

A stylized paper airplane icon in shades of blue is positioned on a dashed grey line that represents a flight path. The path starts on the left, curves upwards, then downwards, and then upwards again towards the right. The background features large, abstract, light grey shapes that resemble the map of Malaysia.

CIVIL AVIATION DIRECTIVE – 1900

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SAFETY REPORTING SYSTEM

CIVIL AVIATION AUTHORITY OF MALAYSIA

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Civil Aviation Directive components and Editorial practices

This Civil Aviation Directive is made up of the following components and are defined as follows:

Standards: Usually preceded by words such as “*shall*” or “*must*”, are any specification for physical characteristics, configuration, performance, personnel or procedure, where uniform application is necessary for the safety or regularity of air navigation and to which Operators must conform. In the event of impossibility of compliance, notification to the CAAM is compulsory.

Recommended Practices: Usually preceded by the words such as “*should*” or “*may*”, are any specification for physical characteristics, configuration, performance, personnel or procedure, where the uniform application is desirable in the interest of safety, regularity or efficiency of air navigation, and to which Operators will endeavour to conform.

Appendices: Material grouped separately for convenience but forms part of the Standards and Recommended Practices stipulated by the CAAM.

Definitions: Terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.

Tables and Figures: These add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

Notes: Included in the text, where appropriate, Notes give factual information or references bearing on the Standards or Recommended Practices in question but not constituting part of the Standards or Recommended Practices;

Attachments: Material supplementary to the Standards and Recommended Practices or included as a guide to their application.

It is to be noted that some Standards in this Civil Aviation Directive incorporates, by reference, other specifications having the status of Recommended Practices. In such cases, the text of the Recommended Practice becomes part of the Standard.

The units of measurement used in this CAD are in accordance with the International System of Units (SI) as specified in CAD 5. Where CAD 5 permits the use of non-SI alternative units, these are shown in parentheses following the basic units. Where two sets of units are quoted it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

Throughout this Civil Aviation Directive, the use of the male gender should be understood to include male and female persons.



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Table of Contents

1	SAFETY REPORTING SYSTEM	1-1
1.1	CITATION	1-1
1.2	APPLICABILITY	1-1
1.3	REVOCAION	1-1
1.4	GENERAL	1-1
1.5	PURPOSE	1-2
1.6	TYPES OF REPORTING	1-3
2	MANDATORY OCCURRENCE REPORT (MOR)	2-1
2.1	BACKGROUND	2-1
2.2	OBJECTIVE	2-1
2.3	ITEMS TO BE REPORTED	2-1
2.4	CATEGORIES OF AIRCRAFT	2-2
2.5	CATEGORIES OF PERSONS REQUIRED TO REPORT	2-2
2.6	CHANNELS FOR REPORTING	2-3
2.7	REPORTING PROCEDURE	2-3
2.8	OCCURRENCE REPORTING FORMS	2-4
2.9	SPECIFIC REPORTING PROVISIONS	2-5
3	VOLUNTARY OCCURRENCE REPORTING (VOR)	3-1
3.1	BACKGROUND	3-1
3.2	OBJECTIVE	3-1
3.3	VOLUNTARY REPORT (VOR)	3-1
4	AIRPORT WILDLIFE HAZARD MONITORING PLAN (AWHMP) AND BIRDSTRIKE REPORTING	4-1
4.1	BACKGROUND	4-1
4.2	OBJECTIVE	4-1
4.3	CATEGORIES OF PERSONS REQUIRED TO REPORT	4-2
5	AIR TRAFFIC INCIDENT REPORT	5-1
5.1	BACKGROUND	5-1
5.2	OBJECTIVE	5-1
5.3	REPORTING BY PILOTS	5-1
5.4	REPORTING BY ATS	5-2
6	MOR – AIRWORTHINESS ASPECT	6-1
6.1	APPLICATION	6-1
6.2	INTERPRETATION	6-1
6.3	OBJECTIVE AND SCOPE	6-2
6.4	REQUIREMENTS	6-3
6.5	ADDITIONAL REPORTING	6-4
7	FLIGHT TIME LIMITATION	7-1
7.1	BACKGROUND	7-1
7.2	OBJECTIVE	7-2
7.3	REPORTING	7-2
8	MANDATORY REPORTING OF DANGEROUS GOODS INCIDENTS AND ACCIDENTS	8-1
8.1	BACKGROUND	8-1
8.2	OBJECTIVE	8-1
8.3	BACKGROUND	8-1



8.4	REPORTING DANGEROUS GOODS INCIDENTS AND ACCIDENTS	8-1
9	PROTECTION OF REPORTERS AND REPORTS	9-1
9.1	CONFIDENTIALITY AND DISSEMINATION OF REPORTS	9-1
9.2	ASSURANCE REGARDING PROSECUTION	9-1
9.3	MALAYSIA CONFIDENTIAL ACCIDENT/ INCIDENT REPORTING (MYCAIR) PROGRAM.....	9-1
10	ACCIDENT / SERIOUS INCIDENT INVESTIGATION.....	10-1
10.1	INTRODUCTION	10-1
10.2	DEFINITIONS	10-1
11	PROCESSING OF OCCURRENCE REPORTS	11-1
11.1	OCCURRENCE REPORT PROCESS	11-1
12	APPENDICES	12-1
12.1	APPENDIX 1 - GUIDE ON THE COMPLETION OF THE CAAM SAFETY OCCURRENCE FORM (CAAM BORANG 9 – OR).12-1	12-1
12.2	APPENDIX 2 - OCCURRENCES TO BE REPORTED	12-5
13	ATTACHMENTS.....	13-1
13.1	ATTACHMENT A – LIST OF SAFETY REPORTING FORMS	13-1

1 Safety Reporting System

1.1 Citation

- 1.1.1 These Directives are the Civil Aviation Directives 1900 – Safety Reporting System (CAD 1900 – SRS), Issue 01/Revision 00, and comes into operation on 15 October 2021.
- 1.1.2 This CAD 1900 – SRS, Issue 01/Revision 00 will remain current until withdrawn or superseded.

1.2 Applicability

- 1.2.1 Any person specified in Regulation 165 (2) of the Civil Aviation Regulations 2016 shall report any reportable occurrence of which they have positive knowledge, even though this may not be first hand, unless they have good reason to believe that appropriate details of the occurrence have already been, or will be, reported by someone else.
- 1.2.2 A report shall also be submitted on any occurrence that involves an unsatisfactory condition, behaviour or procedure, which did not immediately endanger the aircraft but if allowed to continue uncorrected, or if repeated in other foreseeable circumstances, would create a hazard.
- 1.2.3 When there is an occurrence that does not specified within Regulation 165 of Civil Aviation Regulation 2016 or there is other data relating to safety which can cause harm to the civil aviation , report shall be sent as voluntary report in order to further support and develop better aviation safety.

1.3 Revocation

- 1.3.1 This CAD revokes Airworthiness Notice 11 – Mandatory Occurrence Reporting Issue 1 dated 1st September 2005.

1.4 General

- 1.4.1 Safety Reporting System is a methodology of reporting specified in the Civil Aviation Regulations 2016 to confidentially report any reportable events in the interest of improving aviation safety by ensuring that relevant information on safety is reported, collected, stored, investigated, analysed, protected and disseminated while protecting the identity of persons or organisations involved.
- 1.4.2 This CAD is established for the preparation and submission of safety reports by persons or organisations to CAAM in the effort of recording safety data and conduct safety analysis. In this CAD, the term occurrence means any event that occurs within Malaysia or any event involving aircraft registered in Malaysia.

1.4.3 It is of great importance to the success of the Safety Reporting System that the reporters keep firmly in mind the concept of 'endangering' or 'potentially endangering', as used in the above definition, when deciding whether or not to submit a report. The primary objective of occurrence reporting is to monitor, disseminate and record for analysis, critical or potentially critical safety occurrences. It is not intended to collect and monitor the normal flow of day-to-day defects/incidents etc. The latter is an important part of the overall flight safety task, but other procedures and systems exist to carry out this function. In the main these comprise industry responsibilities monitored overall by CAAM. When appropriate, such systems also provide the necessary records for statistical purposes. In order to achieve the above objectives for occurrence reporting, the criteria for a reportable occurrence need to be set above, in terms of the effect on safety, the normal day-to-day defects or minor incidents. Over enthusiastic reporting of such items which fall below these criteria will involve unnecessary duplication and work to both the reporters and CAAM and will also result in large volume of data generated, which would obscure the more significant safety items. Reporters should ensure that the content of their reports meets with the criteria and guidance laid out in Appendix 1. Particular emphasis should be paid to ensuring that day to day operational anomalies, technical defects and routine reliability issues are dealt with via the normal organisational systems and procedures.

1.5 Purpose

1.5.1 The sole purpose of safety reporting is the prevention of accidents and incidents and not to attribute blame or liability.

1.5.2 The existence of the system is to achieve the above objective and 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 organisations etc). CAAM's responsibility is to provide the regulatory framework within which the industry must work and thereafter to monitor performance to be satisfied that required standards are set and maintained. The Safety Reporting System is an established part of CAAM's monitoring function and is complementary to the normal day-to-day procedures and systems.

1.5.3 It is thus no less incumbent upon any organisation:

- a) to record occurrences; and
- b) in conjunction with the appropriate organisation (e.g. aircraft manufacturer, maintenance organisation) and when necessary CAAM, to investigate occurrences in order to establish the cause sufficiently to devise, promulgate and implement any necessary remedial and preventative action.



1.6 Types of reporting

1.6.1 CAAM divides safety occurrence reporting into the following categories: -

- a) Mandatory Occurrence Reporting
- b) Voluntary Occurrence Reporting
- c) Airport Wildlife Hazard Management Plan
- d) Air Traffic Incident Report
- e) MOR Airworthiness Aspect
- f) Flight time Limitation
- g) Mandatory Reporting of Dangerous Goods Incidents And Accidents
- h) Flight Duty Extension



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2 Mandatory Occurrence Report (MOR)

2.1 Background

CAAM has established this reporting system to facilitate mandatory reporting of accidents, serious incidents and incidents.

2.1.1 In accordance with MCAR 2016 Regulation 165, when an occurrence occurs within Malaysia or involving an aircraft operated by a Malaysia operator, relevant persons/operators must notify and shall submit MOR to the Authority within 48 hours the reportable comes to knowledge in pursuant to Regulation 165 (2) of the Civil Aviation Regulation 2016.

2.2 Objective

2.2.1 The objectives of the occurrence reporting are as follows:

- a) to ensure that CAAM is advised of hazardous or potentially hazardous incidents and defects, hereafter referred to as occurrences;
- b) to ensure that knowledge of these occurrences is disseminated so that other persons and organisations may learn from them; and
- c) to enable an assessment to be made by those concerned (whether inside or outside CAAM) of the safety implications of each occurrence, both in itself and in relation to previous similar occurrences that they may take or initiate any necessary action.

2.3 Items to Be Reported

2.3.1 In deciding whether or not to report an occurrence it must be decided whether the event meets the definition as specified in the MCAR 2016. In MCAR 2016, “reportable occurrence” means –

- a) an incident relating to an aircraft or any defect in or malfunctioning of an aircraft or any part or equipment of the aircraft, being an incident, malfunctioning or defect endangering or which if not corrected would endanger the aircraft, its occupants or any other person; or
- b) any defect in or malfunctioning of any facility on the ground used or intended to be used for the purposes of or in connection with the operation of an aircraft, being a defect or malfunctioning endangering, or which if not corrected would endanger the aircraft or its occupants.

A list of examples of these occurrences appears in Appendix 2 to this CAD. This Appendix provides more detailed guidance on the types of occurrences that are required to be reported.

2.3.2 Any person specified in the legislation shall report any reportable occurrence of which they have positive knowledge, even though this may not be first hand,

unless they have good reason to believe that appropriate details of the occurrence have already been, or will be, reported by someone else.

- 2.3.3 A report shall also be submitted on any occurrence that involves an unsatisfactory condition, behaviour or procedure, which did not immediately endanger the aircraft but if allowed to continue uncorrected, or if repeated in other foreseeable circumstances, would create a hazard.

2.4 Categories of Aircraft

- 2.4.1 The MCAR 2016 specifies the aircraft covered by the CAD as:

- a) any aircraft operated under an air operator's certificate granted by CAAM;
- b) any turbine-powered aircraft which has a certificate of airworthiness issued by CAAM;
- c) In the case of organisations providing a service or facility for aircraft operating over or in the Malaysia (e.g. air traffic services, airfields, etc.) any occurrence meeting the required criteria should be reported regardless of the nationality of the aircraft involved.

2.5 Categories of Persons Required to Report

- 2.5.1 The MCAR 2016 Regulation 165 (2) also specifies the categories of persons (or organisations) who are required to report occurrences. These include:

- a) a person who carries on the business of manufacturing a turbine-powered aircraft, a commercial air transport aeroplane or a public transport aircraft, or any equipment or part of such an aircraft, in Malaysia
- b) a person who carries on the business of maintaining or modifying a turbine-powered aircraft, which has a certificate of airworthiness issued by CAAM, and a person who carries on the business of maintaining or modifying any equipment or part of such an aircraft;
- c) the owner, operator or PIC of a Malaysian aircraft used in any commercial air transport operations, general aviation operations or aerial work;
- d) a person who carries on the business of maintaining or modifying an aircraft, operated under Malaysian Air Operator Certificate (AOC) granted by CAAM, and a person who carries on the business of maintaining or modifying any equipment or part of such an aircraft
- e) a person who signs an airworthiness review certificate, or a certificate of release to service for a turbine-powered aircraft, which has a certificate of airworthiness issued by CAAM, and a person who signs an airworthiness review certificate or a certificate of release to service for any equipment or part of such an aircraft;

- f) a person who signs an airworthiness review certificate or a certificate of release to service for an aircraft operated under Malaysian AOC granted by CAAM, and a person who signs an airworthiness review certificate or a certificate of release to service for any equipment or part of such an aircraft;
- g) a person who performs a function which requires him to be authorised by CAAM as an air traffic controller or as a flight information service officer;
- h) a licensee or manager of a licensed aerodrome or a manager of an airport
- i) a person who performs a function concerning the installation, modification, maintenance, repair, overhaul, flight-checking or inspection of air navigation facilities which are utilized by a person who provides an air traffic control service under an approval issued by CAAM; and
- j) A person who performs a function concerning the ground-handling of aircraft, including fuelling, servicing, loadsheet preparation, loading, de-icing and towing at an airport.

2.5.2 In addition to the reporting criteria above, those individuals or organisations shall report occurrences involving any aircraft or aircraft component under the scope of MCAR 2016 and this CAD.

2.5.3 While the legislation defines those who have to report, anyone may report, should they consider it necessary.

2.6 Channels for Reporting

2.6.1 MOR forms are to be completed and sent to the Authority by any means as follows:

CAAM Official website: <https://www.caam.gov.my/contact-us/feedback/> (select related category)

2.7 Reporting Procedure

2.7.1 The MCAR 2016 and this CAD places the primary responsibility for reporting with individuals. However, the interests of flight safety are best served by full participation in the investigation by the organisation involved. Therefore, wherever possible, CAAM encourages 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 CAAM. 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 schemes that may take precedence where immediate action is appropriate.

- 2.7.2 Usually the reporting level within an organisation is set at a lower level than CAAM requirement, in order to provide wider monitoring of the organisation's activities. However, when the employee making such a report is a person having a duty to report to CAAM, in accordance with the MCAR 2016, the company must tell them if the report has not been passed to CAAM as an occurrence report. If the employee is convinced that it should be, they must have the right to insist that the report be passed to CAAM or to report it directly to CAAM themselves. Procedures to ensure that this right of the individual reporter is maintained must be incorporated into the organisation's reporting procedures and be clearly stated in the relevant instructions to staff.
- 2.7.3 Individuals may submit an occurrence report directly to CAAM should they so wish, but in the interest of flight safety they are strongly advised also to notify their employers, preferably by a copy of the report, unless confidentiality is considered essential.
- 2.7.4 Reports must be despatched within 48 hours of the event, unless exceptional circumstances prevent this. Nevertheless, when the circumstances of an occurrence are judged to be particularly hazardous, CAAM expects to be advised of the essential details as soon as possible. This should be followed up within 48 hours by a full written report in the usual way. CAAM is dependent upon the judgement of those responsible for submitting reports to establish which occurrences are in this category. Conversely, for occurrences involving a lesser degree of hazard, reporters must exercise their judgement in deciding whether to delay the despatch of the report if there is the likelihood of additional information becoming available within the statutory 48 hours, which could usefully be included with the report.
- 2.7.5 Should the initial report be incomplete in respect of any item of information required, a further report containing this information must be made within 48 hours of the information becoming available. Prompt advice to CAAM on the results of investigations and the actions taken to control the situation will minimise, or may render unnecessary, direct CAAM involvement in the investigative activity. In the case of technical failures or difficulties, the availability of photographs and/or preservation of damaged parts will greatly facilitate the subsequent investigation.
- 2.7.6 The MCAR 2016 does not require the provision of supplementary information on reportable occurrences, except when specifically requested by the CAAM. However, the efficiency of CAAM follow-up work and the quality of safety data it can provide will be enhanced if reporting organisations keep CAAM informed of major developments in their investigations of occurrences.

2.8 Occurrence Reporting Forms

- 2.8.1 To facilitate consistent reporting and subsequent storage, analysis and statistics of data, only MOR form is acceptable. Occurrence Report description is in

Appendix 1 and MOR form can also be obtained from the CAAM website <https://www.caam.gov.my/e-services-forms/safety-occurrence-report/>

2.9 Specific reporting provisions

2.9.1 Aircraft, Aircraft Equipment and Ground Equipment Defects

2.9.1.1 In the case of occurrences arising from, or relating to, defects in the aircraft, its equipment, or any item of ground equipment, it is important that the appropriate manufacturer(s) be advised of the occurrence as soon as possible. CAAM therefore expects that any organisation which raises an occurrence report (or which has been made aware of a report raised by an individual employee) will pass a copy of the report to the appropriate aircraft or equipment manufacturer(s) as soon as possible, unless it is known that the originator has already done so. In the case of incidents affecting ground installations or services, e.g. aerodrome and/or air traffic control, those responsible for those services should also be informed.

2.9.1.2 A manufacturer or maintenance organisation of aircraft, components or equipment is not expected to report to CAAM, as a matter of routine, those occurrences involving products that have been reported to it by an operator/individual, if the operator/individual has already reported the occurrence to CAAM. They should however report any such occurrence, which they think is reportable, if they know that the operator concerned has not done so. The primary duty for reporting in such cases rests with the operator/individual.

2.9.1.3 Where a maintenance organisation is in doubt as to the applicability of the reporting requirements, e.g. it discovers a defect in a piece of equipment which cannot be associated with a particular aircraft, or even a type of aircraft, it should, nevertheless, make a report in order to ensure that it has complied with the MCAR 2016 and CAD. CAAM would, in any case, wish the organisation, or individual, to report voluntarily such defects on equipment fitted to aircraft types not subject to mandatory reporting.

2.9.1.4 To facilitate effective lines of communication when any part or equipment involved in an occurrence is being dispatched to another area or organisation for investigation or repair, the item(s) should be clearly identified as the subject of an occurrence report to CAAM, by appropriate annotation of the 'tag' and all accompanying paperwork.

2.9.2 Because of the specialist detailed nature of the information required on birdstrike, and airprox occurrences, alternatives to the MOR form is necessary. All such reports, including those required under this CAD, should be submitted.

2.9.3 If any reporter considers that it is essential that their identity not to be revealed, the MOR report itself should be clearly annotated 'CONFIDENTIAL' at the top of



the form and the request will be respected with confidentiality. CAAM cannot, of course, guarantee confidentiality when an occurrence is reported separately by another party in respect of gross negligence. Reporters submitting a MOR with 'CONFIDENTIAL' annotated must accept that effective investigation may be inhibited, however, CAAM would rather have a Confidential Report than no report at all.

3 Voluntary Occurrence Reporting (VOR)

3.1 Background

3.1.1 CAAM encourages voluntary reporting across the whole spectrum of Malaysian civil aviation operations. A voluntary report is made by a person not required to report under the legislation described under MCAR 2016 165 (2). Voluntary reports are processed in a similar way to mandatory reports. VOR occurrence reporting does not eliminate the need for mandatory occurrence reporting of aircraft accidents and incidents to the relevant authorities under the existing law.

3.2 Objective

3.2.1 To enhance aviation safety through the collection of feedback on incidents that are not captured by the Mandatory Occurrences Reporting System (MOR), or that may appear minor but may be useful for others to learn from the reporter's experience and may even lead to changes in procedures or design.

3.3 Voluntary Report (VOR)

3.3.1 Occurrences that are considered to include particularly dangerous or potentially dangerous circumstances should be reported to CAAM immediately

3.3.2 All voluntary reports can be submitted through CAAM official website via <https://www.caam.gov.my/contact-us/feedback/> and select Safety Reporting (Voluntary Reporting) from the category in the drop-down menu.



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4 Airport Wildlife Hazard Monitoring Plan (AWHMP) And Bird Strike Reporting

4.1 Background

- 4.1.1 The presence of wildlife (birds and animals) on and in the aerodrome vicinity poses a serious threat to aircraft operational safety.
- 4.1.2 Airline Operators, Ground Handlers, airport tenants, ATC Tower, AFRS Tower, airport operations and maintenance units are required to report the presence of wildlife at, or in the vicinity of the aerodrome to the Aerodrome Operator.
- 4.1.3 Reporting of wildlife hazard or wildlife strikes in the vicinity of an aerodrome shall be made using written report or email and forward to the Aerodrome Operator.
- 4.1.4 Aerodrome Operators are then responsible to submit the wildlife hazard reports to Airport Wildlife Hazard Assessment Committee for further action.
- 4.1.5 Wildlife Strike reports are sent to CAAM who is responsible to submit periodic wildlife strike statistics report to the National Wildlife Strike Committee and ICAO IBIS Database.
- 4.1.6 CAAM will collect and forward Wildlife strike reports to ICAO for inclusion in the ICAO Bird Strike Information System (IBIS) database. The IBIS is designed to collect and disseminate information on wildlife strikes to aircraft. Information on the system is included in the Manual on the ICAO Bird Strike Information System (IBIS) Doc 9332.
- 4.1.7 When reports are filed, relevant information should be provided whenever possible regarding species identification, number of wildlife struck, time and height of strike, phase of flight, and damage to aircraft components.

4.2 Objective

- 4.2.1 The purpose of airport wildlife hazard monitoring program and bird strike are: -
- a) To determine the species and habitats of reported wildlife at the aerodrome
 - b) To provide essential information on wildlife activities at, or in the vicinity of the aerodrome to ATC Tower and airline operators; and
 - c) To report to the Airport Wildlife Hazard Management Committee the progress of a wildlife hazard monitoring program.



4.3 Categories of Persons Required to Report

4.3.1 Wildlife strikes that occurred at, or in the vicinity of an aerodrome shall be reported to the Aerodrome Operator. Responsibilities of the following persons or department shall be described in the AWHMP: -

- a) Pilots shall report using the standard form as per Attachment A – Bird Strike Reporting Form;
- b) Airlines Engineering Department;
- c) Air Traffic Controllers;
- d) Airlines Safety Department;
- e) Aerodrome operator.

4.3.2 Because of the distinct detailed nature of the information required on bird strike occurrences, supplement to the MOR form is necessary. All such reports, including those required under this CAD, should be submitted.

Refer to CAD 14 Vol 1 Chapter 9 - Wildlife Strike Hazard Reduction:

Forms as per Attachment A – Occurrence Reporting Form and Bird Strike Reporting Form.

5 Air Traffic Incident Report

5.1 Background

5.1.1 This chapter is concerned with incidents specifically related to the provision of ATS known as air traffic incidents. The term air traffic incident is meant to mean a serious occurrence involving air traffic that result in a hazard to an aircraft or multiple of aircrafts.

5.1.2 Types of Air Traffic Incident are as follows: -

- a) Near Collision / Airprox
- b) Serious difficulty caused by faulty procedures or lack of compliance with applicable procedures
- c) Serious difficulty caused by failure or ground facilities

5.2 Objective

5.2.1 Reporting of air traffic incidents is to ensure information are obtained to evaluate and enhance the safety and efficiency of air traffic control as well as identify deficiencies of the present system.

5.3 Reporting by pilots

5.3.1 A pilot involved in an incident should proceed as follows:

- a) during flight, use the appropriate air/ground frequency for reporting an incident of major significance, particularly if it involves other aircraft, so as to permit the facts to be ascertained immediately;
- b) as promptly as possible after landing submit a completed air traffic incident report form for confirming a report of an incident made initially above, or for making the initial report on such an incident if it had not been possible to report it by radio

5.3.2 An initial report made by radio should contain the following information:

- a) type of incident, e.g. near collision;
- b) radio call sign of aircraft making report;
- c) position, heading or route, true airspeed;
- d) flight level, altitude or height, and aircraft attitude;
- e) flying conditions (e.g. instrument meteorological conditions (IMC) or visual meteorological conditions (VMC));
- f) time of incident in Co-ordinated Universal Time (UTC);
- g) description of other aircraft, if relevant;

- h) brief details of incident, including, when appropriate, sighting distance and miss distance.

5.3.3 The air traffic incident report forms if initially reported by radio should be submitted by the pilot to the ATS reporting office of the aerodrome of first landing. The pilot should complete supplement the details of the radio report as necessary. The Air Traffic Incident form contains the requirements of specific fields which is inherent to air traffic related incidents to be populated in order to better assist the investigator to identify the root cause and deficiencies to the current system.

5.3.4 Mandatory Occurrence Report should also be raised as part of requirement from MCAR 2016 Regulation 165. This report will provide a general description of what have transpired which can be downloaded from CAAM official website <https://www.caam.gov.my/wp-content/uploads/2021/10/Safety-Occurence-Form-CAAM-Borang-9-OR.pdf>

Note. – Where there is no ATS reporting office, the report may be submitted to anyother ATS unit.

5.4 Reporting by ATS

5.4.1 Following an air traffic incident, the ATC unit involved should proceed as follows:

- a) identify and designate the incident in accordance with the type of incident;
- b) if the aircraft is bound for a destination located within the area of responsibility of the ATS unit in whose area the incident occurred, arrangements should be made with the operator to obtain the pilot's report on landing;
- c) if the aircraft is bound for a domestic destination, the ATS unit of destination should be requested to obtain the pilot's report on landing;
- d) if the aircraft is bound for an international destination, the ATS authority at destination aerodrome should be notified and given full details of the incident (by AFTN) and requested to obtain the pilot's report;
- e) the civil aviation authority of the State of Registry and the State of the Operator should be notified of the incident by the State of occurrence (by AFTN) together with all available details;
- f) if the incident involves another aircraft, similar action should be taken in regards to both parties;
- g) complete the Air Traffic Incident form;
- h) ensure that the accident/incident authority and the national ATS authority are notified of all reportable incidents. Ensure that the accident/incident are reported to the Authority (<https://www.caam.gov.my/wp-content/uploads/2021/10/CAAM ATM Airprox 01-Air-Traffic-Incident-Report-Form.pdf>)



- 5.4.2 For more details of Air Traffic Incident reporting please refer to CAAM Manual Of Air Traffic Services. The CAAM Air Traffic Incident Reporting form can be found as per Attachment A.



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6 MOR – Airworthiness Aspect.

6.1 Application

6.1.1 This CAD shall be applicable to—

- a) the approved continuing airworthiness management organisation under paragraph 31(1)(a) of the MCAR 2016;
- b) the approved maintenance of aeronautical product organisation under paragraph 31(1)(b) of the MCAR 2016;
- c) the approved maintenance training organisation under paragraph 31(1) (c) of the MCAR 2016; and
- d) the design organisation and production organisation approved under paragraph 21 of the MCAR 2016.

who has knowledge of any occurrences.

6.2 Interpretation

6.2.1 In this chapter, unless the context otherwise requires:

“component” means any engine, propeller, part or appliance of the aircraft;

“Mandatory Occurrence” means reportable occurrences related to faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft.

“MCAR” means Malaysian Civil Aviation Regulations 2016;

“Organisation responsible for the design of the aeronautical product” means—

- a) holder of a Type Certificate (TC) of an aircraft, engine or propeller;
- b) holder of a Supplemental Type Certificate (STC) of an aircraft, engine or propeller;
- c) holder of an Approval for the design of minor modifications;
- d) holder of an Approval for the design of repairs;
- e) holder of a Technical Standard Order Authorisation (TSO); or
- f) holder of a Part Approval (PA); and
- g) “reportable occurrence” shall have the same meaning assigned to it under the MCAR 2016.

6.3 Objective and scope

- 6.3.1 The MOR system is an essential part of the continuing airworthiness monitoring function. The main objective of the MOR is to use the reported information to contribute to the improvement of aviation safety, and not to attribute blame, impose fines or take other enforcement actions.
- 6.3.2 The protection under paragraph 6.3.1 shall not apply to any of the following situations:
- a) in cases of wilful misconduct;
 - b) where there has been a manifest, severe and serious disregard of an obvious risk and profound failure of professional responsibility to take such care as is evidently required in the circumstances, causing foreseeable damage to a person or property, or which seriously compromises the level of aviation safety.
- 6.3.3 The detailed objectives of the MOR system are—
- a) To enable an assessment of the safety implications of each occurrence to be made, including previous similar occurrences, so that any necessary action can be initiated. This includes determining what and why it had occurred and what might prevent a similar occurrence in the future; and
 - b) To ensure that knowledge of the occurrences, causes and corrective actions is disseminated so that other persons and organisations may learn from them.
- 6.3.4 The MOR system will complement the normal day to day procedures and control systems such as quality, reliability and safety management system, and is not intended to supersede any of them nor to be superseded by them. The MOR system can be a tool to identify those occasions where routine procedures have failed.
- 6.3.5 Reporting does not remove the organisation's responsibility to commence corrective actions to prevent similar occurrences in the future.
- 6.3.6 MOR in the following definitions and categories shall be deemed reportable:
- a) In the operations of aircrafts, occurrences are defined as an incident involving the malfunction, defect, technical defect or exceedance of technical limitations that endangers or could endanger the safe operation of the aircraft.
 - b) In the design of aircrafts, parts and appliances, occurrences are defined as a failure, malfunction, defect or other occurrences which has resulted in or may result in an unsafe condition.
 - c) In the production of aircrafts, parts and appliances, occurrences are defined as a deviation which could lead to an unsafe condition.

- d) In the maintenance of aircrafts, parts and appliances, occurrences are 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.

Note. – Details of reportable occurrences are listed in CAGM 8503 – MOR.

6.4 Requirements

- 6.4.1 The organisation referred to in paragraph 6.1 shall make a report of occurrence to the CAAM within forty-eight hours after the occurrence comes to their knowledge.
- 6.4.2 The organisation shall—
 - a) collect, evaluate, process, analyse and store the reports;
 - b) designate one or more persons to handle the collection, evaluation, analysis, assessment and investigation of such reports;
 - c) develop a process to analyse the reportable occurrences in order to identify the safety hazards associated with identified occurrence or groups of occurrences;
 - d) identify and determine and execute any appropriate corrective and preventive action in a reasonable and timely manner;
 - e) take corrective and preventive action in a reasonable and timely manner;
 - f) establish a process to monitor the implementation and effectiveness of the corrective and preventive action; and
 - g) provide its employees and personnel with information concerning the analysis of the report and occurrences for which preventive and corrective action is taken.
- 6.4.3 The organisation shall submit to the CAAM the preliminary analysis of the occurrence within 30 days from the date of notification of the reportable occurrence which include—
 - a) the cause of the reportable occurrence;
 - b) the risk assessment of the occurrence; and
 - c) the corrective and preventive action taken or to be taken.
- 6.4.4 The organisation shall submit to the CAAM the final analysis of the occurrence which include the progress and the effectiveness of the corrective and preventive action within three (3) months from the date of notification of the reportable occurrence.
- 6.4.5 MOR reports shall remain in the organisation's database indefinitely as the significance of such reports may only become obvious at a later date. In

circumstances where the organisation can no longer sustain its operation, then all the information in its MOR database shall be transferred to CAAM.

- 6.4.6 In order to inform CAAM of the level of safety of its operation, the organisation shall submit to CAAM a safety review at least once a year. The safety review shall:
- a) contain aggregated information on the type of occurrences and safety-related information reported through its mandatory occurrence reporting system;
 - b) identify trends;
 - c) identify the action it has taken.

This review is not to be construed as and is independent of the Reliability Programme reviews.

- 6.4.7 The organisation shall establish these requirements and its procedures in the organisation's Exposition.

6.5 Additional reporting

- 6.5.1 The organisation referred to in paragraph 6.1.1 and involved in aeroplanes over 5700 kg or helicopters over 3175 kg maximum certificated take-off mass shall also report the reportable occurrence to the following organisations as follows:
- a) In the case of the organisation under paragraph 31(1)(b) of the MCAR 2016, to the—
 - 1) organisation responsible for the design of the aeronautical product; and
 - 2) organisation under paragraph 31(1)(a) of the MCAR 2016;
 - b) in the case of the organisation under paragraph 31(1)(a) of the MCAR 2016, to the organisation responsible for the design of the aeronautical product; and
 - c) in the case of the organisation under paragraph 31(1)(c) of the MCAR 2016, to the—
 - 1) organisation under paragraph 31(1)(a) of the MCAR 2016; and
 - 2) organisation under paragraph 31(1)(b) of the MCAR 2016.
 - d) in the case of the organisation under paragraph 32(1) of the MCAR 2016 involve in maintenance of aeronautical product, to the –
 - 1) organisation responsible for the design of the aeronautical product; and
 - 2) organisation under paragraph 31(1)(a) of the MCAR 2016.
 - e) in the case of the organisation under paragraph 32(1) of the MCAR 2016 involve in maintenance training, to the –
 - 1) organisation under paragraph 31(1)(a) of the MCAR 2016; and
 - 2) organisation under paragraph 31(1)(b) of the MCAR 2016.



Note. – CAGM 8503 – MOR, provide guidance to fulfil compliance to para 6.4 Requirements and para 6.5 Additional Reporting.



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7 Flight Time Limitation

7.1 Background

- 7.1.1 Flight and Duty Time Limitations (FTL) are necessary to ensure that air crew fatigue does not endanger flight safety. Since the 1944 Chicago Convention, it is recognised that pilot fatigue due to long duty hours, insufficient rest or sleep opportunities etc. can pose a risk to the safety of air operations.
- 7.1.2 The main purpose of a flight time limitations scheme is to ensure that crew members are adequately rested at the beginning of each flying duty period, and whilst flying be sufficiently free from fatigue so that they can operate to a satisfactory level of efficiency and safety in all normal and abnormal situations. Aircraft operators are expected to appreciate the relationship between the frequency and pattern of scheduled flying duty periods and rest periods and time off and give due consideration to the cumulative effects of working long hours interspersed with minimum rest.
- 7.1.3 The definition of flight time, in the context of flight time limitations, applies to flight and cabin crew members. All time spent on duty can induce fatigue in flight and cabin crew members and should therefore be taken into account when arranging rest periods for recovery. Standby may be included as duty if it is likely to induce fatigue.
- 7.1.4 The definition of flight duty period is intended to cover a continuous period of duty that always includes a flight or series of flights for a flight or cabin crew member. It is meant to include all duties a crew member may be required to carry out from the moment he reports for duty until he completes the flight or series of flights and the aeroplane finally comes to rest and the engines are shut down. It is considered necessary that a flight duty period should be subject to limitations because a crew member's activities over extended periods would eventually induce fatigue, transient or cumulative, which could adversely affect the safety of a flight. A flight duty period does not include the period of travelling time from home to the point of reporting for duty. It is the responsibility of the flight or cabin crew member to report for duty in an adequately rested condition.
- 7.1.5 The definition of rest period requires that flight or cabin crew members be relieved of all duties for the purpose of recovering from fatigue. The way in which this recovery is achieved is the responsibility of the flight or cabin crew member. Extended rest periods should be given on a regular basis. Rest periods should not include standby if the conditions of the standby would not enable flight and cabin crew members to recover from fatigue. Suitable accommodation on the ground is required at places where rest periods are taken in order to allow effective recovery.

7.2 Objective

- 7.2.1 To enable the operator to ascertain that the FTL scheme is functioning as intended and as approved and rest periods achieved so as to facilitate inspection by the operator's authorised personnel or by CAAM.
- 7.2.2 To allow data to be routinely collected for analysis in order to gather information related to crew alertness as well as operational flight and cabin crew performance data which is used to determine any flight patterns that may pose risk to the safety of air operations.

7.3 Reporting

- 7.3.1 Whenever a Pilot-in-Command extends an FDP, it shall be reported to his employer on a Discretion Report Form that is acceptable to CAAM. If the extension is greater than 2 hours, or when exercised after any reduced rest period, then the operator shall submit the Pilot-in-Command's written report, together with the operator's comments to CAAM, within 14 days of the aircraft's return to base.
- 7.3.2 Whenever a Pilot-in-Command reduces a rest period, it shall be reported to his employer on a Discretion Report Form that is acceptable to CAAM. If the reduction is more than 1 hour, then the operator shall submit the Pilot-in-Command's written report together with the operator's comments, to CAAM, within 14 days of the aircraft's return to base.
- 7.3.3 The employer / operator should ensure that these reports include for each flight and cabin crew member, at least:
- a) the start, duration and end of each flight duty period;
 - b) the start, duration and end of each duty period;
 - c) rest periods; and
 - d) flight time.
- 7.3.4 The operator should also keep records of occasions when a pilot-in-command has exercised his discretion (as described in 7.3.1). If discretion has to be applied for similar reasons on more than thirty-three (33) percent of occasions when a particular route or route pattern is flown, it is likely that the intention of this guidance is not being met and undue fatigue may result. Arrangements should be made to change the schedule or the crewing arrangements to reduce the frequency at which such events occur.

For further details refer to CAD 1901 – FTL. Form as per Attachment A.

8 Mandatory Reporting of Dangerous Goods Incidents And Accidents

8.1 Background

8.1.1 The Regulation 135 of the MCAR 2016 requires that a report be made for any dangerous goods accident or incident, or the finding of undeclared or mis declared munitions of war or dangerous goods in cargo or passenger's baggage, on a Malaysia aircraft or any other aircraft that lands in or departs from Malaysia. The operator of this aircraft is to submit this report to CAAM using a form specified by CAAM in the quickest manner.

8.2 Objective

8.2.1 The objective is to advise on the reporting procedures for mandatory reporting of dangerous goods incidents and accidents.

8.3 Background

8.3.1 The Regulation 135 of the MCAR 2016 requires that a report be made for any dangerous goods accident or incident, or the finding of undeclared or mis declared munitions of war or dangerous goods in cargo or passenger's baggage, on a Malaysia aircraft or any other aircraft that lands in or departs from Malaysia. The operator of this aircraft is to submit this report to CAAM using a form specified by CAAM in the quickest manner.

8.4 Reporting dangerous goods incidents and accidents.

8.4.1 All dangerous goods incident and accident reports shall be submitted through the Dangerous Goods Occurrence Report form. The form can be found in CAD 18 – National Transport Of Dangerous Goods Programme (NTDGP) and is available on the CAAM website :

<https://www.caam.gov.my/wp-content/uploads/2021/05/1-National-Transport-of-Dangerous-Goods-Programme-NTDGP.pdf>

Refer NTDGP for detail explanation. Form as per Attachment A



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9 Protection of Reporters and Reports

9.1 Confidentiality and Dissemination of Reports

9.1.1 CAAM will ensure that relevant safety information deriving from the analysis of reports, which have been subjected to disidentification, are made available to all parties so that they can be used for improving safety.

9.1.2 Accordingly, CAAM will not disclose the name of the person submitting the report or of a person to whom it relates unless required to do so by law or unless, in either case, the person concerned authorises disclosure.

9.2 Assurance Regarding Prosecution

9.2.1 The sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability.

9.3 Malaysia Confidential Accident/ Incident Reporting (MyCAIR) Program

9.3.1 Where a reporter wishes to disclose sensitive information, but an MOR seems inappropriate, the preferred method of reporting is by submitting the report via MyCAIR which is under the purview of the Air Accidents Investigation Branch (AAIB). It provides a channel for reporting of aviation incidents and safety deficiencies while protecting the reporter's identity



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10 Accident / Serious Incident investigation

10.1 Introduction

- 10.1.1 In Malaysia, the requirements and procedures for the reporting and investigation of accidents and serious incidents are the subject of separate legislation. The investigation of accidents and serious incidents are the responsibility of the AAIB report shall be sent to: AAIB@mot.gov.my
- 10.1.2 To achieve the maximum analytical and statistical benefit from an occurrence record system it is necessary that accidents be included. The term 'occurrence' as used in the MOR system therefore includes accidents, serious incidents and other incidents. Close liaison is maintained between CAAM and AAIB and details of all occurrences reported to CAAM are immediately passed to AAIB for inclusion in the records.
- 10.1.3 Because of the close relationship between aircraft accidents, serious incidents and other occurrences, and between the regulations pertaining to their investigation, the following explanation is included as guidance.

10.2 Definitions

- 10.2.1 **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:
 - 1) being in the aircraft, or
 - 2) direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
 - 3) direct exposure to jet blast.
 - b) 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
 - c) the aircraft sustains damage or structural failure which:
 - 1) adversely affects the structural strength, performance or flight characteristics of the aircraft; and
 - 2) 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

3) the aircraft is missing or is completely inaccessible.

10.2.2 **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.

10.2.3 **Incident:** An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation

10.3 Service providers and operators shall conduct safety investigation, analyse and implement mitigation measures in accordance with the service providers' and operators' safety management system for occurrences other than accident and serious incident.

10.4 Service providers and operators shall submit to CAAM the final analysis of the occurrence which include the progress and the effectiveness of the corrective and preventive action within three (3) months from the date of notification of the reportable occurrence.

11 Processing of Occurrence Reports

11.1 Occurrence Report Process

11.1.1 In relation to all reported occurrences, including those raised by its own personnel, CAAM will:

- a) evaluate each occurrence report received;
- b) make such checks as it considers necessary to ensure that operators, manufacturers, maintenance, repair and overhaul organisations, air traffic control services and aerodrome operators are taking any necessary remedial and preventative action in relation to reported occurrences;
- c) take such steps as are open to it to persuade foreign aviation authorities and organisations to take any necessary remedial and preventative action in relation to reported occurrences;
- d) assess and analyse the information reported to it in order to detect safety problems which may not be apparent to individual reporters;
- e) make available the information derived from occurrence reports in accordance with the relevant CAAM regulations;
- f) where appropriate, issue specific advice or instructions to particular sections of the industry;
- g) where appropriate, act in relation to legislation, requirements or guidance, e.g. revisions of the MCAR 2016, amendments to Flight Manuals and Operations Manuals, introduction of mandatory modifications and inspections, amendments to maintenance schedules, terms of approval, and licences, issue of Aeronautical Information Circulars, etc.; and
- h) ensure that effective communication is maintained between AAIB and CAAM in respect of accident and serious incident investigation and follow up, and that all appropriate areas of CAAM are fully briefed on all matters of significance.

11.1.2 CAAM Key Personnel

- a) CAAM key personnel will collect, evaluate, process and store occurrence data, AAIB safety recommendations etc., but it is not responsible for regulating organisations or individuals. CAAM manages and co-ordinates the occurrence reporting system and thus forms the central point for receipt, evaluation, processing, dissemination, storage, and initial analysis of occurrence report data.

11.1.3 Occurrences Closed on Receipt

- a) A considerable number of occurrences reported to CAAM, while meeting the criteria for a reportable occurrence, have been adequately dealt with by the reporting organisation. Thus, there is no justification for further investigation by CAAM, although details of the occurrence and action taken do provide valuable information for dissemination and storage purposes. Reports judged to be in this category are closed on receipt by the key personnel in their Divisions in CAAM, the principal justification for closure being that it is evident from the report that existing requirements, procedures, documentation, etc., coupled with the reporter's action, have adequately controlled the identified hazard.
- b) When necessary, the key personnel will liaise with the reporter and/or seek advice from appropriate CAAM staff in making this decision. The ability of the key personnel to monitor and close an occurrence on receipt and thus avoid the need for further CAAM's investigation is very much dependent upon the quality of the information provided in the report and, specifically, information on the action taken by the reporting organisation to control the situation.

11.1.4 Grade E' Reports

- a) When reporting to CAAM, any reports that do not meet the criteria for a MOR should normally be filtered out by the company's process. The 'Grade E' category also includes occurrences that are technically 'reportable' but may be considered to be low risk. The classification by CAAM of a report as 'Grade E' does not mean that it is considered insignificant or unimportant, but indicates that the routine monitoring and control procedures are considered adequate to cater for any required follow-up, investigation and initiation of corrective action for the particular occurrence
- b) Certain types of event are considered as "Grade E", provided there is no other flight safety hazard associated with the event. These include:
 - 1) PAN calls for passenger medical emergencies
 - 2) Other PAN calls made for the sole purpose of an expeditious approach.
Note: Unless a report specifically states that a PAN (or Mayday) call was made the occurrence is not reportable under the MOR Scheme, unless there is an associated flight safety hazard.

12 Appendices

12.1 Appendix 1 - Guide on the Completion of the CAAM Safety Occurrence Form (CAAM Borang 9 – OR)

1.1 General

1.1.1 Reporters must provide the information required by the Civil Aviation Regulations 2016 and this CAD. This means that, wherever possible, they should complete all sections of the form where the information requested is relevant to a specific occurrence.

1.1.2 Where reports are submitted via an organisation, any relevant information that is not readily available to the person preparing the initial report should, wherever possible, be added by the person submitting the report on behalf of the organisation. Alternatively, where this is not possible within the required timescale, the outstanding information should be submitted as a supplementary report.

1.1.3 Evaluation and processing of reports is greatly facilitated by use of the electronic versions supplied on the CAAM web site. However, this may not always be possible, in which case, the report should preferably be typewritten or alternately completed in indelible ink.

1.1.4 Operators holding EDTO approval should, when submitting any occurrence report should prominently annotate reports 'EDTO' at the top of the form, as appropriate.

1.1.5 An occurrence may be reported confidentially. If report is confidential, please annotate 'CONFIDENTIAL' and mark clearly at the top of the form. Key personnel will respect the confidentiality and contact you personally

1.2 The Following Are Brief Notes Against Each Block:

1.2.1 Aircraft and operator identification to be completed for all occurrences involving an aircraft. Provides basic identification data.

1.2.2 Flight and weather details relate to in-flight occurrences only. Provides flight data in support of the narrative.

1.2.3 The flight phases listed on the report are define as follows:

PARKED	On ramp with flight crew on board.
TAXYING	(a) From commencement of moving (including push-back) to start of take-offrun. (b) From completion of landing run to terminal gate or point of stopping engines.TAKE-OFF Start of to take-off run to lift-off.
INIT CLIMB	Lift off to 1500 ft or aircraft "clean-up" whichever is higherCLIMB End of initial climb to top of climb.
CRUISE	Top of climb to top of descent including any en route climb or descent. HOLDING Flying to a set procedure at a point which intentionally delays the aircraft.
APPROACH	1500 ft to threshold.



LANDING	Threshold to end of landing run.
CIRCUIT	Flying to a set pattern in the vicinity of an airfield with intention of landing.
AEROBATICS	Deliberate aerobatic manoeuvres, include spinning.
HOVER	Airborne and stationary.

1.2.4 The nature of flight descriptions listed on the report are defined as follows:

PAX	All revenue and non-revenue passengers on Air Transport movement flight.
FREIGHT	Scheduled or non-scheduled flights performed by aircraft carrying property other than mail, stores and baggage.
SURVEY	Aerial photographic or mapping survey.
PLEASURE	Commercial pleasure flying, e.g. sightseeing. AGRICULTURAL Aerial-spraying or crop-dusting.
BUSINESS	Carriage of company staff in aircraft owned or hired by a company.
CLUB/GROUP	Flying other than training by members in a club or group aircraft.
PRIVATE	Other than club/group flying or training.
POSITIONING	Positioning without revenue load to/from point of departure/arrival of revenue flight.
FERRY	Ferry for technical reasons without revenue load, e.g. 3-engine ferry to maintenance base.
TEST	Check of serviceability, issue or renewal of C of A, experimental or development flying.
TRAINING	Training course or examination for any standard of licence or rating type training or continuation training.
PARACHUTING	Carriage of parachutists for the purpose of parachuting.
TOWING	Towing of gliders, banners, etc.

1.3 **Narrative Relates to All Occurrences**

- 1.3.1 This should be a clear and concise description of the occurrence preferably starting with a short title indicating the type of occurrence. It should contain details of what happened or what was found; what immediate action was taken to contain the situation; and any additional information, comments or recommendations which it is considered might assist subsequent investigation.
- 1.3.2 Wherever possible this should be supported by the results of subsequent investigation and details of any action taken by the Reporters' organisation to avoid a reoccurrence.

1.4 Engineering Details

- 1.4.1 Relates to both in flight and ground occurrences.
- 1.4.2 Provides engineering data in support of the narrative.
- 1.4.3 The ground phases listed on the Report Form are defined as follows:
 - a) Maintenance Aircraft on maintenance or overhaul, or at manufacturers.
 - b) Unattended Standing, with no personnel on board.
 - c) Ground Handling Movements of aircraft on the ground other than as defined in 'Taxing'.
 - d) Taxing While aircraft is moving under engine power for any purpose other than those defined in "TAXING" in flight phases above.

1.5 The blocks headed “Maintenance Prog” should be used to identify the Maintenance Programme requirements appropriate to the component or part, i.e. “On Condition”, “Condition Monitored” or “Hard Time”.

- 1.5.1 Aircraft or component times should be quoted in the parameters most relevant to the occurrence or to the component function, e.g. flying hours/cycles/landings, or a combination of each. Provision is made for total times and times since overhaul, repair or inspection.
- 1.5.2 Any published Airworthiness information or control procedures - this provides for the identification of the existence of any such information or procedures (e.g. Mandatory Inspections, Airworthiness Directives, crew, drills, etc.) issued for the purposes of controlling or avoiding such or similar occurrences.
- 1.5.3 When such information, etc does exist the provision of the appropriate reference No.(s) and the compliance status of the aircraft, equipment, facility or organisation is important both in terms of assessing the occurrence and disseminating the details of it to others. Manufacturers advised - this is to record whether or not the manufacturer has been advised. Provision of this information is an important aspect of any occurrence report relating to a specific aircraft or any item of aircraft equipment. Wherever possible such information should be provided as this can significantly reduce any requirements for follow-up activity.

1.6 Non-Technical Details

- 1.6.1 Relevant to all occurrences.
- 1.6.2 It provides for important supporting non-technical information on the occurrence and identification of the Reporter and reporting organisation. When the report is voluntary (i.e. not submitted under Occurrence Reporting requirements), provision is made for the Reporter to indicate if it may be disseminated in the interest of safety.

- 1.6.3 The provision of the Reporter's address and telephone number is optional and is intended for an individual who may wish to be contacted by this means rather than at his place of employment.
- 1.7 **Reporting Organisation relates to all occurrences.**
- 1.7.1 Aircraft or component times should be quoted in the units most relevant to the occurrence or to the component function, e.g. flying hours/cycles/landings, or a combination of each. Provision is made for total times and times since overhaul, repair or inspection.
- 1.7.2 Information should be provided which allows for the identification of the existence of any such information or procedures (e.g. Mandatory Inspections, Airworthiness Directives, crew drills, etc.) issued for the purposes of controlling or avoiding such or similar occurrences. When such information or procedures exist, the provision of the appropriate reference numbers and the compliance status of the aircraft, equipment, facility or organisation are important both in terms of assessing the occurrence and disseminating the details to others.
- 1.7.3 'Manufacturer advised' is an important aspect of any occurrence report relating to a specific aircraft type or any item of aircraft equipment. Wherever possible it should be clearly indicated what information has been provided to the manufacturer, as this can
- 1.7.4 significantly reduce any requirements for follow-up activity. The date sent and any requests for strip/ repair data should also be entered.
- 1.7.5 It is important that reporters consider whether other agencies, such as Aerodrome Authorities, ATS providers etc., should also be notified when occurrences are reported in which they have a direct interest.
- 1.8 **Additional Information relates to all occurrences.**
- 1.8.1 Provision is made on the form for important non-technical information, identification of the reporter and/or reporting organisation; whether the report is mandatory or voluntary and whether the report may be disseminated in the interests of air safety.
- 1.8.2 The provision of the reporter's address and telephone number is optional and is intended for an individual who may wish to be contacted by this means rather than at his place of employment.
- 1.9 **Acknowledgement of Reports**
- 1.9.1 Acknowledgement of reports will be generated once online submission of the report has been made.

12.2 Appendix 2 - Occurrences to be Reported

Introduction

- 1 The formal definition of “reportable occurrence” is contained in the MCAR 2016. 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 out below. Whilst the Appendix lists the majority of occurrences that should be reported it cannot be completely comprehensive and any other occurrences judged, by those involved, to meet the criteria should be reported.
- 2 The MOR scheme 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 scheme 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.
- 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 of the degree of hazard or potential hazard involved is therefore essential in many cases.
- 4 In the case of organisations providing a service or facility for aircraft operating over or in Malaysia, 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 to be reported.

Part 2: List of Air Navigation Services related occurrences to be reported.

Part 1: List of Aircraft Operations, Maintenance, Repair and Manufacture –

1 Related Occurrences to be Reported

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.

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

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

CONTENTS

- a) Aircraft flight operations
- b) Aircraft Technical
- c) Aircraft Maintenance and Repair
- d) Ground Services and Facilities
- e) Supplement to Part 1

1.1 Aircraft Flight Operations

1.1.1 Avoidance manoeuvres:

- a) risk of collision with another 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 another aircraft, terrain or other object;
- c) an avoidance manoeuvre to avoid other unsafe situations.

1.1.2 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

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

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

- 1.1.5 Loss of control (including partial or temporary) regardless of cause.
- 1.1.6 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.).
- 1.1.7 Go around producing a hazardous or potentially hazardous situation.
- 1.1.8 Unintentional significant deviation from airspeed, intended track or altitude (more than 300 ft) regardless of cause.
- 1.1.9 Descent below decision height/altitude or minimum descent height/altitude without the required visual reference.
- 1.1.10 Loss of position awareness relative to actual position or to other aircraft.
- 1.1.11 Breakdown in communication between flight crew "CRM" (crew resource management) or between flight crew and other parties (cabin crew, ATC [air traffic control] engineering).
- 1.1.12 Heavy landing – a landing deemed to require a "heavy landing check".
- 1.1.13 Exceedance of fuel imbalance limits.
- 1.1.14 Incorrect setting of an "SSR" (secondary surveillance radar) code or of an altimeter subscale.
- 1.1.15 Incorrect programming of, or erroneous entries into, equipment used for navigation or performance calculations, or use of incorrect data.
- 1.1.16 Incorrect receipt or interpretation of radio-telephony messages.
- 1.1.17 Fuel system malfunctions or defects, which has an effect on fuel supply and/or distribution.
- 1.1.18 Aircraft unintentionally departing from a paved surface.
- 1.1.19 Collision between an aircraft and any other aircraft, vehicle or other ground object.
- 1.1.20 Inadvertent and/or incorrect operation of any controls.
- 1.1.21 Inability to achieve the intended aircraft configuration for any flight phase (e.g. landinggear and gear doors, flaps, stabilisers, slats etc.).
- 1.1.22 A hazard or potential hazard which arises as a consequence of any deliberate simulation of failure conditions for training, system checks or training purposes.
- 1.1.23 Abnormal vibration.
- 1.1.24 Operation of any primary warning system associated with manoeuvring the aircraft

e.g. configuration warning, stall warning (stick shaker), over-speed warning etc.unless:

- a) 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
 - b) operated for training or test purposes.
- 1.1.25 "GPWS" (Ground Proximity Warning System)/"TAWS" (Terrain Awareness and Warning System) "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 instrument meteorological conditions 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 flaps 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.
- 1.1.26 GPWS/TAWS "alert" when any difficulty or hazard arises or might have arisen as a result of crew response to the "alert".
- 1.1.27 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.
- 1.1.28 Jet or prop blast incidents resulting in significant damage or serious injury.
- 1.1.29 Landing at the wrong airfield.
- 1.2 Emergencies
- 1.2.1 Fire, explosion, smoke or toxic or noxious fumes, even though fires were extinguished.
- 1.2.2 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;
 - b) the procedure does not exist;
 - c) the procedure exists but is incomplete or inappropriate;
 - d) the procedure is incorrect;
 - e) the incorrect procedure is used.



- 1.2.3 Inadequacy of any procedures designed to be used in an emergency, including when being used for maintenance, training or test purposes.
- 1.2.4 An event leading to an emergency evacuation.
- 1.2.5 Depressurisation.
- 1.2.6 The use of any emergency equipment or prescribed emergency procedures in order to deal with a situation.
- 1.2.7 An event leading to the declaration of an emergency ("Mayday" or "PAN").
- 1.2.8 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.
- 1.2.9 Events requiring any use of emergency oxygen by any crew member.
- 1.3 Crew incapacitation
 - 1.3.1 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.
 - 1.3.2 Incapacitation of any member of the cabin crew which renders them unable to perform essential emergency duties.
- 1.4 Injury
 - 1.4.1 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.
- 1.5 Meteorology
 - 1.5.1 A lightning strike which resulted in damage to the aircraft or loss or malfunction of any essential service.
 - 1.5.2 A hail strike which resulted in damage to the aircraft or loss or malfunction of any essential service.
 - 1.5.3 Severe turbulence encounter, an encounter resulting in injury to occupants or deemed to require a "turbulence check" of the aircraft.
 - 1.5.4 A windshear encounter.
 - 1.5.5 Icing encounter resulting in handling difficulties, damage to the aircraft or loss or malfunction of any essential service.
- 1.6 Security
 - 1.6.1 Unlawful interference with the aircraft including a bomb threat or hijack.

- 1.6.2 Difficulty in controlling intoxicated, violent or unruly passengers.
- 1.6.3 Discovery of a stowaway.
- 1.7 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 ATS. 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 CAAM.
 - 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.

2 **Aircraft Technical**

2.1 Structural

Note. – 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;
- f) loss of any part of the aircraft structure in flight.

2.2 Systems

The following general criteria applicable to all systems are proposed (see Supplement to Part 1 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:
 - 1) uncommanded actions,
 - 2) incorrect and/or incomplete response, including limitation of movement or stiffness,
 - 3) runaway,
 - 4) 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:
 - i) the loss, significant malfunction or defect in any main system, subsystem or set of equipment.
 - j) for aircraft types with multiple independent main systems, subsystems or sets of equipment:
 - k) the loss, significant malfunction or defect of more than one main system, subsystem or set of equipment.
 - l) 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;
 - m) 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;
 - n) malfunction or defect of any indication system when this results in the possibility of misleading indications to the crew;

- o) any failure, malfunction or defect if it occurs at a critical phase of the flight and is relevant to the system operation;
 - p) 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.;
 - q) asymmetry of flight controls; e.g. flaps, slats, spoilers etc.
 - r) The Appendix to this Schedule gives a list of examples of reportable occurrences resulting from the application of these general criteria to specific systems.
- 2.3 Propulsion (including engines, propellers and rotor systems) and Auxiliary Power Units (APUs)
- 2.3.1 Flameout, shutdown or malfunction of any engine.
 - 2.3.2 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).
 - 2.3.3 Failure or malfunction of any part of an engine or powerplant resulting in any one or more of the following:
 - a) non-containment of components/debris;
 - b) uncontrolled internal or external fire, or hot gas breakout;
 - c) thrust in a direction different from that demanded by the pilot;
 - d) thrust-reversing system failing to operate or operating inadvertently;
 - e) inability to control power, thrust or revolutions per minute;
 - f) failure of the engine mount structure;
 - g) partial or complete loss of a major part of the powerplant;
 - 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.
 - 2.3.4 An uncommanded thrust/power loss, change or oscillation which is classified as a Lost of Thrust or power Control (LOTIC):
 - 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.
- 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).

2.3.1 Propellers and transmission

- a) Failure or malfunction of any part of a propeller or powerplant resulting in any one or more of the following:
 - b) an overspeed of the propeller;
 - c) the development of excessive drag;
 - d) a thrust in the opposite direction to that commanded by the pilot;
 - e) a release of the propeller or any major portion of the propeller;
 - f) a failure that results in excessive imbalance;
 - g) the unintended movement of the propeller blades below the established minimum in-flight low-pitch position;
 - h) an inability to feather the propeller;
 - i) an inability to change propeller pitch;
 - j) an uncommanded change in pitch;
 - k) an uncontrollable torque or speed fluctuation;
 - l) the release of low-energy parts.

2.3.5 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 malfunctions of the rotor control.
- b) Damage to tail rotor, transmission and equivalent systems.

- 2.3.6 APUs
- a) Shut down or failure when the APU is required to be available by operational requirements, e.g. ETOPS, minimum equipment list (MEL).
 - b) Inability to shut down the APU.
 - c) Overspeed.
 - d) Inability to start the APU when needed for operational reasons.
- 2.4 Human factors
- 2.4.1 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.
- 2.5 Other occurrences
- 2.5.1 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.
- 2.5.2 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.
- 2.5.3 A fire, explosion, smoke or toxic/noxious fumes.
- 2.5.4 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.
- 2.5.5 Failure or defect of passenger address system resulting in loss of, or inaudible, passenger address system.
- 2.5.6 Loss of pilot seat control during flight.
- 3 Aircraft maintenance and repair**
- 3.1 Incorrect assembly of parts or components of the aircraft found during an inspection or test procedure not intended for that specific purpose.
- 3.2 Hot bleed air leak resulting in structural damage.
- 3.3 Any defect in a life-controlled part causing retirement before completion of its full life.
- 3.4 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:
- a) 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;

- b) a secondary structure which consequently has or may have endangered the aircraft;
 - c) the engine, propeller or rotorcraft rotor system.
- 3.5 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:
 - a) it is detected for the first time by the reporting organisation implementing compliance;
 - b) on any subsequent compliance, it exceeds the permissible limits quoted in the instruction and/or published repair/rectification procedures are not available.
- 3.6 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.
- 3.7 Non-compliance or significant errors in compliance with required maintenance procedures.
- 3.8 Products, parts, appliances and materials of unknown or suspect origin.
- 3.9 Misleading, incorrect or insufficient maintenance data or procedures that could lead to maintenance errors.
- 3.10 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.
- 4 Ground Services and Facilities**
- 4.1 Air Navigation Services (ANS)
 - a) See Part 2, list of reportable ANS-related occurrences.
- 4.2 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.
- 4.3 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.

4.4 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

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

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 List
 - 1.1 **Near collision incidents** (encompassing specific situations where one aircraft and another aircraft/the ground/a vehicle/person or objects are perceived to be too close to each other):
 - a) separation minima infringement;
 - b) inadequate separation;
 - c) "near-CFIT" (near-controlled flight into terrain);
 - d) runway incursion where avoiding action was necessary.
 - 1.2 **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):
 - a) runway incursion where no avoiding action is necessary;
 - b) runway excursion;
 - c) aircraft deviation from ATC clearance;
 - d) aircraft deviation from applicable Air Traffic Management (ATM) regulation:
 - 1) aircraft deviation from applicable published ATM procedures;
 - 2) unauthorised penetration of airspace;
 - 3) deviation from aircraft ATM-related equipment carriage and operations, as mandated by applicable regulation(s).
 - 1.3 **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:
 - 1) inability to provide air traffic services;

- 2) inability to provide airspace management services;
 - 3) 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.
- 1.4 **"ATC" (air traffic control) Navigation and Communications** – significant malfunction or deterioration of service.
- 1.5 **An aircraft was or could have been endangered by impairment of any member of ground staff** (e.g. ATC, "AD" (aircraft dispatchers), Maintenance, etc.).
- 1.6 **ATC overload**
- 1.7 **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.

Supplement to Part 1

The following subparagraphs give examples of reportable occurrences resulting from the application of the general criteria to specific systems listed in paragraph 2.2 of Part 1

Air conditioning/ventilation

- a) complete loss of avionics cooling;
- b) depressurisation.

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.

Communications

- a) failure or defect of passenger address system resulting in loss of or inaudible passenger address;
- b) total loss of communication in flight.

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 backup (emergency) electrical generation system.

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.

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.

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.

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 has a significant effect on fuel supply and/or distribution;
- e) inability to transfer or use total quantity of usable fuel.

Hydraulics

- a) loss of one hydraulic system (EDTO 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.

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.

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.

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.

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.

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.

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.

Supplement to Part 2

The following subparagraphs give examples of reportable ATM occurrences resulting from the application of the general criteria listed in paragraph 1.3 of Part 2.

- a) 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.
- b) Provision of less than prescribed terrain clearance.
- c) Provision of incorrect pressure reference data (i.e. altimeter setting).
- d) Incorrect transmission, receipt or interpretation of significant messages when this results in a hazardous situation.
- e) Separation minima infringement.
- f) Unauthorised penetration of airspace.
- g) Unlawful radio communication transmission.
- h) Failure of ANS ground or satellite facilities.
- i) Major ATC/ATM failure or significant deterioration of aerodrome infrastructure.
- j) Aerodrome movement areas obstructed by aircraft, vehicles, animals or foreign objects, resulting in a hazardous or potentially hazardous situation.
- k) Errors or inadequacies in marking of obstructions or hazards on aerodrome movement areas resulting in a hazardous situation.
- l) Failure, significant malfunction or unavailability of airfield lighting

13 Attachments

13.1 Attachment A – List of Safety Reporting Forms

- 1 The list of forms below are available for download from the CAAM website. Users are reminded to always refer to the website for the latest version of each form.

No	Form Name	Form No.
1	Safety Occurrence Form	CAAM Borang 9 – OR
2	Bird Strike Reporting Form	Wildlife Strike Form – 001
3	Air Traffic Incident Report Form	CAAM/ATM/AIRPROX/01
4	Aircraft Emergency / Serious Incident / Accident Reporting Form	CAAM/ATM/Safety/01
5	CAAM Occurrence Report Form	CAAM/ATM/OCR/01
6	Mandatory Occurrence Report (MOR) – Airworthiness Aspect	CAAM/AW/8503-01
7	Dangerous Goods Occurrence Report Form	CAAM/AV/DGU/135
8	Pilot-in-command's Discretion Report – Extension of Flying Duty Period/Flying Hours	CAAM/BOP/FTL/1
9	Pilot-in-command's Discretion Report – Reduction of Rest	CAAM/BOP/FTL/2

- 2 Forms no. 1 to 7 can be accessed through the link below:

<https://www.caam.gov.my/e-services-forms/safety-occurrence-report/>

- 3 Forms no. 8 and 9 can be accessed through the link below:

<https://www.caam.gov.my/e-services-forms/air-operations/>



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