INCIDENT REPORTING SYSTEM

AIR NAVIGATION ORDER

VERSION	**:**	**1.0**
DATE OF IMPLEMENTATION	**:**	**01-05-2011**
OFFICE OF PRIME INTEREST	**:**	**Safety & Investigation Board**

INCIDENT REPORTING SYSTEM

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TYPE OF DOCUMENT	AIR NAVIGATION ORDER (ANO).		
STATUS OF DOCUMENT	CONTROLLED		

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01/05/2011 ANO-003-SBXX-1.0

A. AUTHORITY:

A1. This ANO is issued by the Director General, Pakistan Civil Aviation Authority, in pursuance of Rules 4, 5, 180, 269, 271, 276, 281, 360 and all other enabling provisions of the Civil Aviation Rules, 1994 (CARs, 94).

B. PURPOSE:

B1. The purpose of this ANO is to define:

B1.1 The procedure for Mandatory Incident Reporting System to facilitate collection of information on actual or potential safety deficiencies.

B1.2 The procedure for Voluntary Incident Reporting System and Confidential Reports to facilitate collection of information on actual or potential safety deficiencies that may not be captured by the mandatory incident reporting system.

C. SCOPE:

C1. To streamline activities pertaining to incident reporting system.

C2. This ANO applies to all Companies, Organizations and Enterprises including Operators, AOC Holders, Ground Handling Agents, Service Providers, Regulators, holders of AOC for Regular Public Transport (RPT), Private, Charter and Aerial Aircraft, i.e. involving transportation of passengers, cargo or mail, for remuneration or hire, etc.

D. DESCRIPTION:

D1. DEFINITIONS:

Any term which is used in this ANO shall have the same meaning as given in the Civil Aviation Ordinance 1960, Pakistan Civil Aviation Authority Ordinance, 1982, Civil Aviation Rules, 1994 (CARs, 1994). However, if no such term is defined in the above-mentioned laws, preference would be given to ICAO Annexure 13, accordingly.

D1.1 The terms "**accident**, **serious incident** and **incident**" are defined in Annex 13, Chapter 1 and are reproduced as follows:

D1.1.1 **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:

— being in the aircraft, or

— direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or

— 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

(b) the aircraft sustains damage or structural failure, and

— 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.

Note 1.— For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified, by ICAO, as a fatal injury.

Note 2.— An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

Note 3.— The type of unmanned aircraft system to be investigated is addressed in 5.1.

Note 4.— Guidance for the determination of aircraft damage can be found in Attachment G.

D1.1.2 **SERIOUS INCIDENT:** 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.

Note 1.— The difference between an accident and a serious incident lies only in the result.

Note 2.— Examples of serious incidents can be found in Attachment C.

D1.1.3 **INCIDENT:** An occurrence, other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operation.

Note.— The types of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies are listed in Attachment C.

D2. TYPICAL EXAMPLES OF SERIOUS INCIDENT:

D2.1 The list of accidents and incidents can be derived out of their definitions. The incidents listed are typical examples of incidents that are likely to be **serious incidents**. The list is not exhaustive and only serves as guidance to the definition of serious incident:

D2.1.1 Near collisions requiring an avoidance manoeuvre to avoid a collision or an unsafe situation or when an avoidance action would have been appropriate.

D2.1.2 Controlled flight into terrain only marginally avoided.

D2.1.3 Aborted take-offs on a closed or engaged runway, on a taxiway1 or unassigned runway.

D2.1.4 Take-offs from a closed or engaged runway, from a taxiway1 or unassigned runway.

D2.1.5 Landings or attempted landings on a closed or engaged runway, on a taxiway1 or unassigned runway.

D2.1.6 Gross failures to achieve predicted performance during take-off or initial climb.

D2.1.7 Fires and smoke in the passenger compartment, in cargo compartments or engine fires, even though such fires were extinguished by the use of extinguishing agents.

D2.1.8 Events requiring the emergency use of oxygen by the flight crew.

D2.1.9 Aircraft structural failures or engine disintegrations, including uncontained turbine engine failures, not classified as an accident.

D2.1.10 Multiple malfunctions of one or more aircraft systems seriously affecting the operation of the aircraft.

D2.1.11 Flight crew incapacitation in flight.

D2.1.12 Fuel quantity requiring the declaration of an emergency by the pilot.

D2.1.13 Runway incursions classified with severity A. The ICAO *Manual on the Prevention of Runway Incursions* (Doc 9870) contains information on the severity classifications.
D2.1.14 Take-off or landing incidents. Incidents such as under-shooting, overrunning or running off the side of runways.
D2.1.15 System failures, weather phenomena, operations outside the approved flight envelope or other occurrences, which could have caused difficulties controlling the aircraft.
D2.1.16 Failures of more than one system in a redundancy system mandatory for flight guidance and navigation.
D2.1.17 Any other additional / deletion / amendments to this list as and when incorporated by PCAA as per ICAO International Standards and Recommended Practices.

D3. MANDATORY OCCURRENCE REPORTING (MOR) SYSTEM

D3.1 The objective of the MOR System is to contribute to the improvement of flight safety by ensuring that relevant information on safety is reported, collected, stored, protected and disseminated. The sole objective of such occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability.

D3.2 The existence of the System to achieve the above objective is not intended to replace or reduce the duties and responsibilities of all organisations and personnel within the aviation industry. The primary responsibility for safety rests with the management of the organisations involved (manufacturers, operators, maintenance organizations, handlers, service providers etc). Fundamentally, CAA's responsibility is to provide the regulatory framework within which the aviation industry must work and thereafter to monitor the satisfactory performance that all required standards are set and maintained. The Mandatory Occurrence Reporting System is an established part of the CAA's monitoring function and is complementary to the normal day-to-day procedures and systems. It is thus no less incumbent upon any organization as mentioned in paragraph C2 of this ANO:

a) to report any occurrence; and

b) to record occurrences; and

c) in conjunction with the appropriate organisation (e.g. aircraft manufacturer, operator, maintenance organization, service provider etc.) as and when necessary alongwith CAA, to investigate occurrences in order to establish the cause sufficiently for devising, promulgating and implement any necessary remedial and preventative action.

D3.2 **VOLUNTARY INCIDENT REPORT:**

D3.2.1 A voluntary incident report is that report made by a person or organization who are not required to report in accordance with the requirements of the ANO. Persons and organizations who are required to report are detailed in paragraphs C2 above. Voluntary reports are processed in a similar way to mandatory reports.

D3.2.2 The ANO imposes certain requirements on SIB in respect of the handling and processing of voluntary incident reports. Therefore, such reports will be published in a limited format removing information and data which is likely to identify the reporter.

D3.3 **CONFIDENTIAL REPORTS:**

D3.3.1 If any reporter considers that it is essential that their identity not be revealed, the report itself should be clearly annotated 'CONFIDENTIAL' and submitted direct to President SIB and the envelope should be marked 'Personal'. The request will be respected and the reporter will be contacted personally, either by the PSIB or a designated official. The SIB cannot, of course, guarantee confidentiality when an occurrence is reported separately by another party or where gross negligence is revealed. Reporters submitting a Confidential Report must provide details / information for an effective investigation. The SIB would prefer to have a Confidential Report than no report at all, notwithstanding the inhibitions.

D3.4 **SUBMISSION OF REPORTS:**

D3.4.1 This ANO places the primary responsibility for reporting incidents with individuals. However, the interests of flight safety are best served by full participation in the mitigation efforts by the organisation involved. Therefore, wherever possible, the use of company reporting systems, with a responsible person(s) within the organisation being nominated to receive all reports and to establish which reports meet the desired criteria for an occurrence report to various Directorates of the CAA including SIB is being practiced. Correlation of operational and technical aspects and the provision of any relevant supplementary information, e.g. the reporter's assessment and immediate action to control the problem, is an important part of such activity. Management of such 'Air Safety Reports', including those meeting the MOR criteria, is an important part of an organisation's Safety Management System. MOR reporting action must not interfere in any way with local reporting system that may take precedence where immediate action is appropriate.

D4 REPORTING OF REPORTABLE INCIDENTS:

All incidents regardless of their nature, location, extent of damage, phase of flight or on ground etc., are essentially required to be reported to the PCAA (PD Regulatory / Dte of SQMS) as well as Safety Investigation Board, and any other CAA Directorate as deem appropriate by PCAA. Operators are to maintain record of current contacts and addresses of concerned CAA Directorates. List of Occurrences to be reported is placed as **Appendix 'A'** to this ANO.

D4.1 **FORMAT OF REPORTING AN INCIDENT**

The ICAO under Annex-13 requires, States to develop a database on all aircraft occurrences as per the ICAO SARPs for Mandatory Incident Reporting System. Whenever an incident report is generated, containing the information as mentioned in the attached format, the same needs to be given a discrete number for each Aircraft Occurrence Report (AOR) in favour of a standardized identification:

D4.2 The reference number will be as:

(a) AOR No: 0023-2011-A300 Dated 01-05-11

D4.3 The first set of number is the serial number of an occurrence reported by an operator, the second set is the year of occurrence, the third is aircraft type and fourth the date of occurrence. The serial would be 0001 for the first occurrence of the year starting on 01 January of each year. In the example above, the AOR is 23rd in the year 2011 inclusive of all aircraft held by the operator and it is raised on 1 May 2011.

D4.4 On receipt of initial information (from any Operator or his flight crew / aircrew members, maintenance staff, ATC or any other person(s) / officers), the safety department of an Operator is to allocate the Incident Report number as described above. The Incident Report number, henceforth, will become a reference for all further correspondence on the subject. The Incident Report number is to be printed as central heading of the Incident Report which would be furnished to SIB and the other relevant PCAA departments. Complete incident reporting format is attached as **Appendix 'B'** to this ANO.

D4.5 All accidents / incidents are to be reported to **SIB** and **SQMS** Directorates of PCAA within shortest possible time period and not later than 24 hours. Reports can be sent through telephone, fax and emails. For this purpose email addresses at SIB include (sib@caapakistan.com.pk) & (psib@caapakistan.com.pk), and Fax No 0092 21 34604305. A copy thereof may also be provided to DG CAA, Dy DG CAA, PD(REG), and any other CAA Department as deemed necessary by HQ CAA.

D4.6 **Bird Hit / Strike Related Occurrences**:
All bird strike related incidents are to be reported as per guidelines provided by this ANO. Format of reporting bird strike is attached as **Appendix 'C'** to this ANO.

E. EVIDENCES (ACRONYMS / RECORDS / REFERENCES):

E1. ACRONYMS:

ACC	Accident (as defined in Chapter 1 of ICAO Annexure 13).
ANO	Air Navigation Order
AOC	Air Operator Certificate
AOR	Aircraft Occurrence Report
ADREP	Accident Data Report
CARs 94	Civil Aviation Rules 1994
DG CAA	Director General Pakistan Civil Aviation Authority
DY DG CAA	Deputy Director General Pakistan Civil Aviation Authority
ICAO	International Civil Aviation Organization
PCAA	Pakistan Civil Aviation Authority.
PSIB	President Safety & Investigation Board
SARPs	Standards And Recommended Practices
MOR	Mandatory Occurrence Report
PD REG	Principal Director Regulatory
PD ANS	Principal Director Air Navigation Services
PD AS	Principal Director Airport Services
DAW	Director Airworthiness
DFS	Director Flight Standards
DAT	Director Air Transport
ATCO	Air Traffic Controller

E2. RECORDS:

E2.1 Nil

E3. REFERENCES:

E3.1 CARs, 94

E3.2 ICAO Annex – 13

INCIDENT REPORTING SYSTEM

IMPLEMENTATION:

This Air Navigation Order shall be implemented with effect from 01 May 2011.

(RIAZ UL HAQ)
Air Vice Marshal
Director General
Pakistan Civil Aviation Authority

Dated: - 12 May 2011

(KHAWAJA A MAJEED)
Air Commodore
President SIB
Dated- ***10 May 2011***
File No. HQCAA/1904/31/SIB

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Appendix A Occurrences to be Reported

1. Introduction

1.1 This appendix provides examples of events that fall within these criteria. Reporters should ensure that the content of their reports meets the criteria and guidance laid down below. Whilst the Appendix lists the majority of occurrences that should be reported, it cannot be completely predict / judge and any other occurrences that may be involved to meet the criteria of reporting.

1.2 The MOR system is complementary to the normal day-to-day procedures and 'control' systems (e.g. AOC, Company Approvals, etc.) and is not intended to duplicate or supersede them. The system aims to identify those occurrences where the routine control procedures have failed. To achieve this objective the criteria for a reportable occurrence needs to be set above (in terms of the effects on safety) the normal day-to-day defects and minor incidents.

1.3 Those occurrences that must always be reported (e.g. fires, uncontained engine failures, critically low fuel states, close proximity between aircraft, etc.) can easily be listed but it is impossible to define precisely every significant hazard that requires reporting. What is judged to be reportable on one class of aircraft may not be so on another and the absence or presence of a single factor, human or technical, can transform a minor occurrence into a significant hazard or an accident. Judgement by the reporter regarding the degree of hazard or potential risk / harm / threat and hazard involved is therefore essential in many cases.

1.4 In the case of organisations providing a service or facility for aircraft operating over or in the Pakistan (e.g. Air Traffic Services, airfields etc.) any occurrence meeting the required criteria should be reported regardless of the nationality of the aircraft involved.

Part 1: List of Aircraft Operations, Maintenance, Repair and Manufacture Related Occurrences should be Reported.

Part 2: List of Air Navigation Services Related Occurrences should be Reported.

List of Aircraft Related Occurrence to be Reported : Part 1

Note 1: Although this Part 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 Part does not include accidents and serious incidents.

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 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 (whenever applicable), 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.

2. Aircraft flight operations

2.1 **Operation of the aircraft**

a) Avoidance manoeuvres:

- risk of collision with another aircraft, terrain or other object or an unsafe situation when avoidance action would have been appropriate;
- an avoidance manoeuvre required to avoid a collision with another aircraft, terrain or other object;
- an avoidance manoeuvre to avoid other unsafe situations.

b) Take-off or landing incidents, including precautionary or forced landings. Incidents such as under-shooting, overrunning or running off the side of runways. Take-offs, rejected take-offs, landings or attempted landings on a closed, occupied or incorrect runway. Runway incursions.

c) Inability to achieve predicted performance during take-off or initial climb.

d) Critically low fuel quantity or inability to transfer fuel or use total quantity of usable fuel.

e) Loss of control (including partial or temporary) regardless of cause.

f) Occurrences close to or above V1 resulting from or producing a hazardous or potentially hazardous situation (e.g. rejected take-off, tail strike, engine-power loss etc.).

g) Go around producing a hazardous or potentially hazardous situation.

h) Unintentional significant deviation from airspeed, intended track or altitude (more than 300 ft) regardless of cause.

i) Descent below decision height/altitude or minimum descent height/altitude without the required visual reference.

j) Loss of position awareness relative to actual position or to other aircraft.

k) Breakdown in communication between flight crew "CRM" (crew resource management) or between flight crew and other parties (cabin crew, ATC [air traffic control] engineering).

l) Heavy landing - a landing deemed to require a "heavy landing check".

m) Exceedance of fuel imbalance limits.

n) Incorrect setting of an "SSR" (secondary surveillance radar) code or of an altimeter subscale.

o) Incorrect programming of, or erroneous entries into, equipment used for navigation or performance calculations, or use of incorrect data.

p) Incorrect receipt or interpretation of radio-telephony messages.

q) Fuel system malfunctions or defects, which had an effect on fuel supply and/or distribution.

r) Aircraft unintentionally departing from a paved surface.

s) Collision between an aircraft and any other aircraft, vehicle or other ground object.

t) Inadvertent and/or incorrect operation of any controls.

u) Inability to achieve the intended aircraft configuration for any flight phase (e.g. landing gear and gear doors, flaps, stabilisers, slats etc.).

v) A hazard or potential hazard which arises as a consequence of any deliberate simulation of failure conditions for training, system checks or training purposes.

w) Abnormal vibration.

x) Operation of any primary warning system associated with manoeuvring the aircraft e.g. configuration warning, stall warning (stick shaker), over-speed warning etc. unless:

i) the crew conclusively established that the indication was false and provided that the false warning did not result in difficulty or hazard arising from the crew response to the warning; or

ii) operated for training or test purposes.

y) "GPWS" (Ground Proximity Warning System)/"TAWS" (Terrain Awareness And Warning System) "warning" when:

i) the aircraft comes into closer proximity to the ground than had been planned or anticipated; or

ii) the warning is experienced in instrument meteorological conditions or at night and is established as having been triggered by a high rate of descent (mode 1); or

iii) the warning results from failure to select landing gear or landing flaps by the appropriate point on the approach (mode 4); or

iv) 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.

z) GPWS/TAWS "alert" when any difficulty or hazard arises or might have arisen as a result of crew response to the "alert".

aa) ACAS RA (Air Collision Avoidance System, Resolution Advisory). Note: TCAS (Traffic alert and Collision Avoidance System) is a form of ACAS. All ACAS RAs should be reported, regardless of the cause.

ab) Jet or prop blast incidents resulting in significant damage or serious injury.

ac) Landing at the wrong airfield.

2.2 **Emergencies**

a) Fire, explosion, smoke or toxic or noxious fumes, even though fires were extinguished.

b) The use of any non-standard procedure by the flight or cabin crew to deal with an emergency when:

i) the procedure exists but is not used;

ii) the procedure does not exist;

iii) the procedure exists but is incomplete or inappropriate;

iv) the procedure is incorrect;

v) the incorrect procedure is used.

c) Inadequacy of any procedures designed to be used in an emergency, including when being used for maintenance, training or test purposes.

d) An event leading to an emergency evacuation.

e) Depressurisation.

f) The use of any emergency equipment or prescribed emergency procedures in order to deal with a situation.

g) An event leading to the declaration of an emergency ("Mayday" or "PAN").

h) 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.

i) Events requiring any use of emergency oxygen by any crew member.

2.3 **Crew incapacitation**

a) 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.

b) Incapacitation of any member of the cabin crew which renders them unable to perform essential emergency duties.

2.4 **Injury**

Occurrences which have or could have led to significant injury to passengers or crew but which are not considered reportable as an accident. This applies from the point when the affected passenger or crew member (with the intention of flight) steps into the aircraft until the point where the passenger or crew member disembarks from the aircraft, and at all times in between whilst they are in the aircraft. It does not apply to passenger or crew injuries sustained outside of the aircraft, which should be notified to the Health and Safety Executive for incidents in the Pakistan.

2.5 **Meteorology**

a) A lightning strike which resulted in damage to the aircraft or loss or malfunction of any essential service.

b) A hail strike which resulted in damage to the aircraft or loss or malfunction of any essential service.

c) Severe turbulence encounter, an encounter resulting in injury to occupants or deemed to require a "turbulence check" of the aircraft.

d) A windshear encounter.

e) Icing encounter resulting in handling difficulties, damage to the aircraft or loss or malfunction of any essential service.

2.6 **Security**

a) Unlawful interference with the aircraft including a bomb threat or hijack.

b) Difficulty in controlling intoxicated, violent or unruly passengers.

c) Discovery of a stowaway.

2.7 **Other occurrences**

a) 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.

b) A bird strike which resulted in damage to the aircraft or loss or malfunction of any essential service.

c) All wake-turbulence encounters, regardless of the effect on the aircraft, should be reported to the NATS Wake Turbulence Analysis Team. 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 reported to the CAA.

d) Targeting of an aircraft with a laser or high-powered light.

e) 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.

3. Aircraft technical

3.1 Structural

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

a) damage to a Principal Structural Element (PSE) that has not been designated as damage-tolerant (life-limited element). PSEs are those which contribute significantly to carrying flight, ground, and pressurisation loads, and the failure of which could result in a catastrophic failure of the aircraft;

b) defect or damage exceeding admissible damages to a PSE that has been designated as damage-tolerant;

c) damage to or defect exceeding allowed tolerances of a structural element, the failure of which could reduce the structural stiffness to such an extent that the required flutter, divergence or control reversal margins are no longer achieved;

d) 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;

e) damage to or defect of a structural element, which could jeopardise proper operation of systems. See paragraph 2.2 below;

loss of any part of the aircraft structure in flight.

3.2 Systems

The following general criteria applicable to all systems are proposed (see Appendix for examples):

a) loss, significant malfunction or defect of any system, subsystem or set of equipment when standard operating procedures, drills etc. could not be satisfactorily accomplished;

b) inability of the crew to control the system, for example:

i) uncommanded actions,

ii) incorrect and/or incomplete response, including limitation of movement or stiffness,

iii) runaway,

iv) mechanical disconnection or failure;

c) failure or malfunction of the exclusive function(s) of the system (one system could integrate several functions);

d) interference within or between systems;

e) failure or malfunction of the protection device or emergency system associated with the system;

f) loss of redundancy of the system;

g) any occurrence resulting from unforeseen behaviour of a system.

h) for aircraft types with *single* main systems, subsystems or sets of equipment:

the loss, significant malfunction or defect in *any* main system, subsystem or set of equipment.

i) for aircraft types with *multiple* independent main systems, subsystems or sets of equipment:

the loss, significant malfunction or defect of *more than one* main system, subsystem or set of equipment.

j) 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;

k) 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;

l) malfunction or defect of any indication system when this results in the possibility of misleading indications to the crew;

m) any failure, malfunction or defect if it occurs at a critical phase of the flight and is relevant to the system operation;

n) 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.;

o) asymmetry of flight controls; e.g. flaps, slats, spoilers etc. The Appendix to this Schedule gives a list of examples of reportable occurrences resulting from the application of these general criteria to specific systems.

3.3 **Propulsion (including engines, propellers and rotor systems) and Auxiliary Power Units (APUs)**

a) Flameout, shutdown or malfunction of any engine.

b) Overspeed or inability to control the speed of any high-speed rotating component (for example: APU, air starter, air cycle machine, air turbine motor, propeller or rotor).

c) Failure or malfunction of any part of an engine or powerplant resulting in any one or more of the following:

i) non-containment of components/debris;

ii) uncontrolled internal or external fire, or hot gas breakout;

iii) thrust in a direction different from that demanded by the pilot;

iv) thrust-reversing system failing to operate or operating inadvertently;

v) inability to control power, thrust or revolutions per minute;

vi) failure of the engine mount structure;

vii) partial or complete loss of a major part of the powerplant;

viii) dense visible fumes or concentrations of toxic products sufficient to incapacitate crew or passengers;

ix) inability, by use of normal procedures, to shutdown an engine;

x) inability to restart a serviceable engine.

d) An uncommanded thrust/power loss, change or oscillation which is classified as a Loss Of Thrust or power Control (LOTC):

i) for a single-engine aircraft; or

ii) where it is considered excessive for the application; or

iii) where this could affect more than one engine in a multi-engine aircraft, particularly in the case of a twin-engine aircraft; or

iv) 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.

e) Any defect in a life-controlled part causing its withdrawal before completion of its full life.

f) 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.

g) An engine limiter or control device failing to operate when required or operating inadvertently.

h) Exceedance of engine parameters.

i) Foreign Objects Damage (FOD).

3.3.1 **Propellers and transmission**

a) Failure or malfunction of any part of a propeller or powerplant resulting in any one or more of the following:

i) an overspeed of the propeller;

ii) the development of excessive drag;

iii) a thrust in the opposite direction to that commanded by the pilot;

iv) a release of the propeller or any major portion of the propeller;

v) a failure that results in excessive imbalance;

vi) the unintended movement of the propeller blades below the established minimum in-flight low-pitch position;

vii) an inability to feather the propeller;

viii) an inability to change propeller pitch;

ix) an uncommanded change in pitch;

x) an uncontrollable torque or speed fluctuation;

xi) the release of low-energy parts.

Rotors and transmission

b) Damage or defect of main rotor gearbox/attachment which could lead to in-flight separation of the rotor assembly and/or malfunctions of the rotor control.

c) Damage to tail rotor, transmission and equivalent systems.

APUs

d) Shut down or failure when the APU is required to be available by operational requirements, e.g. ETOPS, minimum equipment list (MEL).

e) Inability to shut down the APU.

f) Overspeed.

g) Inability to start the APU when needed for operational reasons.

3.4 **Human factors**

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.

3.5 **Other occurrences**

a) 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.

b) An occurrence not normally considered as reportable (e.g., furnishing and cabin equipment, water systems), where the circumstances resulted in endangering the aircraft or its occupants.

c) A fire, explosion, smoke or toxic/noxious fumes.

d) Any other event which could endanger the aircraft, or affect the safety of the occupants of the aircraft, or people or property in the vicinity of the aircraft or on the ground.

e) Failure or defect of passenger address system resulting in loss of, or inaudible, passenger address system.

f) Loss of pilot seat control during flight.

4. Aircraft maintenance and repair

a) Incorrect assembly of parts or components of the aircraft found during an inspection or test procedure not intended for that specific purpose.

b) Hot bleed air leak resulting in structural damage.

c) Any defect in a life-controlled part causing retirement before completion of its full life.

d) Any damage or deterioration (e.g. fractures, cracks, corrosion, delamination, disbonding etc.) resulting from any cause (e.g. as flutter, loss of stiffness or structural failure) to:

i) a primary structure or a Principal Structure Element (PSE) (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;

ii) a secondary structure which consequently has or may have endangered the aircraft;

iii) the engine, propeller or rotorcraft rotor system.

e) Any failure, malfunction or defect of any system or equipment, or damage or deterioration thereof found as a result of compliance with an airworthiness directive or other mandatory instruction issued by a regulatory authority, when:

i) it is detected for the first time by the reporting organisation implementing compliance;

ii) on any subsequent compliance, it exceeds the permissible limits quoted in the instruction and/or published repair/rectification procedures are not available.

f) 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.

g) Non-compliance or significant errors in compliance with required maintenance procedures.

h) Products, parts, appliances and materials of unknown or suspect origin.

i) Misleading, incorrect or insufficient maintenance data or procedures that could lead to maintenance errors.

j) Any failure, malfunction or defect of ground equipment used for 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.

5. Ground Services and Facilities

5.1 Air Navigation Services (ANS)

See Part 2, list of reportable ANS-related occurrences.

5.2 Aerodrome and aerodrome facilities

a) Significant spillage during fuelling operations.

b) Loading of incorrect fuel quantities likely to have a significant effect on aircraft endurance, performance, balance or structural strength.

c) Failure or significant deterioration of aerodrome aircraft operating surfaces.

5.3 Handling of passengers, baggage and cargo

a) Significant contamination of aircraft structure, systems and equipment arising from the carriage of baggage or cargo.

b) Incorrect loading of passengers, baggage or cargo, likely to have a significant effect on aircraft mass and/or balance.

c) 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.

d) Inadequate stowage of cargo containers or other substantial items of cargo.

e) Carriage or attempted carriage of dangerous goods in contravention of applicable regulations, including incorrect labelling and packaging of dangerous goods.

5.4 **Aircraft ground handling and servicing**

a) 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.

b) Non-compliance or significant errors in compliance with required servicing procedures.

c) Loading of contaminated or incorrect type of fuel or other essential fluids (including oxygen and potable water).

d) Unsatisfactory ground de-icing/anti-icing.

6. Examples to Part 1 Occurrences

The following subparagraphs give examples of reportable occurrences resulting from the application of the general criteria to specific systems listed in paragraph 3.2 of Part 1.

6.1 **Air conditioning/ventilation**

a) complete loss of avionics cooling;

b) depressurisation.

6.2 **Autoflight system**

a) failure of the autoflight system to achieve the intended operation while engaged;

b) significant reported crew difficulty to control the aircraft linked to autoflight system functioning;

c) failure of any autoflight system disconnect device;

d) uncommanded autoflight mode change.

6.3 **Communications**

a) failure or defect of passenger address system resulting in loss of or inaudible passenger address;

b) total loss of communication in flight.

6.4 **Electrical system**

a) loss of one electrical distribution system (AC/DC);

b) total loss or loss of more than one electrical generation system;

c) failure of the back up (emergency) electrical generation system.

6.5 **Cockpit/Cabin/Cargo**

a) pilot seat control loss during flight;

c) failure of any emergency system or equipment, including emergency evacuation signalling system, all exit doors, emergency lighting, etc.;

d) loss of retention capability of the cargo loading system.

6.7 **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.

6.7 **Flight controls**

a) asymmetry of flaps, slats, spoilers, etc.;

b) limitation of movement, stiffness or poor or delayed response in the operation of primary flight control systems or their associated tab and lock systems;

c) flight control surface runaway;

d) flight control surface vibration felt by the crew;

e) mechanical flight control disconnection or failure;

f) significant interference with normal control of the aircraft or degradation of flying qualities.

6.8 **Fuel system**

a) fuel quantity indicating system malfunction resulting in total loss or wrong indication of 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.

6.9 **Hydraulics**

a) loss of one hydraulic system (ETOPS only);

b) failure of the isolation system;

c) loss of more than one hydraulic circuit;

d) failure of the back-up hydraulic system;

e) inadvertent ram air turbine extension.

6.10 **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.

6.11 **Indicating/warning/recording systems**

a) malfunction or defect of any indicating system when the possibility of significant misleading indications to the crew could result in an inappropriate crew action on an essential system;

b) loss of a red warning function on a system;

c) for glass cockpits: loss or malfunction of more than one display unit or computer involved in the display/warning function.

6.12 **Landing gear system/brakes/tyres**

a) brake fire;

b) significant loss of braking action;

c) asymmetrical braking action leading to significant path deviation;

d) failure of the landing gear free fall extension system (including during scheduled tests);

e) unwanted landing gear or gear doors extension/retraction;

f) multiple tyre burst.

6.13 **Navigation systems (including precision approach systems) and air data systems**

a) total loss or multiple navigation equipment failures;

b) total or multiple air data system equipment failures;

c) significant misleading indications;

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.

6.14 **Oxygen for pressurised aircraft**

a) 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 testing.

6.15 **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.

List of Air Navigation Services Related Occurrences to be Reported : Part 2

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

Note 2: This Part does not include accidents and serious incidents.

Note 3: This Part includes Air Navigation Service (ANS) occurrences which pose an actual or potential threat to flight safety, or can compromise the provision of safe ANS services.

Note 4: The contents of this Part shall not preclude the reporting of any occurrence, situation or condition which, if repeated in different but likely circumstances or allowed to continue uncorrected, could create a hazard to aircraft safety.

1. **Near collision incidents** (encompassing specific situations where one aircraft and another aircraft/the ground/a vehicle/person or object are perceived to be too close to each other):

b) separation minima infringement;

c) inadequate separation;

d) "near-CFIT" (near-controlled flight into terrain);

e) runway incursion where avoiding action was necessary.

2. **Potential for collision or near collision** (encompassing specific situations having the potential to be an accident or a near collision, if another aircraft is in the vicinity):

d) runway incursion where no avoiding action is necessary;

e) runway excursion;

f) aircraft deviation from ATC clearance;

g) aircraft deviation from applicable Air Traffic Management (ATM) regulation:

i) aircraft deviation from applicable published ATM procedures;

ii) unauthorised penetration of airspace;

iii) deviation from aircraft ATM-related equipment carriage and operations, as mandated by applicable regulation(s).

3. **ATM-specific occurrences** (encompassing those situations where the ability to provide safe ATM services is affected, including situations where, by chance, the safe operation of aircraft has not been jeopardised). This shall include the following occurrences:

a) inability to provide ATM services:

i) inability to provide air traffic services;

ii) inability to provide airspace management services;

iii) inability to provide air traffic flow management services;

b) failure of Communication function;

c) failure of Surveillance function;

d) failure of Data Processing and Distribution function;

e) failure of Navigation function;

f) ATM system security.

4. **"ATC" (air traffic control) Navigation and Communications** – significant malfunction or deterioration of service.

5. **An aircraft was or could have been endangered by impairment of any member of ground staff** (e.g. ATC, "AD" (aircraft dispatchers), Maintenance, etc.).

6. **ATC overload.**

7. **Failure or unplanned shutdown of a major operational ATC computer system**, requiring reversion to manual back-up and resulting in disruption to the normal flow of air traffic.

8. **Examples to Part 2 Occurrences**

The following subparagraphs give examples of reportable ATM occurrences resulting from the application of the general criteria listed in paragraph 3 of Part 2.

8.1 Provision of significantly incorrect, inadequate or misleading information from any ground sources, e.g. ATC, Automatic Terminal Information Service (ATIS), meteorological services, navigation databases, maps, charts, manuals, etc.

8.2 Provision of less than prescribed terrain clearance.

8.3 Provision of incorrect pressure reference data (i.e. altimeter setting).

8.4 Incorrect transmission, receipt or interpretation of significant messages when this results in a hazardous situation.

8.5 Separation minima infringement.

8.6 Unauthorised penetration of airspace.

8.7 Unlawful radio communication transmission.

8.8 Failure of ANS ground or satellite facilities.

8.9 Major ATC/ATM failure or significant deterioration of aerodrome infrastructure.

8.10 Aerodrome movement areas obstructed by aircraft, vehicles, animals or foreign objects, resulting in a hazardous or potentially hazardous situation.

8.11 Errors or inadequacies in marking of obstructions or hazards on aerodrome movement areas resulting in a hazardous situation.

8.12 Failure, significant malfunction or unavailability of airfield lighting.

CIVIL AVIATION AUTHORITY

CAAF-001-SBXX-1.0

- ☐ MANDATORY OCCURENCE REPORT
- ☐ VOLUNTARY INCIDENT REPORT

SAFETY & INVESTIGATION BOARD

Initial information on the following format is to be transmitted on telephone / fax to the designated nominees of DG CAA (i.e. President SIB, PD (Reg), & Dir SQMS). It must be followed by a written report immediately after the information is passed on respective tele / fax numbers.

PSIB : Tele # 92 21 9924 2772 Cell # 0301 – 8223810 Fax # 92 21 3460 4305
PD (Reg) :
Dir SQMS

a) **Name, designation & telephone number of the officer/official reporting the Occurrence** :

b) **Name of the Airport from which the message originated:** :

c) **Aircraft Information:** :

i) **Type, Flt # & Registration marks of the aircraft:** :

ii) **Name of the Owner / Operator (if any) of the aircraft:** :

iii) **Name of the Pilot:** :

iv) **Date & Time of the Occurrence / Incident:** :

v) **The last point of departure and the point of intended landing of the aircraft and nature of flight:** :

vi) **The location of the accident / incident with reference to some easily defined geographical point:** :

vii) **Total No. of persons/Passenger/Flight Crew etc., on board: Number of killed (if any):** :

viii) **No. of person(s) seriously injured and (if possible) name(s) of such persons:** :

ix) **The nature & cause of the incident / accident, as far as known:** :

x) **The nature and extent of damage to aircraft:**

Damage Report (if any)

xi) **Weather condition** :

xii) **Summary of the occurrence:**

Summary :

Name: _____ **Signature** _____
Designation: _____ **Dated:** _____
Telephone: _____ **Email:** _____

Distributed to:-

- PD (Reg), HQCAA
- President SIB, HQCAA
- Dir SQMS
- SO to DDG CAA
- Note: √ ☐ **Which is applicable**

MOR Sr. No. _____

HEADQUARTERS CIVIL AVIATION AUTHORITY
BIRD HIT / STRIKE REPORTING FORM
SAFETY & INVESTIGATION BOARD

CAAF-002-SBXX-1.0

OPERATOR: .....

AIRCRAFT TYPE .....

FLIGHT NO.: .....

AIRCRAFT REG. NO.: .....

FROM _____ TO _____

DATE: _____ DAY _____ MONTH _____ YEAR _____

LOCAL TIME OF BIRD HIT : .....

DAWN ☐ DAY ☐ DUSK ☐ NIGHT ☐

AERODROME NAME: .....

RUNWAY USED: .....

LOCATION (IF ENROUTE): .....

HEIGHT AGL: ..... ft

SPEED (IAS): ..... kt

PHASE OF FLIGHT:

PARKED	☐	ENROUTE	☐
TAXI	☐	DESCENT	☐
TAKE-OFF RUN	☐	APPROACH	☐
CLIMB	☐	LANDING ROLL	☐

PART (S) OF AIRCRAFT:

		STRUCK	DAMAGE
RADOME		☐	☐
WINDSHIELD		☐	☐
NOSE (EXCLUDING ABOVE)		☐	☐
ENGINE NO.	1	☐	☐
	2	☐	☐
	3	☐	☐
	4	☐	☐
PROPELLER		☐	☐
WING / ROTAR		☐	☐
FUSELAGE		☐	☐
LANDING GEAR		☐	☐
TAIL		☐	☐
LIGHTS		☐	☐
OTHER (SPECIFY)		☐	☐

EFFECT ON FLIGHT:

NONE	☐
ABORTED TAKE OFF	☐
PRECAUTIONARY LANDING	☐
ENGINES SHUT DOWN	☐
OTHER (SPECIFY)	☐

SKY CONDITION:

NO CLOUD	☐
SOME CLOUD	☐
OVERCAST	☐

PRECIPITATION:

FOG	☐
RAIN	☐
SNOW	☐

BIRD SPECIES: .....

NUMBER OF BIRDS

SEEN		STRUCK
1	☐	☐
2-10	☐	☐
11-100	☐	☐
MORE	☐	☐

SIZE OF BIRD

SMALL	☐
MEDIUM	☐
LARGE	☐

PILOT WARNING OF BIRDS:

YES ☐ NO. ☐

REMARKS (DESCRIBE DAMAGE, INJURIES AND OTHER PERTINENT INFORMATION:

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.....

.....

REPORTED BY (NAME OF PILOT).....

DATE: _____