In those cases in which activities and work processes are automated by CMIS, aviation safety inspectors, aviation safety engineers, and flight test pilots must use CMIS to perform that work. In the event a manual activity or work process described in this order becomes automated in CMIS, the use of CMIS to perform that activity or work process will take precedence.

2. DISTRIBUTION. This order is distributed to Washington Headquarters division levels of the Flight Standards Service, to the branch levels of the Aircraft Certification Service, to the branch levels in the regional Flight Standards Divisions and Aircraft Certification Directorates, to all Flight Standards District Offices, to all Aircraft Certification Offices, to all Aircraft Certification field offices, to all Manufacturing Inspection District and Satellite Offices, to the Aircraft Certification and Airworthiness Branches at the Federal Aviation Administration Academy, to the Suspected Unapproved Parts Program Office, to the Brussels Aircraft Certification Staff, and to the Flight Standards Service Regulatory Support Division.

3. CANCELLATION. Federal Aviation Administration (FAA) Order 8120.2D, Production Approval and Certificate Management Procedures, dated August 17, 2004, and its associated change(s), are canceled.

4. EXPLANATION OF MAJOR CHANGES. This revision—

a. Changes the term "resource targeting" to "risk management."

b. Removes the "no time in service" requirement applicable to new unused products and parts thereof re-introduced back into the quality control or inspection system.

c. Eliminates the limitations on the circumstances under which a holder of a supplemental type certificate (STC) may apply for a production certificate (PC).

d. Incorporates several definitions developed in conjunction with manufacturing representatives from other civil aviation authorities.

e. Incorporates all Parts Manufacturer Approval (PMA) requirements, procedures, and information applicable to manufacturing inspection.

f. Changes the information required on the shipping document when detail parts, produced for installation in a PMA assembly or Technical Standard Order (TSO) article, are sold separately.

g. Consolidates all paragraphs applicable to supplier control into one part.

h. Clarifies information in figures 15 and 16, previously figures 9 and 10, respectively.

i. Clarifies several risk management procedures and requirements.

j. Defines the notification period for the hand-off of supplier control audits.

k. Clarifies personnel responsibilities for investigating and coordinating changes to the Category Parts List (CPL).

l. Adds language regarding the applicability of the holder/licensee of a 14 CFR § 21.27 type certificate (TC) to obtain a PC.

m. Incorporates the deviation, dated April 5, 2002, that authorizes an alternative to the supplier selection process.

n. Adds language regarding the reporting of a suspected unapproved part (SUP).

o. Clarifies the information required on identification plates for products manufactured under a licensing agreement program.

5. ACRONYMS. Acronyms used in this order are as follows:

14 CFR	Title 14, Code of Federal Regulations
AC	Advisory Circular
ACO	Aircraft Certification Office
ACSEP	Aircraft Certification Systems Evaluation Program
APIS	Approved Production Inspection System
ASI	Aviation Safety Inspector
CAA	Civil Aviation Authority
CM	Certificate Management
CMIS	Certificate Management Information System
CMO	Certificate Management Office
CPL	Category Parts List
DMIR	Designated Manufacturing Inspection Representative
DO	District Office
DOA	Delegation Option Authorization
EEP	Enhanced Enforcement Program
FAA	Federal Aviation Administration

FIS	Fabrication Inspection System
ICSSP	International Cooperative Supplier Surveillance Program
MIDO	Manufacturing Inspection District Office
MIO	Manufacturing Inspection Office
MRB	Material Review Board
NTE	Not To Exceed
OAC	Original Airworthiness Certificate
ODA	Organization Designation Authorization
ODAR	Organizational Designated Airworthiness Representative
PAH	Production Approval Holder
PC	Production Certificate
PCB	Production Certification Board
PI	Principal Inspector
PLR	Production Limitation Record
PMA	Parts Manufacturer Approval
QC	Quality Control
SDR	Service Difficulty Report
STC	Supplemental Type Certificate
SUP	Suspected Unapproved Part
TC	Type Certificate
TCDS	Type Certificate Data Sheet
TSO	Technical Standard Order

6. DEFINITIONS. For the purpose of this order, the following definitions apply:

a. Article. Materials, parts, and/or appliances produced under the provision of a TSO authorization. All references in this order to "parts thereof" include TSO articles, as applicable. An article as specified in § 21.143(a) (which includes any material, part, subassembly, assembly, system, or appliance that is used in the type-certificated product) is referred to herein as a "part thereof."

b. Associate Facility. This is a facility that has been approved as an extension to an original production approval holder (PAH). This facility is owned and operated by the same corporate management as the original PAH that controls the design and quality of the product or part(s) thereof, except for companies participating in joint-production and/or co-production business agreements. The associate facility must be listed as a manufacturing facility on the PC or the letter of authorization for other production approvals, e.g., Approved Production Inspection System (APIS), PMA, or TSO authorization (reference chapter 2, section 6 of this order).

c. Audit. A systematic and independent examination to determine compliance of an established supplier system, inspected product or part(s) thereof, or processes with purchase order requirements, technical data, or specifications.

d. Category 1 Product or Part(s) Thereof. A product or part(s) thereof whose failure could prevent continued safe flight and landing; resulting consequences could reduce safety margins, degrade performance, or cause loss of capability to conduct certain flight operations.

e. Category 2 Product or Part(s) Thereof. A product or part(s) thereof whose failure would not prevent continued safe flight and landing; resulting consequences may reduce the capability of the aircraft or the ability of the crew to cope with adverse operating conditions or subsequent failures.

f. Category 3 Product or Part(s) Thereof. A product or part(s) thereof whose failure would have no effect on continued safe flight and landing of the aircraft.

g. Certificate. A document (i.e., a certificate or approval) issued by the FAA that recognizes an applicant's or PAH's established quality control or inspection system and allows for the production of products or parts thereof in accordance with an FAA-approved design.

h. Certificate Management. The method by which the FAA ensures that a PAH remains in compliance with those pertinent regulations that govern the manufacturing of its particular products or parts thereof.

i. Corrective Action. The measures taken to resolve unsatisfactory conditions and to prevent reoccurrence.

j. Days. A reference to calendar days, unless otherwise specified.

k. Distributor. A supplier that engages specifically in the buying and selling of aviation products, parts, appliances, components, or materials, and that conducts no manufacturing activities.

l. District Office. The Manufacturing Inspection District Office (MIDO), and where applicable, Certificate Management Office (CMO), having CM responsibility for a defined geographical area.

m. Evaluation. A systematic and independent examination of an established PAH or associated facility system based on the system elements defined in Order 8100.7.

n. Foreign Manufacturer. A person other than an FAA production approval holder who causes a product or part(s) thereof to be produced outside the United States.

o. Group I Facility. A PAH or associate facility identified by risk management assessment as having the greatest potential to produce nonconforming products or parts thereof.

p. Group II Facility. A PAH or associate facility identified by risk management assessment as having a moderate potential to produce nonconforming products or parts thereof.

q. Group III Facility. A PAH or associate facility identified by risk management assessment as having a low potential to produce nonconforming products or parts thereof.

r. Group IV Facility. A PAH or associate facility identified by risk management assessment as having little or no potential to produce nonconforming products or parts thereof.

s. Inspection System. The total network of administrative and technical data at an APIS or PMA holder required to control the product or part(s) thereof to 14 CFR.

t. Internal Procedure. A PAH's or associate facility's procedures that are not included as part of the FAA-approved data.

u. Manufacturer. A person as defined by 14 CFR part 1, Definitions and Abbreviations, who causes a product or part(s) thereof to be produced. A manufacturer may be a PAH or a supplier to a PAH.

v. Noncompliance. A PAH's or associate facility's operating practice that is found to be inconsistent with 14 CFR, FAA-approved data, or internal procedures. A supplier's operating practice found to be inconsistent with a PAH's or associate facility's purchase order requirements is considered to be a noncompliance by the PAH or associate facility.

w. Ongoing Certificate Management. The performance of CM requirements based on risk management that may be accomplished on a continuing basis.

x. Part(s) Thereof. Any part, material, appliance, system, subassembly, assembly, or software used in a product.

y. Production Approval. An authorization, approval, or certificate issued by the FAA that allows a manufacturer to produce products or parts thereof in accordance with FAA-approved design and an FAA-approved quality control or inspection system.

z. Production Approval Holder. This is a holder of a PC, APIS, PMA, or TSO authorization who controls the design and quality of a product or part(s) thereof. [A person who has been issued a production approval by the FAA.]

aa. Principal Inspector. A manufacturing inspector who has been assigned CM responsibility of a particular PAH or associate facility.

bb. Produce. To manufacture, or cause to be manufactured, a product or part(s) thereof.

cc. Product. Aircraft, aircraft engine, or propeller.

dd. Production Certification Board. An FAA evaluation function consisting of a selected group of FAA specialists acting under the direction of the Production Certification Board (PCB) chairperson for the purpose of determining eligibility of the holder of a TC or an STC, or a licensee, for the issuance of a PC.

ee. Quality Assurance. A management system for programming and coordinating the quality maintenance and improvement efforts of the various groups in a design and/or manufacturing organization, so as to permit design and/or production in compliance with regulatory and customer requirements.

ff. Quality Control. Conduct and direct supervision of the quality tasks (inspection of the product) to ensure that the quality requirements of the product are achieved.

gg. Quality Control Data. Data that provides a description of the quality control system required by part 21 for a PC or TSO authorization holder. These data would encompass the methods, procedures, processes, inspections, tests, specifications, charts, lists, forms, etc., which the PAH employs to produce products or parts thereof.

hh. Quality System. An organizational structure with responsibilities, procedures, processes, and resources that implements a management function to determine and enforce quality principles. A quality system encompasses quality assurance and quality control.

ii. Random Certificate Management. The performance of CM tasks that may be accomplished on an as-needed basis.

jj. Random Sampling. A sampling procedure that ensures that each element in a population has an equal chance of being selected.

kk. Risk Management. A method of categorizing PAH's and associate facilities that provides for effective FAA CM resource deployment.

ll. Root Cause. The underlying cause of a systemic or recurring noncompliance, usually identified through structured analysis.

mm. Specialist. As related to the facility audit function of PC or APIS Boards, FAA manufacturing inspectors/supervisors or flight test, structures, systems, and/or equipment engineering personnel.

nn. Standard Part. A part that is manufactured in complete compliance with an established government or industry-accepted specification, which contains design, manufacturing, and uniform identification requirements. The specification must include all information necessary to produce and conform the part, and must be published so that any person/organization may manufacture the part.

oo. Supplier. Any person or organization contracted to furnish aviation products, parts, appliances, components, materials, or services (at any tier).

7. FORMS. This order identifies several forms used for the evaluation, approval, and CM of production activities. Some of the forms are provided by AIR-200 in electronic format. Appendix 9, Forms Listing, provides a listing of the forms and their sources.

8. RELATION TO OTHER DIRECTIVES. Orders referenced in this directive list only the basic order number. It is the responsibility of the user to establish that the latest revision/amendments are being utilized.

9. REQUESTS FOR INFORMATION. All public requests for information regarding production approval or CM activities will be processed in accordance with the Freedom of Information Act. Refer to FAA Order 1270.1, Freedom of Information Act Program. Any deficiencies found, clarifications needed, or improvements regarding the content of this order should be forwarded to the Planning and Financial Resources Management Branch, AIR-530, Attention: Directives Management Officer, for consideration. FAA Form 1320-19, Directive Feedback Information, is located on the last page of this order for your convenience or you may obtain it electronically from the FAA Web site. A copy may be forwarded to the Production and Airworthiness Division, AIR-200, Attention: Comments to Order 8120.2. If an interpretation is urgently needed, you may contact AIR-200 for guidance, but you should also use the Form 1320-19 as a follow up to each verbal conversation.

10. AUTHORITY TO CHANGE THIS ORDER. The issuance, revision, or cancellation of the material in this order is the responsibility of the Aircraft Certification Service, Production and Airworthiness Division, AIR-200. This division will accomplish all changes, as required, to carry out the agency's responsibility to provide for production approval and CM.

11. DEVIATIONS. Adherence to the procedures in this order is necessary for uniform administration of this directive material. Any deviations from this guidance material must be coordinated and approved by AIR-200. If a deviation becomes necessary, the FAA employee involved should ensure the deviations are substantiated, documented, and concurred with by the appropriate supervisor. The deviation must be submitted to AIR-200 for review and approval. The limits of federal protection for FAA employees are defined by Title 28 U.S.C. § 2679.

12. ELECTRONIC SIGNATURE. The use of an electronic signature for the issuance of a production certificate and a production limitation record, or a production approval letter (i.e., APIS, PMA, or TSO authorization) is not permitted.

13. RECORDS MANAGEMENT. Refer to Orders 0000.1, FAA Standard Subject Classification System, 1350.14, Records Management, and 1350.15, Records Organization, Transfer, and Distribution Standards, or your office Records Management Officer (RMO)/Directives Management Officer (DMO) for guidance regarding retention or disposition of records.

14.-19. RESERVED.

CHAPTER 2. PROCEDURES FOR ISSUING A PRODUCTION APPROVAL

SECTION 1. INTRODUCTION

20. GENERAL. This chapter provides guidance relative to the issuance of a production approval. The following sections provide specific guidance for each of the production approval types, including extension of a production approval within the United States. In general, each section describes the applicability of the production approval, the privileges of the approval, the advice that the FAA should be providing to the applicant, processing the application, and issuing the production approval.

SECTION 2. PRODUCTION UNDER A TYPE CERTIFICATE ONLY (PART 21, SUBPART F)

PART 1. GENERAL

21. APPLICABILITY. Part 21, subpart F, is applicable to a manufacturer of a product or part(s) thereof without benefit of a PC.

22. PRIVILEGES. A manufacturer of a product or part(s) thereof in accordance with part 21, subpart F, is not granted any privileges. However, upon establishment of an APIS, the APIS holder is eligible to have a qualified employee(s) designated as a Designated Manufacturing Inspection Representative (DMIR) in accordance with the provisions of 14 CFR part 183, Representatives of the Administrator (part 183). The APIS holder may also be authorized by part 183 to represent the Administrator as an Organizational Designated Airworthiness Representative (ODAR). FAA Order 8100.8, Designee Management Handbook, contains procedures for the administration of DMIRs and ODARs.

23. ADVISING THE APPLICANT. When production under the provisions of part 21, subpart F, is indicated, a TC applicant should be advised (during the preliminary TC Board) of the following:

a. Advisory Circular (AC) 21-6, Production Under Type Certificate Only, sets forth an acceptable means of complying with part 21, subpart F. The FAA may approve alternative methods and procedures when the applicant can show the proposed methods or procedures will achieve compliance with part 21, subpart F.

b. The applicant's intentions should be documented with respect to production and submitted to the MIDO/CMO. This will allow the FAA to schedule inspections and evaluations at the earliest stages of establishment of the APIS.

c. The applicant should be encouraged to strive for a PC instead of an APIS. The following advantages of the PC should be emphasized:

(1) No requirement to submit FAA Form 8130-9, Statement of Conformity, for each completed product.

(2) Reduced FAA involvement, relative to conformity inspections and airworthiness certification.

(3) Issuance of airworthiness certificates and approvals for completed products without further showing.

(4) Issuance of export approvals for small aircraft without assembly or flight test.

d. FAA inspectors or authorized designees will conduct inspections and issue all of the necessary airworthiness certificates and approvals for a maximum period of six months, except as otherwise authorized after the date of issue of the TC. The applicant should also be advised that FAA personnel resources are limited and that delays may occur during the six-month period depending on the number of inspections and hours that may be necessary.

e. Subsequent to the six-month period (except as otherwise authorized), an APIS or PC must be obtained in order to continue production of the type-certificated product. Additionally, any products or part(s) thereof manufactured after the deadline date without FAA authorization may result in actions as defined in Order 2150.3, Compliance and Enforcement Program.

f. An APIS is based on compliance with those inspection standards specified in § 21.125. Furthermore, these standards along with any inspection system data submitted form the basis for all FAA CM activity.

g. The APIS holder is required to have process specifications, materials review board records, test procedures, and flight check forms that are acceptable to the FAA. It would be advantageous to the TC applicant to develop these data concurrently with the manufacture, inspection, and testing of prototypes of the product.

h. The TC holder or licensee who produces a completed product under part 21, subpart F, must flight test and/or functional test that product in accordance with the requirements of §§ 21.127, 21.128, or 21.129, as applicable.

(1) Aircraft. Each aircraft, both prior to and subsequent to the issuance of an APIS, must be flight tested in accordance with an approved production flight test procedure and flight checklist form as required by § 21.127.

(2) Engines and Propellers. Each engine or propeller, both prior to and subsequent to the issuance of an APIS, must be subjected to an acceptable test run or functional test in accordance with the requirements of § 21.128 or 21.129, as appropriate.

i. The manufacturer should be encouraged to submit (at the appropriate time) a description of the inspection system as evidence of compliance with § 21.125.

j. The applicant cannot utilize manufacturing facilities located outside the United States unless the FAA has determined that the location of the facilities places no undue burden on the FAA, as specified in § 21.43.

k. TC Holder's Responsibility.

(1) Prior to the issuance of an APIS, a TC holder or licensee who produces a product is responsible for complying with §§ 21.123, 21.127, 21.128, 21.129, and 21.130, as appropriate for the particular product involved.

(2) All products and parts thereof manufactured under the provisions of part 21, subpart F, must be marked in accordance with the requirements of 14 CFR part 45, Identification and Registration Marking (part 45).

NOTE: The holder of a Dealer's Aircraft Registration Certificate is responsible for complying with the requirements of 14 CFR part 47, Aircraft Registration (part 47), regarding the use of temporary registration numbers. Specifically, the temporary registration number must be removed from the aircraft no later than the date on which either title or possession passes to another person.

(3) A TC holder or licensee is also responsible for reporting any failures, malfunctions, and defects as required by § 21.3.

l. APIS Holder's Responsibility. Upon the establishment of the APIS, the APIS holder is responsible for the actions listed in paragraph 23k of this order and the following actions:

(1) The APIS holder must submit a manual to the MIDO that describes the APIS and the means for making the determinations required by § 21.125(b).

(2) The APIS holder is responsible for maintaining the APIS in accordance with § 21.125 to ensure that each product conforms to the type design and is in a condition for safe operation. The APIS holder must also comply with any terms or conditions as prescribed in its APIS approval letter.

(3) The APIS holder is responsible for notifying the FAA of changes in the location of the manufacturing complex approved by the FAA for the particular type certificated product(s).

(a) The APIS is issued to the principal manufacturing facility that controls the design and quality of the product(s) for which the approval was granted. A mailbox address is not acceptable for a facility since the actual location must be identified. Such addresses, however, may be used as supplemental to the actual address when desired for such uses as corresponding to and from FAA offices.

(b) When the APIS holder moves the principal manufacturing facility to a new location, the APIS is no longer effective since an APIS is not transferable. If the APIS holder wants an APIS for the new location, the APIS holder must establish the APIS in accordance with § 21.123.

(c) When the APIS holder adds a new production facility, the FAA must be notified of such changes. The FAA may, if deemed necessary, conduct a district office (DO) audit at the new production facility. If a DO audit is deemed necessary, a satisfactory audit result must be obtained before the production facility can be approved for production.

PART 2. FAA ACTIONS DURING THE SIX-MONTH PERIOD

24. FAA CONFORMITY DETERMINATIONS. Subsequent to the date of issuance of the TC and prior to the issuance of an APIS or PC, the MIDO/CMO has full responsibility for determining whether the product or part(s) thereof conform to the type design and are in a condition for safe operation. The MIDO/CMO has the responsibility for performing inspections of incoming materials (at the source, if necessary), installations, and the completed products. The MIDO/CMO has the responsibility for documenting each inspection on FAA Form 8100-1, Conformity Inspection Record, so that each product or part(s) thereof inspected has a complete inspection record. Refer to figure 1 for a sample form.

25. ASSESSING THE APPLICANT'S PROGRESS. The MIDO/CMO should periodically assess the applicant's progress in complying with the regulations for obtaining approval of an APIS or PC. If it appears that the applicant is delaying this action or may not be eligible for an APIS or PC by the deadline date, the applicant should be advised in writing of all known deficiencies. Also, the applicant should be cautioned that after the deadline date, the FAA will not issue any airworthiness certificates or any other approvals unless an extension of the time period is authorized by the directorate manager. The MIDO/CMO should keep the directorate office apprised as to the applicant's progress.

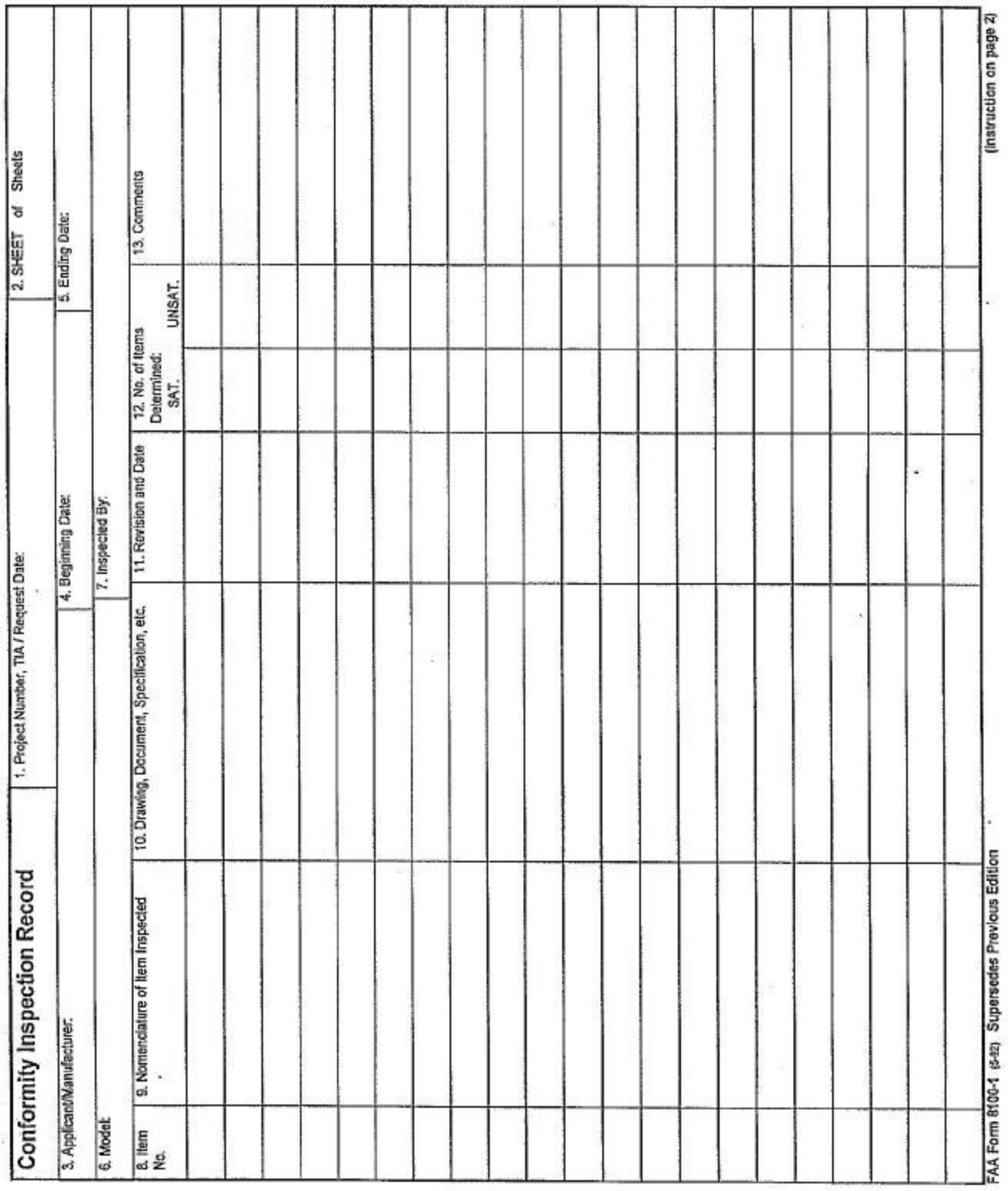
26. EXTENSION OF SIX-MONTH PERIOD. The FAA may grant an extension when there are unusual or extenuating circumstances that preclude the establishment of an APIS or PC within the six-month limitation. The FAA should not grant an extension of the six-month period without giving due consideration to the impact the extension would have on FAA personnel resources and safety. In all instances, the FAA should consider an extension only when the applicant can substantiate the reasons for requesting such an extension. For example, extensions may be justified in those instances where products are in limited or infrequent production and for license and transfer of TCs that were issued more than six months prior to the licensing agreement or transfer. The authorization for extension must be issued to the applicant in writing. Refer to figure 2 for a sample extension letter.

27. APIS OR PC NOT ESTABLISHED WITHIN SIX-MONTH PERIOD. When an applicant fails to establish an APIS or PC by the end of the six-month period (except when extended), the FAA will no longer make conformity determinations and will discontinue the issuance of all airworthiness certifications and approvals. However, the FAA should continue to counsel and advise the applicant to the extent necessary to assist in obtaining an APIS or PC as soon as practicable.

PART 3. PROCESSING AN APPLICATION FOR AN APIS

28. APPLICATION. When an applicant expresses a desire to apply for an APIS instead of a PC, the applicant should be advised that a formal application is not required by the regulations. However, the applicant may use FAA Form 8110-12, Application for Type Certificate, Production Certificate, or Supplemental Type Certificate, to apply for the APIS since it contains appropriate spaces to indicate whether or not production privileges are desired or whether or not parts will be manufactured for sale. Refer to figure 3 for a sample form.

FIGURE 1. SAMPLE FAA FORM 8100-1, CONFORMITY INSPECTION RECORD (FRONT)



Conformity Inspection Record

1. Project Number, TIA / Request Date:
2. SHEET of Sheets
3. Applicant/Manufacturer:
4. Beginning Date:
5. Ending Date:
6. Model:
7. Inspected By:

8. Item No.	9. Nomenclature of Item Inspected	10. Drawing, Document, Specification, etc.	11. Revision and Date	12. No. of Items Determined: SAT.	UNSAT.	13. Comments

FAA Form 8100-1 (5-82) Supersedes Previous Edition (Instruction on page 2)

FIGURE 1. SAMPLE FAA FORM 8100-1, CONFORMITY INSPECTION RECORD (BACK)

INSTRUCTIONS

1. List the FAA assigned number along with date of TIA or Request for Conformity, as applicable.
2. Self-explanatory.
3. List the applicant or the manufacturer, or both. (The manufacturer may be the party producing or responsible for the product).
4. List the date the inspection began.
5. List the date the inspection ended.
6. If inspecting an aircraft, list the make, model, N-number, and serial number. For an engine or propeller, list the make, model, and serial number.
7. Aviation Safety Inspectors must type or print name, sign, and enter office identification. Designees must type or print name, sign, and list their designee identification number.
8. Assign consecutive numbers for each item inspected.
9. List the name or description of the part, appliance, assembly, drawing, document, specification, or name of the process being evaluated.
10. List the technical data that describes the item listed in Block 9. Ie., drawing number, document number, or name of the process specification number, etc.
11. List the revision level and date of the technical data described in Block 10.
12. List the number of items that were determined satisfactory or unsatisfactory. Do not record individual characteristics. *NOTE:* (an item is a single article or unit containing one or more dimensional characteristics or features).
13. Enter comments in this block that will support any information given in Blocks 8 through 12. i.e., unsatisfactory conditions, corrective actions taken, reference to other item numbers listed, serial numbers, type of inspection accomplished, destination of exported products, buyer finished equipment, parts processed through manufacturer's maintenance facility, part new or newly overhauled, condition of part or assembly, etc.
14. To be used for supplementing items 1-13.

NOTE: Unsatisfactory conditions are corrected in one of two ways:

Method 1: If action is presented to correct an unsatisfactory condition, the action is entered in Block 13 and the number in the UNSAT column of Block 12 is lined through and initialed. The number of items now determined satisfactory is entered in the SAT column next to the corrective action entry.

Method 2: If corrective action is not presented, the inspector may continue the inspection by entering the next item inspected. When corrective action to the unsatisfactory condition is eventually presented, assign the item a new number and record the number in Block 8. Complete Blocks 9 and 10, enter a new revision and date if data has changed, and enter the number of items determined satisfactory in Block 12. Record both the corrective action taken and the item number of the unsatisfactory condition in Block 13. Place the item number in parenthesis. Next, line through and initial the number in the UNSAT column located next to Block 13 containing the unsatisfactory condition. Record the corrective action entry item number along with the unsatisfactory condition statement and place the number in parenthesis.

14. Continuation Block

FAA Form 8100-1 (Backer) (3-93)

FIGURE 2. SAMPLE LETTER OF AUTHORIZATION FOR EXTENSION OF § 21.123(c) SIX-MONTH LIMITATION

US Department of Transportation
Federal Aviation Administration

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGION
ROTORCRAFT DIRECTORATE
MANUFACTURING INSPECTION OFFICE
2601 MEACHAM BOULEVARD
FORT WORTH, TEXAS 76137-4298

May 10, 1999

Johnson Aircraft Corporation
119 Standards Street
Benbrook, Texas 12345

Attention: Mr. Nelson P. Norman, Vice President

Authorization for Extension of Production Under Type Certificate Only,
Title 14, Code of Federal Regulations (14 CFR),
Part 21, Certification Procedures for Products and Parts (part 21), Section 21.123(c).

Your request, dated April 28, 1999, regarding the subject matter has been reviewed and authorization is hereby granted to extend the period of time products may be manufactured under a Type Certificate Only without an approved production inspection system from June 1, 1999, to October 1, 1999.

This extension of time is based on the fact that you were unable to establish an approved production inspection system within the six-month period as required by Section 21.123(c) due to the four-month labor strike at your facility which ended April 15, 1999. Aircraft produced under the provisions of this authorization will continue to require inspection by FAA personnel at various stages of fabrication, processing, and assembly where detailed inspections can be conducted.

Johnson Aircraft Corporation must also continue to comply with part 21, subpart F, as applicable, including the requirements for a FAA Form 8130-9, Statement of Conformity, with each application for an airworthiness certificate.

Jason P. Hope
Manager, Manufacturing
Inspection Office, ASW-180

FIGURE 3. SAMPLE FAA FORM 8110-12, APPLICATION FOR TYPE CERTIFICATE, PRODUCTION CERTIFICATE, OR SUPPLEMENTAL TYPE CERTIFICATE

No certificate may be issued unless a completed application form has been received (14 C.F.R. 21)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

APPLICATION FOR TYPE CERTIFICATE, PRODUCTION CERTIFICATE, OR SUPPLEMENTAL TYPE CERTIFICATE

FORM APPROVED O.M.B. No. 2120-0018 09/30/2007

1. Name and address of applicant:	2. Application made for:	3. Product involved :
ABC Aircraft Company 4954 Airport Drive Detroit, Michigan	☐ Type Certificate ☒ Production Certificate ☐ Supplemental Type Certificate	☒ Aircraft ☐ Engine ☐ Propeller

4. TYPE CERTIFICATE (Complete item 4a below)

a. Model designation (s) *(All models listed are to be completely described in the required technical data, including drawings representing the design, material, specifications, construction, and performance of the aircraft, aircraft engine, propeller which is the subject of this application.)*

5. PRODUCTION CERTIFICATE: *(Complete items 5a-c below. Submit with this form, in manual form, one copy of quality control data or changes thereto covering new products, as required by applicable FAR.)*

a. Factory address: *(if different from above)*	b. Application is for:	P.C. No.
	☒ New production certificate ☐ Addition to production certificate *(Give P.C. No.)*	

c. Applicant is holder of or a licensee under a Type Certificate or a Supplemental Type Certificate: *(Attach evidence of licensing agreement and give certificate number)* →	T.C./S.T.C. No.
	1A26

6. SUPPLEMENTAL TYPE CERTIFICATE: *(Complete items 6a-d below)*

a. Make and model designation of product to be modified:

b. Description of modification:

c. Will data be available for sale or release to other persons ?	d. Will parts be manufactured for sale? *(Ref. FAR 21.303)*
☐ Yes ☐ No	☐ Yes ☐ No

7. CERTIFICATION - I certify that the above statements are true.

Signature of Certifying Official	Title	Date
John J. Smith *John J. Smith*	Director, Quality Assurance	May 10, 2004

FAA Form 8110-12 (4/98) Supersedes Previous Edition

29. REVIEW OF PRODUCTION INSPECTION SYSTEM DATA. When an APIS applicant submits production inspection system data as evidence of compliance with part 21, subpart F, the cognizant MIDO will evaluate these data in accordance with the criteria contained in appendix 1 of this order. Any inadequacies in the data submitted must be identified to the applicant for corrective action. After the data has been reviewed, and any applicable corrective actions taken, the MIDO will accept the production inspection system data submitted by the applicant. The FAA does not approve this data since there is no part 21 requirement for submittal of this data for approval.

30. PROVISIONAL APPROVAL PROCEDURES. Evaluation of the applicant's inspection system should be accomplished by the MIDO, concurrent with conducting conformity inspections and making those airworthiness determinations required of the FAA prior to the issuance of an APIS. It is, therefore, to the advantage of the FAA to evaluate and provisionally approve the inspection system on a progressive basis. As portions of the system are determined to meet the regulatory requirements, the MIDO should:

a. Maintain a record of those portions of the system considered satisfactory.

b. Reduce conformity inspections to a spot-check basis for articles covered by the provisionally approved portion of the system.

c. Place increased emphasis on securing corrective actions on the portions of the system where procedural discrepancies have been found or where the system has been found to be inadequate.

31. PRELIMINARY DO AUDIT. When the MIDO has determined that the applicant has the capability to comply with § 21.125, the MIDO will conduct a DO audit as follows:

a. The DO audit evaluates the applicant's production facilities in accordance with 14 CFR, the FAA-approved design data, and the production inspection system data accepted in paragraph 29 of this order. The cognizant MIDO manager will select a team to conduct this audit. The team may consist of the cognizant principal inspector (PI) and at least one other manufacturing inspector or the MIDO manager. It is also recommended that an engineer be selected for the team when deemed necessary by the type and complexity of processes and procedures being utilized at the facility. The standardized evaluation criteria contained in Order 8100.7, Aircraft Certification Systems Evaluation Program, may be used as an aid to evaluate compliance. Team members should be advised, however, that some of the evaluation criteria contained therein may not be related to 14 CFR, and therefore may only be evaluated as a best practice. This audit is not considered an Aircraft Certification Systems Evaluation Program (ACSEP) evaluation. Document noncompliances on FAA Form 8100-6, Noncompliance Record. Refer to appendix 7.

b. Notifying the Applicant. Upon completion of the DO audit, the MIDO will formally notify the applicant as to any corrective actions necessary to comply with § 21.125. The MIDO should advise the applicant that an APIS Board will be scheduled that could result in a request for additional actions.

c. Reporting. The MIDO will prepare FAA Form 8120-14, Production Approval/Certificate Management Activity Report, upon completion of the DO audit, and provisional approval of the applicant's inspection system when applicable. The MIDO will provide notification to the directorate office that the Form 8120-14 may be viewed in CMIS. In addition, the MIDO will provide information to the directorate office concerning the applicant's ability to comply with § 21.125. Refer to appendix 8 for a sample Form 8120-14.

32. APIS BOARD. Upon receipt of Form 8120-14 and notification by the MIDO that the applicant is in a position to comply with § 21.125, the directorate office should schedule an APIS Board. The primary objective of this board is to make a final determination as to whether or not the applicant has established a production inspection system that complies with § 21.125 and that is capable of producing products and parts thereof in conformity with the type design and in a condition for safe operation.

a. Conduct of the APIS Board. The directorate office will conduct the APIS board in a manner similar to a PCB, including the use of a Chairman. Use the PCB procedures contained in chapter 2, section 3, part 3 of this order, as appropriate.

b. APIS Board Minutes. Document the APIS Board minutes in the same manner as a PCB, as applicable to the particular situation. Refer to paragraph 49 of this order.

PART 4. ISSUANCE OF AN APIS

33. APIS APPROVAL LETTER.

a. Preparation and Delivery. When the APIS Board has determined and documented that the applicant's complete production inspection system complies with the requirements of part 21, subpart F, the directorate office will prepare a letter approving the production inspection system. Refer to figure 4 for a sample letter. Electronic signature is not permitted. The approval letter should be delivered to the manufacturer by the MIDO or may be forwarded by certified mail when deemed most expeditious.

b. Additions to the APIS. If the APIS holder desires to add another type-certificated product or a new model to the APIS, the MIDO should evaluate any changes to the APIS that may be involved in the manufacture of the new product. Upon receipt of a completed Form 8120-14 and a satisfactory recommendation from the MIDO, the directorate office may then issue a superseding approval letter. The letter should be issued listing the original and the new product(s) and/or model(s). The APIS holder will be requested to return the original letter. The directorate office will annotate the word "Superseded" on the original letter and retain it in the directorate files.

34. INITIAL RISK MANAGEMENT ASSESSMENT. Subsequent to the approval of the APIS, the MIDO/CMO will conduct a risk management assessment of the APIS holder in accordance with chapter 3, section 2 of this order. The results will determine the initial basis for conducting ongoing CM responsibilities, as summarized in figure 16 of this order.

35.-40. RESERVED.

FIGURE 4. SAMPLE LETTER FOR APPROVING A MANUFACTURER'S PRODUCTION INSPECTION SYSTEM

US Department of Transportation
Federal Aviation Administration

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGION
ROTORCRAFT DIRECTORATE
MANUFACTURING INSPECTION OFFICE
2601 MEACHAM BOULEVARD
FORT WORTH, TEXAS 76137-4298

November 4, 1999

GEM Aircraft Company
711 Suburban Lane
Oklahoma City, Oklahoma 73064

Production Inspection System Approval

Your production inspection system has been evaluated and found to be in compliance with applicable parts of Title 14, Code of Federal Regulations (14 CFR). Therefore, you are authorized to produce the following products and parts thereof in compliance with the standards contained in 14 CFR part 21, Certification Procedures for Products and Parts, Subpart F, and in conformity with the type design data forming the basis for the following type certificate(s):

Type Certificate/Make/Model

1A25GEM1010	GEM	1020
1A78		

The following terms and conditions are applicable to this approval:

1. GEM Aircraft Company's production approval inspection system, methods, procedures, and manufacturing facilities, including your suppliers, are subject to FAA surveillance or investigations. Accordingly, GEM Aircraft Company must advise its suppliers that its facilities are also subject to FAA surveillance and investigation.

2. GEM Aircraft Company must make available to the FAA, upon request, any pertinent information concerning its suppliers who furnish parts/services, including:

a. A description of the part or service.

b. Where, and by whom, the part or service will undergo inspection;

c. Any delegation of inspection duties.

FIGURE 4. SAMPLE LETTER FOR APPROVING A MANUFACTURER'S PRODUCTION INSPECTION SYSTEM (CONT'D)

d. Any delegation of materials-review authority.

e. Name and title of FAA contact at the supplier facility.

f. The inspection procedures required to be implemented.

g. Any direct-shipment authority.

h. Results of GEM Aircraft Company evaluation, audit, and/or surveillance of its suppliers.

i. The purchase/work order number (or equivalent).

j. Any feedback relative to service difficulties originating at GEM Aircraft Company suppliers.

3. Parts or services furnished by suppliers located in a foreign country or jurisdiction may not be used in the production of the products listed in this approval unless:

a. That part or service can and will be completely inspected for conformity at GEM Aircraft Company's facility; or

b. The FAA has determined that the location of the foreign supplier facility places no undue burden on the FAA in administering applicable airworthiness requirements. When the use of such foreign suppliers is contemplated, GEM Aircraft Company must advise the FAA at least 10 days in advance to allow the FAA to make this determination; or

c. The parts/services furnished by the foreign supplier are produced under the "components" provision of U.S. airworthiness bilateral agreements, and approved for import to the U.S. in accordance with Section 21.502.

4. This approval is not transferable to another person or location. In addition, it may be withdrawn for any reason that would preclude its issuance or at anytime the FAA finds that the approved production system is not being maintained. Also, the approval can be withdrawn if unsafe or nonconforming parts are accepted under the approved production inspection system; or if the Statement(s) of Conformity, FAA Form 8130-9, required by Section 21.130, is found to be invalid.

5. Our district office (address of cognizant office) must be notified within 10 days from the date that the address shown in this approval has been changed.

6. GEM Aircraft Company must maintain its approved production inspection system in continuous compliance with the requirements of Section 21.125, and ensure that each product or part(s) thereof conforms with the type design data and is in a condition for safe operation.

FIGURE 4. SAMPLE LETTER FOR APPROVING A MANUFACTURER'S PRODUCTION INSPECTION SYSTEM (CONT'D)

7. GEM Aircraft Company is eligible for the appointment of qualified individuals in its employ to represent the FAA as Designated Manufacturing Inspector Representatives for the purpose of issuing Airworthiness Approvals for Class I, II, and III products.

8. GEM Aircraft Company will report to our district office, in a timely manner, information concerning service difficulties on any product(s) or part(s) thereof produced under this approval, in addition to any failures, malfunctions, and defects required to be reported in accordance with Section 21.3.

9. All pertinent technical data for the product(s) or part(s) thereof to be produced under this approval must be readily available to the FAA at the facility in which the parts are being produced.

10. GEM Aircraft will notify our district office immediately in writing of any changes to the APIS that may affect the inspection, conformity, or airworthiness of the product(s) approved in this letter.

11. GEM Aircraft Company will produce all parts in accordance with GEM Aircraft Company Quality Control Manual, Revision G, dated July 17, 1996, which has been presented as evidence of compliance with Section 21.125. Accordingly, any revisions to these data must be submitted and approved by our district office prior to implementation.

Jack M. Safeway
Manager, Manufacturing
Inspection Office, ASW-180

SECTION 3. PRODUCTION CERTIFICATE (PART 21, SUBPART G)

PART 1. GENERAL

41. APPLICABILITY.

a. Part 21, subpart G, is applicable to any of the following persons who desire to manufacture a complete product and part(s) thereof with benefit of a PC:

(1) The holder/licensee of a § 21.21 TC.

(2) The U.S. holder/licensee of a § 21.29 TC, if the licensing agreement clearly provides for the TC holder's and its Civil Aviation Authority's control over any design changes by the licensee. A working arrangement must also be in place between the Civil Aviation Authority (CAA) and the FAA defining their respective responsibilities as State of Design and State of Manufacture.

(3) The holder of an STC when—

(a) The STC will be incorporated prior to the issuance of an original airworthiness certificate (OAC) to the aircraft; or

(b) The STC will be incorporated after the issuance of an OAC to the aircraft. In this case, the PC would authorize the manufacturing of associated STC parts in accordance with part 21. However, installation of the STC and return to service of the product is accomplished under the provisions of 14 CFR part 43, Maintenance, Preventive Maintenance, Rebuilding, and Alteration (part 43).

(4) The holder/licensee of a § 21.25 TC, provided the TC was issued based on FAA approval of the type design data. The data must have been submitted by the applicant or the licensor and must meet the requirements of § 21.31.

(5) The holder/licensee of a § 21.27 TC, provided that duplicates produced always originate as an aircraft that was designed and constructed in the United States, was accepted for operational use, and was declared surplus by the military. The holder/licensee of a § 21.27 TC also must demonstrate that it has established a quality system that meets the requirements of §§ 21.139 and 21.143 at the product level.

b. A PC may not be issued to the holder of a TC issued under part 21, subpart C (provisional).

c. A PC may not be issued if the manufacturing facilities are located outside the United States, unless it has been determined, in accordance with § 21.137, that such location(s) would place no undue burden on the FAA.

42. PRIVILEGES. A PC holder has the privileges specified in § 21.163. In addition, a PC holder is eligible to have a qualified employee(s) designated as a DMIR in accordance with the provisions of part 183. The PC holder may also be authorized by part 183 to apply for and obtain an Organization Designation Authorization (ODA). Orders 8100.8 and 8100.15 contain procedures for the administration of DMIRs and ODAs, respectively.

43. ADVISING THE APPLICANT. The applicant should be advised that:

a. AC 21-1, Production Certificates, sets forth an acceptable means of complying with part 21, subpart G. Alternative methods and procedures may be approved when the applicant can show that the proposed methods and procedures will achieve compliance with part 21, subpart G.

b. The data required to be submitted under § 21.143 should be arranged in the format suggested in AC 21-1. In those instances where an applicant has already established quality control (QC) procedures, e.g., for military contracts, the applicant must identify those portions that comprise the QC data that will be used to show compliance with § 21.143. The data may or may not comprise a lengthy document, depending upon the size of the manufacturing facilities and product complexity. The data must include descriptive material that adequately covers each applicable paragraph of § 21.143. A title should be provided for positive identification and a revision page or similar control is required to ensure that the original approval date and the date of each revision is recorded. A number or letter should identify each revision.

c. The PC holder who produces a completed product under part 21, subpart G, must flight test and/or production test that product in accordance with the requirements of § 21.143(a)(3).

(1) Aircraft. All aircraft must pass an approved production flight test as part of the inspection procedure required for issuance of an airworthiness certificate. A Special Airworthiness Certificate, FAA Form 8130-7, issued for such purposes provides authorization for production flight testing (reference FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Approvals). The exceptions would be small airplanes and gliders manufactured under a PC and being exported without assembly or flight test under the provisions of § 21.325(b). The intent of this rule is to permit shipment of aircraft without assembly or flight test when the extent of disassembly is the same as an aircraft that has been disassembled for shipment purposes. In these instances, the manufacturer must provide FAA-approved assembly and flight test procedures as a condition of shipment.

(2) Periodic FAA Production Flight Tests. FAA production flight tests will be conducted periodically at the PC holder's facility to ensure continued compliance with all parameters as specified in pertinent type certificate data with respect to performance, flight characteristics, operation qualities, equipment operations, etc. The PI, in coordination with the FAA flight test personnel from the appropriate Aircraft Certification Office (ACO), may arrange these flight tests. In addition, a determination should be made in coordination with FAA flight test personnel that the manufacturer's approved production test pilots are continuing to use approved procedures and that the approved procedures remain adequate.

(3) Engines and Propellers. Engines and propellers must pass a production test approved as part of the QC data required by § 21.143(a)(3).

d. PC Holder's Responsibility.

(1) The PC holder is responsible for maintaining the quality system in conformity with the data and procedures approved for the PC, and for determining that each completed product and part submitted for airworthiness certification or approval conforms to the TC or STC and is in a condition for safe operation.

(2) Section 21.147 requires the holder of a PC to immediately notify the MIDO/CMO in writing of any changes that may affect the inspection, conformity, or airworthiness of the product. These changes would include, but are not limited to:

(a) Relocation of a portion of its facility or addition to existing facilities.

1 A PC holder's manufacturing complex would normally consist of a principal facility and all associate facilities using the same quality system approved by the FAA, for the particular type certificated product(s). Associate facilities are discussed in section 6 of this chapter.

2 The PC is issued to the principal manufacturing facility that controls the design and quality of the product(s) for which the approval was granted. The principal facility address will be listed under the "business address" and all associate facility addresses will be listed under "manufacturing facilities" on FAA Form 8120-4, Production Certificate. A mailbox address is not acceptable for a facility since the actual location must be identified. Such addresses, however, may be used as supplemental to the actual address when desired for such uses as corresponding to and from FAA offices.

3 When a PC holder moves the principal manufacturing facility to a new location, the PC is no longer effective since a PC is not transferable. Refer to § 21.155. If the PC holder wants a PC for the new location, the PC holder must reapply in accordance with § 21.133.

4 When the PC holder moves an associate facility or adds a new production facility, the FAA must be notified of such changes in accordance with § 21.147. The FAA may, if deemed necessary, conduct a preliminary DO audit at the new production facility or moved facility. If a DO audit is deemed necessary, a satisfactory audit result must be obtained before the facility can be approved for production. The PC also must be amended to reflect this change.

(b) Resumption of production after being discontinued for an extended period of time for other than normal periods of time, such as vacation periods.

(c) Significant curtailment/resumption of production operations.

(d) Significant reduction/reassignment of QC personnel.

(e) Changes or revisions to QC data and related procedures.

(3) All products and parts thereof produced under the provisions of part 21, subpart G, must be marked in accordance with the requirements of part 45, and in accordance with any related FAA-approved QC procedures, as applicable.

NOTE: The holder of a Dealer's Aircraft Registration Certificate is responsible for complying with the requirements of part 47, regarding the use of temporary registration numbers. Specifically, the temporary registration number must be removed from the aircraft no later than the date on which either title or possession passes to another person.

(4) Identification Plate Requirements for Aircraft, Aircraft Engines, or Propellers Produced Under a Design Data Licensing Agreement Program.

(a) The identification plate requirements for aircraft, aircraft engines, or propellers produced under a design data licensing program (as applicable) are as follows (Refer to § 45.13):

1 The builder's name is the specific name of the licensee as shown on the licensee's PC.

2 The model designation is that model identified on the associated type certificate data sheet (TCDS).

3 The builder's serial number is the serial number(s) dedicated for the use of the licensee as assigned by the TC holder on the associated TCDS.

4 The TC number is the number identified on the associated TCDS and upon which conformity to type design requirements is determined.

5 The PC number is the number that is listed on the licensee's PC.

6 For aircraft engines, the established rating as shown on the TCDS.

7 For aircraft engines manufactured after January 1, 1984, the following information must also be included:

a The date of manufacture as defined in 14 CFR part 34, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, § 34.1.

b The status of compliance to applicable exhaust emission provisions, as approved by the Administrator (e.g., COMPLY, EXEMPT, or NON-U.S., as appropriate).

(b) As prescribed under the provisions of § 45.13(a)(8), the Administrator will normally deem it appropriate and necessary to include the following information on the identification plates of products manufactured under a design data licensing agreement between an FAA TC and PC holder: **"Manufactured by *(insert the PC holder's name)* under a licensing agreement with *(insert the TC holder's name).*"**

(c) The FAA requires that only the information in paragraph 43d(4)(a) and (b) of this order be included on the identification plates for all products manufactured under a licensing agreement program. However, the FAA would permit a company/corporate logo or registered trademark to be included (after review and approval by the FAA) on the identification plates, if desired by the manufacturer. Aircraft, aircraft engine, and propeller identification plates should be included as part of the product's approved design data and are usually defined in an engineering drawing describing material, size, required information entries, mounting location, etc.

(5) The PC holder must report all failures, malfunctions, and defects as required by § 21.3. The PC holder should be encouraged to establish a procedure for such reporting.

PART 2. PROCESSING AN APPLICATION FOR A PC

44. APPLICATION. Application for a PC is made on Form 8110-12. Refer to figure 3 for a sample form. The applicant must submit the application, accompanied by one copy of the QC procedures showing compliance with § 21.143, to the Manager, Manufacturing Inspection Office (MIO), in the directorate in which the applicant's principal manufacturing facility is located. Refer to paragraph 43d(2)(a)*1* and *2* of this order. Upon receipt of a properly executed Form 8110-12, the MIO manager will forward a copy to the MIDO/CMO. The MIDO/CMO will prepare a letter of acknowledgement, advising the applicant that it has been authorized to initiate a DO audit to determine compliance with applicable regulations. A copy of the letter should be forwarded to the MIO. Refer to figure 5 for a sample letter.

45. PRELIMINARY DO AUDIT. The MIDO/CMO should make arrangements to conduct a DO audit within 30 days after acknowledging the PC application. This audit will be conducted as follows:

a. Evaluate the applicant's QC data for compliance with § 21.143. Additional guidance is provided in appendix 1 of this order. Any inadequacies in the data submitted must be identified to the applicant for corrective action. After the data have been reviewed, and any applicable corrective actions taken, the MIDO/CMO will approve the QC data submitted by the applicant. The approved QC data may be retained in the MIDO/CMO files.

b. Evaluate the applicant's production facilities in accordance with 14 CFR, the FAA-approved design data, and the QC data approved in paragraph 45a of this order. The cognizant MIDO/CMO manager will select a team to conduct this audit. The team may consist of the cognizant PI and at least one other manufacturing inspector or the MIDO/CMO manager. It is also recommended that an engineer be selected for the team when deemed necessary by the type and complexity of processes and procedures being utilized at the facility. The standardized evaluation criteria contained in Order 8100.7 may be used as an aid to evaluate compliance. Team members should be advised, however, that some of the evaluation criteria contained therein may not be related to 14 CFR, and therefore may only be evaluated as a best practice. This audit is not considered to be an ACSEP evaluation. Noncompliances will be documented on Form 8100-6. Refer to appendix 7.

c. Notifying the Applicant. Upon completion of the DO audit, the MIDO/CMO will formally notify the applicant as to any corrective actions needed to comply with § 21.135. The applicant should be further advised that these items represent only the result of the FAA's preliminary DO audit. Additional requests for corrective actions can be anticipated as a result of subsequent noncompliances, which may be noted during the PCB evaluation activity, as detailed in part 3 of this section.

d. Reporting. The MIDO/CMO will provide notification to the MIO that the "Preliminary" Form(s) 8100-6 may be viewed in CMIS. The "Preliminary" Form(s) 8100-6 should identify any unresolved items requiring corrective action. In addition, letters issued to the applicant requesting corrective action also may be viewed in the CMIS project folder.

FIGURE 5. SAMPLE PC APPLICATION ACKNOWLEDGEMENT LETTER

US Department of Transportation
Federal Aviation Administration

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
TRANSPORT AIRPLANE DIRECTORATE
SEATTLE MANUFACTURING INSPECTION DISTRICT OFFICE
2500 EAST VALLEY ROAD, SUITE C-2
RENTON, WASHINGTON 98055-4056

June 10, 1999

ABC Aircraft Company
4954 Airport Drive
Renton, Washington 12345

Production Certification Application Acknowledgement

This will acknowledge receipt of your application dated May 30, 1999, for a Production Certificate. This office has been authorized to initiate a preliminary evaluation of your manufacturing operations, quality system, and testing procedures. The quality control data, required by Title 14, Code of Federal Regulations (14 CFR), part 21, Certification Procedures for Products and Parts (part 21), section 21.143, and submitted with your application, were forwarded to this office for our utilization in determining compliance with applicable regulations.

Accordingly, your quality system and manufacturing facilities (including any supplier facilities, as appropriate) will be evaluated by this office to determine compliance with part 21, subpart G. To preclude any misunderstandings, please notify your suppliers as soon as possible that they are subject to FAA evaluations. We will contact you in the near future to advise you of our evaluation schedule.

Subsequent to our preliminary evaluation, a Production Certification Board will be established to make a final determination as to eligibility for issuance of a Production Certificate. This will be accomplished as soon as practicable following our recommendations to the Manager, Manufacturing Inspection Office, Transport Airplane Directorate. You will be given adequate notice so that a date for convening the Production Certification Board at your principal facility can be mutually agreed upon.

Roger C. Moore
Manager, ANM-108S

PART 3. PRODUCTION CERTIFICATION BOARD

46. GENERAL. The PCB is a high-level FAA evaluation function based directly upon the responsibilities established in Title 49 United States Code (49 USC), §§ 44701, 44702, 44704, and 44709.

a. Purpose. The purpose of the PCB is to evaluate the eligibility of the applicant for issuance of a PC based upon the preliminary findings and recommendations of the MIDO/CMO and the PCB's review of the applicant's facilities and QC data.

b. Applicability. The PCB should be convened only for initial production approvals, or when entire facilities have been relocated or are added to the PC. The PCB should not be convened for the addition of new models to the production limitation record (PLR) or relocation of a portion of the facility. In these instances, the procedures contained in paragraph 51b(1) of this order should be followed.

c. PCB Members. PCB members should consist of a group of qualified specialists from Airframe, Systems & Equipment, Propulsion, Manufacturing, and Flight Test functions, as appropriate. These members will assist in evaluating the applicant's production, engineering, flight test procedures, and other related functions. Representatives from Washington, DC, the Aeronautical Center, and/or other directorates may also participate in a PCB, when deemed desirable or necessary.

d. PCB Chairman. The MIO or CMO manager of the directorate where the manufacturing facility to be evaluated is located will act as the Chairman of the Board. When necessary, the MIO or CMO manager may delegate the chairmanship to the MIDO manager or other qualified directorate office personnel.

47. PCB MEMBER RESPONSIBILITIES. Specific PCB member responsibilities are as follows:

a. PCB Chairman. The PCB chairman is responsible for:

(1) Selecting and assigning board members, as deemed appropriate for the particular product, and notifying the members of the PCB in sufficient time to permit adequate planning and preparation.

(2) Notifying the applicant of the PCB schedule and identifying members and their assignments.

(3) Selecting a representative number of the applicant's supplier facilities for evaluation to determine whether or not the applicant's quality system provides for satisfactory supplier control.

(4) Conducting pre/post PCB meetings with the PCB and/or the applicant.

(5) Reviewing and analyzing the PCB findings and ensuring that appropriate corrective actions have or will be taken.

(6) Completing, signing, and distributing the PCB minutes.

b. Principal Inspector. The PI, in coordination with the responsible MIDO/CMO having CM responsibility, and the PCB chairman, is primarily responsible for establishing schedules, making arrangements for meeting rooms, obtaining sufficient copies of QC data, and making all other arrangements necessary for convening and conducting the PCB in the most expeditious manner. The PI is further responsible for ensuring that the applicant has taken all agreed upon corrective actions, for preparing the minutes of the PCB, and for initiating and completing any enforcement actions, when applicable.

c. Propulsion Section/Branch. The propulsion section/branch or its equivalent is responsible for the evaluation and approval of the applicant's production engine/propeller test procedures, as required by § 21.143(a)(3). This effort will be coordinated with the responsible MIDO/CMO. Upon determining that the procedures are acceptable, a letter of approval will be prepared and forwarded to the applicant when a PC is issued. A copy of this approval letter will be included in the PCB minutes.

d. Flight Test Section/Branch. The flight test section/branch or its equivalent is responsible for the evaluation and approval of the applicant's flight test procedures and checklists as required by § 21.143(a)(3). This effort will be coordinated with the responsible MIDO/CMO. Upon determining that the procedures and checklists are acceptable, a letter of approval will be prepared and forwarded to the applicant when a PC is issued. The letter will also include the names of those company pilots designated and authorized by the applicant to conduct production flight tests. A copy of this letter will be included in the PCB minutes.

e. Other PCB Members. Airframe and equipment engineering representatives and all other PCB members are responsible for ensuring that the applicant is in compliance with § 21.139, as appropriate to their particular assignment. Representatives from Washington, DC, the Aeronautical Center, and/or other directorates are responsible for acting in an advisory capacity and/or for the completion of any PCB activity assigned by the PCB chairman.

48. CONDUCT OF THE BOARD. A PCB is generally conducted in the following basic phases:

a. Initial FAA Personnel Meeting. Prior to arranging a Pre-Production Board meeting, a meeting of FAA personnel will be held to review the results of the DO audit, MIDO/CMO recommendations, and related correspondence between the FAA and the applicant. This meeting will also serve to plan the PCB audit, schedule subsequent meetings, and establish agenda items for the Pre-Production Board meetings.

b. Pre-Production Board. A Pre-Production Board meeting with the applicant's representatives should be considered upon receipt of the PC application. This meeting should include the PCB chairman, MIDO/CMO manager, the PI, and others as necessary. The purpose of this meeting is to advise the applicant as to the purpose of the Board and of the FAA's evaluation plans. It should be made clear to the applicant that the board is a fact-finding body convened to determine whether or not the applicant is in compliance with § 21.135. The applicant should also be advised that the PCB is responsible for making a thorough evaluation of the applicant's quality system/data, organization, production facilities, and if deemed necessary, supplier facilities. Also, a determination should be made at this time that the location of the applicant's facilities will pose no undue burden on the FAA as specified in § 21.137.

c. PCB Audit. Following the Pre-Production Board meeting with the applicant, the PCB should evaluate the applicant's QC data and perform an on-site evaluation of the applicant's quality system, organization, production facility, and any suppliers, as deemed appropriate. Refer to paragraph 45 of this order for audit procedures.

d. Internal FAA PCB Meetings. Board meetings, attended by all board participants, will be conducted as needed to discuss and evaluate each unsatisfactory condition submitted by each member.

e. Reporting. The PCB will prepare Form 8120-14 upon completion of the PCB. All unsatisfactory conditions will be recorded on Form(s) 8100-6 and 8120-14. Refer to appendixes 7 and 8 of this order.

f. Final PCB Meeting. A final meeting, attended by all PCB members and representatives of the applicant, will be held to advise the applicant of the PCB findings. Each unsatisfactory condition should be presented and discussed briefly.

(1) Corrective Action. In those instances where a product is being produced under a TC only, the PC applicant must be requested to commence immediate corrective action on those items that directly involve the product and related QC practices. A reasonable time may be allowed for correcting deficiencies in the QC data. However, the applicant must be advised that the PCB cannot recommend that a PC be issued unless all applicable regulations are complied with and until the MIDO/CMO has evaluated all corrective actions and found them to be satisfactory.

(2) Formal Confirmation. The applicant must also be advised that an official letter will be sent confirming the verbal presentation of the list of unsatisfactory conditions. This formal notification should be prepared by the PI for the signature of the Chairman of the Board, within ten working days following the final meeting with the manufacturer.

(3) Violations. If the PC applicant is manufacturing a product under a TC only, and any of the unsatisfactory conditions are determined to be violations to part 21, subpart F, appropriate enforcement actions should be initiated by the MIDO/CMO in accordance with FAA Order 2150.3.

g. Final Phase of PCB. The final phase of a PCB is the evaluation by the MIDO/CMO of the corrective action taken by the applicant. The results of the re-inspection should be reported to the Chairman of the Board using Form 8120-14. Refer to appendix 8 of this order.

h. PCB Conclusion. The MIDO/CMO will formally advise the applicant in writing, as soon as practicable, that a PC will be issued based on a showing of compliance to § 21.135, or that a PC will not be issued if there is failure to show compliance with § 21.135. The MIDO/CMO will provide notification to the MIO that the letter has been issued and may be viewed in the CMIS project folder.

49. PCB MINUTES. The MIDO/CMO will prepare the PCB minutes for the signature of the Chairman. The minutes should encompass a concise record of the entire PCB proceedings, including the names and titles of all participants.

a. All correspondence relating to the PCB, including letters to the applicant, replies, etc., are considered to be part of the minutes and should be attached as appendixes.

b. All Form(s) 8100-6 and 8120-14, or printed copy of electronic equivalent, should also be attached to the PCB minutes as a separate appendix.

c. Distribution of PCB Minutes. The PCB minutes should be distributed as follows:

(1) Original to the directorate office involved. In accordance with Manual FAA-IR-04-01, Aircraft Certification Service Records Management Requirements Manual, destruction of the original is not authorized.

(2) One copy to the cognizant MIDO/CMO that participated in the PCB.

50. PCB ADJOURNMENT. The PCB will be adjourned when the PCB minutes are accepted by the Chairman and distributed to the board members.

PART 4. ISSUANCE OF PRODUCTION CERTIFICATE AND PRODUCTION LIMITATION RECORD

51. PREPARATION AND DELIVERY OF PC AND PLR. Upon a finding by the PCB that the PC applicant's QC data/system, organization, and facilities comply with § 21.135, the MIDO/CMO will prepare Form 8120-4 and FAA Form 8120-3, Production Limitation Record, for the signature of the MIO Manager. Refer to figures 6 and 7 for sample forms. Signature authority for the PC and PLR may be delegated to the PCB Chairman. Electronic signature is not permitted. Delivery of the PC and PLR should be in person by the PI; however, if this procedure will result in an undue delay, the PC and PLR may be sent to the PC holder by certified mail. Whichever method of delivery is used, it is essential that the PC holder be advised of the PC display requirements and of the PC responsibilities by a letter. Refer to figure 8 for a sample letter.

a. PC. The PC will be consecutively numbered within each directorate; e.g., PC-6CE would indicate that the PC was the sixth one issued by the Small Airplane Directorate. Each directorate should establish and maintain a summary of PCs issued and a listing of changes made thereto.

> **NOTE: When a PC is issued based on a licensing agreement that is for a specific period of time, it must be indicated on Form 8120-4 under "Duration."**

b. PLR. The PLR will include the TC and model number of each product authorized for production, and the date that production was authorized. When a PC is issued for an STC, the PLR will include the STC number, the model number of each product on which the STC is eligible, and the date that production was authorized.

(1) Additions to the PLR. If a PC holder desires to add a new TC or new model under an existing TC to the PLR, the PC holder must make application in the same manner as for the original issuance. In this instance, it is not normally necessary to establish a PCB. In place of the PCB, the MIDO/CMO should conduct an audit using the guidelines in paragraph 45, as appropriate, to determine whether the quality system is adequate or has been appropriately changed to ensure positive control of the product to be added to the PLR. When changes to the quality system are substantial, the PI may elect to request a nonscheduled ACSEP evaluation to make this determination. Refer to Order 8100.7. The MIDO/CMO having CM responsibility may issue revisions to the PLR to include new products or models, when authorized.

FIGURE 6. SAMPLE FAA FORM 8120-4, PRODUCTION CERTIFICATE

This form is a representation of the original form and not to be construed as the original certificate.

NOT FOR OFFICIAL USE

The United States of America
Department of Transportation
Federal Aviation Administration

Production Certificate

Number 6CE

This certificate, issued to
ABC AIRCRAFT COMPANY
whose business address is
4954 AIRPORT DRIVE
KANSAS CITY, MISSOURI
and whose manufacturing facilities are located at
752 PRIMROSE LANE
St. LOUIS, MISSOURI
authorizes the production, at the facilities listed above, of reasonable duplicates
of **airplanes**
which are manufactured in conformity with authenticated data, including, drawings, for which Type Certificates specified in the pertinent and currently effective Production Limitation Record were issued. The facilities, methods and procedures of this manufacturer were demonstrated as being adequate for the production of such duplicates on date of **5 May, 1999.**

Duration: *This certificate shall continue in effect indefinitely, provided, the manufacturer continuously complies with the requirements for original issuance of certificate, or until the certificate is canceled, suspended, or revoked.*

By direction of the Administrator

Date issued:
August 10, 1999

J.J. Jones . J. J. Jones
Manager, Manufacturing Inspection Office

This Certificate is not Transferable, **AND ANY MAJOR CHANGE IN THE BASIC FACILITIES, OR IN THE LOCATION THEREOF, SHALL BE IMMEDIATELY REPORTED TO THE APPROPRIATE REGIONAL OFFICE OF THE FEDERAL AVIATION ADMINISTRATION**

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years or both
FAA FORM 8120-4 (12-69) SUPERSEDES FAA FORM 333

FIGURE 7. SAMPLE FAA FORM 8120-3, PRODUCTION LIMITATION RECORD

This form is a representation of the original form and not to be construed as the original certificate.

NOT FOR OFFICIAL USE

The United States of America
Department of Transportation
Federal Aviation Administration

Production Limitation Record

The holder of
Production Certificate No. 6CE
may receive the benefits incidental to the
possession of such certificate with respect to

AIRCRAFT
(OR AIRCRAFT PROPELLERS,
AIRCRAFT ENGINES, AS APPLICABLE)

manufactured in accordance with the data forming the
basis for the following Type Certificate(s) No.

Type Certificate	Model	Date Production Authorized
5A25	ABA-258D	August 10, 1999

(Note: Any number of columns may be used provided the material is neat and legible. Additional PLRs may be used when necessary. Additional PLRs shall be numbered "1 of 2," "2 of 2," as appropriate to the number of pages involved.)

LIMITATIONS:

(if any)

August 10, 1999
Date of Issuance

By Direction of the Administrator
J. J. Jones
J. J. Jones
Manager, Manufacturing Inspection

FAA FORM 8120-3 (7-67)

FIGURE 8. SAMPLE PC TRANSMITTAL LETTER

US Department of Transportation
Federal Aviation Administration

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SMALL AIRPLANE DIRECTORATE
MANUFACTURING INSPECTION OFFICE
901 LOCUST STREET, ROOM 301
KANSAS CITY, MISSOURI 64106-2641

August 12, 1999

ABC Aircraft Company
4954 Airport Drive
Kansas City, Missouri 12345

Production Certificate Transmittal

We are pleased to forward Production Certificate No. 6CE, dated August 10, 1999, together with its Production Limitation Record listing Type Certificate No. 5A25. These documents must be prominently displayed in the main office of your factory, as required by Title 14, Code of Federal Regulations (14 CFR), part 21, Certification Procedures for Products and Parts (part 21), Section 21.161.

A Production Certificate authorizes the production of duplicates of specific type-certificated products and entitles the holder to certain privileges, including the option to obtain the appointment of a Designated Manufacturing Inspection Representative to issue airworthiness certificates and other related approvals. It should be noted that the issuance of a Production Certificate also places basic responsibilities upon the holder, as prescribed by 49 United States Code, Sections 44702(a) and 44704(b). The related rules are contained in part 21 and 14 CFR part 45, Identification and Registration Marking. We suggest that copies of the aforementioned be made available to the appropriate personnel in your organization.

If at any time you have questions concerning your privileges or responsibilities relative to your Production Certificate, please contact either this office or our Manufacturing Inspection District Office (number and address).

James C. Grace
Manager, Manufacturing Inspection
Office, ACE-180

(NOTE: When the PC and PLR are delivered in person, this letter should be suitably revised to reflect such delivery.)

(2) Deletions from the PLR. Where production of a type-certificated product has been discontinued, and more than one TC is listed on the PLR, the following applies:

(a) If neither the complete product nor spare parts are being produced, the discontinued product or model should be deleted from the PLR. Upon issuance of the revised PLR, the MIDO/CMO will request that the PC holder return the superseded PLR, which will be marked "Superseded" and retained in the files. If no other products, models, or spare parts are covered by the PC, the PC holder will be requested to return both the PC and PLR for cancellation. The MIDO/CMO will retain the canceled PC and PLR.

(b) If production of the complete product has ceased, but spare parts are still being produced, the PLR should be revised to reflect this. The MIDO/CMO should ensure that the PC holder remains in compliance with § 21.147 and will continue to advise the FAA of any changes in its organization, systems, procedures, or processes.

(3) STC Modifications Incorporated by a TC/PC Holder.

(a) When the holder of the TC seeks and obtains its own STC, or is licensed to use another person's STC data, the TC holder may amend the TC to incorporate the STC approval by reference. Another party's STC that is incorporated during production and is referenced in and becomes a part of the TC need not be shown on the PLR. When a TC is amended to incorporate data approved under an STC, only the TC should continue to be shown on the PLR.

(b) When the PC holder of a TC obtains an STC, or related licensing agreement, but does not make the STC an integral part of the TC, the PC holder may incorporate the STC in production products prior to OAC approval, provided that:

1 The PC holder makes application to the FAA to add the STC to its PLR.

2 The QC data is revised as necessary.

3 The engineering data submitted for the STC approval provides all the details necessary for manufacture and for making conformity determinations.

(c) When a PC holder elects not to use either of the foregoing methods, the TC holder may incorporate an STC modification into production products only after OAC, in accordance with the provisions of part 43.

52. INITIAL RISK MANAGEMENT ASSESSMENT. Subsequent to the issuance of the PC, the MIDO/CMO will conduct a risk management assessment of the PC holder in accordance with chapter 3, section 2 of this order. The results will determine the initial basis for conducting ongoing CM responsibilities, as summarized in figure 16 of this order.

53.-55. RESERVED.

SECTION 4. TECHNICAL STANDARD ORDER AUTHORIZATION (PART 21, SUBPART O)

PART 1. GENERAL

56. APPLICABILITY. Part 21, subpart O, is applicable to a person who desires to manufacture an article that meets a specific TSO. The TSO authorization system does not apply to parts produced under a PMA, TC only, or a PC.

57. PRIVILEGES. A TSO authorization holder has the privileges specified in § 21.603. In addition, a TSO authorization holder is eligible to have a qualified employee(s) designated as a DMIR in accordance with the provisions of part 183. The TSO authorization holder may also be authorized by part 183 to apply for and obtain an ODA. Orders 8100.8 and 8100.15 contain procedures for the administration of DMIRs and ODAs, respectively.

58. ADVISING THE APPLICANT. The applicant will be advised that:

a. Section 21.605(a)(3) establishes the need for a quality system. AC 21-1 sets forth an acceptable means of compliance with § 21.605(a)(3). The FAA may approve alternative methods and procedures when the applicant can show that the proposed methods and procedures will achieve compliance with § 21.605(a)(3).

b. The applicant should arrange the data required for submittal to the FAA under § 21.605(a)(3) in the format suggested by AC 21-1. In those instances where an applicant has already established QC procedures, e.g., for military contracts, the applicant must identify those portions that comprise the QC data that the applicant will use to show compliance with § 21.605. The data may or may not comprise a lengthy document, depending upon the size of the manufacturing facilities and product complexity. The data must include descriptive material that adequately covers each applicable paragraph of § 21.605. A title should be provided for positive identification and a revision page or similar control is recommended to ensure that the original approval date and the date of each revision is recorded. A number or letter should identify each revision.

c. A TSO authorization holder is a manufacturer who controls the design and quality of an article produced under the TSO system. The TSO authorization holder's control extends to all related parts, processes, or services, including all related parts, processes, or services procured from outside sources.

d. A TSO design approval can be obtained only for the applicable TSO that is in effect on the date of application for that article.

e. A TSO authorization does not imply installation eligibility on a type-certificated product.

f. TSO Authorization Holder's Responsibility.

(1) The TSO authorization holder is responsible for maintaining the quality system in conformity with the data and procedures approved for the TSO authorization, and for determining that each completed article and parts thereof produced conforms to the TSO and any terms or conditions prescribed in the TSO letter of authorization.

(2) The holder of a TSO authorization should notify the MIDO in writing prior to any changes that may affect the inspection, conformity, or airworthiness of the product. These changes would include:

(a) Relocation of a portion of its facility or addition to existing facilities.

1 A TSO authorization holder's manufacturing complex would normally consist of a principal facility and all associate facilities using the same quality system approved by the FAA, for the particular TSO article(s). Associate facilities are discussed in section 6 of this chapter.

2 The TSO authorization is issued to the principal manufacturing facility that controls the design and quality of the article(s) for which the approval was granted. A mailbox address is not acceptable for a facility since the actual location must be identified. Such addresses, however, may be used as supplemental to the actual address when desired for such uses as corresponding to and from FAA offices.

3 When a TSO authorization holder moves the principal manufacturing facility to a new location, the TSO authorization is no longer effective. In accordance with FAA Order 8150.1, Technical Standard Order Procedures, the responsible MIDO will evaluate the TSO holder's quality system to determine the TSO holder's ability to comply with § 21.143. If the MIDO finds no change to the TSO holder's ability to comply with § 21.143, the TSO holder may be eligible for the reissuance of its TSO authorization(s). The ACO must notify the TSO holder that no new articles may be shipped from its new facility until the TSO authorization has been reissued.

4 When the TSO authorization holder moves an associate facility or adds a new production facility, the FAA should be notified of such changes. The FAA may, if deemed necessary, conduct a preliminary DO audit at the new production facility or moved facility. If a DO audit is deemed necessary, a satisfactory audit result must be obtained before the facility can be approved for production.

(b) Resumption of production after being discontinued for an extended period of time for other than normal periods of time, such as vacation periods.

(c) Significant curtailment/resumption of production operations.

(d) Significant reduction/reassignment of QC personnel.

(e) Changes or revisions to QC data and related procedures.

(3) The TSO authorization holder must report all failures, malfunctions, and defects as required by § 21.3. The TSO authorization holder should be encouraged to establish a procedure for such reporting.

(4) Identification Marking. A TSO authorization holder is responsible for ensuring that only those articles that meet the applicable TSO performance standards are identified as required by § 21.603. Section 21.603(a) states in part that "...no person may identify an article with a TSO marking unless that person holds a TSO authorization and the article meets applicable TSO performance standards." The intent of § 21.603 is to address the identification of an article with its original TSO identification marking as required by § 21.607(d) at the time of manufacture.

NOTE: The address identification marking required by § 21.607(d)(1) will be the location of (1) the principal manufacturing facility, (2) the associate facility, or (3) the supplier that manufactures the complete article.

(a) Supplier Marking. Suppliers to TSO authorization holders can identify parts with TSO markings provided the TSO approval holder adequately controls those suppliers as part of its quality system. Suppliers that mark parts should be treated the same as any other supplier furnishing parts or services, using supplier control procedures as part of the quality system. MIDOs may require that specific part marking controls be included in these procedures, along with any additional conditions that may be necessary for suppliers with direct-ship authorization.

(b) Detail Parts and Invoice Identification. When detail parts are produced for installation in a TSO article, individual detail parts of the TSO article sold separately must be accompanied by a shipping document containing the information required by § 21.607(d) and must identify the detail part as a subcomponent of a TSO article.

(c) Detail Parts and Design Data Identification. TSO article markings required by §§ 21.603 and 21.607(d) are applied to the top-level assembly for which the original TSO authorization was granted, not subassemblies or individual detail parts. It is not required that each individual subassembly or detail part within the TSO article be marked. The TSO marking requirements for detail parts, which are sold by the original TSO authorization holder for installation into its related TSO articles, may be found within the applicable design data for the TSO article. This provides traceability of the individual detail parts to their related TSO articles.

(5) Reidentifying Marking. Section 21.603 does not prohibit a certificated person, authorized under § 43.3, from modifying or replacing the original TSO identification marking in accordance with the TSO authorization holder's instructions (e.g., service letters, service bulletins, airworthiness directives, etc.) resulting from an FAA-approved design change. The following guidance applies to the incorporation of design changes to TSO articles that have left the manufacturer's quality system that require reidentifying of the TSO articles.

(a) There are instances when the holder of a TSO authorization, or a letter of TSO design approval, changes a design and provides data so that these changes may be incorporated into articles in service, through alteration. Service bulletins, service letters, and airworthiness directives are common nomenclature for these types of data, but the data may be transmitted in any appropriate form. Regardless of whether the change is major or minor, as defined in § 21.611, it may be necessary and/or appropriate to reidentify the article.

(b) The reidentification procedure indicated in paragraph 58f(5)(a) of this order must be part of the FAA-approved data for the entire alteration. The identification markings must comply with the requirements of § 21.607 and the applicable TSO. Some of the reidentification methods expected include the following: making additional marks; making new marks and obliterating the old; installing a new data plate or label provided by the TSO authorization holder; or a combination thereof. Consideration should be given to minimizing confusion as to the status of the article and maximizing traceability to the maintenance and alteration records.

(c) Design changes introduced by persons other than the TSO authorization holder are permissible under § 21.611(c). Order 8150.1 addresses the identification/marking requirements of TSO articles that are modified by persons other than the TSO manufacturer.

(6) Identification Marking of Replacement and Modification Parts Produced Pursuant to the Enhanced Enforcement Program (EEP) as Published in Federal Register Notice of February 27, 1995. Parts produced under the EEP that subsequently were issued TSO authorizations were not eligible at the time of production and are ineligible for marking in accordance with § 21.607(d). Although parts produced under the authority of the EEP are not eligible for part marking, these parts were considered acceptable for sale/installation under the provisions of § 21.305(d). Section 21.305(d) allows parts to be approved in any manner approved by the FAA Administrator. Parts produced under the authority of the EEP continue to be acceptable subsequent to the expiration of the EEP.

PART 2. PROCESSING AN APPLICATION FOR A TSO AUTHORIZATION

59. APPLICATION.

a. An applicant (or an applicant's authorized agent) must submit an application for a TSO authorization by letter to the Manager, Aircraft Certification Office (ACO), in the region in which the applicant's principal manufacturing facility is located. The applicant must submit, along with the application, those documents required by § 21.605, which includes:

(1) A statement of conformance.

(2) A copy of the technical data.

(3) A description of the quality system in the detail specified in § 21.143.

b. A foreign manufacturer who desires to obtain a TSO letter of design approval (as provided for in § 21.617) must submit an application through its CAA to the ACO (or equivalent) that has cognizance over the geographical area in which the foreign manufacturer is located. A foreign manufacturer located in a member state of the European Union who desires to obtain a TSO letter of design approval must submit an application through the European Aviation Safety Agency to the Boston ACO.

60. DESIGN APPROVAL. The regulations and requirements concerning TSO design approval methods are contained in part 21, subpart O, and the applicable TSO. Policy covering TSO design approval methods is contained in Order 8150.1.

61. PRELIMINARY DO AUDIT. At the request of the ACO, the MIDO should make arrangements to conduct a DO audit, within the deadline established by the ACO. This audit will be conducted as follows:

a. Evaluate the applicant's QC data for compliance with § 21.143 using the criteria contained in appendix 1 of this order. The data must include an acceptable test procedure to which each production article will be tested. Any inadequacies in the data submitted must be identified to the applicant for corrective action. After the data has been reviewed, and any applicable corrective actions taken, the MIDO will approve the quality control data submitted by the applicant. The approved QC data may be retained in the MIDO files.

b. Evaluate the applicant's production facilities in accordance with 14 CFR, the FAA-approved design data, and the QC data approved in paragraph 61a of this order. The cognizant MIDO manager will select either an individual or a team to conduct this audit. The team may consist of the cognizant PI and at least one other manufacturing inspector or the MIDO manager. It is also recommended that an engineer be selected for the team when deemed necessary by the type and complexity of processes and procedures being utilized at the facility. The standardized evaluation criteria contained in Order 8100.7 may be used as an aid to evaluate compliance. Team members should be advised, however, that some of the evaluation criteria contained therein may not be related to 14 CFR, and therefore may only be evaluated as a best practice. This audit is not considered to be an ACSEP evaluation. Record all noncompliances on Form(s) 8100-6 and 8120-14. Refer to appendixes 7 and 8 of this order.

c. Reporting. The MIDO will advise the ACO concerning the results of the DO audit. Any unresolved items requiring corrective action should be identified and copies of letters to the applicant requesting corrective action will be provided.

PART 3. ISSUANCE OF A TSO AUTHORIZATION OR LETTER OF TSO DESIGN APPROVAL

62. TSO LETTER OF AUTHORIZATION. Upon a showing of compliance with part 21, subpart O, the cognizant ACO will issue a letter in accordance with established procedures. Electronic signature is not permitted. This letter should be amended, as appropriate, to reflect subsequent additions to a manufacturer's original TSO authorization, after appropriate coordination between the ACO and MIDO in determining the need for a DO audit.

63. LETTER OF TSO DESIGN APPROVAL. The cognizant ACO may issue a letter of TSO design approval for an import appliance to a foreign manufacturer located in a country with which the United States has an agreement that provides for the reciprocal acceptance of appliances, provided the following criteria are met:

a. The CAA of the country in which the appliance will be manufactured certifies to the FAA that the design of the particular appliance meets the pertinent design requirements of the specific TSO.

b. The CAA is advised that each appliance produced under the provisions of the TSO design approval and exported to the United States must be accompanied by a certificate of airworthiness for export as specified in § 21.502.

64. INITIAL RISK MANAGEMENT ASSESSMENT. Subsequent to the issuance of the TSO authorization, the MIDO/CMO will conduct a risk management assessment of the TSO holder in accordance with chapter 3, section 2 of this order. The results will determine the initial basis for conducting ongoing CM responsibilities, as summarized in figure 16 of this order.

65.-67. RESERVED.

SECTION 5. PARTS MANUFACTURER APPROVAL (PART 21, SUBPART K)

PART 1. GENERAL

68. APPLICABILITY.

a. Section 21.303 requires any person producing replacement or modification parts for sale for installation on a type-certificated product to obtain a PMA or to produce such parts in accordance with one of the exceptions in § 21.303(b).

b. A PMA may be obtained for replacement parts for TSO articles that are approved as part of a product type design, provided that installation eligibility to that product can be shown. However, approval of a part that would constitute a major design change to the TSO article cannot be done under a PMA and would require a new TSO authorization. An applicant's design that could meet the identicality provisions of § 21.303 would normally not be considered a major design change.

c. A PMA may not be issued if the manufacturing facilities for the part are located outside the United States, unless it has been determined, in accordance with § 21.303, that such location(s) would place no undue burden on the FAA.

d. Exceptions. A PMA is required except, as described below:

(1) Manufacturing inspection procedures, materials, and/or special processes, such as hardening, plating, or shot-peening are not in and of themselves eligible for PMA. However, if a person participates in controlling the design, manufacture, or quality of a part by performing such procedures or processes and does so with the intent that the part be sold for installation on a type-certificated product, that person must do so as an approved supplier to another's FAA-approved production system.

(2) A PMA cannot be issued on the basis of a "one-time-only" STC or FAA Form 337, Major Repair and Alteration, approval. The applicant would have to reapply for a new STC, which constitutes a "multiple approval," before a PMA could be considered.

(3) Other PAHs (PC, APIS, or TSO authorization) may produce replacement parts for their products or articles under their existing design and production approvals. A supplier to a PAH may not produce replacement or modification parts for sale for installation on a type-certificated product, unless the PAH authorizes major inspection and grants direct-ship authority (with FAA approval) to that supplier or that supplier has a PMA for the replacement or modification parts.

(4) An aircraft owner or operator may produce parts for installation on its own product without a PMA. The installation of those parts must comply with part 43 and other applicable airworthiness standards.

(5) An air carrier, operating under 14 CFR part 121, Operating Requirements: Domestic, Flag, and Supplemental Operations, or 14 CFR part 135, Operating Requirements: Commuter and On Demand Operations and Rules Governing Persons On Board Such Aircraft, may produce parts for installation on its own product without a PMA, provided the installation of those parts is approved in accordance with part 43 and complies with the air carrier's accepted maintenance procedures manual and instructions.

(6) An FAA-certificated repair station may produce a part for installation on a type-certificated product for current and anticipated in-house repairs or modifications. Further guidance may be found in AC 43-18, Fabrication of Aircraft Parts by Maintenance Personnel.

(7) The FAA does not require a PMA for production of standard parts produced for sale for installation on a type-certificated product. A PAH may purchase standard parts and subject them to more restrictive inspection criteria prior to approval for installation. When a question arises as to whether a part is a standard part, the certificating ACO and/or MIDO should be contacted to determine whether the design of the part meets the criteria for a standard part.

(8) In accordance with § 21.502, replacement or modification parts produced and imported to the United States under the provisions of an agreement with a foreign country do not require a PMA. The scope of the agreement must specifically include the approval and acceptance of replacement and modification parts. Acceptable replacement and modification parts may include:

(a) Parts produced under the provisions of a bilateral agreement by the foreign holder of an FAA TC issued in accordance with § 21.21 or § 21.29, an STC, or a letter of TSO design approval; or

(b) Parts produced by a foreign manufacturer and approved by their local CAA as specified in a bilateral agreement. (Depending on the scope of the bilateral agreement, such parts may include those designed as replacements for U.S. State of Design products.)

> **NOTE: In both of these cases, the parts are accepted for import under § 21.502, only when accompanied by an appropriate airworthiness approval for export.**

69. PRIVILEGES. A PMA holder has the privileges specified within the PMA letter and supplement. In addition, a PMA holder is eligible to have a qualified employee(s) designated as a DMIR in accordance with the provisions of part 183. The PMA holder may also be authorized by part 183 to apply for and obtain an ODA. Orders 8100.8 and 8100.15 contain procedures for the administration of DMIRs and ODAs, respectively.

70. ADVISING THE APPLICANT. Approval of an application for PMA requires an approval of the design by the ACO and a production system approval by the MIDO. The applicant should be advised of the following:

a. PMA Holder's Responsibility.

(1) Reporting Failures, Malfunctions, and Defects. The PMA holder should establish a procedure to report to the FAA any failure, malfunction, or defect of a PMA part that has left its quality system. This reporting requirement applies to failures, malfunctions, or defects that may result in or have resulted in one of the occurrences listed in § 21.3(c).

(2) Maintaining FIS. The PMA holder must maintain the FIS to comply with § 21.303. The PMA holder should notify the MIDO in writing prior to any changes to the FIS that may affect the inspection, conformity, or airworthiness of the parts.

(3) Additional Part Approvals. If a PMA holder wishes to produce additional parts under the existing approved production system, an application must be made and the holder must show compliance with § 21.303(d). The MIDO will then issue a PMA supplement that adds the new parts to the original approval. If the new parts production constitutes a significant change in the operation or capabilities of the PMA holder, the MIDO will conduct a review the holder's FIS.

(4) Relationship Changes. The PMA holder may not produce parts if any change, in its relationship to the design approval holder (licensor) or otherwise, prevents it from meeting its PMA responsibilities.

b. Part Marking Requirements. Section 45.15 specifies the marking requirements for PMA parts produced for installation on TC products, STC products, and TSO articles. In accordance with § 45.15, parts produced under a PMA must be permanently and legibly marked in a manner that will enable persons to identify that it is a PMA part, the manufacturer, the part number, and the type certificated product(s) on which it may be installed. In the case of a PMA part based on an STC, the identification of installation-eligible type-certificated products must include reference to the STC on the shipping document. The same protocols should be followed in the case of a PMA part to be installed on a TSO article. The installation eligibility marking identifies the name and model of each applicable type-certificated product. Listing TSO identification information (i.e., TSO-C149, TSO-C63C, TSO-C85A, etc.) in lieu of installation eligibility information (i.e., A310-200 series, B737-300 series, etc.) does not meet the requirements of § 45.15. The issuance of the PMA letter authorizes and requires the holder to mark parts as prescribed in § 45.15.

(1) Marking Critical PMA Parts. In addition to the marking requirements of § 45.15, a PMA part with a critical characteristic(s), as described in § 45.14, must be permanently and legibly marked with a serial number. The FAA must confirm that the marking location and the associated process will not affect airworthiness.

(2) Marking Detail Parts of PMA Assemblies. PMA part markings required by § 45.15 are applied to the top-level assembly of the approved replacement or modification part. Marking subassemblies or individual detail parts is not required. For example, if the PMA were approved for a hydraulic pump, the PMA marking would be affixed to the completed assembly. It is not required that each individual subassembly or detail part within the assembly be marked with "FAA-PMA," unless it is being produced under its own PMA. If a PMA is granted for an assembly, individual detail parts of the assembly sold separately, except those produced under their own PMA, must be accompanied by a shipping document containing the information required by § 45.15(a)(1) through (3) and must identify the detail part as a subcomponent of a PMA assembly. The part marking requirements for detail parts that are sold by the original PMA holder for installation into its related PMA assemblies may be found within the applicable design data for the assembly. This provides traceability of the individual detail parts to their related PMA assemblies.

> **NOTE: There is no need to reissue previously issued PMA letters that require detail parts of an assembly sold separately to be marked in accordance with § 45.15.**

(3) Part Numbering. Except as provided in paragraphs 70b(3)(a) and 70b(3)(b) of this order, the applicant's part should be numbered such that it is distinguishable from the corresponding TC holder's part number. The TC holder's part number with a prefix or suffix is sufficient for this purpose, as long as use of such a prefix or suffix will not cause confusion with the part marking practices of the TC holder. The requirement of § 45.15(a)(2) (to mark with the name, trademark, or symbol of the applicant) may be satisfied by the use of a prefix or suffix, if the prefix or suffix is consistent across the applicant's product line. Each part also must be marked with "FAA-PMA" to meet the requirement of § 45.15(a)(1).

(a) Supplier Part Number. Some applicants are suppliers to PAHs. Often these PAHs use the supplier part numbers in their approved designs. When these suppliers later apply for PMA, they may continue to use their original part numbers, provided they also meet the requirements of § 45.15.

(b) Parts Manufactured Under License. When the PMA is based on the applicant showing evidence of a licensing agreement, the PMA part may have the same number as the type-certificated part, provided the applicant also meets the requirements of § 45.15.

(4) Parts Impractical to Mark. If the FAA finds the part too small or impractical (because of characteristics) to mark all (or any) of the information on the part, the information not marked on the part must appear on an attached tag or the part's container label. Often the number of type-certificated products on which the part is eligible for installation is too long to include with the part or the list is likely to change over time. In such cases, the attached tag or container label may refer to the applicant's publicly available manual or catalog for part eligibility information. Section 45.15(b) requires the PMA holder to make the manual or catalog "readily available" for part eligibility information. Providing a manual or catalog via the Internet meets the intent of "readily available." However, because access to the Internet is not universal, the PMA holder must have an alternative means of providing the manual or catalog.

(5) Supplier Marking of PMA Parts. Suppliers to PMA holders may identify parts with PMA markings provided the PMA approval holder adequately controls those suppliers as part of its quality system. Suppliers that mark parts should be treated the same as any other supplier furnishing parts or services, using supplier control procedures as part of the quality system. MIDOs may require that specific part marking controls be included in these procedures, along with any additional conditions that may be necessary for suppliers with direct-ship authorization.

(6) Identification Marking of Replacement and Modification Parts Produced Pursuant to the Enhanced Enforcement Program (EEP) as Published in Federal Register Notice of February 27, 1995. Section 45.15 states that each person who produces a replacement or modification part under a PMA issued under § 21.303 will permanently and legibly mark the part. Parts produced without a PMA, such as parts produced under the EEP, were not produced under § 21.303 and therefore are not eligible for marking in accordance with § 45.15. Although parts produced under the authority of the EEP are not eligible for part marking, these parts were considered acceptable for sale/installation under the provisions of § 21.305(d). Section 21.305(d) allows parts to be approved in any manner approved by the FAA Administrator. Parts produced under the authority of the EEP continue to be acceptable subsequent to the expiration of the EEP.

PART 2. PROCESSING AN APPLICATION FOR A PMA

71. APPLICANT RESPONSIBILITIES.

a. Application Letter. The applicant must submit a letter of application to an ACO or MIDO, depending on the design approval basis. If the applicant is applying on the basis of an STC or identicality by licensing agreement, the application will be submitted to the MIDO having geographical responsibility for the area in which the applicant's manufacturing facility is located. Refer to figure 9 for a sample letter of application. If the design approval basis is other than an STC or identicality by licensing agreement, the application will be submitted to the ACO having geographical responsibility for the area in which the applicant's manufacturing facility is located. The application should include the following information:

(1) The name and address of the manufacturing facility that will be covered by the FIS of the applicant.

(2) The identity of the part for which PMA application is being made, including:

(a) The type-certificated product identified by make, model, series, and if appropriate, serial number, on which the part is to be installed.

(b) The TC holder's part number and if known, the drawing number and revision level that the PMA part would replace or modify.

(3) A statement that certifies the applicant has established a FIS in compliance with § 21.303(h).

(4) A brief description of the method by which design approval will be sought:

(a) Identicality by Showing Evidence of a Licensing Agreement. The applicant should submit an appropriate document from the TC, STC, or TSO authorization holder authorizing use of its FAA-approved data. In addition, the document should attest that the licensed components have service histories with no known problems causing unsafe conditions. Evidence of a licensing agreement is not a separate approval method, but merely a way to show identicality. The evidence of a licensing agreement is used by the applicant to show that the data submitted are FAA-approved and are therefore identical. For FAA purposes, the licensing agreement, in whatever form it takes, need only to authorize the applicant to use the type design data specified. The current industry practice of TC holders preparing "assist letters" for applicants to submit to the FAA sufficiently meets the requirements of showing evidence of a licensing agreement under § 21.303(c)(4). The "PMA assist letter" must include the following information, as appropriate:

1 Product model, name, and TC/STC number.

2 A statement that the PMA applicant is authorized to use the design data as identified by part name, drawing number, and revision level.

3 Information describing the authority of the PMA applicant to use the TC or STC holder's part number and other part marking information.

4 Information that establishes the life limits or airworthiness limitations of the part.

FIGURE 9. SAMPLE PMA LETTER OF APPLICATION

The ABC Tool Company
3000 Hill St.
Randolph, MA 02368
(781) 555-1212

FAA - New England Region
12 New England Executive Park
Burlington, MA 01803
(781) 238-7199

Attention: Mr. Mark Steale
Manager, Boston Manufacturing Inspection
District Office, ANE-MIDO-42

Subject: Request for New FAA-PMA Approval

Mr. Steale:

The ABC Tool Company is submitting an application for Parts Manufacturer Approval for our part number (P/N) ABC 13579. We request your review of the enclosed data being submitted in support of this application. Part number ABC 13579 is a bushing assembly eligible on PS PT9D-1, -7, -9 series engines. Approval is requested based on (STC #/Licensing Agreement #, dated) under 14 CFR § 21.303(c). Part number ABC 13579 replaces PS bushing assembly P/N 13579, drawing no. 13579, revision level C.

The part will be manufactured at ABC Tool Company, 3000 Hill Street, Randolph, MA 02368. ABC Tool Company hereby certifies that a fabrication inspection system that is in accordance with 14 CFR § 21.303(h) has been established and the above part is manufactured in accordance with that system.

Your efforts in support of this request are most appreciated.

Very truly yours,

PMA Administrator,
ABC Tool Company

Enclosures:
1 copy STC or PMA Assist Letter
1 copy Unnumbered PMA Supplement

5 Information on the part's eligibility for installation (product make, series, model, and if appropriate, the serial number per the type certificate data sheet).

6 A statement as to whether design changes to the part and disposition of nonconforming parts will be controlled through the TC, STC, or TSO authorization holder's quality assurance process. The statement also must describe how design change information will flow to the applicant, and consequently, to the FAA.

(b) Identicality Without a Licensing Agreement. The applicant should submit a statement certifying that the design is identical in all respects to the design of the part covered under an approved design (e.g., TC, STC, or TSO authorization). In addition, the applicant should summarize the data that supports the identicality assertion. Identicality to another PMA is unacceptable.

(c) Test and Computation. The applicant should submit a data package that includes a statement that all design, materials, processes, test specifications, system compatibility, and interchangeability are supported by an appropriate test and substantiation plan for FAA review and approval.

(d) STC. The applicant should submit a statement that references the STC number and present evidence of a written permission statement from the STC holder.

b. Unnumbered PMA Supplement. The applicant must prepare an unnumbered PMA supplement. Refer to figure 11 for a sample PMA supplement. Because some PMA supplements are quite long, an electronic copy on a disk or an e-mail will expedite processing.

c. Establishment of the Fabrication Inspection System. In accordance with § 21.303(h), the applicant must establish and maintain a FIS. Refer to appendix 2 of this order.

72. MIDO RESPONSIBILITY. The MIDO confirms that the applicant has the capability to produce the proposed part in accordance with the approved design. The MIDO will conduct the production approval process upon receipt of the PMA supplement evidencing approval of the design by the ACO, or upon receipt of an application based on identicality by licensing agreement or STC. The production approval process includes the following:

a. Conformity Inspections. The MIDO will perform or delegate conformity inspections at the request of the ACO or other MIDOs.

b. FIS Statement. The MIDO will ensure the applicant has submitted a statement certifying that the FIS required by § 21.303(h) has been established. Data submitted as evidence of compliance with part 21, subpart K, should be evaluated in accordance with the criteria contained in FAA Order 8110.42, Parts Manufacturer Approval Procedures, and in Order 8100.7. The ACO should be involved in evaluating technical data such as design data control, software control, and material review board (MRB), etc. When the data have been found to be acceptable, an additional statement, similar to the following, must be included in the initial PMA letter: "(*Applicant name*) shall produce all parts in accordance with (*Applicant name*), Quality Manual, Revision (*manual's revision*), dated (*manual's date*) or a later FAA-accepted revision." Refer to figure 12, condition 13, of this order.

FIGURE 10. SAMPLE TC, STC, OR TSO AUTHORIZATION HOLDER'S PMA ASSIST LETTER

SUPPORTING DATA
PARTS MANUFACTURER APPROVAL

Smith Engineering Corporation
10 Main Street
Los Angeles, CA 90012

FILE NO._____

(1) Manufacturer Part Name and Part No.	(2) Approved Replacement For	(3) TC/STC/TSO Approval and Design Data	(4) Model Eligibility
Part Name: Spring P/N: SE24689	General Air P/N: 24689	TC: E9NM DWG. No: SE25206 Rev: None Date: 3/31/88	General Air CP6-6, -30
Part Name: Pin P/N: SE24695	General Air P/N: 24695	TC: E9NM DWG. No: SE25207 Rev: None Date: 3/31/88	General Air CP6-6, -30

It is hereby certified that the components listed herein are included as a part of the type design/ approved design data for General Air models as specified in the fourth column herein. The type design being used by the PMA applicant is in compliance with any and all applicable airworthiness directives.

The above-named manufacturer is hereby authorized to use the approved (type design) data noted in the third column herein to manufacture replacement components (column 1). The PMA applicant will use General Air Corp. quality assurance processes to control design changes and disposition nonconforming parts. This certification may be used as part of the application for PMA (14 CFR § 21.303).

Approved:
General Air Corp.

_____

J. Doe, Manager Date
(Engineering Manager, Q. A. Manager, Corporate Officer, DER, or FAA Liaison)

PAGE 1 OF 1

c. Preliminary DO Audit. Prior to the original issuance of a PMA, the MIDO will conduct a DO audit of the applicant's facility, including supplier facilities, as appropriate, to determine whether the applicant is in compliance with part 21, subpart K. The MIDO should decide whether to perform a conformity inspection (1) within 30 days of receiving the PMA supplement from the ACO or (2) prior to issuing a PMA based on an STC or identicality by licensing agreement. This determination should be made based on part criticality, the history of the applicant, part complexity, supplier control issues, etc. When applicable, the MIDO will verify the applicant's manufacturing critical processes required to achieve the approved design characteristics.

d. Principal Inspector. When deemed necessary, the PI should conduct or make arrangements for a part conformity or a DO audit when additional parts are approved by a supplement to the original PMA approval letter, or when the manufacturer expands or relocates its facility.

e. Design Change Issues. The MIDO should ensure the applicant has the proper authority and/or FIS processes to implement minor design changes and MRB dispositions. The MIDO should coordinate with the ACO to evaluate the FIS controls that detail the design change and MRB disposition processes.

f. PMA Assist Letter. The evidence of a licensing agreement from the TC, STC, or TSO authorization holder must include written permission for the applicant to use the design data to apply for a PMA. A "PMA assist letter" or similar evidence authorized by the TC, STC, or TSO authorization holder is sufficient for showing evidence of a licensing agreement. Refer to figure 10 for a sample "PMA assist letter." A licensing agreement alone is insufficient to issue a PMA. The applicant must meet all the requirements of § 21.303. The MIDO should ensure the "PMA assist letter" includes the information specified in paragraph 71a(4)(a) of this order.

g. Identicality Finding. Based on the review of the "PMA assist letter" that contains the information specified in paragraph 71a(4)(a) of this order, the MIDO will make a finding of identicality by showing evidence of a licensing agreement. The MIDO also will review the PMA supplement prepared by the applicant. Refer to figure 11 for a sample PMA supplement for licensing agreement and STC.

h. Life-Limited Parts. The MIDO will forward PMA applications for life-limited parts to the certificating ACO to verify completeness of design data. The MIDO should ensure the application includes a continued operational safety plan.

PART 3. ISSUANCE OF A PMA

73. ASSIGNMENT OF THE PMA NUMBER. The MIDO will assign a PMA number to all original PMA letters in accordance with the existing project assignment number procedures. The PMA number should be unique to each PMA holder and be carried forth on subsequent approved supplements for that PMA. The MIDO will sign the PMA supplements affirming production approval after completing validation of the FIS.

FIGURE 11. SAMPLE PMA SUPPLEMENT FOR LICENSING AGREEMENT AND STC

US Department of Transportation
Federal Aviation Administration

FEDERAL AVIATION ADMINISTRATION - PARTS MANUFACTURER APPROVAL

Smith Engineering Corporation
10 Main Street
Los Angeles, CA 90012

PMA NO._____
SUPPLEMENT NO._____
DATE_____

Part Name	Part Number	Approved Replacement for Part Number	Approval Basis and Approved Design Data	Make Eligibility	Model Eligibility
Galley	SE101001-101	101001-101	Identicality per 14 CFR, § 21.303, licensing agreement between Smith Engineering Corp. and Ace Aircraft, File No. 5-1034-89-RMS 769, dated 9/12/89 DWG No: SE 25207 Rev: None Date: 3/31/88 or later FAA-approved revisions	Ace Aircraft	A-700, -710
Wing Kit	MDL 660	Modification Part	STC SA1234NM DWG No: MDL 660 Rev: None Date: 3/31/88 or later FAA-approved revisions	General Air	CP6-6, -30

----------End of Listing----------

NOTE: The procedures that have been accepted by the type certificate or TSO authorization holder and their cognizant FAA Aircraft Certification Office, for minor changes to original parts used on type-certificated products, are also acceptable for incorporating the same minor changes on identical PMA replacement parts. The PMA holder must be able to show traceability relating to the TC, STC, or TSO authorization holder on all minor changes incorporated by this procedure. When these procedures are no longer applicable because of completion of the production contract, or termination of the licensing agreement or business relationship, all subsequent minor design changes to the PMA parts must be submitted in a manner as determined by the ACO. Major design changes (reference 14 CFR §§ 21.93 and 21.97) to drawings and specifications are to be handled in the same manner as that for an original PMA.

_____
Manager, Manufacturing
Inspection District Office

74. PMA LETTER.

a. The MIDO will prepare the following PMA documents:

(1) A PMA letter for the initial issuance of the PMA. Refer to figure 12 for a sample PMA letter.

(2) A transmittal letter for all subsequent issuances of PMA, including all supplements. Refer to figure 13 for a sample transmittal letter.

b. The original(s) should be presented to the manufacturer. The MIDO should retain one copy and an electronic copy should be sent to the ACO. The information on the PMA supplement will be forwarded to the Aircraft Engineering Division, Delegation and Airworthiness Programs Branch (AIR-140).

75. INITIAL RISK MANAGEMENT ASSESSMENT. Subsequent to the issuance of the PMA, the MIDO/CMO will conduct a risk management assessment of the PMA holder in accordance with chapter 3, section 2 of this order. The results will determine the initial basis for conducting ongoing CM responsibilities, as summarized in figure 16 of this order.

PART 4. POST-PMA ACTIVITIES

76. CHANGE IN LOCATION OF THE MANUFACTURING FACILITY. When a manufacturer relocates or expands, including suppliers with delegated major inspection functions, the FAA may, if deemed necessary, conduct a reevaluation of the FIS at the new or expanded facilities. In accordance with § 21.303(j), the PMA holder must notify the FAA in writing within ten days (working) from the date such action takes place. This notification requirement also applies to supplier facilities where a determination as to the safety and conformance to the approved design is not made at the approved receiving facility. The PMA holder should take special care to preserve the inspection status of parts that are to be moved to the new location.

77. TRANSFERABILITY. A PMA is not transferable to another person, company, or location. The regulations do not preclude revising approval letters to show a change in name only of the holder, provided there is no change in the FIS, management, ownership, or location of the principal facility. However, the design portion of a PMA based on an STC may be sold, licensed, or otherwise transferred. If the STC holder or a licensee intends to manufacture parts, it must apply for a new PMA.

78. REUSE OF PMA DESIGN DATA. Although a PMA itself is not transferable, the design and substantiating data approved under a PMA may be used by another person to apply for a new PMA. The applicant must show compliance with the regulations and may submit previously approved substantiating data to meet (partially or fully) this requirement.

79. CHANGES TO THE FIS. Whenever a PMA applicant has submitted data as evidence of compliance with part 21, subpart K, and the MIDO has found the data acceptable, any subsequent revisions to these data should be accepted by the PI prior to implementation. Revisions that affect the design (e.g., MRB, design data control, service difficulty reporting) should be coordinated with the ACO. The MIDO should notify the PMA holder in writing as to the acceptability of the data submitted. Refer to the sample letter in figure 21.

FIGURE 12. SAMPLE PMA LETTER

US Department of Transportation
Federal Aviation Administration

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Kansas City Manufacturing Inspection District Office
250 Richards Road
Kansas City, Missouri 64116

February 12, 2005

Aero-Parts, Inc.
3212 Newton Street
St. Louis, Missouri 63044

FEDERAL AVIATION ADMINISTRATION - PARTS MANUFACTURER APPROVAL

In accordance with Title14, Code of Federal Regulations (14 CFR), part 21, Certification Procedures for Products and Parts, subpart K, the FAA has found that the design data, as submitted by Aero-Parts, Inc., (hereinafter referred to as "the Manufacturer") on September 16, 2004, meets the airworthiness requirements of 14 CFR applicable to the product(s) on which the part(s) is to be installed. Additionally, the FAA has determined that the Manufacturer has established the fabrication inspection system (FIS) required by § 21.303(h) at 3212 Newton Street, St. Louis, Missouri 63044. Accordingly, Parts Manufacturer Approval (PMA) is hereby granted to the Manufacturer to produce the replacement parts (or modification parts, as applicable) listed in the enclosed supplement(s) in conformity with the FAA-approved design data. Subsequent changes to these design data must be approved in a manner acceptable to the FAA.

The following terms and conditions apply to this approval:

1. The Manufacturer's FIS, methods, procedures, and manufacturing facilities, including suppliers, are subject to FAA surveillance and investigations. Accordingly, the Manufacturer must advise its suppliers that their facilities are also subject to FAA surveillance and investigations.

2. The Manufacturer must notify the Kansas City Manufacturing Inspection District Office (MIDO) in writing within ten working days from the date the manufacturing facilities, at which parts are manufactured, are relocated or expanded, to include additional facilities at other locations. This requirement also applies to the Manufacturer's suppliers with major inspection authorization, and those suppliers who furnish parts or related services where a determination of safety and conformance to the approved design cannot or will not be made upon receipt at the approved receiving facility.

3. Upon request, the Manufacturer must make available to the FAA any pertinent information concerning their suppliers who furnish parts/services. This includes:

a. A description of the part or service;

b. Where and by whom the part or service will undergo inspection;

c. Any delegation of inspection duties;

FIGURE 12. SAMPLE PMA LETTER (CONT'D)

d. Any delegation of materials review authority;

e. The name and title of the FAA contact at the supplier facility;

f. The inspection procedures required to be implemented;

g. Any direct-shipment authority;

h. Results of the Manufacturer's evaluation, audit, and/or surveillance of their suppliers;

i. The purchase/work order number (or equivalent); and

j. Any feedback relative to service difficulties originating at the Manufacturer's suppliers.

4. Parts, appliances, or manufacturing services furnished by any suppliers located in a foreign country may not be used in the production of any part or appliance listed in the enclosed supplement unless:

a. That part or service can and will be completely inspected for conformity at the Manufacturer's U.S. facility; or

b. The FAA has determined that the location of the foreign supplier facility places no undue burden on the FAA in administering applicable airworthiness requirements. The Manufacturer must advise the FAA at least ten working days in advance when the use of such foreign suppliers is contemplated. This will allow the FAA time to make this determination.

5. Parts produced under the terms of this approval must be permanently marked with the identification information as required by 14 CFR part 45, Identification and Registration Marking, § 45.15. Use the letters "FAA-PMA," the name, trademark, or symbol of the company, the part number, and the name and model designation of each type-certificated product on which the part is eligible for installation. If the part is too small or impractical to mark, the FAA must approve alternate means of identification. For a part based on an STC, the identification of installation-eligible type-certificated products must refer to the STC on the shipping document.

6. This approval is not transferable and it may be withdrawn for any reason that precludes its issuance or whenever the FAA finds that the FIS is not being maintained. A withdrawal may occur if unsafe or nonconforming parts are accepted under the FIS.

7. The Kansas City MIDO must be notified within ten working days from the date that the address shown in this approval has been changed.

8. The Manufacturer must maintain its FIS in continuous compliance with the requirements of § 21.303(h). The Manufacturer also must ensure that each part conforms to the approved design data and is safe for installation on type-certificated products.

FIGURE 12. SAMPLE PMA LETTER (CONT'D)

9. The Manufacturer is eligible for the appointment of qualified individuals in its employ to represent the FAA as Designated Manufacturing Inspection Representatives (DMIRs). The DMIRs may issue an export airworthiness approval for Class II and Class III products.

10. The Manufacturer must report in a timely manner, to the Kansas City MIDO, information concerning service difficulties on any part produced under this approval. The Manufacturer also must report any failures, malfunctions, and defects that are required to be reported in accordance with § 21.3.

11. All technical data required by § 21.303(c)(3), for the parts to be produced in accordance with this approval, must be readily available to the FAA at the facility where the parts are being produced.

12. The Manufacturer must notify the Kansas City MIDO immediately in writing of any changes to the FIS that may affect the inspection, conformity, or airworthiness of the parts approved in this letter.

13. **This condition should only be prescribed when the applicant voluntarily submits inspection system data/procedures as evidence of compliance with § 21.303(h).** The Manufacturer must produce all parts in accordance with Aero-Parts, Inc., Quality Assurance Manual, Revision B, dated August 7, 1997, that has been presented as evidence of compliance with § 21.303(h). Accordingly, any revisions to these data must be submitted to the Kansas City MIDO for approval prior to implementation.

G Jones

G. Jones
Manager, Kansas City Manufacturing
Inspection District Office

Enclosure:
Parts Manufacturer Approval Listing
Supplement No. 1

FIGURE 13. SAMPLE TRANSMITTAL LETTER OF SUBSEQUENT PMA SUPPLEMENT

US Department of Transportation
Federal Aviation Administration

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Kansas City Manufacturing Inspection District Office
250 Richards Road
Kansas City, Missouri 64116

February 28, 2005

Aero-Parts, Inc.
3212 Newton Street
St. Louis, Missouri 63044

FEDERAL AVIATION ADMINISTRATION - PARTS MANUFACTURER APPROVAL

In accordance with the provisions of Title 14, Code of Federal Regulations (14 CFR), Part 21, Certification Procedures for Products and Parts, subpart K, the FAA has found that the design data, based on a licensing agreement submitted by Jet Parts Engineering, Inc., with letter dated September 10, 2004, meets the airworthiness requirements of the regulations applicable to the products on which the parts are to be installed. Additionally, the FAA has determined that Aero-Parts, Inc., has established the fabrication inspection system required by § 21.303(h) at 3212 Newton Street, St. Louis, Missouri 63044. Accordingly, Parts Manufacturer Approval (PMA) is hereby granted for production of the replacement parts listed in the enclosed Supplement No. 2.

You are reminded that the provisions of 14 CFR, Parts 21 and 45, noted in our PMA letter of approval dated September 22, 2004, also apply to the enclosed PMA Listing-Supplement No. 2. The enclosed supplement should be retained with the original PMA letter as evidence of approval to produce the parts concerned.

Sincerely,

G Jones
G. Jones
Manager, Kansas City Manufacturing
Inspection District Office

Enclosure:
PMA Listing-Supplement No. 2

80. EXPORT CONSIDERATIONS. Many countries have additional requirements regarding their acceptance of PMA parts. In particular, the European Union Member States require special statements on FAA Form 8130-3, Airworthiness Approval Tag, regarding whether a part is critical or non-critical. For more information see FAA Order 8130.21, Procedures for Completion and Use of the Authorized Release Certificate, FAA Form 8130-3, Airworthiness Approval Tag.

81.-84. RESERVED.

SECTION 6. EXTENSION OF A PRODUCTION APPROVAL WITHIN THE UNITED STATES

PART 1. GENERAL

85. APPLICABILITY. The procedures in this section are applicable to a PAH who desires to extend its production approval to another facility, referred to herein as an associate facility. An APIS holder may extend its production approval to an associate facility after the FAA has determined, by a MIDO evaluation, that such extension would place no undue burden upon the FAA.

86. PRIVILEGES. An associate facility has the same privileges as the original PAH, unless the original PAH or the FAA withholds specific privileges. If authorized by the original PAH, the associate facility can request from its MIDO/CMO the appointment of DMIRs. In addition, if authorized by the original PAH, the associate facility may apply for and obtain an ODA. Orders 8100.8 and 8100.15 contain procedures for the administration of DMIRs and ODAs, respectively.

87. ADVISING THE ORIGINAL PAH AND THE ASSOCIATE FACILITY.

a. A PAH can request the FAA to extend its production approval to an associate facility. To be approved, the associate facility must:

(1) Be located within the United States.

(2) Be owned and controlled by the original PAH that controls the design and quality of the product or part(s) thereof, except for companies participating in joint-production and/or co-production business agreements.

(3) Use a quality control or inspection system that has been approved by the original PAH.

(4) For a PMA or TSO authorization holder, produce the same part thereof and to the same extent as the original PAH.

b. When the associate facility produces the complete product or part(s) thereof and meets 14 CFR eligibility requirements for the type of production approval, it should be encouraged to obtain a separate production approval. The PAH would benefit from a separate approval because the FAA offices would not need to coordinate production approval extensions.

c. All FAA correspondence intended for the original PAH will be from or routed through the MIDO/CMO that has CM of the original PAH.

d. Original PAH's Responsibilities.

(1) Implement its quality system or fabrication inspection system (FIS) at the associate facility or approve the quality system or FIS used by the associate facility.

(2) If the approval or acceptance of changes is retained by the original PAH, the associate facility should be required to submit all proposed changes to the originally approved FIS or QC manual to the PAH for acceptance or approval.

e. Associate Facility's Responsibilities.

(1) Communication with the FAA will be with the DO having geographical responsibility of the area in which the associate facility is located.

(2) The associate facility will comply with the quality system or FIS of the original PAH or the quality system or FIS approved by the original PAH.

(3) If the approval of changes to the QC or FIS manual is retained by the original PAH, the associate facility will submit proposed changes to the original PAH for approval.

(4) If the approval of changes to the QC or FIS data is delegated to the associate facility, the associate facility should submit changes to its geographic DO.

PART 2. PROCESSING A REQUEST FOR EXTENSION OF A PRODUCTION APPROVAL

88. REQUEST FOR EXTENSION OF A PRODUCTION APPROVAL. The original PAH can request an extension of its production approval to an associate facility. The extension application will be submitted to the original PAH's MIDO/CMO. The request must contain the following information:

a. The location of the associate facility.

b. The type and extent of activities to be performed at the associate facility.

c. Any special conditions of the request, such as the delegation or withholding of delegation of MRB authority or designee privileges.

d. A point of contact at the associate facility.

89. EVALUATING THE REQUEST. The MIDO/CMO of the original PAH will evaluate the request for extension and determine if:

a. The location of the associate facility is adequately described.

b. The PAH's quality system or FIS is adequate to control the design and quality of the products and parts thereof produced at the associate facility, or the original PAH has reviewed and approved the associate facility's quality system or FIS.

c. The request states explicitly the type and extent of production to be accomplished at the associate facility.

d. Any special conditions of the extension apply (e.g., delegation or nondelegations of MRB authority).

90. COORDINATION WITH THE GEOGRAPHIC DISTRICT OFFICE. Following the evaluation of the request from the original PAH, the MIDO/CMO will contact the DO having geographical responsibility of the area in which the associate facility is located. The MIDO/CMO will:

a. Submit a hand-off memorandum to the geographic DO informing it of the request, a copy of the extension request, and the evaluation results. Refer to figure 14 for a sample memorandum.

b. Request the geographic DO to perform a DO audit.

c. At a minimum, arrange for the following to be addressed:

(1) Reporting of DO audit findings.

(2) Reviewing changes to QC or FIS manual.

(3) Compliance and enforcement actions.

(4) Submittal of correspondence.

PART 3. APPROVAL OF THE REQUEST FOR EXTENSION OF A PRODUCTION APPROVAL

91. APPROVAL OF THE REQUEST. After satisfactory completion of the DO audit and any applicable corrective actions taken, the MIDO/CMO will approve the request. The MIDO/CMO will ensure the original PAH provides the DO of the associate facility a copy of the QC or FIS data to be used if not available at the associate facility. The MIDO/CMO will issue to the original PAH an amended PC, an amended PMA approval letter, or an amended APIS approval letter. For a TSO authorization holder, the MIDO will request that the ACO issue a revised TSO authorization letter. The amended production approval authorization letter will list the associate facility as a manufacturing location. A copy of the amended production approval authorization letter will be sent to the DO of the associate facility.

92. GEOGRAPHIC MIDO RESPONSIBILITY AFTER APPROVAL OF THE REQUEST FOR EXTENSION. The geographic MIDO/CMO will perform CM at the associate facility in accordance with chapter 3 of this order.

FIGURE 14. SAMPLE HAND-OFF MEMO FOR REQUESTING A DO AUDIT AND CM

Federal Aviation Administration

Memorandum

Date: March 29, 2005

To: Manager, Fort Worth Manufacturing Inspection District Office, SW-MIDO-42

From: Duke E. Season, Manager, Cleveland Manufacturing Inspection District Office, CE47

Prepared by: Amanda Dickens

Subject: ACTION: Request for District Office Audit and Certificate Management at ABC Company

This office has received a letter from Airplane Aircraft Company, dated March 6, 2005 (attached), requesting an extension of its production approval to the ABC Company.

In accordance with FAA Order 8120.2E, paragraph 89, we have evaluated Airplane Aircraft Company's request for extension and concur with its request. Since ABC Company is located in your geographic area, we are requesting your office conduct a DO audit at ABC Company, utilizing the following information:

Facility Name/Address:
ABC Company
2500 West Canyon Road
Fort Worth, TX, USA 91355

Point of Contact for ABC Company:
Mr. Jim Blender, Director of Quality Assurance
Phone: (817) 555-1222

Point of Contact for Airplane Aircraft Company:
Mr. Scott Clemons, Airplane Aircraft QA Director
Phone: (216) 333-1212

Q.C. Procedures Applicable to this Associate Facility:
Airplane Aircraft Company's Quality Manual, Revision C

Part Name and/or Part Number: Flight Deck LRU's, Warning Electronics, Cabin Entertainment LRU's Black Box Avionics

FIGURE 14. SAMPLE HAND-OFF MEMO FOR REQUESTING A DO AUDIT AND CM (CONT'D)

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MRB Delegation/Authorization: Yes

Design Approval and/or Change Authorization: Yes

DER Authorization: Yes

Direct Ship Authorization: Yes

DMIR Authorization: Yes

We request the following activities be conducted by your office:

Pre-Approval

A. DO Audit
- ☒ Respond to Requesting MIDO Acknowledging Receipt of Request
- ☒ Review and Evaluate the Capability of Associate Facility Utilizing ACSEP Criteria
- ☒ Verify Supplier Approval Process
- ☒ Review and Report Any Compliance and Enforcement Actions
- ☒ Record and Report the Results of the DO Audit to the Requesting MIDO

Post-Approval

A. Certificate Management
- ☒ Establish Project Number
- ☒ Special Evaluation when requested
- ☒ Risk Management Assessment
- ☒ Corrective Action Follow-Up
- ☐ ACSEP Evaluations
- ☒ PI Evaluation (Including Any Quality Processes and Special Manufacturing Processes to Approved PAH Requirements)
- ☒ Review and Evaluate Changes to Quality Manual
- ☒ Product Audits
- ☐ Supplier Control Audits

B. Designee Management (Order 8100.8)
- ☐ Monitor Activity
- ☐ Perform Annual Review
- ☐ Maintain Designee File
- ☐ Conduct Supervision and Complete Form 8130-14
- ☐ Delegate DMIR(s) to Perform Authorized Functions

C. ☐ Other/Remarks

FIGURE 14. SAMPLE HAND-OFF MEMO FOR REQUESTING A DO AUDIT AND CM (CONT'D)

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Document Certificate Management Activity in CMIS

After your satisfactory completion of the DO audit, this office will notify Airplane Aircraft Company that its request to add ABC Company as an associate facility has been approved. In addition, we will amend or have its production approval(s) (i.e., PC, PMA, or TSO authorization) amended to reflect the addition of this associate facility. A copy will be forwarded to your office.

After the extension is granted and you receive a copy of the amended production approval, we request that your office conduct certificate management activities in accordance with chapter 3 of Order 8120.2E. Please coordinate your certificate management visits with this office, so that we can provide you with applicable information/data needed for corrective action follow-up, special evaluations, etc. We would also like to have copies of all noncompliances, service difficulties, concerns, or items of interest identified during the conduct of certificate management activities.

Attachment
Letter from Airplane Aircraft Company

SECTION 7. NON-U.S. MANUFACTURING FACILITIES—DETERMINATION OF UNDUE BURDEN AND NO UNDUE BURDEN

93. UNDUE BURDEN AND NO UNDUE BURDEN. The Administrator does not issue type certificates or production approvals if the manufacturing facilities are located outside the United States, unless the Administrator finds that the location of the manufacturer's facilities places no undue burden on the FAA.

a. When an initial production approval application involving non-U.S. manufacturing facilities is reviewed by the FAA, an "undue burden or no undue burden" decision must be made and the FAA is required to prepare a decision paper in accordance with FAA Order 8100.11, Developing Undue Burden and No Undue Burden Decision Papers Under 14 CFR Part 21.

b. If a new or existing PAH proposes to use non-U.S. suppliers, the criteria for supplier selection in this order must be applied to determine whether the supplier would likely be selected for a supplier control audit. If the supplier would not be selected, there is no burden. If the supplier could be selected, the FAA is required to prepare a decision paper in accordance with Order 8100.11.

c. Any subsequent changes to an approval holder's manufacturing programs involving non-U.S. facilities will cause the initial undue burden or no undue burden decision to be reevaluated by the FAA.

d. Order 8100.11 provides general instructions on what to consider during decision paper development. It also contains the general content requirements of decision papers that include a specific list of required decision paper elements.

94.-95. RESERVED.