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2. HIGHLIGHTS OF CHANGE

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<tr>
<td>Oct. 2012</td>
<td>Page 7/Para 7(b)</td>
<td>Editorial error - word “awareness” is removed.</td>
</tr>
</tbody>
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3. PURPOSE

The purpose of this Civil Aviation Advisory Publication (CAAP) is to provide interpretative material and guidance in order to report an incident using the GCAA’s mandatory reporting system by persons/organisations regulated by the UAE Civil Aviation Regulations (CARs).

In addition to reporting of safety incident to General Civil Aviation Authority (GCAA), the CAAP also describes the responsibility of the originator to send incident reports to other stakeholders who are partners in safety, e.g. manufacturer, maintenance organizations.

The mandatory reporting requirement is supported by the GCAA’s “Reporting of Safety Incident” (ROSI) system including user manual available in ROSI folder on GCAA website’s (www.gcaa.gov.ae) downloads centre.

Guidance on the GCAA’s voluntary reporting may be found in CAAP 57 – Voluntary Occurrence Reporting System.

Note: This CAAP is based on the EASA AMC 20-8.

4. STATUS OF THIS CAAP

This is Revision No. 2 of Issue 3 of CAAP 22 – SAFETY INCIDENT REPORTING dated October 2012. It will remain in effect until withdrawn or superseded. This issue contains editorial changes and addition of a few reportable items.

5. APPLICABILITY

This CAAP applies to all UAE operators operating in or outside UAE territory, and to the GCAA approved or certified organisations including:

- Overseas organisations (CAR 21 & CAR145) as applicable;
- Recreation aviation aircraft; and
- Any wet leased aircraft operated by UAE certified operator regardless of State of registry.

In most cases the obligation to report is on the holders of a GCAA certificate or approval, which in most cases are organisations, but in some cases can be a single person as a licence holder. In addition, some reporting requirements are directed to persons. However, in order not to complicate the text, only the term “organisation” is used.
With respect to dangerous goods reporting, initial reporting using ROSI form shall be transmitted by the originator. However, detailed report using ICAO/ IATA format shall be completed by the originator as necessary. The definition of reportable dangerous goods incident is different from the other occurrences and the reporting system is also separate. This subject is covered in specific requirements and guidance within CARS, and ICAO Documents, namely:

(a) CAR Part IV, CAR-OPS 1/3.1225 and AMC OPS 1/3.1225  
(b) CAR PART V, Chapter 3, 4 and 5  
(c) CAR Part VI, Chapter 2  
(d) CAR Part VIII Subpart 4, Appendix 4  
(e) CAR Part IX 4.7.5  
(f) ICAO Annex 18, The Safe Transport of Dangerous Goods by Air, Chapter 12  
(g) ICAO Doc 9284-AN/905, Technical Instructions for the Safe Transport of Dangerous Goods by Air.

6. OBJECTIVE OF INCIDENT REPORTING

See CAR-OPS 1 and 3. CAR Parts V, VI, VIII and IX, NOTAC 02/2011, ICAO Doc 9332 and 9137.

(a) The objective of the incident reporting, collection, investigation and analysis systems is to provide timely regulatory response in the interest of aviation safety. The incident reporting system is also an essential element of the overall GCAA centralised monitoring function.

(b) The detailed objectives of the incident reporting systems are:

(i) To encourage aviation industry follow centralized reporting (single point) using ROSI application.  
(ii) To enable an assessment of the safety implications of each incident including previous similar incidents through technical inquiry and initiate timely corrective actions to prevent recurrence of the incident.  
(iii) To ensure that knowledge of incident is disseminated so that other aviation industry members may benefit from them.  
(iv) To enhance international aviation safety by reporting to applicable Civil Aviation Authorities responsible for the Type Certificate Data Sheet (TCDS) or ATS Authority when required.
(v) To enhance international aviation safety by reporting wake vortex incidents and specific bird strikes and details of associated aircraft engine damage to ICAO when required.

(c) The incident reporting system is complementary to the normal day to day procedures and 'control' systems and is not intended to duplicate or supersede any of them. The incident reporting system is a tool to identify those occasions where routine procedures have failed.

(d) Information on each incident (ROSI) shall remain in the database for research and safety promotional activities as well as usage by any other GCAA applications.

7. REPORTING TO THE AUTHORITY

See CAR OPS 1 & 3, CAR Parts V, VI, VIII and IX and NOTAC 02/2011.

(a) Requirements

(i) As detailed in CAR OPS 1.420(b)(2) & CAR OPS 3.420(b)(2), incidents defined as an incident, malfunction, defect, technical defect or exceedance of technical limitations that endangers or could endanger the safe operation of the aircraft must be reported to the Authority (GCAA).

(ii) CAR Part VI, Chapter 3 prescribes that incident defined as a failure, malfunction, defect or other incident which has resulted in or may result in an unsafe condition must be reported to the Authority (GCAA).

(iii) CAR Part V stipulates that incidents defined as any condition of the aircraft or aircraft component that has resulted or may result in an unsafe condition that could seriously hazard the aircraft must be reported to the Authority (GCAA).

(iv) CAR Part VI, Chapter 2, stipulates that;
If an accident/ incident occurs involving dangerous goods it shall be a reportable occurrence. Therefore (where applicable), the Air Operator, Ground Handling Agent, Freight Forwarding Agencies and/or any other entity shall report dangerous goods accidents and incidents (using agreed company procedures or the Mandatory Occurrence Reporting scheme or any other appropriate scheme) to the Competent Authority, within 72 hours of the occurrence, unless exceptional circumstances
prevent this. The initial report shall be made by any means but a written report shall be sent as soon as possible, even if all the information is not available.

This shall include;

(1) Reporting of any occasion when undeclared or wrongly declared dangerous goods are discovered in cargo.

(2) Reporting of any occasion when dangerous goods not permitted under 8.1.1.1 of ICAO Technical Instructions for the Safe Transport of Dangerous Goods and Table 2.3.A of the IATA Dangerous Goods Regulations, are discovered in passengers’ baggage.

(v) An initial report shall be dispatched within 72 hours of the occurrence, unless exceptional circumstances prevent this. The initial report may be made by any means but a written report should be sent as soon as possible, even if all the information is not available. (see Occurrence Report form SI-001, CAR Part VI Chapter 2. CAR Part VIII—ANS — requires the notification, investigation and reporting of incidents in accordance with Subpart 4, Appendix 4 on ATS Occurrence Reporting.

(vi) CAR Part IX – Aerodromes - requires aerodromes to brief air operators to report all flight or ground based incidents including wildlife strikes or near misses. CAR IX also requires that all bird strikes are reported to the GCAA.

(vii) NOTAC 02/2011 – Aerodrome Certificate Holder Mandatory Reporting - requires all certified aerodrome operators to ensure that Manoeuvring Area Excursions, FOD, Aircraft Damage, Runway Incursions and Bird & Wildlife Hazards are reported stipulates that incidents defined as any condition of the aircraft or aircraft component that has resulted or may result in an unsafe condition that could seriously hazard the aircraft must be reported to the Authority (GCAA). See details in NOTAC for specific reporting categories.

(viii) Reporting does not remove the reporter’s or organisation’s responsibility to commence corrective actions to prevent similar incidents in the future. Known, planned or preventive actions already implemented may be included within the ROSI report.

(b) Paragraph 12(g) of this CAAP provides guidance as to what should be reported by an organisation to the GCAA using ROSI. The list of criteria provided may be used as guidance for establishing which incident shall be reported by which
organisation. For example, the organisation responsible for the design will not need to report certain operational incident that it has been made aware of, if the continuing airworthiness of the product is not involved.

8. NOTIFICATION OF ACCIDENT OR SERIOUS INCIDENT OR OTHER CRITICAL EMERGENCY AFFECTING CIVIL AVIATION SYSTEM

See CAR OPS 1.420(c), CAR OPS 3.420(c), CAR Part VIII, sub-part 4, Appendix 4

In addition to ROSI, GCAA had introduced a reporting system (24/7) for accident, serious incident or any critical emergency. Organisations involved or in the knowledge of such serious incident /accident shall directly report about it to the Duty Inspector (DI) using on +971 50 641 4667. Reference is also to be made to DIR 01-2012.

(a) Aircraft Accident / Serious Incident – Fatal & Non-Fatal

(i) UAE Air Operator
(ii) Foreign Air Operator
(iii) State Aircraft – VVIP, VIPs
(iv) Corporate Aircraft

(b) Airborne Serious Emergency affecting the safety of the aircraft

(i) Large Air Carrier Aircraft – such as unlawful interference.
(ii) Dangerous Goods Involvement

(c) Major incident at airport affecting airside operational safety

(i) Crash on Airport
(ii) Aircraft evacuation due to potential hazard
(iii) Major system, structural failure or labour dispute causing serious disruption to operations
(iv) Illegal Acts
(v) Aircraft Hijacking - in UAE
(vi) Hostage taking
(vii) Terrorist activities
(viii) Bomb threats/ Bomb found in civil aircraft/ airport terminal building
9. REPORTING TIME

See CAR Part IV, V, VI, VIII & IX

(a) The reporting period is normally understood to start from when the incident took place or from the time when the reporter determined that there was, or could have been, a potentially hazardous or unsafe condition.

(b) For many incidents there is no evaluation needed; it must be reported. However, there will be occasions when, as part of a Flight Safety and Accident Prevention Programme or Quality Programme, a previously non-reportable incident is determined to be reportable.

(c) Within the overall limit for the submission of a report, the degree of urgency should be determined by the level of risk judged to have resulted from the incident:

   (i) Where an incident is judged to have resulted in an immediate and particularly significant or critical risk the Authority expects to be notified immediately, and by the most expeditious possible means (e.g. telephone – refer to paragraph 7 on accident or serious incident) of whatever details are available at that time. This initial notification should then be followed up by ROSI within the required time period.

   (ii) Where the incident is judged to have resulted in a less immediate and less significant hazard, report submission may be delayed up to the maximum of the reporting period in order to provide more details or more reliable information.

(d) Maximum reporting times for specific type of operator or organisations are summarized in the following table:
<table>
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<tr>
<th>Operator Type</th>
<th>Classification</th>
<th>Reference</th>
<th>Maximum Reporting Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Operators / Maintenance Organizations, CAR21 Organizations</td>
<td>Incident</td>
<td>CAR OPS 1.420(b)(3), CAR OPS 3.420(b)(3) and CAR Part V, CAR 21, CAR145</td>
<td>72 hours via OPS ROSI</td>
</tr>
<tr>
<td>Aerodrome</td>
<td>Serious Incidents</td>
<td>NOTAC 02/2011</td>
<td>8 hours via ATC/AOP ROSI</td>
</tr>
<tr>
<td>Aerodrome</td>
<td>Accidents</td>
<td>CAR VIII – Subpart 4 – Appendix B</td>
<td>3 hours – serious/Accident</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>72 hours – routine (VIA ATC ROSI)</td>
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<tr>
<td>Air Traffic</td>
<td>Incident</td>
<td>CAR Part VI – Chapter 2</td>
<td>72 hours via OPS ROSI</td>
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<td>All</td>
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<td>Duty Investigator - +971 50 641 4667</td>
<td>IMMEDIATELY TO GCAA DI-VIA PHONE</td>
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<td>All</td>
<td>Accidents and Serious Incidents</td>
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<td>IMMEDIATELY TO GCAA DI-VIA PHONE</td>
</tr>
</tbody>
</table>
10. CONTENTS OF THE ROSI

See CAR OPS 1.420, CAR OPS 3.420, CAR OPS 3.517 and CAR Part V, ROSI FORM (Appendix A).

(a) In keeping with the requirements for reporting through ROSI, the amount of information in the report should be commensurate with the severity of the incident. Each report should at least contain the following elements, as applicable to each organisation:

(i) Organisation name, originator’s name and ID.
(ii) Aircraft Registration Mark,, Flight Details/ Aircraft configuration/ Maintenance Incidents/ Approval Reference (if relevant)
(iii) Information necessary to identify the aircraft, crew or part affected
(iv) Date, time and route or location
(v) Check/ mark the appropriate fields in the ROSI form (GCAA website).
(vi) A written short description of the incident including any immediate corrective measures/ actions taken or planned.

(b) For any incident involving a system or component, which is monitored or protected by a warning and/or protection system (for example: fire detection/extinguishing) the incident report should always state whether such system(s) functioned properly.

11. NOTIFYING OTHER AGENCIES BY THE ORIGINATOR – CAR-OPS APPROVED ORGANISATIONS

See CAR OPS 1.420(c) & (d) CAR OPS 3.420 (c) & (d)

For CAR-OPS approved organisations, in addition to reporting incidents to the GCAA, the following agencies should also be notified in specific cases:

(a) Security incidents including laser beam occurrences should also be notified to the appropriate local security agency.
(b) Reports relating to air traffic, aerodrome incidents or bird strikes should also be notified to the appropriate air navigation, aerodrome or ground agency.
(c) Reporting and assessment of air traffic safety incident in ATM within the MIDDLE- EAST RVSM Region should be notified to the GCAA.
12. REPORTING WITHIN ORGANISATIONS

See CAR OPS 1.420(b)(5), CAR OPS 3.420(b)(5), CAR 145.60(a)(b)(c)(d), CAR M 2.202(a)(b) and CAR 21.3(b)(2)

(a) Requirements exist within the CARs that address the reporting of data relating to unsafe or un-airworthy conditions. These reporting lines are:

1. Production organisation to the organisation responsible for the design;
2. Maintenance organisation to the organisation responsible for the design & production;
3. Maintenance organisation to operator;
4. Operator to organisation responsible for the design & production;
5. Production organisation to sub contract production organisation for supplies.

(b) The ‘Organisation responsible for the design’ is a general term, which can be any one or a combination of the following organisations

1. Holder of Type Certificate (TC) of an Aircraft, Engine or Propeller;
2. Holder of a Supplemental Type Certificate (STC) on an Aircraft, Engine or Propeller;
3. Holder of a Technical Standard Order (TSO) Authorisation; or
4. Holder of a Parts Manufacturer Approval (PA) Authorisation

(c) If it can be determined that the incident has an impact on or is related to an aircraft component which is covered by a separate design approval (TC, STC, TSO or PMA), then the holders of such approval/authorisation should be informed. If an incident happens on a component which is covered by a TC, STC, TSO or PMA (e.g. during maintenance), then only that TC, STC, TSO Authorisation or PMA Authorisation holder needs to be informed.

(d) The form and timescale for reports to be exchanged amongst organisations is left for individual organisations to determine. What is important that there must be a data sharing relationship after an incident.
Paragraph 12(g) of this CAAP provides guidance as to what should be reported by an organisation to the GCAA. The list of criteria provided may be used as guidance for establishing which incidents shall be reported to which organisation. For example, certain operational incidents need not to be reported by an operator to the design or production organisation.

13. REPORTABLE INCIDENTS

See CAR OPS 1.420(b), CAR OPS 3.420(b), CAR M 2.202(a)(b), CAR Part VIII, sub-part 4, Appendix 4, CAR IX 4.7.5, NOTAC 02/2011, CAR 145.60(a)(b)(c) and CAR 21.3(b)(2).

Reportable incidents are those where the safety of operation was or could have been endangered or which could have led to an unsafe condition.

(a) There are different reporting requirements for operators (and/or Pilot in Command), maintenance organisations, design organisations, production organisations, maintenance engineers through the designated ROSI originators, air traffic control units, aerodromes, freight forwarders and ground handlers. However, for the purpose of ROSI, items identified in the form shall be considered for reporting. The list is not exhaustive, however, any additional items shall be marked as “Other”, which must be described in the narrative column and/or any extra pages as necessary.

(b) Moreover, as explained in paragraph 5 and 10 above, there are not only requirements for reporting to the authority (GCAA), but also for reporting to other organization, e.g. manufacturer. The criteria for all these different reporting lines are not the same. For example the authority will not receive the same kind of reports from a design organisation as from an operator. This is a reflection of the different perspectives of the organisations based on their activities.
(c) Figure 1 presents a simplified scheme of all reporting lines.

(d) Operations and Maintenance. The list of examples of reportable incidents outlined in paragraph 12(g) is established from the perspective of primary sources of incident information in the operational area (operators and maintenance organisations) to provide guidance for those persons developing criteria for individual organisations on what they need to report to the authority. The list is neither definitive nor exhaustive and judgement by the reporter of the degree of hazard or potential hazard involved is essential.

(e) Design. The list of examples will not be used by design organisations directly for the purpose of determining when a report has to be made to the authority, but it can serve as guidance for the establishment of the system for collecting data. After receipt of reports from the primary sources of information, designers will normally perform some kind of analysis to determine whether an incident has resulted or may result in an unsafe condition and a report to the authority should be made. An analysis method for determining when an unsafe condition exists in relation to continuing airworthiness is detailed in the EASA AMC’s regarding the issuance of Airworthiness Directives.
(f) Production. The list of examples is not applicable to the reporting obligation of production organisations. Their primary concern is to inform the design organisation of deviations. Only in cases where an analysis in conjunction with the design organisation shows that the deviation could lead to an unsafe condition, should a report be made to the Authority (see also (e) above).

(g) Customised List. Each approval, certificate, authorisation other than those mentioned in sub paragraph (d) and (e) above, should develop a customised list adapted to its aircraft, operation or product. The list of reportable incidents applicable to an organisation is usually published within the organisation’s manuals.

(h) Internal Reporting. The perception of safety is central to incident reporting. It is for each organisation to determine what is safe and what is unsafe and to develop its reporting system on that basis. The organisation should establish an internal reporting system whereby reports are centrally collected and reviewed to establish which reports meet the criteria for incident reporting to the Authority and other organisations as required.

(i) Air Traffic Incidents. In addition to the internal reporting system, ATS shall transmit ROSI within 3 hours for an accident, serious incident and AIRPROX, and within 72 hours for ATS incidents. In addition, accidents and serious incidents shall be reported separately to the Duty Inspector immediately.

(j) External Sources. External departments like law enforcement agencies, foreign CAAs may also submit safety incident reports with respect to UAE registered aircraft.

14. A List of examples of reportable incidents

See Appendix B.

15. ROSI FORM

It is available on U.A.E. GCAA website.
16. **Access Control**

To ensure authorized access to ROSI form in the website, users shall establish his/her profile in the website and receive user ID & password to access the form. The official users of the operator or organisation shall notify GCAA to register through email: rosi@gcaa.gov.ae

To support the concept of single point of reporting, GCAA encourages to have one user per company but not exceeding two.

17. **Guidance for filling out the ROSI Form & Submission**

<table>
<thead>
<tr>
<th>Operator Type</th>
<th>Guidance Available</th>
</tr>
</thead>
</table>
| Air Operations/ Airworthiness/ Dangerous Goods | CAAP 22 & on line user manual  
APPENDIX A

See GCAA Website for ROSI

http://www.gcaa.gov.ae/en/rosi/

Dangerous Goods - 2013
APPENDIX B

LIST OF EXAMPLES OF REPORTABLE INCIDENTS

I. AIRCRAFT FLIGHT OPERATIONS

A. Operation of the Aircraft

(1) (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 manoeuvre required to avoid a collision with an aircraft, terrain or other object.

(c) An avoidance manoeuvre to avoid other unsafe situations.

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

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

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

(5) Loss of control (including partial or temporary loss of control) from any cause.

(6) Incident close to or above V₁ resulting from or producing a hazardous or potentially hazardous situation (e.g. tail strike, engine power loss etc.).

(7) Go-around/Missed Approach producing a hazardous or potentially hazardous situation including rejected landing.

(8) Unintentional significant deviation from airspeed, intended track or altitude. (more than 300 ft) from any cause.
(9) Descent below decision height/altitude or minimum descent height/altitude without the required visual reference.

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

(11) Breakdown in communication between flight crew (CRM) or between Flight crew and other parties (cabin crew, ATC, engineering).

(12) Heavy/ hard landing - a landing deemed to require a 'heavy landing check'.

(13) Exceedance of fuel imbalance limits.

(14) Incorrect setting of an SSR code or of an altimeter subscale.

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

(16) Incorrect receipt or interpretation of radiotelephony messages.

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

(18) Aircraft unintentionally departing a paved surface.

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

(20) Inadvertent and/or incorrect operation of any controls.

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

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

(23) Abnormal vibration.

(24) 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. Provided that the false warning did not result in difficulty or hazard arising from the crew response to the warning; or

(b) operated for training or test purposes.

(25) 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 (Mode 1); or

(c) the warning results from failure to select landing gear or landing flap by the appropriate point on the approach (Mode 4); 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.

(26) GPWS/TAWS ‘alert’ when any difficulty or hazard arises or might have arisen as a result of crew response to the ‘alert’.

(27) TCAS/ACAS RAs.

Note: While submitting a ROSI, the operator must indicate if any assistance is required from GCAA in coordinating the incident with foreign ATS Authority or CAA.

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

(29) Taxiway incursion/Runway incursion.

(30) Laser incident (Guidance available in CAAP49)

(31) Unstable approach

(32) Rejected take off
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’).

(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 crew member.
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

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.

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.

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

(1) 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.
(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) Discovery of a stowaway.

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

I. Passenger Handling, Baggage and Cargo

(1) Significant contamination of aircraft structure, or 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 hazard the aircraft, its equipment or occupants or to impede emergency evacuation.

(4) Inadequate stowage of cargo containers or other substantial items of cargo.

(5) Dangerous goods incidents reporting: see CAR-OPS 1.1225 and AMC.
J. Aircraft Ground Handling and Servicing

(1) 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.

(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).

K. Other incidents

(1) Repetitive instances of a specific type of incident which in isolation would not be considered 'reportable' but which due to the frequency at 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) Wake turbulence encounters.

(4) 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.

II. 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. Typical examples of such elements are listed for large aeroplanes in EASA AC/AMC 25.571(a) “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 jeopardise proper operation of systems. See paragraph II.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, subsystem 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) uncommented actions;
   (b) incorrect and or incomplete response, including limitation of movement or stiffness;
   (c) runaway;
   (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, subsystems or sets of equipment:

Loss, significant malfunctions or defects in any main system, subsystem or set of equipment.

(9) For aircraft types with multiple independent main systems, subsystems or sets of equipment:

The loss, significant malfunctions, or defects of more than one main system, subsystem or set of equipment.

(10) 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.

(11) 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.

(12) Malfunction or defect of any indication system when this results in the possibility of misleading indications to the crew.

(13) Any failure, malfunction or defect if it occurs at a critical phase of flight and relevant to the operation of that system.

(14) 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.

(15) Asymmetry of flight controls; e.g. flaps, slats, spoilers etc.

**Note:** Annex C to this CAAP gives a list of examples of reportable incidents resulting from the application of these generic criteria to specific systems.
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 (for example: 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;
   (h) Dense visible fumes or concentrations of toxic products sufficient to incapacitate crew or passengers;
   (i) Inability, by use of normal procedures, to shutdown 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 (LOTC):
   (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 overspeed 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. 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.

E. Other Incidents

(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.

(6) Loss of pilots seat control during flight.

III. AIRCRAFT MAINTENANCE AND 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 lift 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) Products, parts, appliances and materials of unknown or suspect origin.

(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.

IV. AIR NAVIGATION SERVICES, FACILITIES AND GROUND SERVICES

Air Navigation Services - ATTACHMENT A

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

(2) **Note:** Bird strike reports on or in the immediate vicinity of an aerodrome shall be reported to the relevant aerodrome management who shall report the incident to ROSI using their internal procedures.
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACAS Event</td>
<td>An incident where a resolution advisory event (RA) did or may have occurred</td>
</tr>
<tr>
<td>Accident</td>
<td>An occurrence meeting the definition of an accident contained in CAR Part VIII, Subpart 1.</td>
</tr>
<tr>
<td>AIRPROX Category A</td>
<td>An incident in which a collision is narrowly avoided</td>
</tr>
</tbody>
</table>
| AIRPROX Category B               | An incident in which a reduction in required ATC separation occurs where:  
|                                  | 1. There is significant potential for collision, which may result in a time-critical corrective action/evasive response to avoid a collision; or  
|                                  | 2. The separation remaining is less than half the required minimum and no action is taken, or the initial action to resolve the situation was determined by the pilot or ACAS. |
| AIRPROX Category C               | An incident in which a reduction in required ATC separation occurs where:  
|                                  | 1. There is ample time or distance to avoid a potential collision; or  
|                                  | 2. The separation remaining is less than half the required minimum and ATC resolved the situation; or  
|                                  | 3. The separation remaining is half or more than the required minimum and no action is taken, or the initial action to resolve the situation was determined by the pilot or ACAS. |
| AIRPROX Category D               | An incident in which separation was jeopardized or a reduction in required ATC separation occurs where:  
|                                  | 1. The separation remaining is half or more of the required minimum and ATC resolved the situation; or  
<p>|                                  | 2. The minimum separation is maintained but the initial action to resolve the situation was determined by the pilot or ACAS. |
| Airspace Penetration (CTA/CTR/SUA) without | An incident where an aircraft enters civil or military controlled airspace or SUA without clearance or proper authorisation. |</p>
<table>
<thead>
<tr>
<th>clearances or approval</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Apron Incident</td>
<td>An incident reported to ATC where the flight safety of an aircraft was or may have been affected on the apron area.</td>
</tr>
<tr>
<td>ATC Co-ordination Error</td>
<td>An incident where the coordination between ATC Sectors or units is not completed correctly</td>
</tr>
<tr>
<td>ATC Operational issue</td>
<td>An incident, not resulting in any other category, where incorrect ATCO actions or ATC procedures affected, or may have affected flight safety</td>
</tr>
<tr>
<td>ATS/AD Equipment failure</td>
<td>An incident where there is a failure or degradation of ATS or AD operational equipment which has or may have adversely affected flight safety</td>
</tr>
<tr>
<td>Communications failure</td>
<td>An incident where an aircraft experiences a total or partial communications failure</td>
</tr>
<tr>
<td>Deviations from ATC Clearance (not including a level bust)</td>
<td>An incident where an aircraft fails to comply with any component of an ATC clearance, excluding a cleared altitude or flight level</td>
</tr>
<tr>
<td>Emergency (other than engine failure or fuel shortage)</td>
<td>An incident, excluding an accident, security event, engine failure, fuel emergency or medical emergency, where a pilot declares an emergency, Mayday or Pan.</td>
</tr>
<tr>
<td>Engine failure</td>
<td>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.</td>
</tr>
<tr>
<td>Flight planning error</td>
<td>An incident where a flight planning error has been reported which may affect the safety of a flight</td>
</tr>
<tr>
<td>FOD including tyre burst</td>
<td>An incident involving FOD detected on a runway including reported tyre bursts from aircraft which have recently operated on a runway.</td>
</tr>
<tr>
<td>Fuel emergency</td>
<td>An incident where a pilot reports he is experiencing a minimum fuel situation which requires an emergency declaration or a priority landing request.</td>
</tr>
<tr>
<td>Go-around event</td>
<td>An incident, excluding IFR or VFR training aircraft, where an aircraft conducts a go-around from below the minimum descent height/decision height.</td>
</tr>
<tr>
<td>Level Bust Category A</td>
<td>An incident where an aircraft fails to comply with an ATC cleared altitude or flight level resulting in an abrupt manoeuvre where a collision is narrowly averted</td>
</tr>
<tr>
<td>Level Bust Category B</td>
<td>An incident where an aircraft fails to comply with an ATC cleared altitude or flight level resulting in a reduction of separation where: 1. A significant potential for collision which may result in a time critical corrective evasive response to avoid a collision; or</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Level Bust</td>
<td>An incident where an aircraft fails to comply with an ATC cleared altitude or flight level resulting in a reduction of separation where:</td>
</tr>
<tr>
<td>Category C</td>
<td>An incident where an aircraft fails to comply with an ATC cleared altitude or flight level resulting in a reduction of separation where:</td>
</tr>
<tr>
<td>Category D</td>
<td>An incident where an aircraft fails to comply with an ATC cleared altitude or flight level resulting in a reduction of separation where:</td>
</tr>
<tr>
<td>Loss of Runway separation Category A</td>
<td>An incident in which a reduction in required runway separation occurs where a collision is narrowly avoided.</td>
</tr>
<tr>
<td>Loss of Runway separation Category B</td>
<td>An incident in which a reduction in required runway separation occurs where:</td>
</tr>
<tr>
<td>Loss of Runway separation Category C</td>
<td>An incident in which a reduction in required runway separation occurs where:</td>
</tr>
<tr>
<td>Loss of Runway separation Category D</td>
<td>An incident in which runway separation was jeopardised or a reduction in required runway separation occurs where:</td>
</tr>
<tr>
<td>Event Type</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>LSALT/Terrain event</td>
<td>An incident where an IFR aircraft is flown below a Lowest Safe Altitude (LSALT) or an ATC Minimum Radar Vectoring Altitude (MRVA)</td>
</tr>
<tr>
<td>LVP Violations</td>
<td>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.</td>
</tr>
<tr>
<td>Medical emergency</td>
<td>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.</td>
</tr>
<tr>
<td>Military due regard event</td>
<td>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.</td>
</tr>
<tr>
<td>Non-compliance with climb gradient</td>
<td>An incident where an aircraft fails to comply with the published minimum departure climb gradient requirement.</td>
</tr>
<tr>
<td>Operator complaint or operational issue (not resulting in any other category)</td>
<td>An incident involving: 1. A direct operational related complaint or query received from an operator or State; or 2. An ATC issue with an operator</td>
</tr>
<tr>
<td>Runway incursion category A</td>
<td>A serious incident in which a collision is narrowly avoided</td>
</tr>
<tr>
<td>Runway incursion Category B</td>
<td>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.</td>
</tr>
<tr>
<td>Runway incursion Category C</td>
<td>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.</td>
</tr>
<tr>
<td>Runway incursion Category D</td>
<td>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.</td>
</tr>
<tr>
<td>Runway incursion category E</td>
<td>Insufficient information or inconclusive or conflicting evidence precludes a severity assessment</td>
</tr>
<tr>
<td>Runway</td>
<td>An incident occurring on a runway, where operational safety was or may</td>
</tr>
</tbody>
</table>
### Operation Incident

- have been affected, excluding a runway incursion, such as: 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 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/excursion.

### 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.

### V. AERODROMES (REFERENCE NOTAC 02/2011)

1. Manoeuvring Area Excursion - Category A - An incident in which an aircraft has an excursion from a runway – i.e. overrun, excursion off the side of the runway – resulting in damage to aircraft.
2. Manoeuvring Area Excursion - 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. Manoeuvring Area Excursion - 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. Manoeuvring Area Excursion - 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.
5. FOD Category A - FOD which is likely to cause damage to an aircraft on runway or runway shoulder.
6. Aircraft Damage - Category A - Destroyed – Aircraft is unlikely to ever fly again – total write off.
(7) Aircraft Damage - Category B - Substantially Damaged – Major damage that prevents the aircraft from flight until significant maintenance is undertaken

(8) Aircraft Damage - Category C - Minor Damage – Minor damage that prevents the aircraft from immediate flight and requires some maintenance to rectify

(9) Runway Incursion - Category A - A serious incident in which a collision is narrowly avoided

(10) Runway Incursion - Category B - A Runway Incursion incident 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, including a runway incursion occurring while a departing aircraft has commenced its take-off roll or an arriving aircraft has crossed the threshold

(11) Runway Incursion - Category C - A Runway Incursion incident characterized 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

(12) Runway Incursion - Category D - A Runway Incursion incident that meets the definition of a runway incursion such as the incorrect presence of a single 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

(13) 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

(14) 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

(15) 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.
VI. Reportable Incident to Specific Systems

The following subparagraphs give examples of reportable incidents resulting from the application of the generic criteria to specific systems listed in paragraph 12(g) II.B of this CAAP.

(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 signalling 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) 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 run away;

(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;

(8) 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;

(9) 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

(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

(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.

(12) 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
(13) 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.

(14) 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.

(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.

** ITEMS/EVENTS NOT INCLUDED IN THE ROSI FORM, SHALL BE MARKED AS “OTHER” FOLLOWED BY SHORT DESCRIPTION IN THE NARRATIVE COLUMN, NEXT PAGE. **