KEMENTERIAN PERHUBUNGAN
DIREKTORAT JENDERAL PERHUBUNGAN UDARA

PERATURAN DIREKTUR JENDERAL PERHUBUNGAN UDARA
NOMOR : KP 069 TAHUN 2018
TENTANG
PETUNJUK TEKNIS PERATURAN KESELAMATAN PENERBANGAN SIPIL BAGIAN 8900-7.1 (*STAFF INSTRUCTION 8900-7.1*) TENTANG PROSES UMUM UNTUK PENANGANAN INVESTIGASI KECELAKAAN/INSIDEN PESAWAT (*THE GENERAL PROCESS FOR HANDLING AIRCRAFT ACCIDENT/INCIDENT INVESTIGATION*)

DENGAN RAHMAT TUHAN YANG MAHA ESA,

DIREKTUR JENDERAL PERHUBUNGAN UDARA,

Menimbang :

a. bahwa 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 telah mengatur mengenai penanganan investigasi kecelakaan/insiden pesawat;
b. bahwa berdasarkan pertimbangan sebagaimana dimaksud pada huruf a, perlu menetapkan Peraturan Direktur Jenderal Perhubungan Udara tentang Petunjuk Teknis Peraturan Keselamatan Penerbangan Sipil Bagian 8900 – 7.1 (*Staff Instruction 8900-7.1*) Tentang Proses Umum untuk Penanganan Investigasi Kecelakaan/ Insiden Pesawat (*The General Process for Handling Aircraft Accident/Incident Investigation)*

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. 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 BAGIAN 8900 - 7.1 (*STAFF INSTRUCTION 8900 – 7.1*) TENTANG PROSES UMUM UNTUK PENANGANAN INVESTIGASI KECELAKAAN/ INSIDEN PESAWAT (*THE GENERAL PROCESS FOR HANDLING AIRCRAFT ACCIDENT/INCIDENT INVESTIGATION*).

Pasal 1

Memberlakukan Petunjuk Teknis Peraturan Keselamatan Penerbangan Sipil Bagian 8900 – 7.1 (*Staff Instruction 8900 – 7.1*) Tentang Proses Umum untuk Penanganan Investigasi Kecelakaan/Insiden Pesawat (*The General Process for*

Handling Aircraft Accident/Incident Investigation) sebagaimana tercantum dalam Lampiran yang merupakan bagian tak terpisahkan dari 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 : 8 MARET 2018

DIREKTUR JENDERAL PERHUBUNGAN UDARA

ttd

Dr. Ir. AGUS SANTOSO, M. Sc

Salinan sesuai dengan aslinya
KEPALA BAGIAN HUKUM

ENDAH PURNAMA SARI
Pembina / (IV/a)
NIP. 19680704 199503 2 001

LAMPIRAN PERATURAN DIREKTUR JENDERAL
PERHUBUNGAN UDARA
NOMOR : KP 069 TAHUN 2018
TANGGAL : 8 MARET 2018

Staff Instruction

SI 8900 – 7.1

The General Process For Handling Aircraft Accident/Incident Investigation

Amendment:
Date :

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

FOREWORD

1.	PURPOSE	:	This Staff Instruction is prepared for use and guidance of DGCA inspector in handling aircraft accident/incident investigation.
2.	REFERENCES	:	This Staff Instruction should be used in accordance with the applicable regulations.
3.	CANCELLATION	:	-
4.	AMENDMENT	:	The amendment of this Staff Instruction shall be approved by the Director General of Civil Aviation.

DIREKTUR JENDERAL PERHUBUNGAN UDARA

ttd

Dr. Ir. AGUS SANTOSO, M. Sc

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AMENDMENT RECORD LIST

Amendment No.	Issue Date	Inserted By	Insertion Date
Original issue			

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CHAPTER I GENERAL PROCESS

1. GENERAL PROCEDURE FOR ACCIDENT / SERIOUS INCIDENT

a. Generic Process

DGCA will process aircraft accident/incident notification in centralized approach. Service provider are discouraged to report to DGCA Inspector personally. They shall notify accident and incident using guidance based on SI 19-01.

This general process of handling aircraft accident/incident investigation provides procedures for DGCA inspector to handle event such as accident/incident notification, conduct investigation, prepare investigation report, how to response to NTSC reports, and managing safety resolutions.

It is important for an inspector to understand that the process described in this section is not all-inclusive, but rather a tool to use with good judgment in conducting day-to-day duties and responsibilities.

b. Understanding Process

The following guidance provides aid in understanding and applying this process. It is essential to understand that this process may affect different approach of safety resolution.

DGCA has different approach between accident/serious incident and incident. DGCA will handle accident/serious incident by investigating the occurrence to examine nine responsibilities of DGCA. If requested by NTSC, DGCA will also participate in the accident/serious incident investigation as party to NTSC team.

DGCA may only initiate the internal investigation process of the service provider due to limitation of human resources. In such case of repetitive incident, DGCA may deem necessary to investigate the incident.

Consistent implementation of the procedure will make sure that safety resolution will be precise and effective.

c. Definition

Refer to CASR Part 1 and CASR Part 830 for additional information.

1) Substantial Damage. Substantial damage is a damage or failure that adversely affects the structural strength, performance, or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected component.

   a) Airport Authority

   b) Inspector-in-charge

      Investigator-in-Charge (IIC). A person charged, on the basis of his or her qualifications, with the responsibility for the DGCA accident investigation, conduct and control of an investigation.

   c) SSP/AIG

d. NOTIFICATION AND COORDINATION PROCEDURES

Normally, Service Provider is made aware of aircraft accidents. Service Provider shall initiate DGCA Form 830.01 (occurrence related to operation aircraft), mandatory occurrence report form 19.1 (occurrence related to air navigation service), mandatory occurrence report form 19.2 (occurrence related to aerodrome and facility). The form will be sent to Director General.

Until the investigation identifies an event as an accident or incident, it will be regarded as an occurrence. The advantage of labeling an event as an occurrence is that it allows for an assessment of the risk and investigation of the facts for an accurate classification of the event without generating unnecessary reports. No matter how the event is ultimately classified, assigned personnel must in all cases take appropriate action to address any deviations from regulations or other standards.

e. TEAM ASSIGNMENT

Director General will assign a team that its size depends on the complexity of the occurrence. The team shall consist of Principal Operation Inspector, Principal Airworthiness Inspector, Navigation Inspector, Airport Inspector, Security Inspector, Air Transport Inspector and Regional Authority Inspector. One of the inspectors will be assigned

as Inspector-In-Charge (IIC) by Director General based on nature of occurence. Inspector-In-Charge (IIC) has responsibilities such as :

1) Assembling the team of technical specialists to conduct the investigation;
2) Managing all DGCA resources at the scene; and
3) Determining if DGCA responsibilities were involved in the occurrence.

2. INVESTIGATION

The team will collect initial information such as :

1) Preliminary information using DGCA form 8900 - 7.1
2) Compliance to drug and alcohol testing program;
3) ATC statement and voice tapes.

DGCA investigation must determine whether or not the following were factors in the accident :

1) The performance of DGCA facilities or functions;
2) The performance of non-DGCA owned and operated air traffic control (ATC) facilities or Navigational Aids (NAVAID);
3) The airworthiness of DGCA -certified aircraft;
4) The competency of DGCA -certified Personnel, Service Provider.
5) The adequacy of the CASR;
6) The airport certification safety standards or operations involved;
7) The airport security standards or operations involved.
8) The airman medical qualifications involved; and/or
9) There was an apparent violation of CASR.

DGCA will investigate aircraft accidents/serious incident to the extent necessary to :

1) Establish the facts, conditions, and circumstances of the occurrence.
2) Determine the proper execution of DGCA responsibilities.
3) Identify safety issues surrounding the accident and submit meaningful safety recommendations.

a. DGCA IIC Initial Actions

1) Determine the presence of a biohazard or other dangerous environmental condition exists in the area.
2) Ensure that the emergency locator transmitter has been

deactivated (remove batteries, antenna, etc.). This action is necessary to preclude its continued operation or reactivation during aircraft wreckage removal.

3) Flight data and cockpit voice recorders, if installed, should be located and secured.

4) Organize the investigation and assist the NTSC with its investigation if NTSC is on- scene if requested.

5) If requested by NTSC, IIC will help to arrange security at the accident scene. Determine if hazardous materials are on the aircraft and request special assistance if necessary. Agricultural accidents may require arrangement of accident scene security if hazardous materials are on the aircraft.

b. When NTSC is in Charge, but DGCA Inspector Arrives First

Whenever possible, the DGCA IIC should coordinate DGCA's initial on-scene actions with the NTSC IIC before the arrival of the NTSC at the accident scene. Suggested actions are as follows:

1) Establish contact with local law enforcement officials and request accident scene security by such officials.

2) Arrange for preservation of the wreckage

3) Ensure that power to the cockpit voice recorder is off and remains off (to prevent erasure of recorded information) until the recorder is removed by authority of the NTSC.

c. ORGANIZATION AND CONDUCT OF THE INVESTIGATION

1) Organization

The DGCA IIC should hold an organizational meeting. The organizational meeting for most accidents may be an informal conversation involving a DGCA IIC and one or more of the following: DGCA participants, or aircraft operator/owner, or manufacturer representatives. The purpose of the meeting is to define briefly the DGCA's responsibilities, procedures, and objectives; investigation participants are also apprised of what is expected of them.

2) Investigation

After completing the organizational meeting and ensuring the documentation and/or preservation of perishable evidence, e.g.,

human factors data, fuel samples, pressurized systems, and transient witnesses, the DGCA IIC must collect information/photo/sketch/drawing such as (if applicable) :

a) External “macro” views of the main body of the wreckage.
b) Surrounding Terrain
c) Ground Scars leading up to the wreckage
d) Tree strikes or other object damage (if any)
e) Airframe ice (if any is adhering to leading edges of aerodynamic surfaces)
f) Wings and Tail conditions
g) Control surface positions
h) Control surface actuator positions (if possible)
i) Trim tab settings (cockpit and airframe)
j) Flap and flap lever positions
k) Landing gear and lever positions
l) External views of engine(s) and associated engine controls
m) Turbocharger ducting and clamp positions (if installed)
n) All parts including control cables (marked prior to being cut by recovery personnel)
o) Overall view of cockpit
p) Close-up view of cockpit instruments (no more than four instruments to a photograph)
q) Electrical switch positions and circuit breaker
r) Throttle quadrant
s) Fuel selector switch
t) Magneto switch position(s)
u) Throttle quadrant
v) Seat belts
w) Cargo compartments
x) Wreckage distribution.
y) Body distribution.
z) External flight control positions: e.g., rudder, elevator, ailerons, flaps, slats, spoilers, stabilizers, and tabs.
aa) Cockpit flight control indications.
ab) Cockpit instrument readings.
ac) Abnormalities in cabin and cockpit areas.

ad) The GPS coordinates of the main wreckage should be documented. (Additionally, the GPS location or direction and distance from the main wreckage of any major structural component or flight control no longer attached to the main wreckage should be documented).

ae) Fuel and other fluid quantity as well as any evidence of fuel or oil spillage at the accident site.

af) Fuel color and quality. The location from where the fuel is drained (i.e., Water in the fuel? Contaminates?).

ag) Condition of all visible fuel, lube and air lines

ah) Evidence of fluid leaks (fuel, oil, hydraulic)

ai) Spark plug or ignition leads

aj) Aircraft configuration (flap position, landing gear, etc.)

ak) Possible explosives on board (fire crackers, parachute, etc.)

al) Contact information of all witnesses and officials.

am) Missing extremities: wing or horizontal stabilizer tips, vertical stabilizer tip, propeller, or rotor tips, missing flight control surfaces: rudder, elevators, ailerons, flaps, stabilizers, spoilers, slats, tabs, etc., missing structure.

an) Pre-impact versus post-crash fire evidence.

ao) Metal fatigue versus instantaneous breaks.

ap) In-flight versus impact breaks.

aq) Overloading or out-of-center-of-gravity evidence

ar) Evidence of aircraft attitude at impact.

as) Controlled versus uncontrolled attitude at impact.

at) Engine power at impact.

au) Systems operation before impact.

av) Flight control problems.

aw) Evidence of an explosion (fire crackers)

ax) Cockpit documentation.

ay) Evidence of impact before final contact with terrain: trees, wires, buildings, terrain, poles, obstructions.

az) Aircraft performance.

ba) Meteorological conditions.

When gathering information above, the team shall be aware of several precaution such as :

a) Do not rotate the propeller or any other components to avoid post crash damage. Avoid pulling of flight control cables, trim cables, and engine control cables, unless there is a specific investigative purpose in doing so.

b) Protect the ends of failed major structural components from further post mishap damage.

c) Do not disassemble precision components in the field due to the potential loss of evidence; e.g. air pumps. These components need to be examined in a laboratory environment, preferably by the manufacturer.

d) Remove electronic (digital) components only after documenting external physical condition and utilizing manufacturer guidelines when available. Try to preserve all cables and connections in their original state.

e) Disconnect all battery (newer aircraft may have multiple) connections to protect digital memory components.

f) If any engine control, valve, or electrical switch is moved during the recovery process, such movement should be documented.

d. Airman and Aircraft Records to be collected

The Investigation Team must collect Airman and Aircraft Records as follow :

1) A certified copy of the aircrew's DGCA certificate history may be obtained from the DAAO.

2) A certified copy of the aircrew's DGCA medical history may be obtained from the Balai HATPEN.

3) A certified copy of the aircraft historical records may be obtained from the DAAO.

4) Additional data such as flight plan, weather information, airport information, maintenance personnel certificate, aircraft logbook, etc.

e. Investigator Safety

Safe investigative practices and common sense safety precautions are of vital importance but are often overlooked during an investigation. Each investigation participant must consider several items including the following:

1) Good Understanding of Investigation Procedure
2) Good health is a prerequisite.
3) Sound physical condition for withstanding strenuous outdoor activity is a necessity.
4) Control of one's emotions due to the disruptive effect of a disaster is a necessity.
5) Calm and competent behaviour to preclude frantic or ill-advised action is a necessity.
6) The quality of the investigation is best served by an awareness of the need for mental alertness and physical fitness.
7) At high elevations, portable oxygen and other emergency equipment should be available.
8) Reliable communications between the investigation headquarters and the various activity scenes should be maintained by telephone, walkie-talkie, or long-range radio equipment.
9) The following potentially hazardous items or situations may be encountered:
   a) Sharp, jagged pieces of metal. Wreckage may shift.
   b) Fuel and other flammable agents. Toxic agents may be present with a fire.
   c) Ignition sources: hot metal, battery (may also explode), ignition wires, electrical wires, grass or wood fire, or any explosive agent. Tires may explode.
   d) Hazardous materials from the aircraft or at the scene.

3. REPORTING

Deficiencies identified during the investigation that are related to the DGCA's nine areas of responsibility will be annotated on DGCA Form 8020-23 (7.2) with a brief description of the deficiency. It is incumbent on the inspector-in-charge to determine if corrective action is needed. If such action is needed, the inspector or investigator will prepare and forward a safety recommendation(s) in accordance with Chapter 1, paragraph 16.
Investigation report will use DGCA form 8020-23 as a final result.
The form consist forty four data column that the team must fill and provide evidence supporting the statement.

Completion and Distribution of DGCA Form 8020-23 (For Accidents).

a. DGCA Form 8020-23 will be completed and distributed within 15 days after on site investigation.

b. If an accident is downgraded to an incident, the DGCA IIC will submit, through the normal distribution, an amended DGCA Form 8020-23 indicating the downgrade.

c. Destroy all information relative to the accident if no other actions are anticipated at the conclusion of the investigation.

4. RESPONSE TO NTSC REPORT

NTSC usually issued report in three phase :

a. Preliminary Report

IIC responsible to comment preliminary report by compare the factual data found during the investigation process against factual data in preliminary report, IIC will prepare a response letter to NTSC accepting the report or explaining why changes are needed in factual report.

If in the preliminary report contain safety recommendation or safety action taken by operator, IIC will verify safety recommendation and safety action taken and report the result to Director General and accident/incident group.

b. Draft Final Report

IIC is responsible to review the consistency of NTSC analysis from factual data into conclusion and into proposed safety recommendation.

IIC will prepare a response letter to NTSC accepting draft final report or commenting explaining why changes are needed in draft final report.

c. Final Report

IIC will prepare report to Director General and accident/incident group consist of :

1) Monitoring safety recommendation to other organization;
2) Review and proposed corrective action plan for safety recommendation issued to DGCA.

CHAPTER II GENERAL PROCEDURE FOR INCIDENT

1. GENERAL PROCEDURE INCIDENT

a. Notification and Coordination Procedures

DGCA normally receive occurrence notifications from airports, regional airport authorities, air operator, ANS and SSP MOR. SSP or Accident/Incident group will notify and advice Director General to form a team that will initiate the investigation.

According to CASR 19.57(e), DGCA shall receive the notification no later than 72 hours after becoming aware of the occurrence.

Incident Notification from service provider will use DGCA Form 830.01 (occurrence related to operation aircraft), mandatory occurrence report form 19.1 (occurrence related to air navigation service), mandatory occurrence report form 19.2 (occurrence related to aerodrome and facility).

b. Team Assignment

Depend on the type of the occurrence, Director General will form a team from each Directorate to initiate the investigation.

For example : If the occurrence about air navigation issue, Director General will assign air navigation inspector.

Team should initiate investigate actions within 10 calendar-days of receipt of notification of an occurrence, in order to determine what mitigation will correct the problem within 90 calendar-days.

2. INVESTIGATION

a. DGCA Team Initial Actions

If there is insufficient or conflicting occurrence report information, DGCA team will verify the notification. If the information is still insufficient or conflicting, the team will stop the investigation process. However, the team has to be able to explain why such information still insufficient or conflicting.

b. Investigation Process

DGCA will brief the operator to initiate internal investigation according to their own procedure. The team will supervise the investigation. The investigation result and corrective action plan will be reported to DGCA team within 90 calendar-days.

c. Reporting

The team will be reported to the SSP/AIG (Accident/incident group). The report consist of :

1) Description of the deviation;
2) Causal and/or contributing factors;
3) Explanation for recommendations for systemic corrective action to reduce risk of future occurrence;
4) Explanation for action(s) taken to correct the problem and prevent reoccurrence.

CHAPTER III MANAGING SAFETY RESOLUTION

1. Submitting DGCA Form 8900 - 7.2 for Review

When the IIC completes the investigation and finalizes the respective DGCA Form 8900 - 7.2, he or she submits the form to the Director General who will review the data, mitigations, and recommended action(s) provided by the IIC. If Director General concur, He/She will accept the report or otherwise the Director General will return DGCA Form 8900 - 7.2 to the IIC for reconsideration of data and/or actions taken.

Director General are responsible for conducting the final review before submitting the investigation report to the main database. This final review will be a check for completeness and clarity and includes the justification for the action(s) taken.

Director General is responsible for distributing report contain corrective action/recomendation (DGCA Form 8900 - 7.2) to the responsible Directorate explaining to monitor the progress of corrective action plan. Before distributing, Director General will record every corrective action plan/recomendation and the person/directorate who will responsible for it

Responsible Directorate will report back to Director General on the status of corrective action /recomendation. If the corrective action taken accepted then Director General will put the status of corrective action as closed.

a. Reclassification of an occurrence should be based on review of the data provided by ATC, as well as new or additional information obtained by the Team from conducting the investigation of the occurrence. Examples of events that are not to be reclassified:

   1) Insufficient evidence, such as not being able to identify the pilot or the aircraft, does not mean that the pilot deviation did not occur. In these cases the IIC must report in the form in the narrative block, “Due to the lack of information, unable to complete the investigation.”

APPENDIX

1. Applicable Form

1. DGCA Form 830.01 Occurrence Related to Operation Aircraft
2. DGCA Form 19.1 Occurrence Related to Air Navigation Service
3. DGCA Form 19.2 Occurrence Related to Aerodrome and Facility
4. DGCA Form 8900 - 7.1 DGCA Accident/Incident Preliminary Data for Report
5. DGCA Form 8900 - 7.2 DGCA Accident/Incident Investigation Report
6. DGCA form 8020-23 Investigation Report

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