

PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA

NOMOR : KP 062 TAHUN 2018

TENTANG

PETUNJUK TEKNIS PERATURAN KESELAMATAN PENERBANGAN SIPIL BAGIAN  
8900-3.327 (*STAFF INSTRUCTION* 8900-3.327) TENTANG EVALUASI TERHADAP  
PROGRAM PERAWATAN OPERATOR PESAWAT UDARA  
(*EVALUATION OF AIR OPERATOR'S MAINTENANCE PROGRAM (MP)*)

DENGAN RAHMAT TUHAN YANG MAHA ESA,

DIREKTUR JENDERAL PERHUBUNGAN UDARA,

- Menimbang :
- a. bahwa dalam Peraturan Menteri Perhubungan Nomor PM 61 Tahun 2017 tentang Perubahan Keempat Atas 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*) telah diatur mengenai program perawatan operator pesawat udara;
  - b. bahwa dalam rangka mengevaluasi terhadap program-program perawatan operator pesawat udara maka perlu disusun suatu petunjuk teknis;
  - c. bahwa berdasarkan pertimbangan sebagaimana dimaksud pada huruf a dan huruf b, perlu menetapkan Peraturan Direktur Jenderal Perhubungan Udara tentang Petunjuk Teknis Peraturan Keselamatan Penerbangan Sipil Bagian 8900- 3.327 (*Staff Instruction* 8900- 3.327 ) Tentang Evaluasi Terhadap Program Perawatan Opertor Pesawat Udara (*Evaluation Of Air Operator's Maintenance Program (MP)*);

- Mengingat :
1. Undang-Undang Republik Indonesia 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 5);
  3. Peraturan Presiden Nomor 40 Tahun 2015 tentang Kementerian Perhubungan (Lembaran Negara Republik Indonesia Tahun 2015 Nomor 75);
  4. 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;
  5. 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;
  6. Peraturan Menteri Perhubungan Nomor PM 61 Tahun 2017 tentang Perubahan Keempat Atas 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*);

MEMUTUSKAN:

Menetapkan : PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA TENTANG PETUNJUK TEKNIS PERATURAN KESELAMATAN PENERBANGAN SIPIL BAGIAN 8900- 3.327 (*STAFF INSTRUCTION 8900 - 3.327*) TENTANG EVALUASI TERHADAP PROGRAM PERAWATAN OPERATOR PESAWAT UDARA (*EVALUATION OF AIR OPERATOR'S MAINTENANCE PROGRAM (MP)*).

Pasal 1

Memberlakukan Petunjuk Teknis Peraturan Keselamatan Penerbangan Sipi Bagian 8900 – 3.327 (*Staff Instruction 8900 – 3.327*) Tentang Evaluasi Terhadap Program Perawatan Operator Pesawat Udara (*Evaluation of Air Operator's Maintenance Program (MP)*).

Pasal 2

Pada saat Peraturan ini mulai berlaku, ketentuan dalam Volume 2 Bab 64 dan Bab 83 Peraturan Direktur Jenderal Perhubungan Udara Nomor SKEP/44/III/2010 tentang *Staff Instruction 8300 Airworthiness Inspector's Handbook*, dicabut dan dinyatakan tidak berlaku.

Pasal 3

Direktur Kelaikudaraan dan Pengoperasian Pesawat Udara mengawasi Pelaksanaan Peraturan ini.

Pasal 4

Peraturan ini mulai berlaku sejak tanggal ditetapkan

Ditetapkan di : JAKARTA

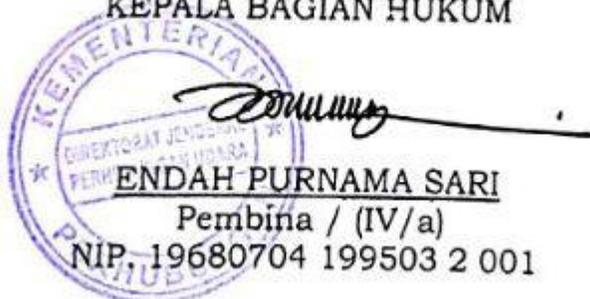
Pada tanggal : 7 MARET 2018

DIREKTUR JENDERAL PERHUBUNGAN UDARA

ttd

Dr. Ir. AGUS SANTOSO, M. Sc

Salinan sesuai dengan aslinya  
KEPALA BAGIAN HUKUM



# Staff Instruction

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SI 8900 – 3.327

Evaluation of Air Operator's Maintenance  
Program (MP)

Amendment : 0

Date :

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REPUBLIC OF INDONESIA – MINISTRY OF TRANSPORTATION  
DIRECTORATE GENERAL OF CIVIL AVIATION  
JAKARTA – INDONESIA

## AMENDMENT RECORD LIST

<b>Amendment No.</b>	<b>Issue Date</b>	<b>Reference</b>
0		

## FOREWORD

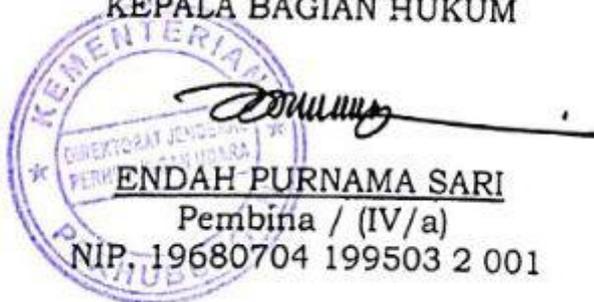
1. PURPOSE : This Staff Instruction is prepared for use and guidance of DGCA inspector and applicant dealing with DGCA for evaluate a maintenance program
2. REFERENCES : This Staff Instruction should be used in accordance with the applicable regulations, CASR 121.367, CASR 135.367, and CASR 91.409.
3. CANCELLATION : Staff Instruction SI 8300 Volume 2 Chapter 64 and Chapter 83, Amendment 4, dated 25 March 2010 are cancelled
4. AMENDMENT : The amendment of this Staff Instruction shall 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 – INTRODUCTION**

### **1. OBJECTIVES**

A maintenance program is document which describes maintenance program. The maintenance program must ensure the specific program objectives stated in CASR 121.367, 135.367, and CASR 91.409 in order to provide the highest possible level of safety in air transportation.

### **2. GENERAL**

Maintenance program development basis is made with the reference to MRBR, MPD and maintenance manual and any other relevant documents where applicable.

Maintenance program required to an air operator shall be developed by considering human factor principles.

### **3. REGULATORY REFERENCE**

Regulations references of this Staff Instruction are:

- CASR Part 43
- CASR Part 91 Subpart E
- CASR Part 121 Subpart L
- CASR Part 135 Subpart L



## **CHAPTER 2 – EVALUATION OF AIR OPERATOR’S MAINTENANCE PROGRAM (MP)**

### **1. GENERAL**

Consistent with CASR 121.363, 135.363, and CASR 91.409, is primarily responsible for the airworthiness of its aircraft and the performance of all of the maintenance or alterations on its aircraft. A keyword in the previous statement is “primarily,” which recognizes responsibilities associated with other persons that perform maintenance for the air operator. The air operator’s certificate makes it a maintenance entity. Under its air operator certificate, it may accomplish its own maintenance, preventive maintenance, or alterations, or it can use other persons who are not direct employees to accomplish that work. Parts 121, 135, and 91 govern each person that the air operator uses or that it employs for any maintenance, preventive maintenance, or alteration of its aircraft. Each person whom the air operator uses must be under the air operator’s direction and control and must follow the air operator’s maintenance program.

### **2. MAINTENANCE PROGRAM REQUIREMENTS**

A maintenance program is applicable to aircraft, engines, propellers and parts, which should contain the following information:

- a. Maintenance tasks and the intervals at which these are to be performed, taking into account the anticipated utilization of the aircraft and operating environment of the aircraft. It is recommended that the maintenance program be based on information made available by the State of Design or by the organization responsible for the type design and any additional applicable experience. The basic requirements for a maintenance program include but are not limited to:
  - i. inspection;
  - ii. scheduled maintenance;

- iii. overhaul and repairs;
  - iv. structural inspection; and
  - v. maintenance tasks and intervals specified and identified as mandatory in approval of the type design.
- b. When applicable, a continuing structural integrity program (SIP) which includes at least:
- i. supplemental inspections;
  - ii. corrosion prevention and control;
  - iii. structural modification and associated inspections;
  - iv. repair assessment methodology; and
  - v. widespread fatigue damage (WFD) review.
- c. Procedures for changing or deviating from a) and b) above for tasks that do not have mandatory designations from the State of Design; and
- d. When applicable, condition monitoring and reliability program descriptions for aircraft systems, components and engines.

Note.— In the context of d) above, “when applicable” means that the condition monitoring and reliability programs are only applicable to aircraft types where the maintenance program was derived using the maintenance review board process.

### **3. REVIEWING OPERATOR/APPLICANTS MAINTENANCE PROGRAM**

- a. The Maintenance Program should include detailed instructions or specific references for accomplishing inspection and maintenance functions. It should also include forms, instructions, and references for recurring non-routine requirements, such as engine changes and inspections following abnormal occurrences (hard landings, lightning strikes, severe turbulence, high brake energy stops, etc.).
- b. Manufacturers’ technical manuals provide instructions for accomplishing specific tasks. These documents also establish methods, technical standards, measurements, and operational test procedures. The policy and procedures section of the Maintenance

Program should describe areas of application for the pertinent technical documents.

- c. Maintenance Program Revision Requirements. Maintenance Program must be easy to revise and must show the date of the last revision on each page. The Maintenance Program must have a page control system showing the number of pages, including the latest revision. The page control system is usually a List of Effective Pages (LEP).
- d. Operator/Applicant Responsibilities. The operator/applicant is responsible for ensuring that MP present adequate guidance to meet all regulatory requirements. The operator/applicant must understand and accept this responsibility early in the certification process.
- e. DGCA Revision Requests. A DGCA may, when necessary, formally request revision to any part of the MP when such revision is in the interest of safety, or when the MP does not meet regulatory requirements. The DGCA should only use this authority when:
  - i. Safety considerations or CASR requirements adequately substantiate the need for revisions; and
  - ii. Informal discussions with the operator fail to accomplish the necessary revision.
- f. Maintenance Program Development Basis and Contents
  - i. Description on the maintenance program basis with references made to MRBR, MPD and maintenance manual and any other relevant documents where applicable.
  - ii. Mandatory maintenance tasks and intervals as specified in the type design must be identified
  - iii. Airworthiness limitation items specified in the type certificate. These may include CMR items, safe-life airworthiness limitation items and damage tolerance ALIs.
  - iv. Mandatory life limits for engine life-limited parts specified by the manufacturer.
  - v. Engine and auxiliary power unit off-wing maintenance as specified in the engine and APU work scope planning guides.

- vi. Special operations requirements relating to maintenance of additional configuration items eg. ETOPS, RVSM, CAT II and CAT III operations.
- vii. AD and SB which related instruction for continuous airworthiness.

#### **4. PROCEDURES**

- a. Detail procedures for completing evaluation of air operator's maintenance program are provided in DGCA Form No. 120-33, as revised.
- b. Evaluate General Requirements. Ensure that the operator/applicant's MP CASR Part 121, 135, and 91, as applicable.
  - i. The MP must include a description introducing its maintenance philosophy. The manual must also contain a list of effective dates.
  - ii. MP revision and distribution procedures for providing current information to all manual holders are required. The manual must include provisions to make it available to maintenance personnel and to furnish a copy to the DGCA.
- c. Evaluate MP Contents. The air operator's MP must describe procedures and provide information related maintenance program refer to the current manufacture technical publication.
  - i. Layout and presentation.
    - A. To include table of contents, sections, description and paragraphing and page numbers for easy referencing.
    - B. References to the appropriate forms to be used.
  - ii. Description of Air Operator and aircraft make and model.
    - A. The legal (registered) name of the operator and trading name (if any).
    - B. The full address, phone number(s), email and facsimile number(s).
    - C. A description of the aircraft make and model, serial number and registration mark.

iii. Revision and Distribution Control.

- A. The certificate holder shall ensure that the MP is amended as necessary to keep the information contained therein up to date.
- B. The certificate holder's manual must describe the revision control procedures and how it will control the distribution of manuals.
- C. Manuals must be easy to revise and have a page control system that shows the number of pages and ensures that the manual includes the latest revision. The page control system is usually an LEP. List of Effective Pages (LEP) must contain the following:
  - the operator name,
  - date of each page and revision number,
  - MP revision number, and
  - signature block containing space for signature of the operator and the Airworthiness Inspector.
- D. Details the process of revising the MP.
- E. The approval and control and distribution of a revision to the MP.
- F. Record of revision.

iv. Approved MP

The MP must include at least the following:

- A. MRB report approved by the State of Design;
- B. MPD issued by the type certificate holder or manufacturer;
- C. Airworthiness limitation items (ALIs) specified in the type certificate data sheet. These may include CMRs, safe life airworthiness limitation items, and damage-tolerant ALIs;
- D. A method for performing schedule and un-schedule maintenance (other than required inspections), preventive maintenance, and alterations including maintenance tasks and the interval at which these are to be performed, taking

into account the anticipated utilization of the aircraft (refer to CASR 121.367(a)135.367(a), and 91.409;

- E. When applicable, a continuing structural integrity program, include supplemental inspections, corrosion prevention and control processes, structural modification and associated inspections, repair assessment methodology and widespread fatigue damage review procedures. (Refer to CASR 121.367(a) and 135.367(a));
  - F. When applicable, condition monitoring and reliability program descriptions for aircraft systems, components, and engines (refer to CASR 121.367(a) and 135.367(a));
  - G. Time limitations (calendar time, operational hours, flight cycles) or standards for determining time limitations for overhauls, inspections, and checks of airframes, engines, propellers, appliances, and emergency equipment;
  - H. Engine and auxiliary power unit (APU) off-wing maintenance as specified in the engine and APU work scope planning guides;
  - I. ICAs specified for air-operator-installed equipment or required by supplemental type certificate (STC) modifications, including emergency equipment. All items in the maintenance program should have the source document clearly identified and mandatory items (such as CMRs, ALIs and ADs) must be clearly distinguished from items that are subject to adjustments or changes based on operating experience.
- v. Required Inspection Item (if applicable).
- A. Tasks as RIIs. The air operator must designate those items of maintenance and alteration that it must inspect (required inspections) including at least those that could result in a failure, malfunction, or defect that endangers the safe operation of the aircraft if the person performing the

maintenance or alteration does not do it properly, or if they use improper parts or material.

- B. Making RII Lists. The air carrier must identify specific items of inspection for each aircraft type (it is inappropriate to designate entire systems as RIIs).
- vi. Maintenance Tasks and Their Intervals (if applicable)
  - A. The tasks and intervals would include those of aircraft, engine, propeller and components
  - B. The task intervals commonly used includes cycles, flight hours or calendar time.
  - C. Ensure that maintenance tasks packaged into check packages (hour or letter checks) are within their recommended time intervals.
- vii. Short Term Escalation Procedures (if applicable)
  - A. Define the maximum limitations for a short term escalation refer to the manufacturer recommendations
  - B. Contain criteria that defines the type of data acceptable for justifying a short term escalation
  - C. Correspond with the overall maintenance program. The procedures must ensure that an escalation will not create an unsafe condition.
  - D. Restrict the occurrence of repetitive short term escalations that indicate a need for a change in the maintenance program
  - E. Provide a method for recording all escalations, with provisions for submitting/reporting each request/use of an escalation to the DGCA
- viii. Engine Trend Monitoring (if applicable)

For aircraft that may not require a reliability program, a conditioning monitoring program for engines may be required.
- ix. Special operations requirements relating to maintenance of additional configuration items eg. ETOPS, RVSM, CAT II and CAT III operations (if applicable)

x. Disposition of Life Limited Aircraft Parts

Definitions used in this section. For the purposes of this section the following definitions apply.

- Life limited part means any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness, or the maintenance manual.
- Life status means the accumulated cycles, hours, or any other mandatory replacement limit of a life-limited part.

Each person who removes a life limited part from a type certificated product must ensure that the part is controlled in accordance with the followings:

- A. Temporary removal of parts from type certificated products. When a life limited part is temporarily removed and reinstalled for the purpose of performing maintenance, no disposition under paragraph (c) of this section is required if
- 

- (1) The life status of the part has not changed;
- (2) The removal and reinstallation is performed on the same serial numbered product; and
- (3) That product does not accumulate time in service while the part is removed.

- B. Disposition of parts removed from type-certificated products. Except as provided in paragraph (b) of this section, each person who removes a life limited part from a type certificated product must ensure that the part is controlled using one of the methods in this paragraph. The method must deter the installation of the part after it has reached its life limit. Acceptable methods include:

- (1) Record keeping system. The part may be controlled using a record keeping system that substantiates the part number, serial number, and current life status of

the part. Each time the part is removed from a type certificated product, the record must be updated with the current life status. This system may include electronic, paper, or other means of record keeping.

- (2) Tag or record attached to part. A tag or other record may be attached to the part. The tag or record must include the part number, serial number, and current life status of the part. Each time the part is removed from a type certificated product, either a new tag or record must be created, or the existing tag or record must be updated with the current life status.
- (3) Non-permanent marking. The part may be legibly marked using a nonpermanent method showing its current life status. The life status must be updated each time the part is removed from a type certificated product, or if the mark is removed, another method in this section may be used. The mark must be accomplished in accordance with the instructions under section 45.16 in order to maintain the integrity of the part.
- (4) Permanent marking. The part may be legibly marked using a permanent method showing its current life status. The life status must be updated each time the part is removed from a type certificated product. Unless the part is permanently removed from use on type certificated products, this permanent mark must be accomplished in accordance with the instructions under section 45.16 in order to maintain the integrity of the part.
- (5) Segregation. The part may be segregated using methods that deter its installation on a type-certificated product. These methods must include, at least-

- (i) Maintaining a record of the part number, serial number, and current life status, and
      - (ii) Ensuring the part is physically stored separately from parts that are currently eligible for installation.
    - (6) Mutilation. The part may be mutilated to deter its installation in a type certificated product. The mutilation must render the part beyond repair and incapable of being reworked to appear to be airworthy.
    - (7) Other methods. Any other method approved or accepted by the DGCA.
  - C. Transfer of life-limited parts. Each person who removes a life-limited part from a type certificated product and later sells or otherwise transfers that part must transfer with the part the mark, tag, or other record used to comply with this section, unless the part is mutilated before it is sold or transferred.
- xi. Parts Removed from an aircraft no longer in service
- A. Aircraft withdrawn from service are often used as a source of spare parts, a process sometimes described as “parting out”. These parts, although serviceable at the time the aircraft was placed in storage, may have been affected adversely by storage conditions, including especially environmental factors, or by the length of storage.
  - B. The records for the aircraft and its parts prior to the aircraft being placed into storage will need to be researched in order to ascertain the previous maintenance history, and MCAI, modification and repair status of the parts being removed. Any unusual events immediately prior to storage, e.g. heavy landings or lightning strikes, will also have to be considered when deciding on the serviceability of the parts being removed.

- C. It is important that the part removal process be planned and controlled in a manner as close as possible to that adopted for routine maintenance tasks on in-service aircraft. The following points in particular should be considered:
    - (1) the means by which the part is removed should be in accordance with the normal maintenance data (e.g. maintenance manuals), using the tooling specified;
    - (2) adequate access equipment should be provided;
    - (3) if conducted in the open, disassembly should cease during inclement weather;
    - (4) all work should be carried out by appropriately qualified maintenance personnel;
    - (5) all open connections should be blanked;
    - (6) a protected and enclosed quarantine storage area for the parts being removed should be provided in the immediate vicinity of the work area; and
    - (7) normal maintenance documentary controls should be used, e.g. the use of work sheets or cards to record component removals, and label identification to show serviceability status.
  - B. An assessment for condition and eventual return to service of each removed part will need to be conducted by a suitably approved organization. The extent of the work necessary before the part is returned to service with the range from a simple external visual inspection to a complete overhaul.
- xii. Parts Recovered from Aircraft Involved in Accidents
- A. When an aircraft has been involved in an accident, the title to the salvage may pass from the insured aircraft owner to other persons (e.g. aircraft insurers); this salvage may be offered for sale either complete or as separate aircraft items in an “as is, where is” condition. While some items may be

totally unaffected by the accident or incident which caused the aircraft to be declared as salvage, it is essential to obtain clear evidence that this is the case. If such evidence cannot be obtained, the item may not be returned to service.

- B. Before overhaul and reinstallation can be considered, all such items must therefore be subject to airworthiness assessment and inspection in the light of adequate knowledge of the circumstances of the accident, subsequent storage and transport conditions, and with evidence of previous operational history obtained from valid airworthiness records. Confirmation of this assessment in the form of an airworthiness release is essential.
- C. In particular, if a crash load is sufficient to take any part above its proof strength, residual strains may remain which could reduce the effective strength of the item or otherwise impair its functions. Loads higher than this may of course crack the item, with an even more dangerous potential. Further, a reduction in strength may be caused by virtue of the change of a material's characteristics following overheat from a fire. It is therefore of the utmost importance to establish that the item is not cracked, distorted or overheated. The degree of distortion may be difficult to assess if the precise original dimensions are not known, in which case there is no option but to reject the item. Any suggestion of overheating would be cause for a laboratory investigation into significant change of material properties.

xiii. Disposal of Scrapped Parts

- A. Those responsible for the disposal of scrapped aircraft parts and materials should consider the possibility of such parts and materials being misrepresented and sold as serviceable at a later date. Caution should be exercised to ensure that the following types of parts and materials are disposed of in

a controlled manner that does not allow them to be returned to service:

- (1) parts with non-repairable defects, whether visible or not to the naked eye;
- (2) parts that are not within the specifications set forth by the approved design and cannot be brought into conformity with applicable specifications;
- (3) parts and materials for which further processing or rework cannot make them eligible for certification under an approved system;
- (4) parts subjected to unacceptable modifications or rework that is irreversible;
- (5) life-limited parts that have reached or exceeded their life limits, or have permanently missing or incomplete records;
- (6) parts that cannot be returned to an airworthy condition due to exposure to extreme forces or heat; and
- (7) principal structural elements removed from a high cycle aircraft for which conformity cannot be accomplished by complying with the mandatory requirements applicable to ageing aircraft.

B. Scrapping of parts and materials may not be appropriate in certain cases when there is an ongoing evaluation process to determine whether a part or material may be restored to an airworthy condition. Examples of these cases include the extension of life limits, the re-establishment of in-service history records, or the approval of new repair methods and technologies. In these cases, such parts should be segregated from serviceable parts until the decision has been made as to whether these parts can be restored to an airworthy condition, or be scrapped.

C. Scrapped parts should always be segregated from serviceable parts and when eventually disposed of should

be mutilated or clearly and permanently marked. This should be accomplished in such a manner that the parts become unusable for their original intended use and unable to be reworked or camouflaged to provide the appearance of being serviceable.

- D. When scrapped parts are disposed of for legitimate non-flight uses, such as training and education aids, research and development, or for non-aviation applications, mutilation is often not appropriate. In such cases the parts should be permanently marked indicating that they are not serviceable; alternatively, the original part number or data plate information can be removed or a record kept of the disposition of the parts.

- xiv. Other Requirement

Regulation requirement inspection in accordance with CASR Part 91

- xv. Forms To Be Used

If the MP refers to specific company forms, list them and attach a sample of the inspection and maintenance forms and instructions for completing such forms or a reference to a separate forms manual.

- c. The following provides some guidance on task intervals:

- i. The task intervals are commonly specified in the MRB report in terms of relevant usage parameters such as cycles, flight hours or calendar time. For planning convenience, it is usual for the air operator (or the MRB) to group the tasks into packages or scheduled maintenance checks (for example, A-check or 150-hour check). When this is done, it is important to retain visibility of the original MRB recommended usage parameter for use when task and/or scheduled maintenance check interval adjustments are evaluated; and
- ii. Some air operators prefer to accomplish scheduled maintenance checks in separate “phases” which combine to make up a

complete check. This is acceptable provided that the interval between repetitions of tasks is not exceeded (this may require some phases to be accomplished long before they are due during the first cycle).

## **5. FUTURE ACTIVITY**

Updating the maintenance program and conducting surveillance to the air operator's maintenance program.

- a. Revisions to the approved maintenance program should be raised by the air operator, in order to reflect changes in the type certificate holder's recommendations, modifications, service experience, or as required by the DGCA. Reliability programs form one important method of updating approved programs, if applicable.
- b. The air operator may vary the periods prescribed by the program only with the approval of DGCA. The DGCA should not approve intervals escalations or task modifications related to MCAI, ALIs and CMRs without appropriate coordination with the State of Design.
- c. The air operator's approved maintenance program should be subject to periodic review to ensure that all mandatory requirements are addressed. These include MCAI, ICAs, revisions to the MRB report and maintenance needs of the aircraft as identified by the reliability program (if applicable) or other monitoring of in-service performance.
- d. The DGCA should ensure that the air operator has the necessary resources, organization and documented processes to perform the continuous assessment of the type certificate holder's latest recommendations and maintenance requirements of the aircraft.
- e. The air operator should review the content of the maintenance program periodically for continued validity in view of operating experience and ensure that the program is amended and revised as necessary by means of establishing an appropriate revision and control system and that copies of all amendments to the maintenance program are furnished promptly to all organizations or persons to whom the maintenance program has been issued.



## **CHAPTER 3 EVALUATE SHORT-TERM ESCALATION PROCEDURES**

### **1. OBJECTIVE**

This chapter provides guidance for evaluating short-term escalation procedures based on requirements for Authorization, Conditions and Limitations (ACL) D076, Short-Term Escalation Authorization.

### **2. GENERAL**

An AOC holder's time limitations, maintenance intervals, and instructions and procedures to conduct inspections, which include the necessary tests and checks, are an integral part of their maintenance and inspection program.

This program is a fundamental component of the AOC holder's Maintenance Program (MP). On average, the inspection intervals in the certificate holder's manual include a degree of safety to maximize aircraft reliability. Due to unanticipated circumstances, a certificate holder might need to temporarily adjust the interval for an individual aircraft, system, or component.

### **3. USE OF A SHORT-TERM ESCALATION AUTHORIZATION**

- a. By authorizing the use of the AOC holder's short-term escalation procedures, the DGCA is allowing the AOC holder to apply the limitations of ACL D76 to aircraft maintenance intervals, airframe component and appliance maintenance intervals, and powerplant component and accessory maintenance intervals. The limitations imposed by ACL D76 and the AOC holder's procedures should not allow a short-term escalation that would compromise the airworthiness of an aircraft or any safety-of-flight issue. Unanticipated situations arise (such as contractor scheduling, conflicts in weather, parts availability, or other unscheduled maintenance) during which the short-term escalation of a maintenance interval may be used.
- b. Principal Airworthiness Inspectors (PAI) must closely monitor the use of short-term escalation authorizations to ensure AOC holders are not abusing or using the escalation authorizations indiscriminately and

that they do not conceal unsound maintenance practices, maintenance program deficiencies, or poor management decisions.

- c. Short-term escalations for aircraft, aircraft systems, or components not subject to a reliability program may only be authorized by the issuance of ACL D76 or by an DGCA on a case-by-case basis.
- d. AOC holders operating aircraft, aircraft systems, or components under the controls of an approved reliability program may issue short-term escalations, provided that short-term escalation procedures have been incorporated into their reliability program.
- e. The AOC holder must provide policy, procedures, instructions, and/or information in the manual, which allows personnel concerned with short-term escalations to perform their duties and responsibilities to a high degree of safety.
- f. A short-term escalation should only be used after the AOC holder thoroughly evaluates all of the alternatives and gives careful consideration to the operating performance and the continued airworthiness of the aircraft, systems, and components. A review of the proposed escalation should include the following:
  - i. If the short-term escalation authorization applies to powerplants, powerplant accessories and components, propellers and gearboxes, and airframe accessories and components, the AOC holder must provide previous inspection results or justifiable data from previous teardown reports.
  - ii. If supplemental inspections are warranted during the escalation period to ensure continued airworthiness of the airframe, system, or component, the certificate holder must provide the supplemental inspection schedule.
- g. Short-term escalations cannot be issued after an item has exceeded an established maintenance program time limitation. PAI,s should monitor each short-term escalation to ensure that the AOC holder is not using the short-term escalation to hide noncompliance with the AOC holder's time limitations. PAI's should look at the current time

limitation, the current time, and the proposed escalation to properly monitor for these situations.

NOTE: The short-term escalation must not be construed as a permanent escalation to the task or check interval.

- h. Maximum short-term escalation intervals may be a percentage of an existing time interval for a particular task or designated in hours of time in service, cycles, or some other identifiable increment. Except under certain conditions, the maximum time allowable for a short-term escalation is 10 percent (not to exceed 500 hours/cycles) time in service. Maintenance tasks or checks controlled by calendar-days or years would also have a limit of 10 percent, not to exceed the amount of days it would take the aircraft to reach the 500-hour time in service limit. For example, if a AOC holder's use is 10 hours a day, the maximum time allowable for short-term escalation of a particular calendar task is 10 percent, but may not exceed 50 days (500 hours ÷ 10 hours a day = 50 days). AOC holders must describe the methods and procedures for calculating short-term escalation intervals in their manual.
- i. The AOC holder must notify the DGCA no later than the next working day following the AOC holder's issuance of the short-term escalation. To ensure continuity between the DGCA and the AOC holder, the DGCA recommends that the AOC holder's program includes procedures to notify the PAI by telephone within 24 hours after the authorization is issued, followed by written notification no later than 72 hours after issuance of the authorization.

#### **4. EXTENSION OF SHORT-TERM ESCALATIONS**

The 10 percent, which is not to exceed the 500-hour maximum time limit for a short-term escalation, is usually sufficient for an AOC holder to accomplish required tasks. Under special conditions, an AOC holder may extend the maximum limit of an individual item. The AOC holder must perform sufficient analysis and provide adequate justification to the DGCA to substantiate the

extension request. All extension requests beyond the maximum limit require prior approval by the PAI.

## **5. PROHIBITIONS**

Short-term escalation procedures do not apply to the following:

- Intervals specified by DGCA Airworthiness Directives (AD);
- Life limits specified by Type Certificate Data Sheets (TCDS);
- Limitations specified by minimum equipment lists (MEL) or Configuration Deviation Lists (CDL);
- Structural sampling periods imposed by Maintenance Review Boards (MRB);
- Certification Maintenance Requirements (CMR) (unless specifically allowed and designated by the CMR document); and
- Fuel system airworthiness limitations (AL) and critical design configuration control limitations (CDCCL).

## **6. BUYING BACK OF TIME**

- a. Do not assume that all short-term escalation time granted must be “bought back” at the next inspection. Each carrier must evaluate its program during development and revisions to determine if and when a “buying back” of time may be required.
- b. Carriers routinely combine individual maintenance tasks with common intervals into letter checks. These letter checks normally run in a series (e.g., C1, C2, C3). The use of a short-term escalation authorization to extend a letter check that is part of a series of letter checks will also impact the compliance times of individual maintenance tasks that compile the checks.

EXAMPLE: A particular maintenance task is due every 4,000 hours and is added to the C check series. The C1 is due at 1,000 hours, the C2 at 2,000 hours, and so forth. In this scenario, the particular task was placed on the C4 for completion. The certificate holder exercises its short-term escalation process on the C2 check by escalating it 100 hours. After this escalation, the normal repeat interval of 1,000 hours is continued through the rest of the C check series. Now the AOC

holder does an individual maintenance task compliance audit and discovers that this particular task, which was required by their maintenance program to be completed at 4,000 hours, was actually completed at 4,100 hours (because of the short-term escalation exercised by the carrier for the C2). Even though this particular task was not part of the C2 package, it is acceptable for the task to have exceeded the maintenance program requirement in the amount equal to the short-term escalation authorized (maximum of 10 percent).

- c. While constructing their check packages, carriers should take particular care to avoid the possibility of including maintenance tasks that are prohibited from being short-term escalated. If a AOC wishes to include those prohibited tasks, then the PAI and the AOC must evaluate the effects of the short-term escalation and determine if the buying back of time granted during the short-term escalation is required.
- d. If the above scenario used a particular 4,000-hour task that was unacceptable for short-term escalation, then the AOC would be in violation unless the time was bought back after the C2 short-term escalation to avoid exceeding the 4,000-hour requirement of the task.

NOTE: For the purposes of this chapter, short-term escalation applies to both inspections and any other maintenance requirements (operational check, functional check, restoration, and discard) of the aircraft, aircraft appliances, and components. Subparagraph 5 of this chapter lists the only items not allowed to be subject to short-term escalation.

## **7. PROCEDURES**

Review the AOC holder's manual and ensures that:

- a. Duties, responsibilities, and authority. The general policies section of the applicable manual contains the duties, responsibilities, and authority for management personnel (refer to 121.59 and 135.43), and for any other management personnel and appropriate members of

organization (i.e., quality assurance (QA), quality control (QC), maintenance planning, and recordkeeping).

- b. Duties, responsibilities, and instructions. The manual contains duties, responsibilities, and instructions to keep each of its employees and other persons used in its operations informed of the provisions of its ACL D76 that applies to that employee's or person's duties and responsibilities.
- c. Policies, procedures, and instructions. There are clear policies, procedures, instructions, and/or information to allow personnel concerned with the ACL D76 authorized short-term escalation process to perform duties and responsibilities to a high degree of safety; ACL D72, Aircraft Maintenance—Maintenance Program (MP) Authorization; and ACL D76).
- d. ACL D76. The AOC holder has inserted pertinent excerpts of its ACL D76 (or additional references) in its manual, identified each such excerpt as a part of its ACL, and has stated that compliance with each ACL D76 requirement is mandatory.
  - a. Each AOC holder shall keep each of its employees and other persons used in its operations informed of the provisions of its operations specifications that apply to that employee's or person's duties and responsibilities.
  - e. Maximum limitations. It defines the maximum limitations for a short-term escalation.
  - f. Short-Term Escalation. It contains criteria defining the type of data acceptable for justifying a short-term escalation and procedures to ensure that that no short-term escalations are authorized without supporting data.
  - g. Correspondence maintenance program. It corresponds with the overall maintenance program. The procedures must ensure that an escalation will not create an unsafe condition.
  - h. Restrictions for repetitive escalations. It restricts the occurrence of repetitive short-term escalations that indicate a need for a change in the maintenance program.

- i. Method for recording escalations. It provides a method for recording all escalations with provisions for submitting/reporting each request/use of an escalation to the PAI.
- j. Interaction with the Continuing Analysis and Surveillance System (CASS). There must be policies and procedures to ensure the short-term escalation program interacts with the CASS. The CASS must provide performance measurements to ensure the program is producing desired results.
- k. Procedures and controls. There are procedures and controls in place to prevent the use of short-term escalation on aircraft that are operating under the provisions of a military contract.

NOTE: The operator may include a list of items that it restricts from short-term escalation.

## **APPENDIX**

### **APPLICABLE FORMS**

DGCA Form No. 120-33, Evaluation and Approval of Air Operator's Maintenance Program.