



Public Authority for Civil Aviation

CAR-13

Civil Aviation Regulation

Aircraft Accident & Incident Investigation & Reporting Procedures

Effective: 24th October 2018

Approved by: HE Dr. Mohamed bin Nasser Al-Zaabi (CEO)

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Glossary of Terms or Abbreviations

The following terms or acronyms may be used in any manual or document published by PACA. Reproduction in part or whole is allowed without prior approval. The Document Control Office reserves the rights to include such a listing in any PACA manual or document prior to publishing.

AMC	Acceptable Means of Compliance
ACAS	Airborne Collision Avoidance System
ACC	Area Control Centre
ACCID	Accident
AD	Aerodrome
AD	Airworthiness Directive
ADREP	Accident/Incident Reporting System
AFIS	Aerodrome Flight Information Service
AFTN	Aeronautical Fixed Telecommunication Network
AIC	Aeronautical Information Circular
AIP	Aeronautical Information Publication
AIRPROX	Airspace proximity
AIS	Aeronautical Information Service
A/C	Aircraft
AMSL	Above Mean Sea Level
AOC	Air Operator Certificate
APP	Approach Control Office
ARO	Air Traffic Services Reporting Office
ASMI	Airspace management incident
ATC	Air Traffic Control
ATS	Air Traffic Service
CAR	Civil Aviation Regulation
CCAA	Contracting Civil Aviation Authority
COM	Communications/Equipment
FIC	Flight Information Centre
FIS	Flight Information Service
FOD	Foreign object damage
GM	Guidance Material
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IIC	Investigator in Charge
INCID	Serious Incident
ISA	International standard atmosphere
LOTC	Loss of total control
LSALT	Lowest safe altitude
LVP	Low visibility procedures
Minister	Minister of Transport and Communications
MOR	Mandatory Occurrence Report
NOTAM	Notice to Airmen
NPA	Notice of Proposed Amendment
OTSD	Oman Transport Safety Board
PL	Policy Lead
RA	Resolution advisory event
RCC	Rescue Co-ordination Centre of the Sultanate
RESA	Runway end safety area

RNAV	Area Navigation
SAR	Search and Rescue
SIGMET	Significant Meteorological Report
SRA	Surveillance Radar Approach
SSR	Secondary Surveillance Radar
SUA	Special user airspace
TCAS	Traffic Alert and Collision Avoidance System
TL	Technical Lead
UTC	Universal Time Coordinated
VHF	Very High Frequency
VRS	Voluntary Reporting Scheme
WX	Weather

FOREWORD

- (a) CAR 13 has been issued by the Public Authority for Civil Aviation (PACA) of Oman (hereinafter called the AUTHORITY) under the provisions of the Civil Aviation Law of the Sultanate of Oman.
- (b) ICAO Annex 13 provides the basic structure of CAR 13, but with additional sub-divisions where considered appropriate and in context with the regulations governing the overall role of the Oman Transport Safety Department (OTSD) who hold the primary role of aircraft accident and incident investigation.
- (c) CAR 13 prescribes the requirements for activities following accidents and incidents wherever they occurred.
- (d) Amendments to the text in CAR 13 are issued as amendment pages containing revised paragraphs.
- (e) New, amended and corrected text will be enclosed within brackets until a subsequent 'Change' is issued
- (f) The editing practices used in this document are as follows:
 - (1) 'Shall' is used to indicate a mandatory requirement and may appear in CARs.
 - (2) 'Should' is used to indicate a recommendation
 - (3) 'May' is used to indicate discretion by the Authority, the industry or the applicant, as appropriate.
 - (4) 'Will' indicates a mandatory requirement and is used to advise of action incumbent on the Authority.

Note: The use of the male gender implies the female gender and vice versa.

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SUBPART A - GENERAL

CAR 13.001 Applicability

- (a) Unless otherwise stated, these Regulations apply to activities following accidents and incidents involving civil aircraft wherever they occurred and apply:
 - (1) to occurrences arising out of or in the course of air navigation, which occur to civil aircraft in or over the Sultanate of Oman; or
 - (2) to such occurrences, which occur elsewhere to civil aircraft registered in the Sultanate of Oman.
- (b) Leased and Chartered Aircraft: In these Regulations the specifications concerning the State of the Operator apply only when the aircraft is leased, chartered or interchanged and when that State is not the State of Registry and if it discharges in respect of these Regulations, in part or in whole, the functions and obligations of the State of Registry.
- (c) The Public Authority for Civil Aviation (PACA): PACA is empowered by Civil Aviation Law of Oman as the Competent Authority for the development and promulgation of Regulations pertaining to regulation of aircraft operations or activities associated with the movement of aircraft within Oman.
- (d) This Regulation shall prescribe the role and position of the Ministry of Transport and Communications and the Oman Transport Safety Department (OTSD) in the event of aircraft accident/incident within the airspace of the Sultanate, or when an Omani registered aircraft experiences an accident or incident outside the Sultanate of Oman.
 - (1) Designation of Investigator in Charge (IIC);
 - (2) Designation and composition of the Aircraft Accident/Incident Committee;
 - (3) Initial notification, investigation and final reporting of aircraft incidents and accidents and other occurrences in the operation of aircraft, when they involve civil aircraft of the Sultanate registration and foreign civil aircraft within the airspace of the Sultanate.
 - (4) Entitlement and participation of accredited representative;
 - (5) Air Operators consideration regarding incident/accident;
 - (6) Accident prevention measures.

CAR 13.005 Definitions

For the purpose of CAR-13 the following definitions shall apply:

"Accident" An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

- (a) a person is fatally or seriously injured as a result of:
 - (1) being in the aircraft, or
 - (2) direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
 - (3) direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
- (a) the aircraft sustains damage or structural failure which:
 - (1) adversely affects the structural strength, performance or flight characteristics of the aircraft, and would normally require major repair or replacement of the affected

component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or

c) the aircraft is missing or is completely inaccessible.

"Accredited representative" means a person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State.

"Adviser" is a person appointed by a State, on the basis of his or her qualification, for the purpose of assisting its accredited representative in an investigation.

"Aircraft" is any machine that can derive support in the atmosphere from the reaction of the air other than the reactions of the air against the earth's surface.

"Causes" are actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

"Civil Aircraft" means any aircraft registered in an ICAO Contracting State.

"Charter" means the powers vested upon the OTSD through civil laws and regulations.

"Committee" means the body established to investigate the accident or incident (see Investigation Committee)

"Contracting State" means any State which is party to the Chicago Convention.

"Contributing factors" Actions, omissions, events, conditions, or a combination thereof, which, if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification of contributing factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

"Fatal injury" means any injury which results in death within 30 days of the date of the accident.

"Flight recorder" is any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

"Incident" means an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

"Inspector" A person appointed as an Inspector of Air Accidents (who may be an appointed staff member of the OTSD, a seconded inspector from PACA or from another State) under this Regulation and any other regulations promulgated by the OTSD.

"Investigation" a process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusion, including the determination of causes and, when appropriate, the making of safety recommendations.

"Investigation Committee" Appointed by the Oman Transport Safety Department (OTSD) and empowered to conduct an aircraft accident/incident investigation under the control of the investigator-in-charge.

"Investigator in Charge (IIC)" a person charged, on the basis of his or her qualification, with the responsibility for the organization, conduct and control of an investigation. This person shall be

designated by the OTSD to direct the investigative activity of the Investigation Committee and over whose signature any required report is issued.

"Maximum mass" is maximum certificated take-off mass.

"Minor Incident" involves circumstances indicating that an incident has occurred resulting in no injuries to persons, nor damage to property or operating equipment, however, investigation of the root cause may or will prevent reoccurrence in the future.

"Operator" means a person, organization or enterprise engaged in or offering to engage in an aircraft operation.

"Oman Transport Safety Department (OTSD)" An independent department within the Ministry of Transport and Communications empowered to investigate all accidents and incidents in the land, sea and air areas of transportation and operations.

"Public Authority for Civil Aviation" A sector of the Ministry of Transport and Communications empowered to provide surveillance and regulatory oversight of aviation activities within Oman.

"Preliminary report" is the report used for the prompt dissemination of data obtained during the early stages of the investigation.

"Safety recommendation" A proposal of an accident investigation authority based on information derived from an investigation, made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident. In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies.

"Serious incident" is an incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

"Serious injury" means an injury, which is sustained by a person in an accident and which:

- (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received;
- (2) Causes severe hemorrhages, nerve, muscle, or tendon damage;
- (3) Results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
- (4) Involves second or third degree burns, or any burns affecting more than 5 percent of the body surface;
- (5) Involves injury to any internal organ; or
- (6) Involves verified exposure to infectious substances or injurious radiation.

"State of Design" is the State having jurisdiction over the organization responsible for the type design.

"State of Manufacture" is the State having jurisdiction over the organization responsible for the final assembly of the aircraft.

"State of Occurrence" is the State in the territory of which an accident or incident occurs.

"State of Registry" is the State on whose register the aircraft is entered.

"State of the Operator" is the State in which the operators principal place of business is located or, if there is no such place of business, the operators permanent residence.

"State safety program" (SSP) An integrated set of regulations and activities aimed at improving safety.

"Substantial Damage" means damage or failure, which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. For the purposes of this Section, the following conditions are not considered "substantial damage":

- (1) for multi-engine aircraft: engine failure or damage limited to an engine if only one engine fails or is damaged,
- (2) bent fairings or cowlings, dented skin, small punctured holes in the skin or fabric,
- (3) ground damage to rotor or propeller blades, and
- (4) damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips.

Voluntary Reporting Scheme or **VRS** means the voluntary reporting scheme established under sub-regulation CAR-13.400 for reporting safety incidents.

SUBPART B — PROCEDURES

CAR 13.010 General

CAR 13.011 Objective of the Investigation

The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability.

CAR 13.015 Independence of Investigations

The Sultanate of Oman shall establish an accident investigation unit that is independent from the State aviation authorities and other entities that could interfere with the conduct or objectivity of an investigation.

CAR 13.020 Delegation of Authority

The Sultanate delegates the role and responsibilities pertaining to the investigation of aircraft accidents and incidents within the Sultanate of Oman or involving aircraft registered within the State or Oman is the registered State of the Operator. This unit shall be known as the Oman Transport Safety Department (OTSD).

CAR 13.025 Protection of evidence, custody and removal of aircraft

a) Responsibility of the OTSD:

The OTSD, as the State of Occurrence, shall take all reasonable measures to protect the evidence and to maintain safe custody of the aircraft and its contents for such a period as may be necessary for the purposes of an investigation. Protection of evidence shall include the preservation, by photographic or other means of any evidence, which might be removed, effaced, lost or destroyed. Safe custody shall include protection against further damage, access by unauthorized persons, pilfering and deterioration.

****Note:** The protection of flight recorder evidence requires that the recovery and handling of the recorder and its recordings be assigned only to qualified personnel.

b) Protection of Evidence.

- (1) When a reportable accident occurs in or over the Sultanate, no person other than an authorized person, shall have access to the aircraft involved in the accident and neither the aircraft nor its contents shall, except under the authority of the OTSD, be removed or otherwise interfered with.
- (2) the aircraft may be removed or interfered with so far as may be necessary for the purpose of:
 - (I) extricating persons or animals;
 - (II) removing any mail, valuables or dangerous goods carried by the aircraft;
 - (III) preventing destruction by fire or other cause;
 - (IV) preventing any danger or obstruction to the public, air navigation or other transport
 - (V) removing any other property from the aircraft under the supervision of an Inspector or with the agreement of an Inspector or of a Police Officer.

- (3) The OTSD or authorized person may order the owner, operator or hirer of the aircraft, or other person on whose behalf the commander was in command of the aircraft, as the case may be, to remove it to such place as he shall indicate.
- (4) Should the aircraft be wrecked on water, the aircraft or any of its contents may be removed to such extent as may be necessary for bringing it or them to a place of safety.
- (5) The owner or the operator of an aircraft involved in an accident or incident for which notification must be given is responsible for preserving to the extent possible records, including all recording mediums of flight, maintenance, and voice recorders pertaining to the operation and maintenance of the aircraft and to the airmen, until the OTSD takes custody thereof and a release is granted.
- (6) The OTSD or authorized person may, in the absence of the owner, operator or hirer of the aircraft or other person referred to therein or in the event of the non-compliance with the order given by him under (5) above, remove the aircraft and in such case, all expenses incurred in removing the aircraft shall be paid by and recoverable from the owner, operator or hirer of the aircraft, or other person on whose behalf the commander was in command of the aircraft
- (7) Where it is necessary to move aircraft wreckage or cargo, sketches, descriptive notes, and photographs shall be made, if possible, of the original position and condition of the wreckage and any significant impact marks.
- (8) The OTSD or an authorized person shall not be liable for any loss or damage occurring to any aircraft during its removal under these regulations or in the course of any subsequent investigation or otherwise.
- (9) The operator, owner or hirer of an aircraft involved in an accident or incident shall retain all records, reports, internal documents, and memoranda dealing with the accident or incident, until authorized by the OTSD to the contrary.

c) Requests from State of Registry/Operator/Design or Manufacturer.

If a request is received from the State of Registry, the State of the Operator, the State of Design or the State of Manufacturer that the aircraft, its contents, any other evidence remain undisturbed pending inspection by an accredited representative of the requesting State, the OTSD as the State of Occurrence, shall take all necessary steps to comply with such request, so far as this is reasonably practicable and compatible with the proper conduct of the investigation; provided that the aircraft may be moved to the extent necessary to extricate persons, animals, mails and valuables, to prevent destruction by fire or other causes, or to eliminate any danger or obstruction to air navigation, to other transport or to the public, and provided that it does not result in undue delay in returning the aircraft to service where this is practicable.

d) Release from Custody.

Subject to the provisions of paragraphs (b) and (c) above, the OTSD as the State of Occurrence, shall release custody of the aircraft, its contents or any parts thereof as soon as they are no longer required in the investigation, to any person or persons duly designated by the State of Registry or the State of the Operator, as applicable. For this purpose the OTSD shall facilitate access to the aircraft, its contents, or any parts thereof, provided that, if the aircraft, its contents or any parts thereof, lie in an area within which the OTSD finds it impracticable to grant such access, it shall itself effect removal to a point where access can be given.

CAR 13.030 – Notification

CAR 13.031 Accident/Incident Notification

The initial notification regarding accident or serious incident shall be done through any of the following:

- (a) The pilot in command of the aircraft involved at the time of the accident, or if they be killed or incapacitated, then the operator of the aircraft;
- (b) In the case of an accident occurring on or adjacent to a Sultanate airport, the airport authority;
- (c) Nearest Air Traffic Control unit;
- (d) Rescue Coordination Centre of the Sultanate (RCC);
- (e) Directly to the Oman Transport Safety Department (OTSD);
- (f) Directly through the Public Authority for Civil Aviation (PACA); or
- (g) Through local or administrative units of the government of Oman (Wali), or security agencies.

CAR 13.035 Reportable Occurrences

The OTSD shall be notified when:

- (a) An aircraft accident or any of the incidents, as listed below, occurs;
 - (1) Flight control system malfunction or failure.
 - (2) Inability of any required flight crewmember to perform his normal flight duties because of injury or illness.
 - (3) Failure of structural components of a turbine engine excluding compressor and turbine blades and vanes.
 - (4) In-flight fire.
 - (5) Aircraft collide in flight.
 - (6) For large multi-engine aircraft (more than 5700 kg maximum certificated take-off mass):
 - i. in-flight failure of electrical systems which requires the sustained use of an emergency bus powered by a back-up source such as a battery, auxiliary power unit, or air-driven generator to retain flight control or essential instruments;
 - ii. in-flight failure of hydraulic systems that result in sustained reliance on the sole remaining hydraulic or mechanical system for movement of flight control surfaces;
 - iii. sustained loss of the power or thrust produced by two or more engines;
 - iv. evacuation of an aircraft in which an emergency egress system is utilized.
 - (7) Significant incidents involving:
 - i. the transport of dangerous goods;
 - ii. breaches of security;
 - iii. the carriage of important persons;
 - iv. a serious maintenance event and/or failure;
 - v. aircraft departure of taxiways/runways;
 - vi. taxi accidents/collisions;
 - vii. flight crew incapacitation;
 - viii. decompression resulting in emergency descent;
 - ix. ATC incidents involving near collisions;
 - x. serious wind-shear phenomenon;
 - xi. passenger offences affecting safety; and

- xii. any other factor affecting or derogating safety.
- xiii. an aircraft is overdue and is believed to have been involved in an incident.

****Note:** *Further examples of Mandatory Occurrence Reports can be found in Appendix B of this regulation*

CAR 13.040 Reporting of Accidents / Incidents and Overdue Aircraft

(a) Reports

- (1) The operator of an aircraft shall file a report on the appropriate OTSD Form (see Appendix D) within 72 hours after an accident/incident or after the 7th day if an overdue aircraft is still missing.
- (2) A report on an incident for which notification is required by CAR-13.035 or Appendix B, shall be filed within 72 hours of the occurrence of the incident utilizing OTSD appropriate form or operator equivalent.
- (b) Crew Member Statement. Each crewmember, if physically able at the time when the report is submitted, shall attach a statement setting forth the facts, conditions, and circumstances relating to the accident or incident as they appear to them. If the crewmember is incapacitated, they shall submit the statement as soon as they are physically able.
- (c) Where to file the Reports. The operator of an aircraft shall file any report required by this Section with the OTSD Aircraft Incident/Accident Investigation Section within the Sultanate of Oman.

CAR 13.050 – Responsibilities

CAR 13.051 Responsibility of the OTSD as the State of Occurrence

- (a) Forwarding. Upon receipt of the notification concerning accident or serious incident in the Sultanate, the OTSD is responsible for initial organization of the aircraft accident/incident investigation and shall notify the Minister and other concerned parties. The OTSD as the Independent Investigation Unit of the State of Occurrence shall forward a notification of an accident or serious incident with a minimum of delay and by the most suitable and quickest means available to:
 - (1) the State of Registry;
 - (2) the State of the Operator;
 - (3) the State of Design;
 - (4) the State of Manufacture; and
 - (5) the International Civil Aviation Organization (ICAO), when the aircraft involved is of a maximum mass of over 2,250 kg or is a turbojet-powered aeroplane.
- (b) However, when the Sultanate is not aware of a serious incident, the State of Registry or the State of the Operator, as appropriate, shall forward a notification of such an incident to the State of Design, the State of Manufacture and the Sultanate.
- (c) Format and Contents of Notification. The notification shall be in plain English and contain as much of the following information as is readily available, but its dispatch shall not be delayed due to lack of complete information:
 - (1) For accident the identifying abbreviation ACCID, for serious incidents INCID;
 - (2) Type, manufacturer, nationality, registration marks and serial number of the aircraft;

- (3) Name of owner, operator and hirer, if any, of the aircraft;
 - (4) qualification of the pilot-in-command, and nationality of crew and passengers;
 - (5) date and time (local time or UTC) of the accident or serious incident;
 - (6) last point of departure and point of intended landing of the aircraft;
 - (7) position of the aircraft with reference to some easily defined geographical point and latitude and longitude;
 - (8) number of crew and passengers; aboard, killed and seriously injured; others, killed and seriously injured;
 - (9) description of the accident or serious incident and the extent of damage to the aircraft so far as is known;
 - (10) an indication to what extent the investigation will be conducted or is proposed to be delegated by the State of Occurrence;
 - (11) physical characteristics of the accident or serious incident area, as well as an indication of access difficulties or special requirements to reach the site;
 - (12) identification of the originating authority and means to contact the investigator-in-charge and the accident investigation authority of the State of Occurrence at any time; and
 - (13) presence and description of dangerous goods on board the aircraft.
- (d) Additional information. As soon as possible to do so, the OTSD, as the State of Occurrence shall dispatch the details omitted from the notification as well as any other known relevant information.

CAR 13.055 Responsibility of the Contracting Civil Aviation Authority as the State of Registry / Operator / Design or Manufacturer

The following applies when the other Contracting State is the State of Registry, State of Operator, State of Design or State of Manufacturer in case of an Accident or serious Incident of an aircraft.

- (a) Information – Participation. Upon receipt of the notification, the Contracting Civil Aviation Authority (CCAA), as the State of Registry or the State of the Operator or the State of Design or the State of Manufacturer shall, as soon as possible, provide the State of Occurrence with any relevant information available to them regarding the aircraft and flight crew involved in the accident or serious incident. PACA (and or the OTSD) shall also inform the State of Occurrence whether the Oman Transport Safety Department (OTSD) intends to appoint an accredited representative and if such an accredited representative is appointed, the name and contact details; as well as the expected date of arrival if the accredited representative will travel to the State of Occurrence.
- (b) Forwarding. When the State of Occurrence is not aware of a serious incident, the CCAA as the State of Registry or the State of the Operator; as appropriate, shall forward a notification of such incident to the State of Design, the State of Manufacturer, and the State of Occurrence.

CAR 13.060 Accidents or Serious Incidents in the territory of a non-contracting State or outside the territory of any State

- (a) Responsibility of OTSD as State of Registry. When the OTSD, as the State of Registry, institutes the investigation of an accident, the OTSD shall forward a notification in accordance with CAR-13.035, with a minimum of delay, and by the most suitable and quickest means available to;
- (1) The State of Occurrence;

- (2) the State of the Operator;
- (3) the State of Design;
- (4) the State of Manufacturer; and
- (5) the International Civil Aviation Organization (ICAO), when the aircraft involved is of a maximum mass of over 2,250 kg or is a turbojet-powered aeroplane.

(b) Responsibility of CCAA as State of the Operator, Design or Manufacturer

- (1) Upon receipt of the notification the CCAA shall, upon request, provide the State of Registry with any relevant information available to them regarding the aircraft and flight crew involved in the accident or serious incident. The CCAA shall also inform the State of Registry whether it intends appoint an accredited representative, and if such an accredited representative is appointed, the name and contact details, as well as the expected date of arrival if the accredited representative will be present at the investigation.
- (2) Upon receipt of any notification, the CCAA, as the State of the Operator, shall with minimum of delay and by the most suitable and quickest means available, provide the State of Registry the details of any dangerous goods on-board the aircraft.

CAR 13.065 Operator Responsibilities

The operator of an aircraft involved in an accident or incident for which notification must be given is responsible for preserving to the extent possible any aircraft wreckage, cargo, and mail aboard the aircraft and all records, including all recording data of flight, maintenance, and voice recorders, pertaining to the operation and maintenance of the aircraft and of the crew until the OTSD takes custody thereof or a release is granted.

The operator of an aircraft involved in an accident or incident shall retain all records, reports, internal documents, and memoranda dealing with the accident or incident, until authorized by the OTSD to the contrary.

The operator of any Omani registered aircraft, or any foreign aircraft shall immediately, and by the most expeditious means available, notify the OTSD (directly, via PACA or an ATC unit who will notify the OTSD) when an aircraft accident / incident occurs or any other occurrences which should be reported in accordance with the Mandatory Occurrence Reporting Scheme.

The operator of any civil aircraft or any foreign aircraft shall file a report in the form and manner prescribed by the OTSD within 72 hours after an accident/incident, as well if an overdue aircraft is still missing.

Each crewmember, if physically able at the time the report is submitted, shall attach a statement setting forth the facts, conditions, and circumstances relating to the accident or incident as they appear to them. If the crewmember is incapacitated, they shall submit the statement as soon as they are physically able.

The operator of an aircraft shall file any report with either the OTSD, PACA or the air traffic service unit (ATC) concerned.

All reports, mandatory or otherwise not filed directly to the OTSD shall be forwarded immediately to the on-duty OTSD officer for immediate evaluation.

SUBPART C – INVESTIGATION

CAR 13.070 Instituting and conducting of investigations as state of occurrence

The Sultanate, as State of Occurrence shall institute an investigation into the circumstances of a serious incident when the aircraft is of a maximum mass of over 2,250 kg. Such a State may delegate the whole or any part of the conducting of such investigation to another State or a regional accident investigation organization by mutual arrangement and consent. In any event, the State of Occurrence shall use every means to facilitate the investigation.

CAR 13.075 Accidents or serious incidents in the territory of a non-contracting State

When the accident or serious incident has occurred in the territory of a non-Contracting State, which does not intend to conduct an investigation in accordance with ICAO Annex 13, the OTSD, as the State of Registry or State of the Operator, should endeavour to institute and conduct an investigation in co-operation with the State of Occurrence but, failing such co-operation, should itself conduct an investigation with such information as is available.

CAR 13.080 Accidents or serious incidents outside the territory of any State

- (a) When the location of the accident or the serious incident cannot definitely be established as being in the territory of any State, the OTSD, as the State of Registry shall institute and conduct an investigation of the accident or serious incident. However, it may delegate the whole or any part of the investigation to another State by mutual arrangement and consent.
- (b) If the scene of an accident in international waters is in the vicinity of the State territory of occurrence, the OTSD shall provide all possible assistance as may be available, and shall, likewise, respond to requests by the State of Registry.
- (c) If the State of Registry is a non-Contracting State which does not intend to conduct an investigation in accordance with Annex 13, the State of the Operator or, failing that, the State of Design or the State of Manufacture should endeavour to institute and conduct an investigation. However, such a State may delegate the whole or any part of the investigation to another State by mutual arrangement and consent.

CAR 13.085 Organisation and conduct of the investigation

Responsibility for Investigation

In conformity with the Chicago Convention on International Civil Aviation and the Civil Aviation Law (Oman), it is the obligation of the State in which an aircraft accident occurs (the State of Occurrence), to institute an inquiry into the circumstances of the accident. In the case of the accident, the Director of the OTSD shall appoint an accident investigation Committee and an investigator in charge on behalf of the Committee,

In the case of the serious incident or incident, the OTSD shall appoint an incident investigation Committee and an Investigator in Charge (IIC). The report is submitted by the Committee for aircraft accident/incident investigation, shall be forwarded to the OTSD Board for review.

In the case of an accident or incident in a foreign state involving civil aircraft of The Sultanate registry, where the foreign state is a signatory to Annex 13 of the Chicago Convention, the State of Occurrence is responsible for the investigation, but The Sultanate as a State of Registry or a State of Operator shall

be entitled to appoint an accredited representative to participate in the investigation. An appointment of an accredited representative is competence of the OTSD.

If the accident or incident occurs in a foreign state not bound by the provisions of ICAO Annex 13 to the Chicago Convention, which does not intend to conduct an investigation in accordance with ICAO Annex 13, the State of Registry or the State of Operator, in this instance the Sultanate, should institute and conduct an investigation in cooperation with the State of Occurrence, but failing such cooperation, the OTSD should itself conduct an investigation.

When the location of the accident or the serious incident cannot definitely be established as being in the territory of any State, the Sultanate as the State of Registry or the State of Operator shall institute and conduct any necessary investigation of the accident or serious incident

Organization and Conduct of the Investigation

In accordance with the provisions of ICAO Annex 13 of the Chicago Convention, an accident investigation Committee shall have independence in the conduct of the investigation and have unrestricted authority over its conduct. The investigation shall include:

- (a) the gathering, recording and analysis of all relevant information on that accident or incident;
- (b) the protection of certain accident and incident investigation records in accordance with CAR-13.150;
- (c) if appropriate, the issuance of safety recommendations;
- (d) if possible, the determination of the causes and/or contributing factors; and
- (e) the completion of the Final Report.

Where feasible, the scene of the accident shall be visited, the wreckage examined and statements taken from witnesses. The extent of the investigation and the procedure to be followed in carrying out such an investigation shall be determined by the accident investigation authority, depending on the lessons it expects to draw from the investigation for the improvement of safety.

The investigator in charge (IIC) and the members of the Committee should have their investigation field kits and essential personal items packed and ready, so that they can proceed without delay to the accident site (**** NOTE - List of investigation field kit could be found in Manual of Aircraft Accident and Incident Investigation - Organization and Planning – Doc 9756 AN/965).**

Any investigation conducted in accordance with the provisions of this regulation shall be separate from any judicial or administrative proceedings to apportion blame or liability (CAR-13.150 paragraph (e))

CAR 13.090 Investigation Committee

- (a) For the purpose of carrying out an investigation into the circumstances and causes of accidents to which these Regulations apply, the OTSD shall convene an Accident Investigation Committee immediately to initiate the investigation. Composition and size of the investigation Committee shall be determined by complexity of the aircraft accident or incident and by proposal of the investigator-in-charge.
- (b) When an accident or incident involves a civil and a military aircraft, the Accident Investigation Committee shall be composed of Investigators appointed by the OTSD, those of the relevant Military Aviation Authority and the State Security. The committee shall be under the direction of the Investigator-in-charge.

- (c) The accident/incident investigation Committee is conducted by the investigator-in-charge. The accident/incident investigation Committee, if necessary, should establish working groups composed of experts, which are not necessarily members of the Committee. The group Chairman is a member of the Committee and charged to direct the group.
- (d) The accident investigation Committee should have ready access to sufficient funds to enable investigation to be properly conducted. It is responsibility of the Ministry and the OTSD to make available those funds.
- (e) Aircraft accident/incident investigation is a specialized task, which should only be undertaken by qualified investigators. Within the OTSD appropriately qualified personnel should be identified (list of experts for aircraft of those skills). The investigator-in-charge and members of the Committee should have practical background in aviation acquired by working as professional pilots, aeronautical engineers, aircraft maintenance engineers or working in some specialized areas of aviation including management, operations, airworthiness, air traffic services, meteorology and human factors.
- (f) The working groups, pertaining to complexity of accident, could include:
 - (1) For investigation of flight operations;
 - (2) For investigation of aircraft structure;
 - (3) For investigation of power plants;
 - (4) For investigation of aircraft systems;
 - (5) For investigation of flight recorders;
 - (6) For investigation of maintenance and aircraft records;
 - (7) For investigation of air traffic services;
 - (8) For investigation of meteorology;
 - (9) For investigation of human factors;
 - (10) For collection of witnesses reports;
 - (11) For investigation of search and rescue and firefighting services.
- (g) The working groups produce a report with conclusions concerning their investigation areas and forward it to the accident/incident investigation Committee. Those reports are part of the Committee final report. After ending the investigation at the accident site, the accident/incident investigation Committee continues to work in sessions.
- (h) The investigator-in-charge and members of the accident/incident investigation Committee sign the final report, but the IIC shall certify every page of the report by appending their initials.
- (i) Any member of the accident/incident investigation Committee, who disagree with other Committee members in regard with conclusion or other parts of a final report, has a right to express their disagreement about the accident.
- (j) Any member of the accident/incident investigation Committee, who expresses their disagreement, is obliged to explain in writing facts and arguments on which their opinion is based. That statement is integral part of a Committee work statement to the OTSD.
- (k) The accident/incident investigation Committee correspondence, working group's reports, witnesses' reports, experts' reports, Committee meetings minutes, sketches, photographs and other attachments, are stamped with a particular Committee seal.
- (l) The documents pertinent to the analysis of the accident or incident shall be included in the final report and other records and complete investigation Committee's documentation should be kept within the OTSD archives.

- (m) If, after the investigation has been closed, new and significant evidence becomes available in relation to accident, the OTSD shall re-open it. In the event that OTSD did not institute an investigation, other States shall first obtain the consent of the OTSD before they institute any investigation.
- (n) The Sultanate shall take all reasonable measures to protect the evidence and to maintain safe custody of the aircraft and its contents for such a period as may be necessary for the purpose of an investigation. Protection of evidence shall include the preservation, by photographic or other means of any evidence, which might be removed, effaced, lost or destroyed. Safe custody shall include protection against further damage, access by unauthorized persons, robbery and deterioration.
- (o) Until the arrival of the investigator-in-charge and the investigation Committee, the wreckage shall not be disturbed except in the extent necessary to rescue survivors and extrication of victims from aircraft wreckage. All disturbed parts of the wreckage should be kept at the site of accident. The aircraft may be moved to the extent necessary:
 - (1) To remove persons, animals, mail and valuables,
 - (2) To prevent destruction by fire or other causes, protect the wreckage from further damage; or
 - (3) To eliminate any danger or obstruction to air navigation, to other transport or to the public.

Where it is necessary to move aircraft wreckage, mail, or cargo, then sketches, descriptive notes, and photographs shall be made, if possible, of the original positions and condition of the wreckage and any significant impact marks.

CAR 13.095 Investigator- in-Charge – Designation (IIC)

- (a) The OTSD shall designate the Investigator-in-charge of the investigation and shall initiate the investigation immediately.
- (b) The Investigator-in-charge shall determine whether or not an investigation shall be carried out into any accident or incident to which any Regulations may apply and the form of the investigation. He may himself carry out, or may cause an Investigator(s) to carry out, an investigation of any such accident.
- (c) Without any prejudice to the power of an Investigator to seek such advice or assistance as he may deem necessary in making an investigation, the OTSD may at the request of the Investigator-in-charge, appoint additional experts from whatever source, to assist the Investigator in a particular investigation and such person(s) shall for the purpose of so doing have such of the powers of an Investigator under any Regulations, as may be specified in their appointment.
- (d) The OTSD shall entitle the State of Registry, the State of Operator, the State of Design and the State of Manufacture to appoint an accredited representative to participate in the investigation.
- (e) Each State shall inform the Sultanate whether it intends to appoint an accredited representative and if such a representative is appointed, the name and contact details.
- (f) In the case that aforementioned States did not appoint representatives, the OTSD should invite the operator to participate in the investigation.
- (g) Any State which on request provides information, facilities or experts shall be entitled to appoint an accredited representative to participate in the investigation.

- (h) A State which has a special interest in an accident by virtue of fatalities or serious injuries to its citizens, shall, upon making a request to do so, be permitted to appoint an expert.
- (i) Participants in the investigation organization shall be responsive to the direction of investigator in charge and may lose participation status if they do not comply with their appointed obligations or instructions, or if they conduct themselves in a manner prejudicial to the investigation.
- (j) An accredited representative, including his advisers, shall confer entitlement to participate in all aspects of the investigation, under the authorization of the investigator in charge, in particular to:
 - (1) Visit the scene of the accident;
 - (2) Examine the wreckage;
 - (3) Obtain witness information and suggest areas of questioning;
 - (4) Have full access to all relevant evidence as soon as possible;
 - (5) Receive copies of all pertinent documents;
 - (6) Participate in read-outs of recorded media;
 - (7) Participate in all off-scene investigative activities such as component examinations, technical briefings, tests and simulations;
 - (8) Participate in all Committee meetings including deliberations related to analysis, findings,
 - (9) causes and safety recommendations;
 - (10) Make submissions in respect of the various elements of the investigation.
- (k) With purpose of compliance with aforementioned requirements, and to assist in ensuring complete understanding of the requirements and limitations of participation status, the same shall sign a statement containing these requirements and limitations immediately upon attaining participation status. Failure to timely sign that statement may result in loss of status as a participant. The statement contents shall be determined by the investigator in charge.

CAR 13.100 Investigator- in-Charge – Access and control

- (a) The investigator in charge shall have unrestricted access to the wreckage and all relevant material, including flight recorders and ATS records, and shall have unrestricted control over it, so that a detailed examination can be made without delay by authorized personnel participating in the investigation.
- (b) The investigator-in-charge organizes, conducts, controls, and manages the field phase of the investigation, regardless of what other representatives of the State are also on-scene at the accident or incident site.
- (c) The IIC has the responsibility and authority to supervise and coordinate all resources and activities of all personnel, both government and civilians, involved in the on-site investigation.
- (d) Upon presentation of appropriate identification, an IIC is authorized to enter any property where an accident/incident subject to the Omani jurisdiction has occurred, or wreckage from any such accident/incident is located, and does all things considered necessary for proper investigation.
- (e) Upon demand of an IIC and presentation of identification, any Omani government agency, or person having possession or control of any transportation vehicle or component thereof, any facility, equipment, process or controls relevant to the investigation, or any pertinent records

or memoranda, including all files, hospital records, and correspondence then or thereafter existing, and kept or required to be kept, shall forthwith permit inspection, photographing, or copying thereof by such authorized person for the purpose of investigating an accident or incident, or preparing a study, or related to any special investigation pertaining to safety or the prevention of accidents.

- (f) An IIC may question any person having knowledge relevant to an accident/incident, study, or special investigation. The IIC also have exclusive authority, on behalf of the OTSD, to decide the way in which any testing will be conducted, including decisions on the person that will conduct the test, the type of test that will be conducted, and any individual who will witness the test.
- (g) The IIC, upon presenting appropriate identification, is authorized to examine and test to the extent necessary any civil or public aircraft, aircraft engines, propellers, appliances, or property aboard such aircraft involved in an accident in commercial air transport.

CAR 13.105 Furnishing of information

Where an accident to which these regulations apply occurs, whether in or over the State or elsewhere, the owner, operator, pilot in command, hirer or any other person involved in the loading or operation of the aircraft shall, if so required by notice in writing given to him by the Investigator-in-charge, send to the Investigator-in-charge, within such time as may be specified in the notice, such information as is in his possession or control with respect to the accident and in such form as the Investigator-in-charge may require.

CAR 13.110 Powers of investigators

For the purpose of the investigation of any accident or incident to which any Regulations apply, or any inquiries undertaken with a view to determining whether any such investigation should be held, an Investigator shall have power:

- (a) by summons, under their Charter, to call before them and examine all persons as they deem fit, to require such persons to answer any questions or furnish any information or procure copies of any documents, and articles which the Investigator may consider relevant and to retain copies of any such books, papers, documents and articles until the completion of the investigation, or, as the case may be, it is determined that an investigation shall not be carried out;
- (b) to take statements from all such persons as they deem fit and to require any such person to make and sign a declaration of the truth of the statements made by them;
- (c) to have access to and examine any aircraft involved in any such accident and the place where the accident occurred and to require any such aircraft or any part of equipment thereof to be preserved unaltered pending investigation;
- (d) to examine, remove, test and take measures for the preservation of, or otherwise deal with, the aircraft involved in the accident, or, where it appears to the Investigator to be necessary for the purposes of such investigation, any other aircraft, or any part of such aircraft or anything contained therein;
- (e) on production, if required, of his credentials, to enter and inspect any place, building or aircraft, the entry or inspection whereof appears to the Investigator to be necessary for the purpose of any such investigation except that an Investigator shall not have power to enter any premises which at the time are being used as a dwelling;

- (f) to take such measures for the preservation of evidence as they consider appropriate.

CAR 13.115 Obstructions of investigations

- (a) The OTSD, in the exercising of any powers or duties granted by the regulations governing the powers to investigate.
- (b) A person shall not, without reasonable excuse, fail to comply with any summons or requisition of an Investigator conducting an investigation or undertaking any inquiries with a view to determining whether any investigation should be held under the powers and regulations granted to the OTSD.

CAR 13.120 Form and conduct of investigations

- (a) The extent of investigations and the procedure to be followed in carrying out investigations required or authorised under the OTSD Regulations shall be determined by the Senior Investigator in Charge (IIC) taking account of the purpose described in CAR-13.015, (Protection of evidence, custody and removal of aircraft); the principles and objectives of the OTSD regulations and the lessons they expect to draw from the accident or incident for the improvement of safety.
- (b) Public notice that a formal investigation is taking place shall be given in such a manner as the Investigator-in-charge may decide and shall invite any persons who desire to make representations concerning the circumstances or causes of the accident, to do so in writing within the time to be specified in the notice.
- (c) All investigations shall be held in private.
- (d) Where it appears to the Investigator in the course of any investigation that in order to resolve any conflict of evidence or that for any other reason it is expedient to do so, they may permit any person to appear before them and to call evidence and examine witnesses.
- (e) The Investigator-in-charge, in co-ordination with the Accident Investigation Committee, may determine that any investigation being carried out into an accident shall be discontinued. In the event of a formal investigation being discontinued no report shall be made thereon to the OTSD. However, public notice should be given, in such a manner as the Investigator-in-charge may determine, that the investigation has been discontinued.
- (f) Following the discontinuance of any investigation, the Investigator-in-charge shall submit to the OTSD, such information as they consider desirable in the interest of the avoidance of accidents in the future.

CAR 13.125 Flight recorders

- (a) The OTSD, when conducting the investigation, shall arrange for the readout of the flight recorders without delay. Effective use shall be made of flight recorders in the investigation of all accidents and incidents.
- (b) In the event that the OTSD does not have adequate facilities to read out the flight recorders, it shall use the facilities made available to it by other states, giving consideration to the following:
 - (1) the capabilities of the readout facility;
 - (2) the timeliness of the readout; and
 - (3) the location of the read out facility.

CAR 13.130 Autopsy examinations

- (a) The OTSD, when conducting the investigation into a fatal accident, shall arrange for complete autopsy examination of fatally injured flight crew and, subject to the particular circumstances, of fatally injured passengers and cabin crew, by a pathologist, preferably experienced in accident investigation. These examinations shall be expeditious and complete.
- (b) The investigator-in-charge is authorized to obtain a copy of the report of autopsy performed on any person who dies as a result of having been involved in an aircraft accident within the jurisdiction of the Sultanate.
- (c) The investigator-in-charge, on behalf of the OTSD, may order an autopsy or seek other tests of such persons as may be necessary to the investigation, provided that to the extent consistent with the needs of the accident investigation.
- (d) The investigator-in-charge, when appropriate, should arrange for medical examination of the crew, passengers and involved aviation personnel.

CAR 13.135 Medical examinations

- (a) When the OTSD is conducting the investigation it shall arrange for medical examination of the crew, passengers and involved aviation personnel, by a physician, preferably experienced in accident investigation. These examinations should be expeditious.
- (b) Such examinations may also determine whether the level of physical and psychological fitness of flight crew and other personnel directly involved in the occurrence is sufficient for them to contribute to the investigation.

CAR 13.140 Co-ordination with other authorities

- (a) At the site of accident or serious incident, the accident investigation Committee shall cooperate with other authorities, particularly with judicial authority, search and rescue service, police, coroner's office, medical personnel, airport authority, firefighting service, and other military and civil organizations.
- (b) Particular attention shall be given to evidence, which requires prompt recording and analysis for the investigation to be successful, such as the examination and identification of victims, readouts of flight recorder recordings and ATS recordings.
- (c) For the purpose of creating adequate conditions and in achieving good cooperation with other authorities, the OTSD is obliged to provide necessary working conditions for the investigator-in-charge and the accident/incident Committee.

CAR 13.145 Informing security or judicial authorities

- (a) If, in the course of an investigation, it becomes known, or it is suspected, that an act of unlawful interference was involved, the Investigator-in-charge shall immediately initiate action to ensure that the aviation security authorities of the State(s) concerned are so informed.
- (b) If the Investigator-in-charge finds evidence or suspects that the accident or incident was a result of a criminal act, he shall refer the matter to the competent and relevant judicial authorities of the State(s) concerned with a view to the institution of necessary legal proceedings.

CAR 13.150 Disclosure of records

The OTSD, when conducting the investigation into an accident or incident, shall not make the following records available for purposes other than accident or incident investigation, unless the appropriate authority for the administration of justice in that State determines that their disclosure outweighs the adverse domestic and international impact such action may have on that or any future investigations:

- (a) cockpit voice recordings and airborne image recordings and any transcripts from such recordings; and
- (b) records in the custody or control of the accident investigation authority being:
 - (1) all statements taken from persons by the investigation authorities in the course of their investigation;
 - (2) all communications including cockpit voice recordings and transcripts from such recordings between persons having been involved in the operation of the aircraft;
 - (3) medical or private information regarding persons involved in the accident or incident;
 - (4) recordings and transcripts of recordings from air traffic control units; and
 - (5) analysis of and opinions about information, including flight recorder information, made by the accident investigation authority and accredited representatives in relation to the accident or incident; and.
- (c) These records shall be included in the Final Report or its appendices only when pertinent to the analysis of the accident or incident. Parts of the records not relevant to the analysis shall not be disclosed.
- (d) The names of the persons involved in the accident shall not be disclosed to the public by the accident investigating unit.
- (e) Any other investigation conducted by other agencies for the purpose of determining the party at fault or the civil or criminal liability shall be conducted without reference to any findings determined by the investigating unit.
- (f) The OTSD shall ensure that requests for records in the custody or control of the accident investigation authority are directed to the original source of the information, where available.
- (g) The OTSD shall take measures to ensure that audio content of cockpit voice recordings as well as image and audio content of airborne image recordings are not disclosed to the public.

CAR 13.155 Re-opening of investigations

- (a) If, after the OTSD investigation has been closed;
 - (1) new and significant evidence became available or
 - (2) for any other reason there are grounds for suspecting that the reputation of any person has been unfairly and adversely affected, the OTSD, if it conducted the investigation, shall re-open it. However, when the State, which conducted the investigation did not institute it, that State shall first obtain the consent of the State, which instituted the investigation.
- (b) Any investigation reopened shall be subject to and conducted in accordance with the provisions of these Regulations relating to a formal investigation thereof.

CAR 13.160 Information — Accidents and incidents

Responsibility of any other State;

- (a) Any State shall, on request from the OTSD conducting the investigation of an accident or an incident, provide that State with all the relevant information available to it.

- (b) Any State, the facilities or services of which have been, or would normally have been, used by an aircraft prior to an accident or an incident, and which has information pertinent to the investigation, shall provide such information to the State conducting the investigation.

Responsibility of the State of registry/operator;

- (c) Flight Recorders: When an aircraft involved in an accident or a serious incident lands in a State other than the State of Occurrence, the OTSD, as the State of Registry or the State of the Operator shall, on request from the State conducting the investigation, furnish the latter State with the flight recorder records and, if necessary, the associated flight recorders.
- (d) Organizational Information: The OTSD, as the State of Registry and/or the State of the Operator, on request from the State conducting the investigation, shall provide pertinent information on any organization whose activities may have directly or indirectly influenced the operation of the aircraft.

CAR 13.165 Participation in the investigation

- (a) Rights. The State of Registry, the State of the Operator, the State of Design and the State of Manufacturer shall each be entitled to appoint an accredited representative to participate in the investigation.
- (b) Operator – Advisor. The State of Registry, or the State of the Operator, shall appoint one or more advisers proposed by the operator to assist its accredited representative. When neither the State of Registry nor the State of the Operator appoints an accredited representative, the OTSD, as the State conducting the investigation should invite the operator to participate.
- (c) Obligations. When the State conducting an investigation of an accident to an aircraft of a maximum mass of over 2,250 kg specifically requests participation by the OTSD, as the State of Registry, the State of the Operator, the State of Design and the State of Manufacturer, the OTSD shall provide an accredited representative.

CAR 13.170 Participation of other States

- (a) Rights. Any State, which on request provides information, facilities or experts to the State conducting the investigation, shall be entitled to appoint an accredited representative to participate in the investigation.
- (b) Any State that provides an operational base for field investigations or, is involved in search and rescue or wreckage recovery operations, or is involved as a State of a code-share or alliance partner of the operator, may also be invited to appoint an accredited representative to participate in the investigation.

CAR 13.175 Entitlement of accredited representatives

- (a) Advisors.
 - (1) A State entitled to appoint an accredited representative shall also be entitled to appoint one or more advisers to assist the accredited representative in the investigation.
 - (2) Advisors assisting an accredited representative shall be permitted, under the accredited representative's supervision, to participate in the investigation to the extent necessary to enable the accredited representative to make his or her participation effective.

- (b) Participation. Participation in the investigation shall confer entitlement to participate in all aspects of the investigation, under the control of the Investigator-in-charge, in particular to;
- (1) visit the scene of the accident;
 - (2) examine the wreckage;
 - (3) obtain witness information and suggest areas of questioning;
 - (4) have full access to all relevant evidence as soon as possible;
 - (5) receive copies of all pertinent documents;
 - (6) participate in readouts of recorded media;
 - (7) participate in off-scene investigative activities such as component examinations, technical briefings, tests and simulations;
 - (8) participate in investigation progress meetings including deliberations related to analysis, findings, causes and safety recommendations; and
 - (9) make submissions in respect of the various elements of the investigation.
- (c) Limitations. However, participation of States other than the State of Registry, the State of the Operator, the State of Design and the State of Manufacturer may be limited to those matters, which entitled such states to participation under paragraph CAR 13.175 (a).
- (d) Obligations. The accredited representative and his or her advisers;
- (1) shall provide the State conducting the investigation with all relevant information available to them; and
 - (2) shall not divulge information on the progress and the findings of the investigation

CAR 13.180 Participation of States having suffered fatalities or serious injuries to its citizens

- (a) Rights and Entitlements. A State, which has a special interest in an accident, by virtue of fatalities or serious injuries to its citizens shall, upon making a request to do so, be permitted by the State conducting the investigation to appoint an expert who shall be entitled to:
- (1) visit the scene of the accident;
 - (2) have access to the relevant factual information which is approved for public release by the OTSD conducting the investigation, and information on the progress of the investigation;
 - (3) participate in the identification of the victims;
 - (4) assist in questioning surviving passengers who are citizens of the expert's State; and
 - (5) receive a copy of the Final Report.
- (b) This will not preclude the State from also assisting in the identification of victims and in meetings with survivors from that State.

CAR 13.185 Access to and Release of Wreckage, Records, Mail, and Cargo

- (a) Only the accident investigation personnel and persons authorized by the investigator-in-charge to participate in an investigation, examination or testing shall be permitted access to wreckage, records, mail, or cargo in the custody.

- (b) Wreckage, records, mail, and cargo in the custody shall be released when it is determined that the investigation Committee have no further need of such wreckage, mail, cargo, or records. This decision should be brought by the investigator-in-charge.

CAR 13.190 Cooperation with the Media

- (a) Release of information during the field investigation, particularly at the accident scene, shall be limited to factual developments, and shall be made only through a person designated by the OTSD in cooperation with Royal Oman Police. All information concerning the accident or incident obtained by any person or organization participating in the investigation shall be passed to the IIC through appropriate channels before being provided to any individual outside the investigation.
- (b) No information concerning the accident or incident may be released to any media or any person before initial release by the OTSD with prior consultation and approval of the IIC.

SUBPART D – FINAL REPORT

CAR 13.200 Consultation

- (a) The Final Report is the report of the investigator in charge or the investigation Committee. The report should cover in detail all relevant aspects of the investigation.
- (b) The OTSD shall send a copy of the draft Final Report to the State, which instituted the investigation and to all States that participated in the investigation, inviting their significant and substantiated comments on the Report as soon as possible. The draft Final Report of the investigation shall be sent for comments to:
 - (1) the State of Registry;
 - (2) the State of the Operator
 - (3) the State of Design;
 - (4) the State of Manufacturer.
 - (5) any State that participated in the investigation.
- (c) If the OTSD receives comments within sixty days of the date of the transmittal letter it shall either amend the draft Final Report to include the substance of the comments received, or if desired by the State that provided comments, append the comments to the Final Report. If the OTSD receives no comments within sixty days of the date of the first transmittal letter, it shall issue the Final Report to the recipient States unless an extension of that period has been agreed by the States concerned.

CAR 13.205 Recipients

The Final Report of the investigation of an accident shall be sent with a minimum of delay by the OTSD to:

- (a) the Minister;
- (b) the State of Registry;
- (c) the State of the Operator;
- (d) the State of Design;
- (e) the State of Manufacture;
- (f) the International Civil Aviation Organization (ICAO) for an aircraft having mass over 5,700 kg or is powered by jet turbine engines;
- (g) any State having suffered fatalities or serious injuries to its citizens; and
- (h) any State that provide relevant information, significant facilities or experts.

CAR 13.210 Release of Final Report

- (a) The OTSD shall not publish or give access to a draft report or any part thereof, or any document obtained during an investigation, without the express consent of the State which conducted the investigation, unless such reports or documents have already been published or released by that latter State.
- (b) The Final report should be released in the shortest time and, if possible, within twelve months of the date of occurrence. If report cannot be released within aforementioned period, the investigation Committee shall release an interim report on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues raised.

- (c) At any stage of the accident or incident the investigation Committee shall recommend any preventive action that it considers necessary to be taken to enhance aviation safety. Safety recommendation should be distributed within the State, to other State(s) and when ICAO documents are involved, to ICAO.

CAR 13.215 Publication of Reports

- (a) Public Access.
 - (1) The OTSD shall, unless in their opinion there are good reasons to the contrary, cause the Investigator-in-charge's report to be made public, wholly or in part, in such manner as they think appropriate.
 - (2) In the interest of accident prevention, the OTSD shall release the Final Report as soon as possible, within twelve months of the date of the occurrence.
- (b) Format. ICAO Annex 13, Appendix should be used for the format of the Final Report (see Appendix A, para 4, to CAR 13.215).

CAR 13.220 Safety Recommendations

- (a) At any stage of the investigation of an accident or incident, the OTSD, as the accident or incident investigation authority, shall recommend in formal dated correspondence to the appropriate authorities, including those in other States, any preventative action, which it considers necessary to be taken promptly to enhance aviation safety.
- (b) The OTSD conducting investigations of accidents or incidents, shall address, when appropriate, any safety recommendations arising out the formal dated correspondence of its investigations, to the accident investigation authorities of other State(s) concerned and, when ICAO documents are involved, to ICAO.

CAR 13.225 Action on Safety Recommendations

- (a) A State that receives safety recommendations shall inform the proposing State, within ninety (90) days of the date of the transmittal correspondence, of the preventive action taken or under consideration, or the reasons why no action will be taken.
- (b) These responses shall be recorded and a copy of such response action is to be appended to the investigation file.

SUBPART E – ADREP REPORTING

The ICAO ADREP database of accident and incident information is used to provide States with flight safety information and in order to assist them in their accident or incident investigation and preventions efforts.

CAR 13.300 Responsibility of the OTSD when conducting an investigation

(a) Accidents to aircraft over 2,250 kg

When the aircraft involved in an accident is of a maximum mass over 2,250 kg, the OTSD shall send the Preliminary Report to:

- (1) the State of Registry or the State of Occurrence, as appropriate;
- (2) the State of the Operator;
- (3) the State of Design;
- (4) the State of Manufacture;
- (5) any State that provided relevant information, significant facilities or experts; and
- (6) International Civil Aviation Organization;

(b) Accidents to aircraft of 2,250 kg or less

When an aircraft involved in an accident is of a maximum mass less than 2,250 kg, and when airworthiness or matters considered to be of interest to other States involved, the investigation Committee or the investigator in charge shall send the Preliminary Report to:

- (1) the State of Registry or the State of Occurrence, as appropriate;
- (2) the State of the Operator;
- (3) the State of Design;
- (4) the State of Manufacture;
- (5) any State that provide relevant information, significant facilities or experts.

(c) Dispatch

The Preliminary Report shall be sent by facsimile, e-mail, or airmail within thirty days of the date of the accident unless the Accident/Incident Data Report has been sent by that time. When matters directly affecting safety are involved, it shall be sent as soon as the information is available and by the most suitable and quickest means available.

(d) Language

Preliminary Report shall be prepared in English and Arabic.

**** NOTE: Examples of these reports can be found in the Manual of Aircraft Accident & Incident Investigation (ICAO Doc 9756-AN/965), Part 4.**

(e) Additional information

The OTSD when conducting the investigation shall, upon request, provide other States with pertinent information additional to that made available in the Accident/Incident Data Report (ADREP).

(f) Incidents to aircraft over 5,700 kg

If the OTSD conducts an investigation into an incident to an aircraft of a maximum mass of over 5,700 kg, the OTSD shall send, as soon as is practicable after the investigation, the Incident Data Report to the International Civil Aviation Organization.

***NOTE: The types of incidents, which are of main interest to ICAO for accident prevention studies are listed in Appendix B of this regulation.*

SUBPART F – ACCIDENT PREVENTION MEASURES

CAR 13.400 Incident Reporting Systems

- (a) A State Civil Aviation Authority (PACA) shall establish a Mandatory Occurrence Reporting (MOR) system to facilitate collection of information on actual or potential safety deficiencies, any accident, serious incident or incident within 72 hours from the time of occurrence.
- (b) Mandatory Occurrence Reports are obligatory. These reports will cover actions stated in Appendix B of this regulation and will cover such areas as follows:
 - (1) Aircraft Flight Operations
 - (2) Aircraft Technical
 - (3) Aircraft maintenance & Repair
 - (4) Ground services & Facilities
 - (5) Aerodromes
- (c) A State shall establish a voluntary incident reporting system to facilitate collection of information on actual or potential safety deficiencies that may not be captured by the mandatory occurrence reporting system. *This Voluntary Reporting System (VRS) will be established by the State Civil Aviation Authority (PACA).*
 - (1) A voluntary incident reporting system shall be non-punitive and afford protection to the sources of the information.
- (d) An operator shall ensure that the OTSD, will be informed and notified by the quickest means available of any accident or serious incident.

CAR 13.405 Database Systems and Analysis — Preventive actions

- (a) The State shall establish and maintain an accident and incident database to facilitate the effective analysis of information on actual or potential safety deficiencies obtained, including that from its incident reporting systems, and to determine any preventive actions required.
- (b) The database systems shall use standardized formats to facilitate data exchange.
- (c) The State should, following the identification of preventive actions required to address actual or potential safety deficiencies, implement these actions and establish a process to monitor implementation and effectiveness of the responses.
- (d) The State, in the analysis of the information contained in its database, identifies safety matters considered to be of interest to other States, that State should forward such safety information to them as soon as possible.
- (e) In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse source including safety studies. If safety recommendations are addressed to an organization in another State, they should also be transmitted to that State's investigation authority via the OTSD.
- (f) Exchange of safety information

States should promote the establishment of safety information sharing networks among all users of the aviation system and should facilitate the free exchange of information on actual and potential safety deficiencies.

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APPENDIX A – FORMAT OF THE FINAL REPORT

PURPOSE

The purpose of this format is to present the Final Report in a convenient and uniform manner.

Detailed guidance on completing each section of the Final Report is found in the ICAO Manual of Aircraft Accident and Incident Investigation (Doc 9756), Chapter 4.

FORMAT

Title. The Final Report begins with a title comprising: name of the operator; manufacturer, model, nationality and registration marks of the aircraft; place and date of the accident or incident.

Synopsis. Following the title is a synopsis describing briefly all relevant information regarding: notification of accident to national and foreign authorities; identification of the accident investigation authority and accredited representation; organization of the investigation; authority releasing the report and date of publication; and concluding with a brief résumé of the circumstances leading to the accident.

Body. The body of the Final Report comprises the following main headings:

- (1) Factual information
- (2) Analysis
- (3) Conclusions
- (4) Safety recommendations; each heading consisting of a number of subheadings as outlined in the following.
- (5) Appendices – Include as appropriate.

***Note — In preparing a Final Report, using this format, ensure that:*

- (a) all information relevant to an understanding of the factual information, analysis and conclusions is included under each appropriate heading;*
- (b) where information in respect of any of the items in (1) Factual information is not available, or is irrelevant to the circumstances leading to the accident, a note to this effect is included under the appropriate subheadings.*

1. FACTUAL INFORMATION

1.1 History of the flight. A brief narrative giving the following information:

- (a) Flight number, type of operation, last point of departure, time of departure (local time or UTC), point of intended landing.
- (b) Flight preparation, description of the flight and events leading to the accident, including reconstruction of the significant portion of the flight path, if appropriate.
- (c) Location (latitude, longitude, elevation), time of the accident (local time or UTC), whether day or night.

1.2 Injuries to persons. Completion of the following (in numbers):

- (a) Injuries
- (b) Crew
- (c) Passengers

- (d) Others
- (e) Fatal
- (f) Serious
- (g) Minor/None

***Note. — Fatal injuries include all deaths determined to be a direct result of injuries sustained in the accident. Serious injury is defined in Chapter 1 of Annex 13.*

1.3 Damage to aircraft. Brief statement of the damage sustained by aircraft in the accident (destroyed, substantially damaged, slightly damaged, no damage).

1.4 Other damage. Brief description of damage sustained by objects other than the aircraft.

1.5 Personnel information:

- (a) Pertinent information concerning each of the flight crewmembers including: age, validity of licenses, ratings, mandatory checks, flying experience (total and on type) and relevant information on duty time.
- (b) Brief statement of qualifications and experience of other crewmembers.
- (c) Pertinent information regarding other personnel, such as air traffic services, maintenance, etc., when relevant.

1.6 Aircraft information:

- (a) Brief statement on airworthiness and maintenance of the aircraft (indication of deficiencies known prior to and during the flight to be included, if having any bearing on the accident).
- (b) Brief statement on performance, if relevant, and whether the mass and centre of gravity were within the prescribed limits during the phase of operation related to the accident. (If not and if of any bearing on the accident, give details.)
- (c) Type of fuel used.

1.7 Meteorological information:

- (a) Brief statement on the meteorological conditions appropriate to the circumstances including both forecast and actual conditions, and the availability of meteorological information to the crew.
- (b) Natural light conditions at the time of the accident (sunlight, moonlight, twilight, etc.).

1.8 Aids to navigation. Pertinent information on navigation aids available, including landing aids such as ILS, MLS, NDB, PAR, VOR, visual ground aids, etc., and their effectiveness at the time.

1.9 Communications. Pertinent information on aeronautical mobile and fixed service communications and their effectiveness.

1.10 Aerodrome information. Pertinent information associated with the aerodrome, its facilities and condition, or with the take-off or landing area if other than an aerodrome.

1.11 Flight recorders. Location of the flight recorder installations in the aircraft, their condition on recovery and pertinent data available therefrom.

1.12 Wreckage and impact information. General information on the site of the accident and the distribution pattern of the wreckage; detected material failures or component malfunctions. Details concerning the location and state of the different pieces of the wreckage are not normally

required unless it is necessary to indicate a break-up of the aircraft prior to impact. Diagrams, charts and photographs may be included in this section or attached in the Appendices.

1.13 Medical and pathological information. Brief description of the results of the investigation undertaken and pertinent data available therefrom.

***Note. — Medical information related to flight crew licenses should be included in 1.5 — Personnel information.*

1.14 Fire. If fire occurred, information on the nature of the occurrence, and of the firefighting equipment used and its effectiveness.

1.15 Survival aspects. Brief description of search, evacuation and rescue, location of crew and passengers in relation to injuries sustained, failure of structures such as seats and seat-belt attachments.

1.16 Tests and research. Brief statements regarding the results of tests and research.

1.17 Organizational and management information. Pertinent information concerning the organizations and their management involved in influencing the operation of the aircraft. The organizations include, for example, the operator; the air traffic services, airway, aerodrome and weather service agencies; and the regulatory authority. The information could include, but not be limited to, organizational structure and functions, resources, economic status, management policies and practices, and regulatory framework.

1.18 Additional information. Relevant information not already included in 1.1 to 1.17.

1.19 Useful or effective investigation techniques. When useful or effective investigation techniques have been used during the investigation, briefly indicate the reason for using these techniques and refer here to the main features as well as describing the results under the appropriate subheadings 1.1 to 1.18.

2. ANALYSIS

Analyse, as appropriate, only the information documented in Part 1.1 (Factual information) and which is relevant to the determination of conclusions and causes.

3. CONCLUSIONS

List the findings, causes and contributing factors established in the investigation. The list of causes should include both the immediate and the deeper systemic causes.

***Note. — As stated in 1.1, the Final Report format presented in this Appendix may be adapted to the circumstances of the accident or incident. Thus, States may use either “causes” or “contributing factors”, or both, in the Conclusions.*

4. SAFETY RECOMMENDATIONS

As appropriate, state any recommendations made for the purpose of accident prevention and identify safety actions already implemented.

5. APPENDICES

Include, as appropriate, any other pertinent information considered necessary for the understanding of the report.

Information to be given in Notification

The required notification shall contain the following information, if available:

- (1) Type, manufacturer nationality, and registration marks, and serial number of the aircraft;
- (2) Name of owner, operator and hirer, if any, of the aircraft;
- (3) Name of the pilot in command, and nationality of crew and passengers;
- (4) Date and time (local time or UTC) of the accident or serious incident;
- (5) Last point of departure and point of intended landing of the aircraft;
- (6) Position of the aircraft with reference to some easily defined geographical point and latitude and longitude;
- (7) Number of crew and passengers aboard, number killed and seriously injured;
- (8) Description of the accident or serious incident and the extent of damage to the aircraft so far as is known;
- (9) Physical characteristics of the accident or serious incident area, as well as an indication of access difficulties or special requirements to reach the accident site;
- (10) Presence and description of dangerous goods on board the aircraft.

Specific Reports

Occurrences, for which specific notification and reporting methods must be used, by a Commander or an Operator, are described below:

Air Traffic Incident

A Commander shall without delay notify the air traffic service unit concerned of the incident and shall inform them of his intention to submit an air traffic incident report after the flight has ended, whenever an aircraft in flight has been endangered by a near collision with any other flying device, faulty air traffic procedure and failure of air traffic services facilities.

Airborne Collision Avoidance System Resolution Advisory

A Commander shall notify the air traffic service unit concerned and submit an ACAS report to the relevant authority (PACA or OTSD) whenever an aircraft was manoeuvred in response to an ACAS Resolution Advisory.

Bird Hazards and Strikes

A Commander shall immediately inform the local air traffic services unit whenever a potential bird hazard is observed and if it's occurred, that results in significant damage to the aircraft or the loss or malfunction of any essential service. The Commander or the Operator shall submit a written bird strike report after landing to the OTSD, PACA or ATS unit.

In-flight Emergencies with Dangerous Goods on Board

If an inflight emergency occurs and situations permits, a Commander shall inform the appropriate air traffic service (ATS) unit of any dangerous goods on board. After landing if the occurrence has been associated with the transport of dangerous goods, a Commander shall comply with the reporting requirements to the OTSD or PACA.

Unlawful Interference

Following an act of unlawful interference on board of aircraft, the Commander shall submit a report to the local Police and to the OTSD or PACA.

Encountering Potential Hazardous Conditions

A Commander shall notify to the appropriate air traffic services unit any irregularity in a ground or navigational facility, a meteorological phenomenon or a volcanic ash cloud if encountered during flight.

ACCIDENT PREVENTION MEASURE

Safety Recommendations

In accordance with ICAO Annex 13 the investigation Committee or the investigator in charge (IIC) shall recommend to the aviation authority, including those in other States, any preventive action that is considered necessary to be taken promptly to enhance aviation safety. The investigation Committee or the investigator in charge should describe the safety problem and provide justification for safety actions. Consideration should be given to whether a safety recommendation should prescribe a specific solution to a problem or whether the recommendation should be flexible enough to allow the addressee latitude in determining how the objective of the recommendation can be achieved.

The safety recommendation should identify what action is required, but should leave considerable scope for the implementing authority to determine how the problem will be resolved.

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APPENDIX B – LIST OF EXAMPLES OF REPORTABLE INCIDENTS

Note 1: Although this regulation lists the majority of reportable occurrences, it is not completely comprehensive. Any other occurrences, which are judged by those involved to meet the criteria, should also be reported.

Note 2: This regulation does not include accidents, however all accidents require a mandatory report.

Note 3: Occurrences to be reported are those where the safety of operation was or could have been endangered or which could have led to an unsafe condition. If in the view of the reporter an occurrence did not endanger the safety of the operation but if repeated in different but likely circumstances would create a hazard, then a report should be made. What is judged to be reportable on one class of product, part or appliance may not be so on another and the absence or presence of a single factor, human or technical, can transform an occurrence into an accident or serious incident.

Note 4: Specific operational approvals, e.g. "RVSM" (reduced vertical separation minima), "ETOPS" (extended range twin operations), "RNAV" (area navigation), or a design or maintenance programme, may have specific reporting requirements for failures or malfunctions associated with that approval or programme.

Note 5: The primary objective of occurrence reporting is to monitor, disseminate and record for analysis, critical or potentially critical safety occurrences. It is not intended to collect and monitor the normal flow of day-to-day defects/incidents etc. The latter is an important part of the overall flight safety task but other procedures and systems exist to carry out this function. Organisational reporting policies need to ensure clear criteria for mandatory reporting to PACA to ensure that all relevant safety events are completely and correctly reported and that those events which are not required to be sent to the PACA are well defined and are appropriately reported in accordance with the organisation's internal reporting system(s). Reporters should ensure that the content of their reports meets the criteria and guidance referenced in this CAR. Particular emphasis should be paid towards ensuring that day-to-day anomalies, insignificant technical defects and routine reliability issues are dealt with by means of the normal organisational systems and procedures.

1. AIRCRAFT FLIGHT OPERATIONS

A. Operation of the Aircraft

- (1) Aircraft manoeuvre:
 - (a) Risk of collision with an aircraft, terrain or other object or an unsafe situation when avoidance action would have been appropriate.
 - (b) An avoidance maneuver required to avoid a collision with an aircraft, terrain or other object.
 - (c) An avoidance maneuver to avoid other unsafe situations.
- (2) Take-off or landing incidents, including precautionary or forced landings
- (3) Incidents such as under-shooting, over running or running off the side of runways
- (4) Take-offs, rejected take-offs, landings or attempted landings on a closed, occupied or incorrect runway
- (5) Inability to achieve predicted performance during take-off or initial climb
- (6) Critically low fuel quantity or inability to transfer fuel or use total quantity of usable fuel
- (7) Loss of control (including partial or temporary loss of control) from any cause
- (8) Incident close to or above V1 resulting from or producing a hazardous or potentially hazardous situation (e.g. tail strike, engine power loss, rejected take-off etc.)

- (9) Go-around/Missed Approach producing a hazardous or potentially hazardous situation including rejected landing
- (10) Unintentional significant deviation from airspeed, intended track or altitude (more than 300ft) from any cause
- (11) Descent below decision height/altitude or minimum descent height/altitude without the required visual reference
- (12) Loss of position awareness relative to actual position or to other aircraft
- (13) Breakdown in communication between flight crew (CRM) or between Flight crew and other parties (cabin crew, ATC, engineering)
- (14) Heavy/hard landing - a landing deemed to require a 'heavy landing check'
- (15) Exceedance of fuel imbalance limits
- (16) Incorrect setting of an SSR code or of an altimeter subscale
- (17) Incorrect programming of, or erroneous entries into, equipment used for navigation or performance calculations, or use of incorrect data
- (18) Incorrect receipt or interpretation of radiotelephony messages
- (19) Fuel system malfunctions or defects, which had an effect on fuel supply and/or distribution
- (20) Aircraft unintentionally departing a paved surface
- (21) Collision between an aircraft and any other aircraft, vehicle or other ground object
- (22) Inadvertent and/or incorrect operation of any controls
- (23) Inability to achieve the intended aircraft configuration for any flight phase (e.g. landing gear and doors, flaps, stabilisers, slats etc.
- (24) A hazard or potential hazard which arises as a consequence of any deliberate simulation of failure conditions for training, system checks or training purposes
- (25) Abnormal vibration
- (26) Operation of any primary warning system associated with manoeuvring of the aircraft e.g. configuration warning, stall warning (stick shake), over speed warning etc. unless:
 - (a) the crew conclusively established that the indication was false.
 - (b) provided that the false warning did not result in difficulty or hazard arising from the crew response to the warning; or
 - (c) operated for training or test purposes.
- (27) GPWS/TAWS 'warning' when:
 - (a) the aircraft comes into closer proximity to the ground than had been planned or anticipated; or
 - (b) the warning is experienced in IMC or at night and is established as having been triggered by a high rate of descent; or
 - (c) the warning results from failure to select landing gear or landing flap by the appropriate point on the approach; or
 - (d) any difficulty or hazard arises or might have arisen as a result of crew response to the 'warning' e.g. possible reduced separation from other traffic. This could include warning of any Mode or Type i.e. genuine, nuisance or false.
- (28) GPWS/TAWS 'alert' when any difficulty or hazard arises or might have arisen as a result of crew response to the 'alert'
- (29) TCAS/ ACAS RA's:
- (30) ***Note: While submitting a MOR, the operator must indicate if any assistance is required from Oman ATS in coordinating the incident with foreign ATS Authority or CAA.*
- (31) Jet or prop blast incidents resulting in significant damage or serious injury
- (32) Taxiway incursion/Runway incursion, any occurrence unauthorized presence on a taxiway of an aircraft, vehicle, person or object that creates a collision hazard or results in a potential loss of separation
- (33) Laser or high intensity directional light incidents

- (34) Unstable approach reported by pilots or analysed through FDM programme. If the occurrence reported by a pilot requires confirmation through a Flight Data Monitoring analysis (CAR-OPS 1 and CAR-OPS 3).

B. Emergencies

- (1) Fire, explosion, smoke or toxic or noxious fumes, even though fires were extinguished.
- (2) The use of any non-standard procedure by the flight or cabin crew to deal with an emergency when:
 - (a) the procedure exists but is not used; or
 - (b) a procedure does not exist; or
 - (c) the procedure exists but is incomplete or inappropriate; or
 - (d) the procedure is incorrect; or
 - (e) the incorrect procedure is used.
- (3) Inadequacy of any procedures designed to be used in an emergency, including when being used for maintenance, training or test purposes.
- (4) An event leading to an emergency evacuation.
- (5) Depressurisation.
- (6) The use of any emergency equipment or prescribed emergency procedures in order to deal with a situation.
- (7) An event leading to the declaration of an emergency ('Mayday' or 'Pan Pan').
- (8) Failure of any emergency system or equipment, including all exit doors and lighting, to perform satisfactorily, including when being used for maintenance, training or test purposes.
- (9) Events requiring any emergency use of oxygen by any crewmember.

C. Crew Incapacitation

- (1) Incapacitation of any member of the flight crew, including that which occurs prior to departure if it is considered that it could have resulted in incapacitation after take-off.
- (2) Incapacitation of any member of the cabin crew, which renders them unable to perform essential emergency duties.

D. Aircrew Fatigue

- (1) A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness, circadian phase, or workload (mental and/or physical activity) that can impair a crew member's alertness and ability to safely operate an aircraft or perform safety related duties and complying with criteria of Note 5.
- (2) Fatigue is a major human factors hazard because it affects most aspects of a crewmember's ability to do their job. It therefore has implications for safety.
- (3) For example, crew member reports on fatigue due to an incident happened on the aircraft and it is believed that fatigue is considered to be the main reason for the occurrence of such incident.

E. Injury

An incident, which have or could have led to significant injury to passengers or crew but which are not considered reportable as an accident under ANNEX 13.

F. Meteorology

- (1) A lightning strike, which resulted in damage to the aircraft or loss or malfunction of any essential service.
- (2) A hail strike, which resulted in damage to the aircraft or loss or malfunction of any essential service.

- (3) Severe turbulence encounters resulting in injury to occupants or deemed to require a 'turbulence check' of the aircraft (exceeding structural limits of the airframe).
- (4) A wind shear encounter.
- (5) Icing encounter resulting in handling difficulties, damage to the aircraft or loss or malfunction of any essential service.

G. Security

- (1) Unlawful interference with the aircraft including a bomb threat or hijack.
- (2) Difficulty in controlling intoxicated, violent or unruly passengers.
- (3) Any other incident of any type considered to have endangered or which might have endangered the aircraft or its occupants on board the aircraft or on the ground.

H. Other Occurrences

- (1) Repetitive instances of a specific type of occurrence which in isolation would not be considered "reportable" but which due to the frequency with which they arise, form a potential hazard.
- (2) A bird strike, which resulted in damage to the aircraft or loss or malfunction of any essential service.
- (3) All wake-turbulence encounters, regardless of the effect on the aircraft, should be reported via the MOR reporting scheme. Severe encounters, meeting the definition of an occurrence, e.g. involving max control input, high angles of pitch/bank, the need to 'go-around' etc, should also be immediately reported to the controlling authority.
- (4) Targeting of an aircraft with a laser or high-powered light.
- (5) Any other occurrence of any type considered to have endangered or which might have endangered the aircraft or its occupants on board the aircraft or persons on the ground.

2. AIRCRAFT TECHNICAL

A. Structural

Not all structural failures need to be reported. Engineering judgement is required to decide whether a failure is serious enough to be reported. The following examples can be taken into consideration:

- (1) Damage to a Principal Structural Element that has not been qualified as damage tolerant (life limited element). Principal Structural Elements are those which contribute significantly to carrying flight, ground, and pressurisation loads, and whose failure could result in a catastrophic failure of the aircraft. e.g. Typical examples of such elements are listed for large aeroplanes in EASA AMC to CS25 "damage tolerance and fatigue evaluation of structure" and in equivalent AMC material for rotorcraft.
- (2) Defect or damage exceeding admissible damages to a Principal Structural Element that has been qualified as damage tolerant.
- (3) Damage to or defect exceeding allowed tolerances of a structural element which failure could reduce the structural stiffness to such an extent that the required flutter, divergence or control reversal margins are no longer achieved.
- (4) Damage to or defect of a structural element, which could result in the liberation of items of mass that may injure occupants of the aircraft.
- (5) Damage to or defect of a structural element, which could jeopardize proper operation of systems. See paragraph B. below
- (6) Loss of any part of the aircraft structure in flight.

B. Systems

The following generic criteria applicable to all systems are proposed:

- (1) Loss, significant malfunctions or defects of any system, sub-system or set of equipment when standard operating procedures, drills etc. could not be satisfactorily accomplished.
- (2) Inability of the crew to control the system, e.g.:
 - (a) Significant interference with normal control of the aircraft or degradation of flying qualities including surface vibration felt by crew;
 - (b) incorrect and or incomplete response, including limitation of movement or stiffness;
 - (c) run away control surface;
 - (d) Mechanical disconnection or failure.
- (3) Failure or malfunction of the exclusive function(s) of the system (one system could integrate several functions).
- (4) Interference within or between systems.
- (5) Failure or malfunction of the protection device or emergency system associated with the system.
- (6) Loss of redundancy of the system.
- (7) Any incident resulting from unforeseen behaviour of a system.
- (8) For aircraft types with single main systems, sub-systems or sets of equipment:
- (9) Loss, significant malfunctions or defects in any main system, sub-system or set of equipment.
- (10) For aircraft types with multiple independent main systems, sub-systems or sets of equipment:
- (11) The loss, significant malfunctions, or defects of more than one main system, sub-system or set of equipment
- (12) Operation of any primary warning system associated with aircraft systems or equipment unless the crew conclusively established that the indication was false provided that the false warning did not result in difficulty or hazard arising from the crew response to the warning.
- (13) Leakage of hydraulic fluids, fuel, oil or other fluids, which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems or equipment, or risk to occupants.
- (14) Malfunction or defect of any indication system when the possibility of misleading indications to the crew could result in an inappropriate crew action on an essential system.
- (15) Any failure, malfunction or defect if it occurs at a critical phase of flight and relevant to the operation of that system.
- (16) Incidents of significant shortfall of the actual performances compared to the approved performance which resulted in a hazardous situation (taking into account the accuracy of the performance calculation method) including braking action, fuel consumption etc.
- (17) Asymmetry of flight controls; e.g. flaps, slats, spoilers etc.

C. Propulsion (including Engines, Propellers and Rotor Systems) and APUs

- (1) Flameout, shutdown or malfunction of any engine.
- (2) Over speed or inability to control the speed of any high speed rotating component (e.g.: Auxiliary power unit, air starter, air cycle machine, air turbine motor, propeller or rotor).
- (3) Failure or malfunction of any part of an engine or power plant resulting in any one or more of the following;
 - (a) Non-containment of components/debris;
 - (b) Un-controlled internal or external fire, or hot gas breakout;
 - (c) Thrust in a different direction from that demanded by the pilot;
 - (d) Thrust reversing system failing to operate or operating inadvertently;
 - (e) Inability to control power, thrust or rpm;
 - (f) Failure of the engine mount structure;
 - (g) Partial or complete loss of a major part of the power plant;

- (g) Dense visible fumes or concentrations of toxic products sufficient to incapacitate crew or passengers;
 - i. Inability, by use of normal procedures, to shut down an engine; (j) Inability to restart a serviceable engine.
- (4) An un-commanded thrust/power loss, change or oscillation which is classified as a loss of thrust or power control (LOTTC):
 - (a) For a single engine aircraft; or
 - (b) Where it is considered excessive for the application, or
 - (c) Where this could affect more than one engine in a multi-engine aircraft, particularly in the case of a twin engine aircraft; or
 - (d) For a multi-engine aircraft where the same, or similar, engine type is used in an application where the event would be considered hazardous or critical.
- (5) Any defect in a life controlled part, causing retirement of before completion of its full life.
- (6) Defects of common origin, which could cause an in-flight shut down rate so high that there is the possibility of more than one engine being shut down on the same flight.
- (7) An engine limiter or control device failing to operate when required or operating inadvertently.
- (8) Exceedance of engine parameters.
- (9) FOD resulting in damage.
- (10) Propellers and -transmission
Failure or malfunction of any part of a propeller or power plant resulting in any one or more of the following:
 - (a) An over speed of the propeller;
 - (b) The development of excessive drag;
 - (c) A thrust in the opposite direction to that commanded by the pilot;
 - (d) A release of the propeller or any major portion of the propeller;
 - (e) A failure that results in excessive unbalance;
 - (f) The unintended movement of the propeller blades below the established minimum in-flight low-pitch position;
 - (g) An inability to feather the propeller;
 - (h) An inability to command a change in propeller pitch;
 - (i) An un-commanded change in pitch;
 - (j) An uncontrollable torque or speed fluctuation;
 - (k) The release of low energy parts.
- (11) Rotors and-transmission
 - (a) Damage or defect of main rotor gearbox/ attachment, which could lead to in-flight separation of the rotor assembly, and / or modifications of the rotor control.
 - (b) Damage to tail rotor, transmission and equivalent systems.
- (12) APUs
 - (a) Shut down or failure when the APU is required to be available by operational requirements, e.g. ETOPS, MEL.
 - (b) Inability to shut down the APU.
 - (c) Over speed.
 - (d) Inability to start the APU when needed for operational reasons.

D. Other Reportable Incidents to Specific Systems

The following subparagraphs give examples of reportable incidents resulting from the application of the generic criteria to specific systems:

- (1) Air conditioning/ventilation
 - (a) Complete loss of avionics cooling;
 - (b) Depressurisation
- (2) Auto-flight system
 - (a) Failure of the auto-flight system to achieve the intended operation while engaged
 - (b) Significant reported crew difficulty to control the aircraft linked to auto-flight system functioning
 - (c) Failure of any auto-flight system disconnect device
 - (d) Un-commanded auto-flight mode change
- (3) Communications
 - (a) Failure or defect of Passenger Address System resulting in loss or inaudible passenger address;
 - (b) Total loss of communication in flight.
- (4) Electrical system
 - (a) loss of one electrical system distribution system (AC or DC)
 - (b) total loss or loss or more than one electrical generation system
 - (c) failure of the back-up (emergency) electrical generating system
- (5) Cockpit/Cabin/Cargo
 - (a) Pilot seat control loss during flight;
 - (b) Failure of any emergency system or equipment, including emergency evacuation signaling system, all exit doors, emergency lighting, etc.;
 - (c) Loss of retention capability of the cargo loading system.
- (6) Fire protection system
 - (a) Fire warnings, except those immediately confirmed as false;
 - (b) Undetected failure or defect of fire/smoke detection/protection system, which could lead to loss or reduced fire detection/protection;
 - (c) Absence of warning in case of actual fire or smoke.
- (7) Fuel system
 - (a) fuel quantity indicating system malfunction resulting in total loss or erroneous indicated fuel quantity on board;
 - (b) leakage of fuel which resulted in major loss, fire hazard , significant contamination;
 - (c) malfunction or defects of the fuel jettisoning system which resulted in inadvertent loss of significant quantity, fire hazard, hazardous contamination of aircraft equipment or inability to jettison fuel;
 - (d) fuel system malfunctions or defects which had a significant effect on fuel supply and/or distribution;
 - (e) inability to transfer or use total quantity of usable fuel;
- (8) Hydraulics
 - (a) loss of one hydraulic system (ETOPS only)
 - (b) failure of the isolation system to operate
 - (c) loss of more than one hydraulic circuits
 - (d) failure of the backup hydraulic system
 - (e) inadvertent Ram Air Turbine extension
- (9) Ice detection/protection system
 - (a) undetected loss or reduced performance of the anti-ice/de-ice system
 - (b) loss of more than one of the probe heating systems
 - (c) inability to obtain symmetrical wing de icing

- (d) abnormal ice accumulation leading to significant effects on performance or handling qualities
- (e) crew vision significantly affected
- (10) Indicating/warning/recording systems
 - (a) loss of a red warning function on a system
 - (b) For glass cockpits: loss or malfunction of more than one display unit or computer involved in the display/warning function.
- (11) Landing gear system /brakes/tyres
 - (a) Brake fire
 - (b) Significant loss of braking action
 - (c) Unsymmetrical braking leading to significant path deviation
 - (d) Failure of the L/G free fall extension system (including during scheduled tests)
 - (e) Unwanted gear or gear doors extension/retraction
 - (f) Multiple tyres burst
- (12) Navigation systems (including precision approaches system) and air data systems
 - (a) Total loss or multiple navigation equipment failures;
 - (b) Total failure or multiple air data system equipment failures;
 - (c) Significant misleading indication;
 - (d) Significant navigation errors attributed to incorrect data or a database coding error;
 - (e) Unexpected deviations in lateral or vertical path not caused by pilot input;
 - (f) Problems with ground navigational facilities leading to significant navigation errors not associated with transitions from inertial navigation mode to radio navigation mode.
- (13) Oxygen
 - (a) for pressurised aircraft: loss of oxygen supply in the cockpit;
 - (b) loss of oxygen supply to a significant number of passengers (more than 10%), including when found during maintenance or training or test purposes.
- (14) Bleed air system
 - (a) Hot bleed air leak resulting in fire warning or structural damage;
 - (b) Loss of all bleed air systems;
 - (c) Failure of bleed air leak detection system.
- (15) Any other that could be related to system/component for Special Operations Approval granted by the PACA (e.g. AWO, RVSM, etc.)

***Note: Items/events not included in the MOR form, shall be marked as “Other” followed by short description in the narrative column.*

E. Human Factors

- (1) Any incident where any feature or inadequacy of the aircraft design could have led to an error of use that could contribute to a hazardous or catastrophic effect.

F. Other Occurrences

- (1) Any incident where any feature or inadequacy of the aircraft design could have led to an error of use that could contribute to a hazardous or catastrophic effect.
- (2) An incident not normally considered as reportable (for example, furnishing and cabin equipment, water systems), where the circumstances resulted in endangering of the aircraft or its occupants.
- (3) A fire, explosion, smoke or toxic or noxious fumes.
- (4) Any other event which could affect the safety of the aircraft/occupants of the aircraft, or people or property in the vicinity of the aircraft or on the ground.
- (5) Failure or defect of passenger address system resulting in loss or inaudible passenger address system.

3. AIRCRAFT MAINTENANCE & REPAIR

- (1) Incorrect assembly of parts or components of the aircraft found during an inspection or test procedure not intended for that specific purpose.
- (2) Hot bleed air leak resulting in structural damage.
- (3) Any defect in a life controlled part, causing retirement before completion of its full life.
- (4) Any damage or deterioration (i.e. fractures, cracks, corrosion, delaminating, dis-bonding etc.) resulting from any cause (such as flutter, loss of stiffness or structural failure) to;
 - (a) Primary structure or a principal structural element (as defined in the manufacturers' repair manual) where such damage or deterioration exceeds allowable limits specified in the Repair Manual and requires a repair or complete or partial replacement of the element;
 - (b) Secondary structure which consequently has or may have endangered the aircraft;
 - (c) The engine, propeller or rotorcraft rotor system.
- (5) Any failure, malfunction or defect of any system or equipment, or damage or deterioration found as a result of compliance with an Airworthiness Directive or other mandatory instruction issued by a Regulatory Authority, when;
 - (a) It is detected for the first time by the reporting organisation implementing compliance;
 - (b) On any subsequent compliance where it exceeds the permissible limits quoted in the instruction and/or published repair/rectification procedures are not available.
- (6) Failure of any emergency system or equipment, including all exit doors and lighting, to perform satisfactorily, including when being used for maintenance or test purposes.
- (7) Non-compliance or significant errors in compliance with required maintenance procedures.
- (8) Suspected unapproved products, parts, appliances and materials.
- (9) Misleading, incorrect or insufficient maintenance data or procedures that could lead to maintenance errors.
- (10) Failure, malfunction or defect of ground equipment used for test or checking of aircraft systems and equipment when the required routine inspection and test procedures did not clearly identify the problem when this results in a hazardous situation.

4. GROUND SERVICES & FACILITIES

A. AIR NAVIGATION SERVICES (ANS)

This list is in no way exhaustive and any occurrence which is believed to be a flight safety issue shall be reported.

***Note: Birdstrike and wildlife (BWI) reports related to events on or in the immediate vicinity of an aerodrome shall be reported according to the procedures in force at the relevant aerodrome*

Flight Safety Issues

Category	Description
ACAS Event	An incident where a resolution advisory event (RA) did or may have occurred
Accident	An occurrence meeting the definition of an accident contained in CAR 13.005.

Category	Description
AIRPROX	<p>A situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.</p> <ol style="list-style-type: none"> 1. Risk of collision. The risk classification of an aircraft proximity in which serious risk of collision has existed 2. Safety not assured. The risk classification of an aircraft proximity in which the safety of the aircraft may have been compromised. 3. No risk of collision. The risk classification of an aircraft proximity in which no risk of collision has existed. 4. Risk not determined. The risk classification of an aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.
ASMI Category A	An incident in which a reduction in required ATC separation occurs where the separation remaining is 25% or less of the required minimum, regardless of whether or not corrective action or an evasive response to avoid a collision was taken.
ASMI Category B	An incident in which a reduction in required ATC separation occurs where the separation remaining is 26% up to and including 50% of the required minimum and no ATC action is taken, or the initial action to resolve the situation was determined by the pilot or ACAS.
ASMI Category C	<p>An incident in which a reduction in required separation occurs where:</p> <ol style="list-style-type: none"> 1. The separation remaining is 26% up to and including 50% of the required minimum and ATC resolved the situation; or 2. The separation remaining is 51% up to and including 75% of the required minimum and no ATC action is taken, or the initial action to resolve the situation was determined by the pilot or ACAS.
ASMI Category D	<p>An incident in which a reduction in required separation occurs where:</p> <ol style="list-style-type: none"> 1. The separation remaining is 51% up to but not including 90% of the required minimum and ATC resolved the situation; or 2. The separation remaining is 76% or more and no ATC action is taken, or the pilot or ACAS resolved the situation.
ASMI Category E	An incident in which a reduction in required separation occurs where the separation remaining is 90% or more of the required minimum and ATC resolved the situation.
Airspace Penetration (CTA/CTR/SUA) without Clearance or Approval	An incident where an aircraft enters civil or military controlled airspace or SUA without clearance or proper authorisation.

Category	Description
Apron Incident	An incident reported to ATC where the flight safety of an aircraft was or may have been affected on the apron area.
ATC Coordination Error	An incident where the coordination between ATC Sectors or units is not completed correctly, where the ATC coordination failure affected flight safety.
ATC Operational Issue	An incident, not resulting in any other category, where incorrect ATCO actions or ATC procedures affected, or may have affected flight safety.
ATS/AD Equipment Failure	An incident where there is a failure or irregularity of ATS or Aerodrome communication, navigation or surveillance systems or any other safety-significant systems or equipment which could adversely affect the safety or efficiency of flight operations and/or the provision of an air traffic control service.
Communications Failure	An incident where an aircraft experiences a total or partial communications failure
Deviations from ATC Clearance (not including a Level Bust)	An incident where an aircraft fails to comply with any component of an ATC clearance, excluding a cleared altitude or flight level
Emergency (other than Engine Failure or Fuel Shortage)	An incident, excluding an accident, security event, engine failure, fuel emergency or medical emergency, where a pilot declares an emergency, Mayday or Pan.
Engine Failure	An incident where a pilot reports he has experienced an engine failure during takeoff, in-flight or landing, or reports that he has shut down an engine due to a technical problem.
Flight Planning Error	An incident where a flight planning error has been reported which may affect the safety of a flight
FOD	An incident involving FOD detected on a runway including reported tyre bursts from aircraft which have recently operated on a runway. 1. Category A: FOD which is likely to cause damage to an aircraft on a runway or runway shoulder; 2. Category B: FOD which is likely to cause damage to an aircraft found within runway strip or RESA; 3. Category C: FOD which is likely to cause damage to an aircraft on taxiways or taxiway shoulders; 4. Category D: FOD which is likely to cause damage to an aircraft found on the taxiway strips, apron areas or elsewhere on the airfield.
Fuel Emergency	An incident where a pilot reports he is experiencing a minimum fuel situation which requires an emergency declaration.
Go-Around Event	Any go- around event, except where an aircraft intentionally goes around for training purposes.
Level Bust Category A	An incident where an aircraft deviates from an assigned level by 800 feet or more, and there was no loss of separation.

Category	Description
Level Bust Category B	An incident where an aircraft deviates from an assigned level by 600 or 700 feet and there was no loss of separation.
Level Bust Category C	An incident where an aircraft deviates from an assigned level by 400 or 500 feet, and there was no loss of separation.
Level Bust Category D	An incident where an aircraft deviates from an assigned level by 300 feet or less and there was no loss of separation.
Loss of Runway Separation Category A	An incident in which a reduction in required runway separation occurs where: 1. A collision is narrowly avoided; or 2. The separation remaining is 25% or less of the required minimum, regardless of whether or not corrective action or an evasive response to avoid a collision was taken.
Loss of Runway Separation Category B	An incident in which a reduction in required runway separation occurs where: 1. A significant potential for collision which may result in a time-critical corrective evasive response to avoid a collision; or 2. The separation remaining is 26% up to and including 50% of the required minimum, and no ATC action is taken, or; the initial action to resolve the situation was determined by the pilot.
Loss of Runway Separation Category C	An incident in which a reduction in required runway separation occurs where: 1. There is ample time or distance to avoid a potential collision; or 2. The separation remaining is 26% up to and including 50% of the required minimum, and ATC resolved the situation; or 3. The separation remaining is 51% or more of the required minimum and no ATC action is taken, or the initial action to resolve the situation was determined by the pilot.
Loss of Runway Separation Category D	An incident in which a reduction in required runway separation occurs where: 1. The separation remaining is 51% or more of the required minimum and ATC resolved the situation; or 2. An aircraft is in receipt of a landing or take-off clearance, while another aircraft is on the runway, and the initial action to resolve the situation was determined by the pilot.
LSALT/Terrain Event	An incident where an IFR aircraft is flown below a Lowest Safe Altitude (LSALT) or an ATC Minimum Radar Vectoring Altitude (MRVA)
LVP Violations	An incident where an aircraft conducts an operation when RVR, Met visibility and/or cloud base conditions are below the required approach minima or the aerodrome operator minima.

Category	Description
Manoeuvring Area Excursion	<p>Category A: An incident in which an aircraft has an excursion from a runway – i.e. overruns, excursion off the side of the runway – resulting in damage to aircraft</p> <p>Category B: An incident in which an aircraft has an excursion from a taxiway – excursion off the side of the taxiway – resulting in damage to aircraft</p> <p>Category C: An incident in which an aircraft has an excursion from a runway – i.e. overruns, excursion off the side of the runway – resulting in no damage to aircraft</p> <p>Category D: An incident in which an aircraft has an excursion from a taxiway- excursion off the side of the taxiway – resulting in no damage to aircraft.</p>
Medical Emergency	An incident where a pilot reports a medical emergency requiring a diversion or priority track or landing due to a sick or injured passenger or crew member.
Military Event	An incident where actions of a military aircraft under limited civil ATC control results in a situation where flight safety in controlled airspace is or may have been compromised.
Non-compliance with climb gradient	An incident where an aircraft fails to comply with the published minimum departure climb gradient requirement.
Operator complaint or operational issue (not resulting in any other category)	<p>An incident involving:</p> <ol style="list-style-type: none"> 1. A direct operational related complaint or query received from an operator or State; or 2. An ATC issue with an operator
Runway Incursion Category A	A serious incident in which a collision is narrowly avoided.
Runway Incursion Category B	A runway incursion in which the separation decreases and there is a significant potential for collision, which may result in a time-critical corrective/evasive response to avoid a collision. This includes a runway incursion occurring while a departing aircraft has commenced its take-off roll or an arriving aircraft has crossed the threshold.
Runway Incursion Category C	A runway incursion characterised by ample time and/or distance to avoid a collision, including a runway incursion occurring while a departing aircraft has been cleared to line up, or cleared for take-off or an arriving aircraft has been cleared to land but has not crossed the threshold.
Runway Incursion Category D	A runway incursion that meets the definition of a runway incursion such as the incorrect presence of a vehicle, person or aircraft on the protected area of a surface designated for the landing and take-off of aircraft but with no immediate safety consequences.
Runway Incursion Category E	Insufficient information or inconclusive or conflicting evidence precludes a severity assessment

Category	Description
Runway Operation Incident	An incident occurring on a runway, where operational safety was or may have been affected, excluding a runway incursion, such as 1. an aircraft conducts an operation on a runway without proper authority, e.g. conducting a take-off or landing on an operational or closed runway without a clearance; or 2. attempting a take-off or landing from a taxiway not approved for such an operation.
Security Event	An incident involving a security event relating to an aircraft, which may adversely affect flight safety, such as a Hijack, Bomb Warning or an unruly passenger, which results in a request for a priority diversion or landing, or the attendance to an aircraft by security personnel.
Taxiway Operation Incident	An incident, excluding an actual or attempted take-off or landing on a taxiway, where an aircraft, vehicle or person operates on a taxiway in a manner where operational safety was or may have been affected, including taxiway incursion.
Technical Problem	An incident excluding a declared emergency where a pilot reports an aircraft technical problem.
Visual Hazard Report	An incident where a pilot or ATC unit becomes aware of a situation involving a light source, including laser, spotlights or pyrotechnics, where flight safety was or may have been compromised
Wake Turbulence Event	An incident relating to a pilot's report of turbulence, or its effects, from another aircraft's wake. If the incident was already reported as an ASMI then no need to report it as Wake Turbulence.

5. Aerodromes

A. Aerodrome and aerodrome facilities

- (1) Significant spillage during fuelling operations.
- (2) Loading of incorrect fuel quantities likely to have a significant effect on aircraft endurance, performance, balance or structural strength.
- (3) Failure or significant deterioration of aerodrome aircraft operating surfaces.

B. Maneuvering Areas Excursions

- (1) Category A: An incident in which an aircraft has an excursion from a runway – i.e. overruns, excursion off the side of the runway – resulting in damage to aircraft
- (2) Category B: An incident in which an aircraft has an excursion from a taxiway – excursion off the side of the taxiway – resulting in damage to aircraft
- (3) Category C: An incident in which an aircraft has an excursion from a runway – i.e. overruns, excursion off the side of the runway – resulting in no damage to aircraft
- (4) Category D: An incident in which an aircraft has an excursion from a taxiway- excursion off the side of the taxiway – resulting in no damage to aircraft.

C. FOD

An incident involving FOD detected on a runway including reported tyre bursts from aircraft which have recently operated on a runway.

- (1) Category A: FOD which is likely to cause damage to an aircraft on a runway or runway shoulder;
- (2) Category B: FOD which is likely to cause damage to an aircraft found within runway strip or RESA;
- (3) Category C: FOD which is likely to cause damage to an aircraft on taxiways or taxiway shoulders;
- (4) Category D: FOD which is likely to cause damage to an aircraft found on the taxiway strips, apron areas or elsewhere on the airfield.

D. Aircraft Damage

- (1) Aircraft Damage - Category A - Destroyed – Aircraft is unlikely to ever fly again – total write off
- (2) Aircraft Damage - Category B - Substantially Damaged – Major damage that prevents the aircraft from flight until significant maintenance is undertaken
- (3) Aircraft Damage - Category C - Minor Damage – Minor damage that prevents the aircraft from immediate flight and requires some maintenance to rectify

E. Runway Incursion

Category	Description
Runway Incursion Category A	A serious incident in which a collision is narrowly avoided.
Runway Incursion Category B	A runway incursion in which the separation decreases and there is a significant potential for collision, which may result in a time-critical corrective/evasive response to avoid a collision. This includes a runway incursion occurring while a departing aircraft has commenced its take-off roll or an arriving aircraft has crossed the threshold.
Runway Incursion Category C	A runway incursion characterised by ample time and/or distance to avoid a collision, including a runway incursion occurring while a departing aircraft has been cleared to line up, or cleared for take-off or an arriving aircraft has been cleared to land but has not crossed the threshold.
Runway Incursion Category D	A runway incursion that meets the definition of a runway incursion such as the incorrect presence of a vehicle, person or aircraft on the protected area of a surface designated for the landing and take-off of aircraft but with no immediate safety consequences.
Runway Incursion Category E	Insufficient information or inconclusive or conflicting evidence precludes a severity assessment
Runway Operation Incident (other occurrences)	An incident occurring on a runway, where operational safety was or may have been affected, excluding a runway incursion, such as <ol style="list-style-type: none">1. an aircraft conducts an operation on a runway without proper authority, e.g. conducting a take-off or landing on an operational or closed runway without a clearance; or2. attempting a take-off or landing from a taxiway not approved for such an operation.

F. Bird & Wildlife

- (1) Bird & Wildlife Hazard - Category A - An incident where a pilot experiences wildlife striking an aircraft resulting in significant damage to the aircraft and or requiring an aborted take-off, in-flight diversion, prioritised landing or resulting in an accident
- (2) Bird & Wildlife Hazard - Category B - An incident where a pilot reports an actual or potential wildlife strike, which does not result in significant damage or adversely affect the flight
- (3) Bird & Wildlife Hazard - Category C - An incident where dead wildlife is found on the runway when a strike has not been reported by a pilot.

G. Handling of passengers, baggage and cargo

- (1) Significant contamination of aircraft structure, systems and equipment arising from the carriage of baggage or cargo.
- (2) Incorrect loading of passengers, baggage or cargo, likely to have a significant effect on aircraft mass and/or balance.
- (3) Incorrect stowage of baggage or cargo (including hand baggage) likely in any way to endanger the aircraft, its equipment or occupants or to impede emergency evacuation.
- (4) Inadequate stowage of cargo containers or other substantial items of cargo.
- (5) Carriage or attempted carriage of dangerous goods in contravention of applicable regulations, including incorrect labelling and packaging of dangerous goods.

H. Aircraft ground handling and servicing

- (1) Failure, malfunction or defect of ground equipment used for the testing or checking of aircraft systems and equipment when the required routine inspection and test procedures did not clearly identify the problem, where this results in a hazardous situation.
- (2) Non-compliance or significant errors in compliance with required servicing procedures.
- (3) Loading of contaminated or incorrect type of fuel or other essential fluids (including oxygen and potable water).
- (4) Incorrect loading of cargo pallets onto aircraft.
- (5) Medium to serious damage resulting from collision of ground servicing vehicles.
- (6) Unsatisfactory ground de-icing/anti-icing.

APPENDIX C – GUIDANCE FOR THE DETERMINATION OF AIRCRAFT DAMAGE

- (1) If an engine separates from an aircraft, the event is categorized as an accident even if damage is confined to the engine.
- (2) A loss of engine cowl (fan or core) or reverser components which does not result in further damage to the aircraft is not considered an accident.
- (3) Occurrences where compressor or turbine blades or other engine internal components are ejected through the engine tail pipe are not considered an accident.
- (4) A collapsed or missing radome is not considered an accident unless there is related substantial damage in other structures or systems.
- (5) Missing flap, slat and other lift augmenting devices, winglets, etc., that are permitted for dispatch under the configuration deviation list (CDL) are not considered to be an accident.
- (6) Retraction of a landing gear leg, or wheels-up landing, resulting in skin abrasion only. If the aircraft can be safely dispatched after minor repairs, or patching, and subsequently undergoes more extensive work to effect a permanent repair, then the occurrence would not be classified as an accident.
- (7) If the structural damage is such that the aircraft depressurizes, or cannot be pressurized, the occurrence is categorized as an accident.
- (8) The removal of components for inspection following an occurrence, such as the precautionary removal of an undercarriage leg following a low-speed runway excursion, while involving considerable work, is not considered an accident unless significant damage is found.
- (9) Occurrences that involve an emergency evacuation are not counted as an accident unless someone receives serious injuries or the aircraft has otherwise sustained significant damage.

****Note 1-** Regarding aircraft damage which adversely affects the structural strength, performance or flight characteristics, the aircraft may have landed safely, but cannot be safely dispatched on a further sector without repair.

****Note 2-** If the aircraft can be safely dispatched after minor repairs and subsequently undergoes more extensive work to effect a permanent repair, then the occurrence would not be classified as an accident.

Likewise, if the aircraft can be dispatched under the CDL with the affected component removed, missing or inoperative, the repair would not be considered as a major repair and consequently the occurrence would not be considered an accident.

****Note 3-** The cost of repairs, or estimated loss, such as provided by insurance companies may provide an indication of the damage sustained but should not be used as the sole guide as to whether the damage is sufficient to count the occurrence as an accident. Likewise, an aircraft may be considered a "hull loss" because it is uneconomic to repair, without it having incurred sufficient damage to be classified as an accident.

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