

KEMENTERIAN PERHUBUNGAN  
DIREKTORAT JENDERAL PERHUBUNGAN UDARA

PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA  
NOMOR : KP 060 TAHUN 2018

TENTANG

PETUNJUK TEKNIS PERATURAN KESELAMATAN PENERBANGAN SIPIL  
BAGIAN 8900-3.329 (*STAFF INSTRUCTION 8900-3.329*) TENTANG  
EVALUASI PEMELIHARAAN REKAM SISTEM (*MAINTENANCE RECORDS  
SYSTEM EVALUATIONS*)

DENGAN RAHMAT TUHAN YANG MAHA ESA,

DIREKTUR JENDERAL PERHUBUNGAN UDARA,

- Menimbang :
- a. bahwa dalam Peraturan Menteri Perhubungan Nomor PM 28 Tahun 2013 tentang Peraturan Keselamatan Penerbangan Sipil Bagian 121 (*Civil Aviation Safety Regulation Part 121*) tentang Persyaratan–Persyaratan Sertifikasi dan Operasi bagi Perusahaan Angkutan Udara yang Melakukan Penerbangan Dalam Negeri, Internasional dan Angkutan Udara Niaga Tidak Berjadwal (*Certification And Operating Requirements: Domestic, Flag and Supplemental Air Carriers*) sebagaimana diubah terakhir dengan Peraturan Menteri Perhubungan Nomor PM 61 Tahun 2017;
  - b. bahwa dalam rangka mengevaluasi pemeliharaan rekam sistem pada pesawat udara dipandang perlu menyusun ketentuan yang mengatur petunjuk teknis evaluasi pemeliharaan rekam sistem;
  - c. bahwa berdasarkan pertimbangan sebagaimana dimaksud pada huruf a dan b, perlu menetapkan Peraturan Direktur Jenderal Perhubungan Udara tentang Petunjuk Teknis Peraturan Keselamatan Penerbangan Sipil Bagian 8900-3.329 (*Staff Instruction 8900-3.329*) Tentang Evaluasi Pemeliharaan Rekam Sistem (*Maintenance Records System Evaluations*);

- Mengingat :
1. Undang-Undang Nomor 1 Tahun 2009 tentang Penerbangan (Lembaran Negara Republik Indonesia Tahun 2009 Nomor 1, Tambahan Lembaran Negara Republik Indonesia Nomor 4956);
  2. Peraturan Presiden Nomor 7 Tahun 2015 tentang Organisasi Kementerian Negara (Lembaran Negara Republik Indonesia Tahun 2015 Nomor 8);
  3. Peraturan Presiden Nomor 40 Tahun 2015 tentang Kementerian Perhubungan (Lembaran Negara Republik Indonesia Tahun 2015 Nomor 75);
  4. Peraturan Menteri Perhubungan Nomor KM 18 Tahun 2002 tentang Persyaratan-Persyaratan Sertifikasi Dan Operasi Bagi Perusahaan Angkutan Udara Niaga Untuk Penerbangan Komuter dan Charter sebagaimana telah diubah terakhir dengan Peraturan Menteri Perhubungan Nomor PM 63 Tahun 2017;
  5. Peraturan Menteri Perhubungan Nomor PM 28 Tahun 2013 tentang Peraturan Keselamatan Penerbangan Sipil Bagian 121 (*Civil Aviation Safety Regulation Part 121*) tentang Persyaratan Sertifikasi dan Operasi Bagi Perusahaan Angkutan Udara yang Melakukan Penerbangan Dalam Negeri, Internasional dan Angkutan Udara Niaga Tidak Berjadwal (*Certification And Operating Requirements: Domestic, Flag and Supplemental Air Carriers*) sebagaimana diubah terakhir dengan Peraturan Menteri Perhubungan Nomor PM 61 Tahun 2017;
  6. Peraturan Menteri Perhubungan Nomor PM 59 Tahun 2015 tentang Kriteria, Tugas dan Wewenang Inspektur Penerbangan sebagaimana telah diubah terakhir dengan Peraturan Menteri Perhubungan Nomor PM 142 Tahun 2016;
  7. Peraturan Menteri Perhubungan Nomor PM 189 Tahun 2015 tentang Organisasi dan Tata Kerja Kementerian Perhubungan sebagaimana telah diubah terakhir dengan Peraturan Menteri Perhubungan Nomor PM 117 Tahun 2017;

MEMUTUSKAN :

Menetapkan : PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA TENTANG PETUNJUK TEKNIS PERATURAN KESELAMATAN PENERBANGAN SIPIL BAGIAN 8900-3.329 (*STAFF INSTRUCTION 8900-3.329*) TENTANG EVALUASI PEMELIHARAAN REKAM SISTEM (*MAINTENANCE RECORDS SYSTEM EVALUATIONS*).

Pasal 1

Memberlakukan Petunjuk Teknis Peraturan Keselamatan Penerbangan Sipi Bagian 8900-3.329 (*Staff Instruction 8900-3.329*) Tentang Evaluasi Pemeliharaan Rekam Sistem (*Maintenance Records System Evaluations*), sebagaimana tercantum pada lampiran Peraturan ini.

Pasal 2

Direktur Kelaikudaraan dan Pengoperasian Pesawat Udara mengawasi pelaksanaan Peraturan ini.

Pasal 3

Peraturan ini mulai berlaku sejak tanggal ditetapkan.

Ditetapkan di Jakarta

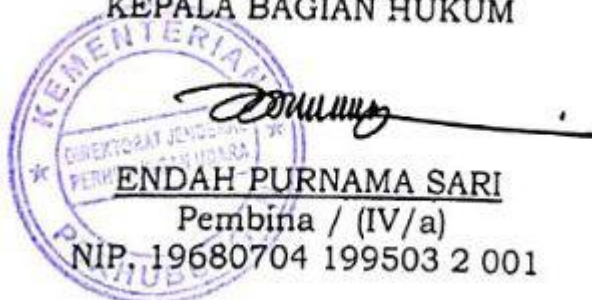
Pada tanggal 6 Maret 2018

DIREKTUR JENDERAL PERHUBUNGAN UDARA

ttd

Dr. Ir. AGUS SANTOSO, M. Sc

Salinan sesuai dengan aslinya  
KEPALA BAGIAN HUKUM



LAMPIRAN PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA  
NOMOR : KP 060 TAHUN 2018  
TANGGAL : 6 MARET 2018

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# **STAFF INSTRUCTION**

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**SI 8900 – 3.329**

**Maintenance Records System Evaluations**

Amendment : 0  
Date :

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**REPUBLIC OF INDONESIA – MINISTRY OF TRANSPORTATIONS  
DIRECTORATE GENERAL OF CIVIL AVIATION  
JAKARTA – INDONESIA**



## FOREWORD

1. **PURPOSE** : This Staff Instruction has been prepared to guide and assist all Directorate of Airworthiness and Aircraft Operation personnel, Directorate General of Civil Aviation, operators, or applicants dealing with the Indonesian Authorities, in properly discharging their responsibilities and efficiently accomplishing their assigned tasks to evaluate the air operator maintenance record system.
2. **REFERENCES** : This Staff Instruction should be used in accordance with the applicable regulations.
3. **CANCELLATION** : Staff Instruction SI 8300 Volume 2 Chapter 71, SI 8300 Volume 2 Chapter 92, and SI 8300 Volume 3 Chapter 27 are cancelled.
4. **AMENDMENT** : Amendment of this Staff Instruction will be approved by the Director General of Civil Aviation.

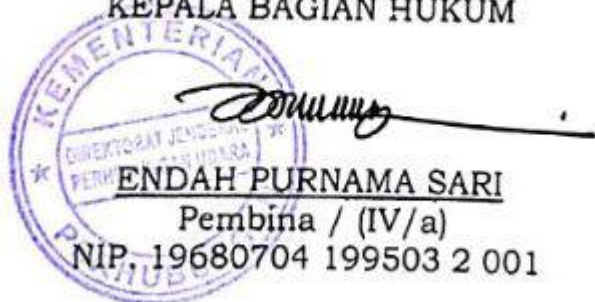
## DIRECTOR GENERAL OF CIVIL AVIATION

ttd

**Dr. Ir. AGUS SANTOSO, M.Sc**

Salinan sesuai dengan aslinya

**KEPALA BAGIAN HUKUM**



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## **CHAPTER 1 EVALUATION OF AIR OPERATOR PART 121/135 MAINTENANCE RECORDS SYSTEM**

### **1. GENERAL DESCRIPTION**

This section provides guidance to evaluate maintenance record system of air operator.

This section applies to DGCA inspectors with oversight responsibility of air operators that are subject to maintenance record keeping requirement required by CASR 121.380, 121.380a, 135.380, and 135.380a.

### **2. OBJECTIVE**

#### **a. Monitoring Air Operator Aircraft Maintenance Records**

This chapter provides information necessary for evaluating air operator maintenance records systems and other required records/reports on an initial and continuing compliance basis. Pertinent sections of CASR outline the requirement of an air operator system for the preparation, storage, and retention of certain required records and reports. The primary objective of these systems is the generation, storage, retention, and retrieval of accurate and complete air operator aircraft maintenance records that show that the standard certificate of airworthiness of a particular aircraft is effective.

#### **b. Regulatory Scope**

Consistent with CASR part 121 and part 135, the rules (including those regarding aircraft maintenance records), reports, and other required records that parts 121 and 135 contain govern each person employed or used by an air operator for any maintenance, preventive maintenance, or alteration of its aircraft. Consistent with the definitions in CASR part 1, a “person” includes individuals certificated under CASR part 65, AMO certificated under CASR part 145, and any other “individual, firm, partnership, corporation, company, association, joint-stock association, or governmental entity” that the DGCA has not certificated.

### **3. REQUIRED AIR OPERATOR AIRCRAFT MAINTENANCE RECORDS:**

#### **a. Required Records.**

Regulations require air operators to make and keep a list of certain summary status records and records related to the issuance of a maintenance release form, and to transfer that information with the aircraft when it is sold. These specific records are listed in Section 121.380 and 135.380.

#### **b. Retention Requirements**

The current requirements consist of a list of summary status information and maintenance records. Currently, the regulations require each air operator to keep certain maintenance records using the system specified in Section 121.380 and 135.380.

- i. As referenced in CASR 121.380 and 135.380, except for the records of the last complete overhaul of each airframe, engine, propeller, appliance, or rotor, all the records necessary to show that all requirements for the issuance of a



maintenance release under CASR 121.709 or 135.709 have been met “shall be retained until the work is repeated or superseded by other work or for two years after the work is performed.

While the regulatory requirement (for all the records necessary to show that all requirements for the issuance of a maintenance release have been met) does not provide a detailed list of records that the air operator must retain, this requirement generally means:

- A. Records of all scheduled maintenance that work of equivalent scope and detail has not superseded.
  - B. For those items requiring overhaul, detailed records of the accomplishment of the last overhaul.
  - C. Records of all unscheduled maintenance that work of equivalent scope and detail has not superseded.
  - D. Adequate copies of the maintenance log, covering the last 60 days of operation, required under CASR 121.563, 121.701, and 135.563 and consistent with CASR 121.709(d).
- ii. As referenced in CASR 121.380 and 135.380, “the records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance shall be retained until the work is superseded by work of equivalent scope and detail.’
  - iii. As referenced in CASR 121.380(b)(3), 121.380a, and 135.380a, the records containing the following information “shall be retained and transferred with the aircraft at the time the aircraft is sold”.

#### **4. OTHER REQUIRED RECORDS AND REPORTS.**

Part 121 subpart V, as well as CASR 135.703 and 135.705, outline the reports and records required for air operators to keep. The DGCA also uses these reports in its continuous review of air operator maintenance operations as a direct means of assessing the design, performance, and effectiveness of all elements of the air operator maintenance program, as well as the Continuing Analysis and Surveillance System (CASS).

##### **a. Air Operator Maintenance Release.**

Consistent with CASR part 43, CASR 121.709 and 135.709, it is clear that an air operator may not operate its aircraft after the accomplishment of any maintenance, preventive maintenance, or alterations unless it has approved the aircraft for return to service.

- i. An air operator maintenance release or a log entry is the air operator’s version of an approval for return to service. An air operator may accomplish an approval for return to service with a log entry instead of a maintenance release. Other than form or format, there is no legal or technical difference between an air operator airworthiness release and a log entry. This is consistent with the requirements of CASR part 43, CASR 121.709 and 135.709.
- ii. The requirement for maintenance release are as follows:
  - The work was performed in accordance with the requirements of the certificate holder’s manual;

- An authorized person inspected all items requiring inspection and determined that the work was satisfactorily completed;
  - No known condition exists that would make the aircraft un-airworthy; and
  - Concerning the work performed, the aircraft is in condition for safe operation.
- iii. These requirements for maintenance release are also consistent with statutory requirements for regulations that reflect operations with the highest possible degree of safety in the public interest. There is only one approval for return to service certification and documentation required by CASR 121.709 or 135.709. The air operator may accomplish in execution in one of two manners: in an aircraft maintenance log entry or maintenance release form. The regulations require that a copy of the maintenance release is given to the pilot in command (PIC) and that a record of the maintenance release is kept for at least 2 months.
- iv. Sections 121.709 and 135.709 clearly show that each time any maintenance, preventive maintenance, or alterations are accomplished on an air operator aircraft, the air operator must comply with the requirement for maintenance release.
- v. For the purposes of contract maintenance, it is important to note that CASR 121.709 and 135.709 outline specific requirements for the persons authorized to sign a maintenance release. Such a release is limited to the work the repair station is rated to perform, and actually performs, on an aircraft for certificate holders operating under parts 121 and 135. However, in preparing the maintenance release, the person (or in this instance, the certificated part 145 repair station) must comply with the procedures set forth in the part 121 or 135 certificate holder's manual for preparing the maintenance release.
- vi. Finally, as a qualification requirement, each authorized individual must hold an Aircraft Maintenance Engineer Licence (AMEL) with appropriate ratings.
- b. **Maintenance Log.**  
Sections 121.563, 121.701, and 135.563 require an aircraft maintenance log. These sections require any person who takes action in response to a reported or observed failure or malfunction to make a record of that action in the maintenance log of the aircraft. In addition, CASR 121.563 and 135.563 require the PIC to ensure that it has entered all mechanical irregularities occurring during flight time in the maintenance log at the end of that particular flight time.
- c. **Service Difficulty Reports (SDR)**  
SDRs are required by CASR 121.703 and 135.703, and part 145, CASR 145.221. While the air operator should use these reports to identify deficiencies within its air operator maintenance program, they are also the primary means of gathering information for the DGCA's Service Difficulty Reporting System (SDRS)
- d. **Mechanical Interruption Summary (MIS)**  
These reports address the inability of the aircraft to arrive at its scheduled destination due to mechanical difficulties. Sections 121.705 and 135.705 require these documents. Analysis of the events in these reports is one of the air operator's most effective means of determining the effectiveness of the Continuous Airworthiness Maintenance Programs (CAMP) or Approved Aircraft Inspections Program (AAIP).

e. **Alteration and Repair Reports**

Regulations require CASR part 121 and part 135 air operators to prepare a report of each major alteration and each major repair made on its aircraft promptly on their completion, as outlined in CASR 121.707 and 135.707. While the regulations require an air operator to submit a report of a major alteration to the DGCA inspector assigned to the CASR part 121 and part 135 air operators, they do not require the air operator to submit a report of a major repair. But the air operator must make it available for DGCA inspection. The report, required by CASR 121.707 and 135.707, should contain at least the identification of the altered airframe, aircraft engine, propeller, or appliance. The report should provide a means of positively identifying each altered item and its technical data approval basis.

**5. HISTORICAL AIRCRAFT MAINTENANCE RECORDS**

a. DGCA Monitoring

Through extensive and thorough research, the DGCA has determined that a regulatory or statutory requirement for the preparation, storage, and retention of historical or source records to authenticate or support required air operator aircraft maintenance records (particularly current air operator status records) does not exist. Aircraft maintenance records and current summary status information are the primary and most direct means the DGCA and the operator have of determining the airworthiness status of aircraft.

b. Records

The DGCA's level of confidence in current status records produced by an air operator's maintenance records system and monitored by that air operator's CASS is clearly higher than it would be for those records produced by no system or by a system that the DGCA does not monitor. Unless there is evidence to the contrary, an aircraft maintenance record, particularly a current status record, produced by an air operator's maintenance records system should be acceptable by itself (i.e., without historical or source records). For its aircraft maintenance records system, the air operator must develop and use detailed documentation and source requirements and procedures for administrative handling of aircraft components and parts. The air operator must clearly identify these requirements and procedures in its manual. These source and documentation requirements may include, but are not limited to, documentation of AD compliance, life-limited part current status information, description of maintenance performed, and appropriate certification of new and repaired parts.

c. Essential Information

To ensure that the air operator satisfies these requirements, it should enter the following essential information into its records system:

- i. Documentation and source information required for air operators to retain as necessary to support the CASS.
- ii. Documentation that may be necessary to integrate the part into the air operator's CAMP or AAIP
- iii. Documentation required to support future maintenance on the affected parts, such as detailed shop records.

d. Additional Records.

An air operator may wish to archive certain source documentation records, which the air operator used to introduce parts into their system. These may be such records as the manufacturer's invoice for new parts, export certificates of airworthiness, documentation of a major repair or alteration, or other similar information that the air operator may consider useful in the future.

## 6. REFERENCES AND FORMS

a. References.

- CASR Parts 43, CASR Part 121, and CASR Part 135

b. Form

- DGCA Form No. 120-42a

## 7. PROCEDURES

a. Overview.

During initial certification, regulations require an air operator to establish an aircraft maintenance records system. The air operator should base its system on system safety principles. It must also develop a section in its manual that provides a description of the system as well as detailed instructions for the use of that records system. The records system may be electronic. The DGCA inspector should ensure that the air operator's manual contains a description or overview of the records system. In addition, the air operator's initial compliance statement should clearly identify the detailed procedures contained in the air operator manual to use for the generation, storage, retention, and retrieval of aircraft maintenance records. The air operator manual maintenance records procedures should be written in a consistent format and describe clear, concise, and accurate procedures. Ambiguities are not acceptable. After certification, the assigned DGCA inspector will conduct surveillance and audit for renewal of the air operator's aircraft maintenance records system on a routine basis to ensure that it is producing and maintaining accurate records, and that they are retrievable in accordance with the system

b. Record Location and Responsible Persons

Assigned DGCA inspector shall verify that the air operator has procedures in its manual for making required records available to the DGCA at its principal base of operations. The certificate holder is required to keep a current listing that includes the location of the records and those persons who are responsible for each record, document, and report. Each employee of, or person used by, the air operator who is responsible for maintaining the air operator's maintenance records must make those records available to the DGCA.

c. System Evaluation

Evaluation of the aircraft maintenance reporting and records system described in the air operator's manual. The reporting and records system must include the procedures, information, and instructions necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety. The manual should identify the individual with overall authority and responsibility for the records system as well as the individual who has direct responsibility for

each system function. The general regulatory requirements for an air operator maintenance records system are that the system must be suitable, and that the system must provide for the preservation and retrieval of information in a manner acceptable to the DGCA. Additionally, with regard to maintenance work performed, the system must include procedures that ensure that maintenance work records at least include the following:

- i. A description (or reference to data acceptable to the DGCA) of the work performed
  - ii. The name of the person performing the work if the person is from outside the organization of the air operator
  - iii. The name or other positive identification of the individual approving the work. The system should address both types of aircraft maintenance records (i.e., records to show that all requirements for the issuance of a maintenance release have been met and the record of current summary status information). The current summary status information should contain, at least, that information described in Paragraph 3 of this Chapter.
- d. Procedures Review
- While reviewing the air operator's manual, keep in mind that although each air operator's maintenance records system must meet the same requirements, the system and procedures developed and used by each individual air operator to meet those requirements may be quite different from one another. The system may be electronic.
- i. the records procedures must address the generation, storage, retention, and retrieval of records of all maintenance and alterations, whether air operator personnel or authorized persons outside of the air operator's organization accomplish the maintenance or alteration.
  - ii. Records of maintenance, preventive maintenance, or alterations accomplished on an air operator aircraft by a maintenance provider are air operator records. The procedures must clearly identify the particular individual(s), by job title or description, who has the authority and responsibility for each particular function of the records system.
  - iii. In addition, the air operator's maintenance records procedures must not be contrary to the regulations, nor should the manual contain procedures that allow activity those results in de facto exemptions from sections of the CASR.
- e. An air operator maintenance records system must include, at least, methods and detailed procedures for the generation, storage, retention, and retrieval of:
- i. Records of scheduled, unscheduled, and shop maintenance.
  - ii. Records of engine and/or propeller or rotor shop maintenance.
  - iii. Records of the maintenance log entry or airworthiness release described in CASR 121.709 and 135.709.
  - iv. If the air operator uses a maintenance release form, all records necessary to show that all requirements for the issuance of the airworthiness release form described in CASR 121.709 and 135.709 have been met.
  - v. The Service Difficulty Reports.
  - vi. The Mechanical Interruption Summary Reports.
  - vii. The report of each major alteration and repair of each airframe, aircraft engine, propeller, or appliance of an aircraft operated by the air operator.

- viii. The current summary status information, describing;
  - A. The total time in service of the airframe, each engine, each propeller, and for part 135 air operator, each rotor.
  - B. The current status of each life-limited part of each airframe, engine, propeller, appliance, and for part 135 air operator, each rotor.
  - C. The TSO of each item requiring overhaul.
  - D. The current inspection status of the aircraft.
  - E. The current status of each applicable AD.
  - F. A list of the current major alterations to each airframe, aircraft engine, propeller, or appliance.
  - G. A list of the current major alterations and major repairs to each airframe, engine, propeller, rotor, or appliance.

## CHAPTER 2 EVALUATION OF OPERATORS PART 91 MAINTENANCE RECORDS SYSTEM

### 1. GENERAL

Maintenance Records Requirements must be comply with CASR 91.417.

### 2. PROCEDURES FOR RECORDS

The manual should contain procedures for the records system. The procedures should address the following requirements of the regulations:

- a. The total time in service record may consist of aircraft maintenance record pages, separate cards or pages, a computer list, or other methods as described in the operator's/applicant's manual.
- b. Life-limited parts (e.g., components of the airframe, engine, propellers, rotors, and appliances) are identified for removal from service when they have reached a specific time limit or number of cycles.
  - i. The current status of the part is a record indicating the operating time limits, total number of hours or accumulated cycles, and the number of hours or cycles remaining before the component reaches its required retirement time. This record must also include any modification of the part in accordance with ADs, Service Bulletins (SB), or product improvements by the manufacturer or operator/applicant.
  - ii. The DGCA does not consider the following to be current status records:
    - Work orders,
    - Maintenance installation records,
    - Purchase requests,
    - Sales receipts,
    - Manufacturers documentation of original certification, and
    - Other historical data.
  - iii. Whenever an operator cannot establish the current status of a life-limited part, that part should be considered un-airworthy and must be removed from service.
- c. The person must make a record overhaul(s) an item of aircraft equipment. This overhaul record must describe the work performed. The program manager/operator/applicant must have this record or be able to make it available to the DGCA.
- d. Section 91.417 requires retaining a record identifying the current inspection status of each aircraft.
  - i. The record must show the time in service since the last inspection required by the inspection program, under which the person maintains the aircraft and its appliances.
  - ii. The operator must retain inspection work packages or routine and non-routine items generated while performing any part of the inspection program for two years after performing the work or until other work repeats or supersedes it.

- e. The operator must keep a record showing the current status of applicable ADs, including the method of compliance.
  - i. This record must include the following:
    - The AD number and revision date;
    - List of ADs applicable to the aircraft;
    - The date and time in service or cycles, as applicable;
    - Method of compliance; and
    - The time in service or cycles and/or date when the next action is required (if it is a recurring AD).
  - ii. An acceptable method of compliance may be one of the following:
    - Reference to a particular portion of the AD,
    - Reference to a manufacturer's SB if the AD references the bulletin, or
    - Reference to any other document generated by the operator/applicant that shows compliance with the AD.
  - iii. The operator's manual must have procedures to comply with new and emergency ADs to ensure completion of the action within the given time limits. This must include procedures for notifying the responsible individuals to implement the required action during other than routine duty hours.
  - iv. Serious problems have surfaced during DGCA inspections when the applicable AD current status and method of compliance was not complete. When the operator cannot determine current status and method of AD compliance from the document, they must verify this compliance through either visual inspection or detailed records review.
- f. The operator must accomplish all major alterations by using approved data. Previous inspections have identified lack of approved data to support major alterations. Operators are required to retain records of each major alteration to the following:
  - i. Airframe,
  - ii. Engine,
  - iii. Propeller,
  - iv. Rotor, and
  - v. Appliance.
- g. The operator must retain major repair records for two years after accomplishing the work or until the work is repeated or superseded by other work.
- h. Major alteration records must be retained with the aircraft indefinitely. If the person sells the aircraft, he or she must transfer the records to the purchaser.

### **3. REFERENCES AND FORMS**

- a. References.
  - i. CASR Part 91.
  - ii. Operator Maintenance Records.
  - iii. Operator's Manual.
- b. **Forms.** DGCA Form No. 120-42b



#### 4. PROCEDURES

##### a. Review the Operator's Maintenance Records

- i. Analyse operator's records system. Determine if the regulations' records requirements are met. The records should provide an acceptable method for creating, preserving, and retrieving required records. All records must contain the following:
  - A. Description of the work performed (or reference to data acceptable to the Administrator);
  - B. The date of completion of the work performed; and
  - C. The signature and certificate number of the person approving the aircraft for return to service.
- ii. Airworthiness Records.

Ensure that the records as described in CASR 91.417 are retained for two years after the work is performed or until repeated or superseded by other work.
- iii. Total Time in Service.
  - A. Determine the method of recording total time in service of the airframe, engine, propeller, and rotor. This record must show the current time in service appropriate parameter.
  - B. Determine if this record is retained until the aircraft is sold and is transferred with the aircraft upon sale.
- iv. Status of Life-Limited Parts.

Ensure that the operator is tracking the current status of life-limited parts for each airframe, engine, propeller, rotor, and appliance.
- v. Time Since Last Overhaul of All Items Required to be Overhauled.

This document must accompany the aircraft when transferred.
- vi. Overhaul Records.

Ensure that the manual describes how the operator documents the last complete overhaul of each engine, propeller, and rotor. The overhaul records should be retained until the work is superseded by work of equivalent scope and detail. The overhaul record may include:

  - A. Disassembly data,
  - B. Dimensional check data,
  - C. Replacement parts list,
  - D. Repair data,
  - E. Reassembly/test data, and
  - F. Reference to data including overhaul specifications.
- vii. Current Aircraft Inspection Status.
  - A. Determine how the operator records the time in service since the last inspection.

- B. Determine if procedures ensure that this record is retained until the aircraft is sold and is transferred with the aircraft upon sale.
- viii. AD Compliance. Determine how the operator complies with records requirements of the ADs, including emergency ADs. Ensure that there is a record containing the following items:
  - A. Current Status.
    - The AD number and revision date,
    - A list of all ADs applicable to the aircraft,
    - Date and time of compliance, and
    - Time and/or date of next required action (if it is a recurring AD).
  - B. Method of Compliance. This includes either a record of the work performed or reference to the applicable section of the AD.
  - C. Determine if this record is retained until the aircraft is sold and is transferred with the aircraft upon sale.
- ix. Major Alteration Records.

Determine how the operator maintains the records of major alterations to each airframe, engine, propeller, rotor, and appliance.
- b. Inspect the Operator Record System.
  - i. Identify the documents/forms that are used for ensuring that the following are accomplished:
    - A. Total time in service,
    - B. Status of life-limited parts,
    - C. Time since last overhaul document,
    - D. Overhaul records,
    - E. Current aircraft inspection status,
    - F. Current status of applicable ADs, and
    - G. Major alteration records.
  - ii. Inspect the records and, during the inspection, document and photocopy any confusing areas, obvious omissions, or apparent discrepancies.
    - A. Compare the records with the actual accomplishment of the maintenance.
    - B. Obtain and review the maintenance logs to determine the scheduled inspections and non-routine maintenance.
    - C. Review maintenance records to ensure that:
      - Flight discrepancies were entered at the end of each flight,
      - Corrective action was related to the discrepancy,
      - Corrective action and sign off are entered into the maintenance record,
      - Repetitive discrepancies are handled properly, and

- Deferred maintenance as authorized by the minimum equipment list (MEL) is deferred according to the operator's MEL and instructions (if any).
- iii. Select or obtain work packages for scheduled inspections and ensure that scheduled inspections are properly signed off.
    - A. Ensure that non-routine items generated were properly signed off.
    - B. Determine if repairs were categorized correctly (major or minor) and if approved data was used for major repairs.
  - iv. Compare the actual record of accomplishment with the total time/cycles in service record for the airframe, engine, propeller, and rotor.
  - v. Select and obtain total time/cycles in service record for a sample number of aircraft to ensure that cumulative flight times/cycles are added to the record.
  - vi. Make a spot check of the cumulative total time/cycle in service against the flight logs to ensure that daily entries correspond to the flight log.
  - vii. If the operator maintains a hand-written maintenance record for engines, compare the record entries to the aircraft flight log entries for accuracy and to detect transposition of flight time/cycles in service, numbers, etc.
  - viii. Compare the manual procedures for life-limited parts with the actual recording of the current status of life-limited parts.
  - ix. Select a random sample of records and ensure that:
    - A. All life-limited parts described in the aircraft approved limitations are noted.
    - B. Current status of each part is provided to include:
      - Total operating hours (including calendar time)/cycles accumulated,
      - Life limit (total service life),
      - Remaining time/cycles, and
      - Modifications.
    - C. Ensure that:
      - Time/cycles limits on the program manager/operator list are the same as those in the approved aircraft limitations; and
      - Life limits have not been exceeded.
    - D. Select a sample of life-limited items that have been installed and review records to ensure that life-limited time was carried forward from the previous service record.
    - E. If overhauled, ensure that the time since overhaul (TSO) record is available.
    - F. Ensure that the life limit of an item has not been changed as a result of the overhaul.
  - x. Compare the overhaul list with the actual record.

- xi. Identify items in the operator maintenance program that have overhaul requirements, if applicable.
- xii. Ensure that all items identified are on the current list.
- xiii. Ensure that the overhaul list contains the time/cycles since last overhaul.
- xiv. Ensure that the items on the list have not exceeded their specified overhaul time/cycle limits.
- xv. Select a random sample of items from the overhaul list to:
  - A. Ensure that the records contain a description of the overhaul, and that the item was overhauled according to the overhaul specifications by a qualified and authorized person.
  - B. Ensure the component was approved for return to service by an authorized person.
- xvi. Review the removal/installation records of overhauled components to determine if the overhaul was accomplished within the authorized time limits.
  - A. Compare the current aircraft inspection status with the record available.
  - B. Determine whether daily flight hours/cycles are recorded to obtain the current inspection status.
  - C. Take a random sample of aircraft inspection records and review the last two "C" checks (or equivalent) to ensure that scheduled inspections times/cycles were not exceeded (overflowed).
- xvii. Compare the compliance with ADs with the current status of the AD document.
  - A. Contact the program manager/operator responsible for AD records and request a random sample of aircraft AD compliance record.
  - B. Ensure that the document contains all applicable ADs for the sampled aircraft.
  - C. Ensure that the AD requirements were accomplished within the effective times of the AD, with special emphasis on recurring ADs.
  - D. Ensure that the AD document contains current status and method of compliance. The current status must include these three items:
    - A list of all ADs applicable to the aircraft,
    - Date and time of compliance, and
    - Time and/or date of next required action (if it is a recurring AD).
  - E. Ensure that the list is being retained indefinitely.
  - F. Select from the current AD compliance document a number of ADs accomplished within the last 12 months and ensure that the appropriate accomplishment records are available. Review the accomplishment record to ensure the following:
    - The method of compliance is as specified in the AD,

- The date of compliance is identical to the date on the current status list,
- The person is authorized to accomplish the work, and
- The accomplishment was properly signed off.

xviii. Compare the major alteration and repair records with the actual records.

A. Major Alterations:

- Request a list of all major alterations for a random sample of aircraft;
- Ensure that the list contains the date of accomplishment and a brief description of the alteration; and
- Select a random sample of major alterations accomplished within the last 12 months and ensure that the respective maintenance records show that alterations were accomplished according to approved data.

B. Major Repairs:

- Request several records of major repairs, if available;
- Ensure that the records contain the date of accomplishment and a brief description of the repair. The respective maintenance records must also show that repairs were accomplished according to approved data; and
- When major repairs or alterations are identified and are not recorded, request the actual maintenance accomplishment record from the operator.

## **APPENDIX**

### **APPLICABLE FORMS**

- a. DGCA FORM No. 120-42a, Evaluation of Air Operator Part 121/135 Maintenance Records System.
- b. DGCA Form No. 120-42b, Evaluation of Operator Part 91 Maintenance Record Systems.