

KEMENTERIAN PERHUBUNGAN  
DIREKTORAT JENDERAL PERHUBUNGAN UDARA

PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA

NOMOR : KP 068 TAHUN 2018

TENTANG

PETUNJUK TEKNIS PERATURAN KESELAMATAN PENERBANGAN SIPIL  
8900-6.6 (*STAFF INSTRUCTION 8900-6.6*) TENTANG EVALUASI ANALISIS  
BERKELANJUTAN DAN PROGRAM PENGAWASAN OPERATOR PESAWAT  
UDARA (*EVALUATE OF AIR OPERATOR'S CONTINUING ANALYSIS AND  
SURVEILLANCE PROGRAM*)

DENGAN RAHMAT TUHAN YANG MAHA ESA

DIREKTUR JENDERAL PERHUBUNGAN UDARA,

- Menimbang :
- a. bahwa dalam rangka membakukan seluruh petunjuk teknis yang ada di lingkungan Direktorat Jenderal Perhubungan Udara untuk memberikan petunjuk teknis yang terstruktur, sistematis, dan terorganisir maka perlu disusun suatu petunjuk teknis;
  - b. bahwa berdasarkan pertimbangan sebagaimana dimaksud dalam huruf a, perlu menetapkan Peraturan Direktur Jenderal Perhubungan Udara Tentang Petunjuk Teknis Peraturan Keselamatan Penerbangan Sipil 8900-6.6 (*Staff Instruction 8900-6.6*) tentang Evaluasi Analisis Berkelanjutan dan Program Pengawasan Operator Pesawat Udara (*Evaluation of Air Operator's Analysis and Surveillance Program*);
- 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. Keputusan 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 59 Tahun 2015 tentang Kriteria, Tugas dan Wewenang Inspektur Penerbangan sebagaimana telah diubah terakhir dengan Peraturan Menteri Perhubungan Nomor PM 142 Tahun 2016;
6. 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 8900-6.6 (*STAFF INSTRUCTION 8900-6.6*) TENTANG EVALUASI ANALISIS BERKELANJUTAN DAN PROGRAM PENGAWASAN OPERATOR PESAWAT UDARA (*EVALUATE OF AIR OPERATOR'S CONTINUING ANALYSIS AND SURVEILLANCE PROGRAM*).

Pasal 1

Memberlakukan Petunjuk Teknis Peraturan Keselamatan Penerbangan Sipil 8900-6.6 (*Staff Instruction 8900-6.6*) tentang Evaluasi Analisis berkelanjutan dan Program Pengawasan Operator Pesawat Udara (*Evaluation of Air Operator's Analysis and Surveillance Program*) sebagaimana tercantum dalam Lampiran yang merupakan bagian tak terpisahkan dari Peraturan ini.

Pasal 2

Pada saat Peraturan ini mulai berlaku, maka ketentuan dalam Volume 2 Bab 65 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 Direktur Jenderal ini mulai berlaku sejak tanggal ditetapkan.

Ditetapkan di : JAKARTA

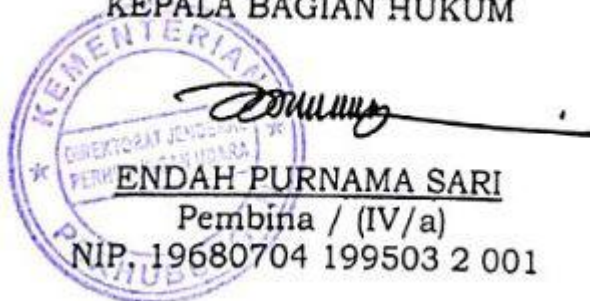
Pada tanggal : 8 MARET 2018

DIREKTUR JENDERAL PERHUBUNGAN UDARA

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Dr. Ir. AGUS SANTOSO, M. Sc

Salinan sesuai dengan aslinya  
KEPALA BAGIAN HUKUM



# Staff Instruction

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SI 8900-6.6

Evaluation Of Air Operator's Continuing  
Analysis And Surveillance Program (CASP)

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

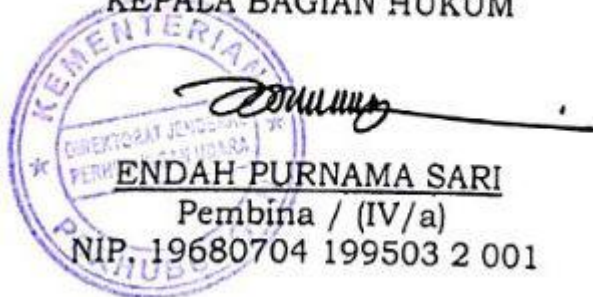
1. PURPOSE : This Staff Instruction is prepared for use and guidance of DGCA inspector and applicant dealing with DGCA for evaluate a maintenance program
2. REFERENCES : This Staff Instruction should be used in accordance with the applicable regulations, CASR 121.373 and CASR 135.373.
3. CANCELLATION : Staff Instruction SI 8300 Volume 2 Chapter 65 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.

DIREKTUR JENDERAL PERHUBUNGAN UDARA

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Salinan sesuai dengan aslinya  
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## **CHAPTER I INTRODUCTION**

### **1. OBJECTIVES**

This section provides guidance for monitoring a Continuing Analysis and Surveillance Program (CASP) and for evaluating the overall effectiveness of the Maintenance Program (MP).

### **2. GENERAL**

- a.** Reliability Program. Some certificate holders with approved reliability programs use the reliability program to fulfill the monitoring mechanical performance functions requirement of its CASP. Since both reliability programs and CASPs require data collection, data analysis, and corrective action requirements, a duplication of operational data would occur.
- b.** Monitoring Mechanical Performance. Not all the elements of the current edition of Advisory Circular (AC) 120-17, Maintenance Control by Reliability Methods, are required to be contained in a CASP for monitoring mechanical performance. AC 120-17 does not provide for the audit function of CASPs.

### **3. REGULATORY REFERENCE**

Regulations references of this Staff Instruction are:

- CASR Part 121.373
- CASR Part 135.373
- CASR Part 19



## **CHAPTER II EVALUATION OF AIR OPERATOR'S CONTINUED AND SURVEILLANCE PROGRAM (CASP)**

### **1. PLANNING**

#### **a. Program Requirements**

- 1) The program must contain a system that determines the effectiveness of the maintenance programs, and provides for timely corrective action of any deficiencies in the maintenance programs. This system must be identified in a chapter of the Air Operator Certificate maintenance manual and must reference CASR part 121.373, and/or CASR part 135.373 and CASR Part 19.
- 2) Any portions of the program not contained in this chapter of the manual must be referenced to their exact location. For example, an approved reliability program must be referenced in the program if it is used to fulfill the mechanical monitoring function of the program.

#### **b. Air Operator Size**

The complexity and sophistication of the program should be relative to the Air Operator operation. A small Air Operator should not be expected to have a program suitable for a large Air Operator; however, all programs must have, as a minimum, monitoring mechanical performance and audit functions. Procedures for administering these two functions must be identified in the Air Operator's manual.

#### **c. Monitor Mechanical Performance Function**

This function must provide for collecting and analyzing operational data. The intent here is to identify deficiencies that require corrective action. This monitoring is done through emergency response, day-to-day monitoring, and long term monitoring.

##### 1) Emergency Responding

Emergency responding includes identifying emergency/critical situations, determining causes, and formulating a plan to ensure that similar conditions do not exist in like equipment. Typical examples of emergency/critical situations include:

- a) In-flight engine separations;
- b) In-flight propeller separations;
- c) Uncontained engine failures;
- d) Critical structural failures; and
- e) Any life-limited part failure.

- 2) Day-to-Day Monitoring. Normally, large Air Operator conduct daily meetings to discuss morning launch delays and activities of the previous day. Smaller Air Operator conduct these meetings at less frequent intervals. Typical example discussed include:
  - a) Daily mechanical problems of each aircraft;
  - b) Non-availability of spare parts;
  - c) Inadequate manpower to perform maintenance;
  - d) Deferred maintenance items—excessive numbers and time;
  - e) Safety-related failures;
  - f) Recurring maintenance problems;
  - g) Excessive unscheduled maintenance;
  - h) Maintenance delays/cancellations; and
  - i) Scheduled inspection results, including sufficient time to complete the check, unusual/critical findings, recurring problems, and parts/equipment/manpower availability.
- 3) Long-Term Monitoring. This system should include charting or some appropriate means of reporting and accounting operational data at specified intervals to reveal trend-related information. Typical examples of operational data used by the certificate holder to monitor mechanical performance are:
  - a) Pilot reports compiled
  - b) Inspection findings compiled;
  - c) Failure rates compiled;
  - d) Tear-down reports;
  - e) Premature removal rates (includes engines);
  - f) Engine shutdown rates;
  - g) Confirmed failure rates;
  - h) Deferred minimum equipment list (MEL) items; and
  - i) Service Difficulty Reports (SDR).
  - j) Mechanical Interruption Summary Report (MIRS)

**d. Audit Functions**

- 1) Auditing is normally an on-the-scene observation and should be a scheduled, ongoing activity encompassing periodic audits of contract agencies. The audit also addresses adequacy of equipment and facilities, storage and protection of parts, competency of mechanics, and housekeeping.

- 2) To be effective, audits should be separate from the maintenance organization. If audits are assigned to organizational units with other duties, the audit should be accomplished as an independent activity. Under no conditions may an organizational unit perform an audit on itself. Typical audit functions ensure that:
- a) All publications and work forms are current and readily available to the user;
  - b) Maintenance is performed according to the methods, standards, and techniques specified in the Air Operator Certificate manuals;
  - c) Maintenance forms are screened for completeness, proper entries, and Required Inspection Items (RII) identification;
  - d) Major repairs/alterations are properly classified and accomplished with approved data;
  - e) Records of all applicable Airworthiness Directives (AD) contain current status and method of compliance;
  - f) Maintenance releases are executed by designated persons and according to procedures specified in the Air Operator Certificate manuals;
  - g) Records reveal current status of life-limited parts;
  - h) The training program syllabus is being followed;
  - i) Carryover items and deferred maintenance are properly handled; and
  - j) Vendors are properly authorized, qualified, staffed, and equipped to do the contractor function according to the Air Operator Certificate manual.

**e. Use of Contractors**

When the Air Operator contracts with another certificate holder and/or Approve Maintenance Organization for maintenance support, the air operator is still responsible for CASP requirements. The responsibility for administering or controlling a CASP can never be contracted out. However, contract organizations may be used to collect operational data, make analyses and recommendations, perform audits, and report information to be used by the certificate holder in identifying deficiencies and implementing corrective action.

## **2. PREREQUISITES AND COORDINATION REQUIREMENTS**

### **a. Prerequisites:**

Knowledge of the regulatory requirements of parts 19, 121, and 135;

### **b. Coordination**

This task requires coordination between the principal Inspector (PI) assigned to the certificate holder. Safety issues, deviations from standards, and noncompliance may require interdepartment coordination, depending on the severity and complexity of the issues.

## **3. PROCEDURES.**

### **a. Review the historical data of the program to include the following:**

- 1) The history of past inspections ;
- 2) The history of Compliance Actions;
- 3) The Enforcement Information System (EIS);
- 4) The previous 6 months' Mechanical Interruption Summaries (MIS);
- 5) SDRs ;
- 6) Any other operational data that might indicate negative trends in the maintenance/inspection program; and
- 7) Surveillance history using SMS.

### **b. Collect Items to be Used During Inspection the following:**

- 1) Samples of any negative trends in the previous 6 months' Mechanical Interruption Summary.
- 2) Negative trends on the Air Operator Certificate aircraft fleets (query the SDR).
- 3) Samples of negative trends in operational data that the certificate holder identified in previous reports.
- 4) Reports of all emergency/critical situations during the previous 12 months.
- 5) Samples of records from the day-to-day monitoring meetings in which corrective actions were deemed necessary.
- 6) Negative trends in the maintenance/inspection program noted during routine surveillance that the CASP had not detected. Examples of situations indicating negative trends include increases in the following:
  - a) Aircraft delays;
  - b) Premature removal rates;
  - c) The number of engine shutdown rates;
  - d) Number of short term escalations;

- e) Deferred maintenance MEL items and length of time items remain deferred; and
- f) Repeat pilot reports.

**c. Review the Air Operator Certificate's CASP**

Before making the onsite inspection, obtain the Air Operator Certificate maintenance procedures manual and review the CASP. It is vital that the inspector obtain precise knowledge of the Air Operator Certificate programs, concepts, and how the program is administered. While reviewing the manual to ensure that it complies with CASR and before making the inspection, note any unclear areas, obvious omissions, or apparent discrepancies.

- 1) Review the Air Operator Certificate's CASP as described in the manual. Ensure that it contains policies and procedures for determining the effectiveness of the maintenance program and for corrective action of any deficiencies in those programs as required by CASR Part 121.373, or Part 135.373.
  - 2) Ensure that the manual contains procedures for administering the CASP that are clear and easy to understand.
  - 3) Ensure that the Air Operator Certificate manual describes a systematic method of reviewing operational data. It should determine the effectiveness of the maintenance/inspection program through:
    - Emergency responding;
    - Day-to-day monitoring; and
    - Long-term monitoring. data collection;
    - Long-term monitoring. data analysis.
- a) Emergency responding

The manual must include procedures for responding to critical and/or emergency safety-related situations. Review the manual procedures to ensure:

- i. Critical/emergency situations are defined;
- ii. Procedures exist for the notification/coordination process;
- iii. Procedures exist for determining if similar situations exist on other aircraft;
- iv. Procedures exist to ensure that the certificate holder implements corrective action; and
- v. Procedures define how the certificate holder notifies the DGCA.

b) Day-to-day monitoring

Ensure that the manual contains procedures for conducting periodic meetings with required personnel to discuss mechanical performance and identify the need for corrective action.

Procedures must include:

- i. What items to discuss;
- ii. When to conduct meetings;
- iii. Who attends meetings; and
- iv. How records of these meetings are forwarded to the DGCA.

c) Long-term monitoring: data collection

Determine how the certificate holder is monitoring the mechanical performance function of the program. This monitoring should include, at a minimum:

- i. What operational data the certificate holder is using;
- ii. What forms are used to collect the data;
- iii. Who is responsible for compiling the data; and
- iv. When and how often the data is collected.

d) Long-term monitoring; data analysis. Ensure that the manual has procedures for analyzing operational data. The procedures must include:

- i. When the analysis is to be performed;
- ii. Who is responsible for performing the initial analysis;
- iii. What conditions, based on performance standards, warrant corrective action; and
- iv. Who is responsible for performing further analysis and making a corrective action recommendation.

4) Ensure that the manual has procedures for taking corrective action based on the data analysis. The procedures must describe:

- i. Who has responsibility for implementing corrective action;
- ii. When the corrective action will be implemented; and
- iii. How the corrective action will be phased into the maintenance program.

NOTE: Some Air Operator Certificate fulfill this long term monitoring function through their approved reliability programs.

5) Ensure that the Air Operator Certificate Program contains the audit functions. Review :

- a) The procedures must provide a continuous audit of the total maintenance program, including contract agencies. The procedures must state:
  - i. Who is responsible for performing audits
  - ii. What is being audited (e.g., manuals, maintenance, record entries, RIIs, training, Maintenance releases, deferred maintenance, AMO, etc.);
  - iii. When the audits are performed;
  - iv. How the audits are documented; and
  - v. How records are retained.
- b) Procedures for analyzing audit functions must include the following:
  - i. Analyzing each audit to identify deficiencies;
  - ii. Initiating corrective action for each deficiency;
  - iii. Providing for on-the-spot corrective action, if appropriate;
  - iv. Providing for further analysis to determine system breakdown;
  - v. Establishing qualifications of persons performing analysis; and
  - vi. Recording audit findings and subsequent actions.
- c) Procedures must contain corrective action, to include:
  - i. Timely implementation of corrective action from the data analysis; and
  - ii. Followup to determine effectiveness of the corrective action.

**d. Document Findings of Review Prior to Onsite Inspection** Document preliminary findings found during the office and manual review. Discuss them with the PI. Along with the PI, indicate those inspection findings that must be brought to the attention of the certificate holder during the initial meeting. These findings will be used in determining the overall effectiveness of the program.

**e. Schedule the Inspection**

Coordinate the inspection with the certificate holder to determine when the Air Operator Certificate personnel will be available and agree upon a time for the inspection. Arrange to attend a periodic meeting.

**f. Meet With the Certificate Holder**

Contact the person who has overall responsibility for the program and discuss:

- i. The nature and scope of the inspection;

- ii. Negative trends discovered during manual and office review; and
- iii. Organizational elements responsible for administering the program, including identifying personnel.

**g. Verify Currency of Air Operator Certificate's CASP**

Ensure that the organizational person responsible for the CASP has the current manuals. This can be done by comparing the effective dates or revision dates of the manual master copy held by the certificate holder with the manual held by the responsible person.

**h. Determine if Staffing Equals that Described in the Air Operator Certificate Manual**

Compare the current organization to the organization described in the manual. Document any differences in staffing. These differences will be used in the final analysis in determining the effectiveness of the CASP.

**i. Ensure the Manual is Readily Available to Personnel**

Determine whether each organizational element responsible for administering the program has a current copy of the manual available.

**j. Inspect Certificate Holder System to Monitor Mechanical Performance**

During the inspection, document and photocopy any instances in which the certificate holder did not follow the procedures identified in the manual by inspecting the following areas:

- 1) **Emergency Responding** Using the previous year's reports of emergency actions gathered during the office review, determine whether:
  - a) Manual procedures were followed to ensure that similar situations did or did not exist on other aircraft;
  - b) Fault analysis was accomplished for each situation; and
  - c) Any corrective action established was implemented and effective.
- 2) **Day-to-Day Monitoring**
  - a) Establish that periodic meetings are occurring as defined in the manual.
  - b) Attend a periodic meeting to determine if daily mechanical problems are being discussed and if the appropriate personnel are attending.
  - c) Using day-to-day monitoring records collected during office review, determine, when the need for corrective action was recognized, whether:
    - i. The problem was assigned to appropriate personnel; and



- ii. The plan for corrective action was established, implemented, and effective.

3) **Long-Term Monitoring**

a) **Data Collection**

Compare the manual procedures with the actual data collection. Ensure that the following is being accomplished according to the manual:

- i. All operational data was collected and was entered on the appropriate forms;
- ii. The appropriate persons compiled the data; and
- iii. The data was collected at the specified times.

b) **Data Analysis**

Determine if data analysis is being performed in accordance with manual procedures by comparing the manual procedures to actual performance. Ensure that:

- i. Operational data was analyzed to identify items exceeding performance standards, indicating negative trends;
- ii. These items were further analyzed to identify cause by using the sample of negative trends reported by the certificate holder and collected during the planning of the inspection;
- iii. Trained, competent, and qualified personnel performed initial and further analysis;
- iv. Audit functions are accomplished when analysis has identified the need; and
- v. The need for corrective action was determined.

c) **Corrective Action**

Use the same sample of the negative trends used in the data analysis to ensure that the certificate holder established and implemented a corrective action plan (CAP) for those items requiring corrective action. Continue to follow those items through the corrective action process.

- i. Determine if the plan required changes to the maintenance/inspection program;
- ii. Ensure that these changes were implemented; and
- iii. Review operational data to ensure that the corrective action was effective in reversing the negative trend.

d) **Documentation**

Document all findings indicating that the certificate holder did not follow its manual procedures. These findings will be used in determining the overall effectiveness of the CASP.

**k. Inspect the Air Operator Certificate System to Audit the Maintenance Program**

Document and photocopy any instances in which the Air Operator Certificate did not follow the procedures identified in the manual. Contact the responsible person identified in the manual to determine what audits the Air Operator Certificate accomplished in the past 12 months.

1) **Inspection**

Inspect audit functions by accomplishing the following:

- i. Sample a cross-section of audit requirements identified in the manual and have the Air Operator Certificate provide records of audit completion;
- ii. Review the audit completion records to determine scope and detail of inspection;
- iii. Verify results of audit by performing spot check of the audited facility;
- iv. Verify that audits were performed within specified time periods;
- v. Determine whether persons who performed the audits have experience and expertise in the areas audited;
- vi. Determine whether audit functions triggered by analysis are accomplished; and
- vii. Discuss any other areas of concern found during surveillance that was not noted through the audit system.

2) **Analyze Audit Findings**

Determine if the Air Operator certificate has performed analysis of audits. Using samples collected from audit records provided by the Air Operator certificate, determine the following:

- i. Analysis of each audit was accomplished to identify deficiencies;
- ii. On the spot and system corrective actions were implemented to correct deficiencies; and

- iii. Personnel performing audit had necessary experience and expertise.

**3) Corrective Action**

Using the same samples:

- i. Determine if the Air Operator Certificate has implemented corrective action;
- ii. Perform an onsite inspection to ensure the timely implementation of the corrective action; and
- iii. Determine the effectiveness of corrective action by ensuring that similar deficiencies no longer exist.

- 4) Documentation.** Document all findings indicating that the Air Operator certificate did not follow the manual procedures. The inspector will use these findings in determining the overall effectiveness of the program.

**1. Follow Up on Negative Trends Identified During Office and Manual Review**

**1) Follow SMS Manual**

- a) Contact the person responsible for the negative trend.
- b) Determine whether the trend was significant.
- c) Determine why the program did not identify the trend.
- d) Ensure that corrective action is initiated.
- e) Document all findings.

**2) Determine Effectiveness of the CASP**

combine all inspection findings from the following to determine program effectiveness, including:

- a) The office and manual review;
- b) Onsite inspection; and
- c) Inspector identified trends.

**m. Coordination**

After assessing the CASP and before debriefing the Air Operator certificate, consult with the supervisory personnel to determine which, if any, findings require official notification.

**n. Debrief Air Operator Certificate Holder**

As follow:

- 1) Discuss results of the inspection;
- 2) Discuss all discrepancies discovered during the inspection;
- 3) Discuss possible corrective action;

- 4) Inform the Air Operator certificate that official written notification of findings will follow; and
- 5) Inform the Air Operator certificate holder that they must submit a plan for the timely completion of corrective action.

NOTE: Agree with the Air Operator Certificate upon time limits for the CAP during the debriefing. The inspector can negotiate with the certificate holder over time limits later if mitigating circumstances arise.

## APPENDIX

### APPLICABLE FORMS

DGCA Form No. 120-45, Evaluation Of Air Operator's Continuing Analysis And Surveillance Program (CASP)

DIREKTUR JENDERAL PERHUBUNGAN UDARA

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