

Safety Regulation Group

CAP 382

The Mandatory Occurrence Reporting Scheme

Information and Guidance

www.caa.co.uk



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Foreword

The purpose of this publication is to describe the CAA Mandatory Occurrence Reporting (MOR) Scheme and to provide guidance to those who, by the associated legislation, are involved in its operation.

CAP 382 incorporates the requirements of Article 226 of the Air Navigation Order (ANO) 2009. This Article is the incorporation into UK law of the requirements of EU Directive 2003/42/EC of 13 June 2003 on occurrence reporting in civil aviation.

In compliance with EU Directive 2003/42/EC, the CAA, which has been designated by the DfT to be the 'Competent Authority', is required to put in place a mechanism to collect, evaluate, process and store occurrence data. The CAA, with its MOR system, has had such a mechanism since 1976.

The CAA welcomes comments and suggestions for the improvement of both the Scheme and this publication. Such comments should be addressed to Head of Safety Data at the address in section 3.

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Statement by the Chief Executive of the CAA

Just Culture

The CAA espouses a 'Just Culture' in the interests of the ongoing development of flight safety. This means the CAA supports the development, within all areas of the aviation community, of a culture in which:

- individuals are not punished for actions, omissions or decisions taken by them that are commensurate with their experience and training but which result in a reportable event; but
- where gross negligence, wilful violations and destructive acts are not tolerated.

This position is in line with European Commission Regulation 691/2010.

Confidentiality of Reports

It is fundamental to the purpose of the reporting of incidents and accidents, that the knowledge gained from the investigation of these occurrences is disseminated so that we may all learn from them.

Without prejudice to the proper discharge of its responsibilities, the CAA 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 the person concerned authorises disclosure.

Should any safety follow-up action arising from a report be necessary, the CAA will take all reasonable steps to avoid disclosing the identity of the reporter or of those individuals involved in any reportable occurrence.

Assurance Regarding Prosecution

The CAA gives an assurance that its primary concern in relation to the MOR scheme is to secure free and uninhibited reporting and that it will not be its policy to institute proceedings in respect of unpremeditated or inadvertent breaches of the law which come to its attention only because they have been reported under the Scheme, except in cases of gross negligence.

Possible Action by Employers

Where a reported occurrence indicated an unpremeditated or inadvertent lapse by an employee, the CAA would expect the employer in question to act responsibly, to share the view that free and full reporting is the primary aim, and ensure that every effort should be made to avoid action that may inhibit reporting. The CAA will, accordingly, make it known to employers that, except to the extent that action is needed in order to ensure safety, and except in such flagrant circumstances as are described above, it expects them to refrain from disciplinary or punitive action which might inhibit their staff from duly reporting incidents of which they may have knowledge.

Action in Respect of Licences

The CAA has a duty to vary, revoke or suspend a licence as appropriate if it ceases to be satisfied that the holder of the licence is competent, medically fit and a fit person to exercise the privileges of the licence. If an occurrence report suggests that the licence holder does not satisfy any of these requirements, the CAA will take appropriate licensing action. For example, if the report indicates that the licence holder requires further training, the CAA may suspend his licence until he has undergone such training. If a report should indicate that the licence holder may not be a fit person to exercise the privileges of his licence, the fact that he has reported the occurrence will be taken into account in determining his fitness and may weigh in his favour. Although the CAA recognises that, in practice, licensing action may be regarded

as having a punitive effect, there can be no question of action being taken by the CAA on a licence as a punitive measure. The purpose of licence action is solely to ensure safety and not to penalise the licence holder. In all such cases, when considering what action to take, the CAA will take into account all relevant information which is available to it about the circumstances of the occurrence and about the licence holder.

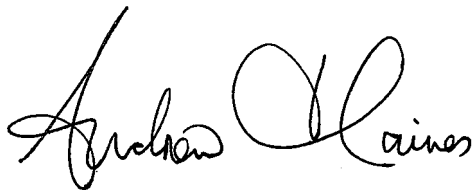
Protection of the Interests of the Licence, Approval or Certificate Holder

Where the CAA proposes to take action against a licence, approval or certificate, the holder is entitled to have that proposal reviewed at a hearing conducted by Board members of the CAA. A guide to this procedure is at <http://www.caa.co.uk/docs/3/Reg6Guidance2006v2.pdf>. At any such hearing, the holder may be legally represented and may be assisted or accompanied by anyone he wishes.

Where a licence holder is a member of an association or trade union he is at liberty to inform that association or union of any prosecution or action by the CAA in respect of his licence, and seek their assistance.

UK Legislation

The principles above have always been central to the investigation of air safety occurrences and greatly influence the success of such programmes. As a result of EU Directive 2003/42, many of these principles are captured in UK law through the Air Navigation Order 2009 (Article 226 refers).



Andrew Haines
Chief Executive of the CAA
March 2011

The Mandatory Occurrence Reporting Scheme

1 The Objective of the Scheme

- 1.1 The objective of the MOR Scheme is to contribute to the improvement of flight safety by ensuring that relevant information on safety is reported, collected, stored, protected and disseminated. The sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability.
- 1.2 The existence of the Scheme to achieve the above objective is not intended to replace or reduce the duties and responsibilities of all organisations and personnel within the aviation industry. The primary responsibility for safety rests with the management of the organisations involved (manufacturers, operators, maintenance organisations etc). The CAA'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 Mandatory Occurrence Reporting Scheme is an established part of the CAA's monitoring function and is complementary to the normal day-to-day procedures and systems.

It is thus no less incumbent upon any organisation:

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

2 Applicability

2.1 What Should be Reported?

- 2.1.1 In deciding whether or not to report an occurrence it must be decided whether the event meets the definition as specified in the ANO. A reportable occurrence in relation to an aircraft means:

Any incident which endangers or which, if not corrected, would endanger an aircraft, its occupants or any other person.

A list of examples of these occurrences appears in Appendix B to this publication. This Appendix provides more detailed guidance on the types of occurrences that are required to be reported. However, reporters are left to determine whether endangerment is a factor and thus determine whether the incident should be reported.

- 2.1.2 Any person specified in the legislation should 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.
- 2.1.3 A report should 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.

2.1.4 It is of great importance to the success of the Scheme 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 the CAA. 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 the CAA and will also tend, by sheer volume of data generated, to 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 B. 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.

2.2 **Categories of Aircraft Under the Scheme**

2.2.1 The ANO specifies the aircraft covered by the MOR Scheme as:

- any aircraft operated under an air operator's certificate granted by the CAA;
- any turbine-powered aircraft which has a certificate of airworthiness issued by the CAA.

In the case of organisations providing a service or facility for aircraft operating over or in the UK (e.g. air traffic services, airfields, etc.) any occurrence meeting the required criteria should be reported regardless of the nationality of the aircraft involved.

2.2.2 In addition to the reporting criteria above, those organisations approved under EU legislation; EC 1702/2003, Part 21, or EC 2042/2003, Part M and Part 145, should report occurrences involving any aircraft or aircraft component under the scope of their Approval. EASA guidance AMC 20-8 and the relevant EU Regulation should be consulted for further information.

2.3 **Categories of Persons Required to Report**

2.3.1 The ANO also specifies the categories of persons (or organisations) who are required to report occurrences. These include:

- a) the operator and the commander of a turbine-powered aircraft which has a certificate of airworthiness issued by the CAA;
- b) the operator and the commander of an aircraft operated under a national air operator's certificate or an EU-OPS air operator certificate granted by the CAA;
- c) 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 the United Kingdom;
- d) a person who carries on the business of maintaining or modifying a turbine-powered aircraft, which has a certificate of airworthiness issued by the CAA, and a person who carries on the business of maintaining or modifying any equipment or part of such an aircraft;

- e) a person who carries on the business of maintaining or modifying an aircraft, operated under a national air operator's certificate or an EU-OPS air operator certificate granted by the CAA, and a person who carries on the business of maintaining or modifying 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 a turbine-powered aircraft, which has a certificate of airworthiness issued by the CAA, 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 signs an airworthiness review certificate or a certificate of release to service for an aircraft operated under a national air operator's certificate or an EU-OPS air operator certificate granted by the CAA, 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;
- h) a person who performs a function which requires him to be authorised by the CAA as an air traffic controller or as a flight information service officer;
- i) a licensee or manager of a licensed aerodrome or a manager of an airport to which Chapter III of Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24th September 2008 on common rules for the operation of air services in the Community applies;
- j) 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 the CAA;
- k) 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 to which Chapter III of Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24th September 2008 on common rules for the operation of air services in the Community applies.

NOTE: An airport covered by Chapter III of Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24th September 2008 on common rules for the operation of air services in the Community, is interpreted by the CAA as an airport that is used for the conduct of Public Transport or Commercial Air Transport operations.

2.3.2 In addition to the reporting criteria above, those individuals or organisations within the scope of EC 216/2008 should report occurrences involving any aircraft or aircraft component under the scope of this EU legislation.

2.3.3 It should be understood that while the legislation defines those who *have* to report, anyone *may* report, should they consider it necessary.

2.4 **Voluntary Reporting**

2.4.1 The CAA encourages voluntary reporting across the whole spectrum of UK civil aviation operations. A voluntary report is made by a person not required to report under the legislation described above. Voluntary reports are processed in a similar way to mandatory reports.

3 Contact Details

- 3.1 Completed occurrence reports should normally be sent to the Safety Data department of the CAA. It is usual for this to be done by email, but fax and hard copy are also acceptable formats. If agreed with the CAA beforehand, it may be appropriate to send reports to other CAA offices.

| | | |
|------------------------|--|--------------------------|
| Email | sdd@caa.co.uk | Safety Data |
| Fax | 01293 573972 | Civil Aviation Authority |
| Phone | 01293 573220 | Aviation House |
| Out of hours emergency | 01293 573344 | Gatwick Airport South |
| | | West Sussex |
| | | RH6 0YR |

- 3.2 Occurrences that are considered to include particularly dangerous or potentially dangerous circumstances should be reported to the CAA immediately. Outside normal office hours the CAA emergency telephone number may be used for this purpose. If the occurrence relates to an aircraft technical defect the responsible CAA regional office may be able to assist. Regional office telephone numbers are available on the CAA website. If a report has been submitted over the phone in such 'emergency' circumstances, a follow-up report should be subsequently submitted in the usual manner.

4 Legislation

- 4.1 The legislation applicable to Mandatory Occurrence Reporting in the UK can be divided into two categories, European and national UK legislation. It should be noted that reference must always be made to the source legislation if there is any doubt as to the responsibility for the reporting of an occurrence. If clarification is required the CAA Safety Data department can be contacted, see section 3.

4.2 UK Legislation

- 4.2.1 Legislation on the CAA MOR Scheme is contained in Article 226 of the Air Navigation Order 2009 (ANO) and Part 5 of the Air Navigation (General) Regulations 2006.
- 4.2.2 The ANO implements in the UK, Directive 2003/42/EC of the European Parliament and of the Council of 13 June 2003 on occurrence reporting in civil aviation.
- 4.2.3 The legislation concerning the release of information supplied under the CAA MOR Scheme is contained in Regulation 9 of the CAA Regulations 1991.

4.3 European Legislation

- 4.3.1 Quite apart from the Directive mentioned above, which has been implemented by Article 226 of the ANO, there are a number of EU Regulations which contain occurrence reporting requirements. These are directly applicable within the UK and take precedence over national legislation.
- 4.3.2 EC 216/2008 is the Regulation that, among other things, defines the aircraft types within the jurisdiction of the European Aviation Safety Agency (EASA). Aircraft outside the responsibility of EASA are defined in Annex II to this regulation and are often referred to as 'Annex II aircraft'. With respect to occurrence reporting, Annex II aircraft can be considered under national UK legislation only.
- 4.3.3 EC 1702/2003 covers the design and manufacture of aircraft and under 21A.165(f) places a responsibility on production organisations for reporting items released which could lead to an unsafe condition.

- 4.3.4 EC 2042/2003 covers the continuing airworthiness of aircraft and places a responsibility on the individual or organisation responsible for the airworthiness of an aircraft, e.g. the owner of an aircraft, to report any 'condition of an aircraft or component which endangers flight safety' under M.A.202. Additionally, organisations approved under Part 145 have an obligation to similarly report under 145.A.60.
- 4.3.5 EASA have produced an 'Acceptable Means of Compliance' document in relation to occurrence reporting, AMC20-8. This provides guidance on the reporting of occurrences in the situations covered by the EU regulations above.
- 4.3.6 EU Ops 1 also places an obligation on aircraft operators with respect to occurrence reporting in a similar way to UK legislation, under OPS 1.420.

4.4 **Reporting Differences Between the UK and EU Legislation**

- 4.4.1 The European regulations above stipulate that reports are dispatched within 72 hours of the incident. Current UK legislation, covering those areas of aviation that are outside of this European legislation, stipulates reporting within a 96 hour period. It is intended to amend the UK legislation to adopt the 72 hour period but in the meantime it is proposed that the 72 hour period is adopted throughout an affected organisation's internal procedures for consistency.
- 4.4.2 Additional requirements to report to the 'state of registry'; 'organisation responsible for the design' and 'state of operator' must also be complied with for those occurrences meeting the reporting criteria in AMC20-8, (applicable to EU Ops 1, Part 145, Part 21 and Part M).

5 **Reporting Procedure**

- 5.1 The ANO 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, the CAA 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 the CAA. 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.
- 5.2 Usually the reporting level within an organisation is set at a lower level than the CAA 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 the CAA, in accordance with the ANO, the company must tell them if the report has not been passed to the CAA 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 the CAA or to report it directly to the CAA 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.
- 5.3 Individuals may submit an occurrence report directly to CAA 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.

- 5.4 Reports must be despatched within 96(72¹) hours of the event, unless exceptional circumstances prevent this. Nevertheless, when the circumstances of an occurrence are judged to be particularly hazardous, the CAA expects to be advised of the essential details as soon as possible. This should be followed up within 96(72¹) hours by a full written report in the usual way. The CAA 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 96(72¹) hours, which could usefully be included with the report.
- 5.5 Should the initial report be incomplete in respect of any item of information required by the Air Navigation (General) Regulations, a further report containing this information must be made within 96(72¹) hours of the information becoming available. Prompt advice to the CAA on the results of investigations and the actions taken to control the situation will minimise, or may render unnecessary, direct CAA 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.
- 5.6 The ANO does not require the provision of supplementary information on reportable occurrences, except when specifically requested by the CAA. However, the efficiency of CAA follow-up work and the quality of safety data it can provide will be enhanced if reporting organisations keep the CAA informed of major developments in their investigations of occurrences.
- 5.7 **Occurrence Reporting Forms**
- 5.7.1 To facilitate consistent reporting and subsequent storage and analysis of data, three standard report forms, designed in consultation with industry, are available. Organisations may wish to use a report format designed to meet their own system requirements. In such cases the in-house document(s) should, as far as possible, follow the general format of the CAA model. Any format other than the standard CAA forms will require CAA approval and should encompass similar data fields to the appropriate CAA form(s).
- 5.7.2 Appendix A shows the three CAA forms, which are:
- a) Form SRG 1601, to be used for all types of occurrence except: air traffic occurrences reported by Air Traffic Controllers and air traffic services ground equipment occurrences reported by Air Traffic Engineers. (Airprox occurrences, wake vortex incidents and birdstrikes are also separately reported – see below)
 - b) Form SRG 1602 for use solely by Air Traffic Controllers and Flight Information Service Officers when reporting ATS occurrences.
 - c) Form SRG 1603 for use solely by Air Traffic Engineers for all occurrences associated with Air Traffic Service Ground Equipment.
- Individual Forms are available on the CAA Web Site www.caa.co.uk.

¹ Note. If EU legislation is applicable the reporting period is 72 hours, see paragraphs 2.3.2, 4.3 and 4.4.

6 Specific Reporting Provisions

6.1 Aircraft, Aircraft Equipment and Ground Equipment Defects

- 6.1.1 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. The CAA 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. The original report should list all addressees to whom it has been sent.
- 6.1.2 A manufacturer or maintenance organisation of aircraft, components or equipment is not expected to report to the CAA, 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 the CAA. 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.
- 6.1.3 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 law. The CAA 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.
- 6.1.4 To facilitate effective lines of communication when any part or equipment involved in an occurrence is being despatched to another area or organisation for investigation or repair, the item(s) should be clearly identified as the subject of an occurrence report to the CAA, by appropriate annotation of the 'tag' and all accompanying paperwork.

6.2 Airprox, Wake Turbulence and Birdstrikes

- 6.2.1 Because of the specialist detailed nature of the information required on birdstrike, Airprox and wake turbulence occurrences, alternatives to the standard Occurrence Report forms are necessary. All such reports, including those required under the terms of the ANO, should be submitted as shown below.

| | | |
|--|---|---|
| <p>Airprox in UK airspace reported by pilots</p> | <p>UK Airprox Board, RAF Northolt, West End Road, Ruislip, Middlesex, HA4 6NG.</p> | <p>Tel + 44 (0)208 842 6051 Fax + 44 (0)208 842 6056 Email info@airproxboard.org.uk Website www.airproxboard.org.uk Form CA 1094 available from the UKAB website</p> |
| <p>Birdstrikes in UK Airspace <i>Outside UK airspace, if a birdstrike resulted in damage to the aircraft or loss or malfunction of any essential service, a MOR should be submitted to CAA Safety Data.</i></p> | <p>Aerodrome Standards, CAA, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.</p> | <p>Fax + 44 (0)1293 573971 Form SRG 2004 available from the CAA website. Preferred method: online report www.caa.co.uk/birdstrikerereporting</p> |

| | | |
|---|--|---|
| <p>Wake Turbulence Incidents <i>All wake turbulence incidents should be submitted to the NATS team. Severe incidents, meeting the criteria for an MOR, should also be submitted to CAA Safety Data.</i></p> | <p>Wake Turbulence Analysis Team, NATS, Corporate and Technical Centre, 4000 Parkway, Whiteley, Fareham, Hampshire, PO15 7FL.</p> | <p>Fax: +44 (0) 1489 615215 Form SRG 1423 available from the CAA website</p> |
|---|--|---|

6.3 Air Traffic Controllers

6.3.1 Reports (including Airprox) should be submitted in accordance with the procedures contained in the CAA Manual of Air Traffic Services Part 1 using Report Form SRG 1602 (see Appendix A).

6.4 Passenger Medical Emergencies and PAN Calls

6.4.1 Certain types of event are considered as 'Grade E' (see Section 9.4), provided there is no other flight safety hazard associated with the event. These include:

- a) PAN calls for passenger medical emergencies*.
- b) Other PAN calls made for the sole purpose of an expeditious approach.

* Please note that 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.

6.4.2 These types of occurrence still need to be reported, but in much less detail, which means only the following information (if known) needs to be submitted:

- | | |
|-----------------------------|-------------------------------|
| Date of occurrence | Time of occurrence |
| Aircraft type | Aircraft registration |
| Aircraft operator | Flight number or call sign |
| Nature of flight (e.g. pax) | Phase of flight (e.g. cruise) |
| Route from/to | Location of occurrence |

Occurrence summary in one sentence: e.g. PAN declared due to passenger medical emergency, a/c diverted.

6.5 Retention of Data from a Flight Data Recorder (FDR)

6.5.1 The CAA expects to use flight recorder data only when this is necessary for the proper investigation of the more significant occurrences. It is not intended to use such data to check on information contained in a written report but to supplement and extend the written information. Examples of the types of occurrence for which flight data records would be most useful are: significant excursion from the intended flight parameters; significant loss of control or control difficulties; unexpected loss of performance or a genuine GPWS warning.

6.5.2 The more comprehensive recorders fitted to some aircraft are capable of providing valuable data on a wider range of occurrences and the CAA would expect to make judicious use of such information in relation to appropriate occurrences. For this purpose, the CAA requests that operators retain the data from an FDR which is relevant to a reportable occurrence for a period of 14 days from the date of the occurrence being reported to the CAA, or a longer period if the CAA so requests.

6.5.3 The CAA depends upon the judgement of those responsible for submitting reports to establish which occurrences require the retention of FDR data. It is equally incumbent upon the CAA to advise the reporting organisation, as quickly as possible, when it requires such data

6.6 Confidential Reports

6.6.1 If any reporter considers that it is essential that their identity not be revealed, the report itself should be clearly annotated 'CONFIDENTIAL' and submitted direct to Safety Data at Gatwick, addressed to 'Head of Safety Data' and the envelope should be marked 'Personal'. The request will be respected and the reporter will be contacted personally, either by the Head of Safety Data or their deputy. The CAA cannot, of course, guarantee confidentiality when an occurrence is reported separately by another party or where ANO Article 226(17) applies in respect of gross negligence. Reporters submitting a Confidential Report must accept that effective investigation may be inhibited, however, the CAA would rather have a Confidential Report than no report at all. In many cases it may be more appropriate to submit the report under the CAA 'Whistleblowing' system, see paragraph 7.4.

7 Protection of Reporters and Reports

7.1 Confidentiality and Dissemination of Reports

7.1.1 In accordance with Article 226 and the EU Directive the CAA 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.

7.1.2 Accordingly, the CAA 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.

7.2 Assurance Regarding Prosecution

7.2.1 Article 226 of the ANO 2009 provides that the sole objective of occurrence reporting is the prevention of accidents and incidents and not to attribute blame or liability. It further provides that:

"Without prejudice to the rules of criminal law, no proceedings may be instituted in respect of unpremeditated or inadvertent infringements of the law which come to the attention of the relevant authorities only because they have been reported under this article as required by Article 4 of the Occurrence Reporting Directive, except in cases of gross negligence."

7.2.2 This mirrors the obligations of the European Directive on Occurrence Reporting, which Article 226 implements in the United Kingdom.

7.3 Possible Action by Employers

7.3.1 Article 8(4) of the European Occurrence Reporting Directive requires Member States to ensure that employees who report incidents are not subjected to any prejudice by their employer. In the United Kingdom, legal protection for employees is provided for by the Public Interest Disclosure Act 1998.

7.3.2 In any event, where a reported occurrence indicated an unpremeditated or inadvertent lapse by an employee, the CAA expects an employer to act responsibly and to share its view that free and full reporting is the primary aim, and that every effort should be made to avoid action that may inhibit reporting. Therefore, except to

the extent that action is needed in order to ensure safety, and except in such flagrant circumstances as may in accordance with Article 226(17) of the ANO 2009 justify prosecution, it expects employers to refrain from disciplinary or punitive action which might inhibit their staff from duly reporting incidents of which they may have knowledge.

7.4 'Whistleblowing' to the CAA

- 7.4.1 Where a reporter wishes to disclose sensitive information to the CAA, but an MOR seems inappropriate, the preferred method of reporting is by email to whistleblowers@caa.co.uk or if this is not possible, reports may be given by contacting the CAA Whistleblowing Focal Point, by calling 01293 573190. Further information about making a whistleblower report to the CAA is available on the CAA website, www.caa.co.uk.

8 Air Accidents Investigation Branch (AAIB) and Department for Transport

- 8.1 In the UK the requirements and procedures for the reporting and investigation of accidents and serious incidents are the subject of separate legislation – Civil Aviation (Investigation of Accidents and Incidents) Regulations. The investigation of accidents is the responsibility of the AAIB and not the CAA. The AAIB is part of the Department for Transport and is independent of the CAA.
- 8.2 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 the CAA and the AAIB and details of all occurrences reported to the AAIB are immediately passed to the CAA for inclusion in the records.
- 8.3 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.

The Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 1996 provides the following definitions:

Accident: An occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:

- a) a person suffers a fatal or serious injury as a result of:
 - i) being in or upon the aircraft;
 - ii) direct contact with any part of the aircraft, including parts which have become detached from the aircraft; or
 - iii) direct exposure to jet blast;except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
- b) the aircraft sustains damage or structural failure which:
 - i) adversely affects the structural strength, performance or flight characteristics of the aircraft; and

- ii) would normally require major repair or replacement of the affected component; except for engine failure or damage, when the damage is limited to the engine, its cowlings or accessories; or for damage limited to propellers, wing tips, antennas, tyres, brakes, fairings, small dents or puncture holes in the aircraft skin; or
- c) the aircraft is missing or is completely inaccessible.

Serious Incident: An incident involving circumstances indicating that an accident nearly occurred.

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

- 8.4 Because the Civil Aviation (Investigation of Accidents and Incidents) Regulations require that only those Accidents (as defined above) and Serious Incidents are to be reported to the Department for Transport (DfT), it is sometimes assumed that only these 'Reportable Accidents' may be subject to investigation by the AAIB. The same Regulations, however, empower the Chief Inspector of Air Accidents to determine whether or not an investigation is to be carried out on any occurrence, i.e. whether or not it qualified for reporting to the Department for Transport. It should be appreciated, therefore, that although reference is made in this document to the need for the investigation by either industry, the CAA, or both, of occurrences reported under the CAA Mandatory Occurrence Reporting Scheme, the Chief Inspector of Air Accidents, under the terms of the Accident Investigation Regulations, is also empowered to investigate such occurrences should he so decide.
- 8.5 To report an accident or serious incident to the Air Accidents Investigation Branch, the following number should be used: 01252 512299.

9 Processing of Occurrence Reports and Publication of Occurrence Information

- 9.1 In relation to all reported occurrences, including those raised by its own personnel, the CAA will:
- a) evaluate each occurrence report received;
 - b) decide which occurrences require investigation by the CAA in order to discharge the CAA's functions and responsibilities;
 - c) 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;
 - d) 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;
 - e) assess and analyse the information reported to it in order to detect safety problems which may not be apparent to individual reporters;
 - f) make available the information derived from occurrence reports in accordance with the relevant CAA Regulations;
 - g) make available the results of studies of the data provided to those who will use them for the benefit of air safety;
 - h) where appropriate, issue specific advice or instructions to particular sections of the industry;

- i) where appropriate, take action in relation to legislation, requirements or guidance, e.g. revisions of the Air Navigation Order (ANO), EU (EASA) aviation regulations, 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.;
- j) ensure that effective communication is maintained between AAIB and CAA in respect of accident and serious incident investigation and follow up, and that all appropriate areas of CAA are fully briefed on all matters of significance;
- k) exchange data with EU states in accordance with the requirements of the EU Directive 2003/42/EC of 13 June 2003 on occurrence reporting in civil aviation and the ANO 2009, Article 226 (as amended).

9.2 **CAA Safety Data**

Safety Data is a department established within the Safety Regulation Group of the CAA and its technical staff have engineering, operational and air traffic expertise. The department has data processing facilities for the storage of occurrence data, AAIB safety recommendations etc. but it is not responsible for regulating organisations or individuals. The department 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.

9.3 **Occurrences Closed on Receipt**

A considerable number of occurrences reported to the CAA, 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 the CAA, 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 Safety Data, 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. When necessary, Safety Data will liaise with the reporter and/or seek advice from appropriate CAA staff in making this decision. The ability of Safety Data to close an occurrence on receipt and thus avoid the need for further CAA 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.

9.4 **'Grade E' Reports**

When reporting to the CAA via a company system, any reports that do not meet the criteria for a MOR should normally be filtered out by the company's process. However, when reports are received by Safety Data that are judged to fall outside the MOR criteria, basic details are entered into the database and categorised as 'Grade E'. Details are also placed on a separate listing which is available to the originators to advise them of the decision and to provide the opportunity to question it. When a report in this category is considered to provide supporting data for a reportable occurrence, it will be treated as a supplementary report. The 'Grade E' category also includes occurrences that are technically 'reportable' but may be considered to be low risk. The classification by the CAA 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.

9.5 MOR Listings

Organisations contributing to the MOR system can be provided with online access to monthly MOR listings. These are listings of all new occurrences that have been recorded during the period. Each occurrence contains the essential details (e.g. aircraft type or service/ facility involved, flight phase, etc.) together with a brief narrative describing the occurrence. The name of the reporting organisation and any applicable reference number is included for each MOR, so that the list also provides an acknowledgement of the occurrences received by the CAA. Also included in the List are those occurrences that were 'Open' for CAA investigation and which have been 'Closed' during the period. Previously entered occurrences for which significant new information has become available during the period may also appear in any one (or all) of the lists.

9.6 Occurrence Publications

Occurrence Publications and data from the Safety Data records required for the purposes of furthering flight safety will be made available on request, subject to the provisions of Regulation 9 of the CAA Regulations 1991. For those directly participating in the Scheme (i.e. the UK aviation industry) the supply of data will normally be at no charge; however, in exceptional cases, which require extensive time and hence expense, the CAA must reserve the right to make a charge in accordance with the CAA Scheme of Charges. Any data made available for purposes other than flight safety will also normally be subject to charge. All such requests should be made via e-mail to Safety Data. The following publications are available via the CAA and UK Airprox Board websites.

- **Follow-up Action on Occurrence Report (FACTOR)**

These reports contain details of the CAA response to Safety Recommendations contained in an Accident Report or Bulletin issued by the Air Accidents Investigation Branch.

- **General Aviation Safety Information Leaflet (GASIL)**

This leaflet contains summaries of the more significant occurrences affecting general aviation aircraft and operations. Factual information, CAA comment and, when appropriate, advice on remedial or preventative measures are included. In addition it contains other items of general safety information relevant to GA operations.

- **Analysis of Airprox in UK Airspace**

These reports are produced twice yearly by the UKAB, an independent body, to collate the Airprox occurrence reports. The UKAB assesses the degree of risk, determines causal factors and may make Recommendations to the CAA. The Report also records the CAA Response to any such Recommendation.

INTENTIONALLY LEFT BLANK

Appendix A Occurrence Report Forms

Occurrence Report Form – SRG 1601

UK Civil Aviation Authority

OCCURRENCE REPORT

Safety Data,
 Civil Aviation Authority,
 Safety Regulation Group,
 Aviation House,
 Gatwick Airport South,
 West Sussex,
 RH6 0YR
 e-mail: sdd@caa.co.uk
 Fax: 01293 573972 Tel: 01293 573220

Please complete this form online, print, sign and send it to the above address.

CAA Occurrence Number

If report is CONFIDENTIAL -
 mark clearly at the top and
 provide contact address/Tel no.
 Your wish will be respected.



Reporter's Ref:

| | | | | | |
|------------------------|--|----------------------|-------------------|---------------|-----------------------------------|
| AIRCRAFT TYPE & SERIES | | REGISTRATION | DATE (dd/mm/yyyy) | TIME OF EVENT | DAY <input type="checkbox"/> |
| OPERATOR | | LOCATION/POSITION/RW | | UTC | NIGHT <input type="checkbox"/> |
| | | | | | TWILIGHT <input type="checkbox"/> |

| | | | | | | | |
|------------|------------|----------|--|----------|------------------------------|--|--|
| FLIGHT NO. | ROUTE FROM | ROUTE TO | FL <input type="checkbox"/> ALT/HT (FT) <input type="checkbox"/> | IAS (KT) | IFR <input type="checkbox"/> | TCAS RA | ETOPS |
| | | | | | VFR <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> | YES <input type="checkbox"/> NO <input type="checkbox"/> |

| | |
|------------------|--------------|
| NATURE OF FLIGHT | FLIGHT PHASE |
|------------------|--------------|

| ENVIRONMENTAL DETAILS | | | | | | | | | | |
|-----------------------|------------|-------|---------|---------------|---------------------------------|-------|------------|----------|--------------|--|
| WIND | | CLOUD | | PRECIPITATION | OTHER METEOROLOGICAL CONDITIONS | | | | RUNWAY STATE | |
| DIRN. | SPEED (kt) | TYPE | HT (ft) | | VISIBILITY | ICING | TURBULENCE | OAT (°C) | CATEGORY | |
| | | | | | KM <input type="checkbox"/> | | | | | |
| | | | | | M <input type="checkbox"/> | | | | | |

BRIEF TITLE

DESCRIPTION OF OCCURRENCE

| | |
|---|--|
| Any procedures, manuals, pubs. (AIC, AD, SB etc.) directly relevant to occurrence and (where appropriate) compliance state of aircraft, equipment or documentation. | |
|---|--|

| GROUND STAFF REPORT | | | | | | | | | | | | |
|--|------------------------------|---|-----------------------------|--------------------------------------|---|------------------------------|--------------------------------|------------------------------|---------------------------------|-------------------------------|------------------------------|-----------------------------|
| A/C CONSTRUCTOR'S NO. | ENGINE TYPE/SERIES | ETOPS APPROVED | | GROUND PHASE | | | MAINTENANCE ORGANISATION | | | | | |
| | | YES <input type="checkbox"/> | NO <input type="checkbox"/> | MAINTENANCE <input type="checkbox"/> | | | TEL. | | | | | |
| | | | | | GROUND HANDLING <input type="checkbox"/> | | | | | | | |
| | | | | | UNATTENDED <input type="checkbox"/> | | | | | | | |
| COMPONENT/PART | | | MANUFACTURER | | | PART NO. | | SERIAL NO. | | | | |
| REFERENCES:- MANUAL/ATA/IPC | | | | | COMPONENT OH/REPAIR ORGANISATION | | | | | | | |
| ORGANISATION AND APPROVAL REFERENCE | | | | NAME | | | | POSITION | | | | |
| SIGNATURE | | | | | | | | DATE (dd/mm/yyyy) | | | | |
| If report is voluntary (i.e. not subject to mandatory requirements) can the information be published in the interests of safety? | YES <input type="checkbox"/> | Address and tel.no. (if reporter wishes to be contacted privately). | | | NOTE 1: If additional information, as below, is available, please provide. NOTE 2: If the occurrence is related to a design or manufacturing deficiency, the manufacturer should also be advised promptly. NOTE 3: Where applicable, a report of this incident should be forwarded directly to other agencies involved, e.g. Aerodrome Authority, ATC agency. | | | | | | | |
| | NO <input type="checkbox"/> | | | | | | | | | | | |
| REPORTING ORGANISATION - REPORT | | | | | | | | | | | | |
| ORGANISATION COMMENTS - ASSESSMENT/ACTION TAKEN/SUGGESTIONS TO PREVENT | | | | | | | | | | | | |
| SAMPLE | | | | | | | | | | | | |
| UTILISATION - AIRCRAFT | | | | | UTILISATION - ENGINE/COMPONENT | | | | | MANUFACTURER ADVISED | | |
| | TOTAL | SINCE OH/REPAIR | SINCE INSPECTION | | TOTAL | SINCE OH/REPAIR | SINCE INSPECTION | | YES | NO | | |
| HOURS CYCLES LANDINGS | | | | HOURS CYCLES LANDINGS | | | | | <input type="checkbox"/> | <input type="checkbox"/> | | |
| REPORTING ORGANISATION | | | TEL. | REPORTER'S REF | | REPORT | | REPORTER'S INVESTIGATION | | FDR DATA RETAINED | | |
| E-MAIL | | | FAX | | | NEW <input type="checkbox"/> | SUPPL <input type="checkbox"/> | NIL <input type="checkbox"/> | CLOSED <input type="checkbox"/> | OPEN <input type="checkbox"/> | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| NAME | | | POSITION | | | | | | TEL. | | | |
| E-MAIL | | | | SIGNATURE | | | | DATE (dd/mm/yyyy) | | | | |

Advice on the Completion of the CAA Occurrence Report Form – SRG 1601

1 General

- 1.1 Reporters must provide the information required by the Air Navigation (General) Regulations as amended. This means that, wherever possible, they should complete all sections of the Form where the information requested is relevant to a specific occurrence. (Relevance is the important aspect and where any of the information requested is clearly not relevant it may be omitted, e.g. weather details when weather is not a factor.)
- 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.
- 1.3 Evaluation and processing of reports is greatly facilitated by use of the electronic versions supplied on the CAA web site. However, this may not always be possible, in which case, the report should preferably be typewritten or alternately completed in black ink.
- 1.4 Operators holding ETOPS approval should, when submitting any occurrence report on the aircraft type(s) subject to this approval, complete the appropriate 'box' provided. Those operators not using SRG 1601, should prominently annotate reports 'ETOPS', as appropriate.

2 Aircraft Type, Series and Operator should be completed for all occurrences involving an aircraft. Provides basic identification data.

3 Nature and Phase of Flight relates to in-flight occurrences. Provides flight data in support of the narrative.

3.1 Nature of Flight descriptions:

| | |
|--------------|--|
| Passenger | Flight under Class 1, 2-5 and 7 Air Transport Licence or an exemption. |
| Freight | Flight under Class 1 or 6 Air Transport Licence or an exemption. |
| Positioning | Positioning without revenue load to/from point of departure/ arrival of revenue flight. |
| Ferry | Initial ferry/delivery flight. |
| 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, continuation training. |
| Business | Carriage of company staff in aircraft owned or hired by a company. |
| Agricultural | Aerial application, crop spraying, top dressing, etc. |
| Survey | Aerial photographic or mapping survey. |

| | |
|-------------|--|
| Pleasure | Commercial pleasure flying. e.g. sightseeing. |
| Club/Group | Flying other than training by members in a club or group aircraft. |
| Private | Other than club/group flying or training. |
| Parachuting | Carriage of parachutists for the purpose of parachuting. |
| Towing | Towing of gliders, banners, etc. |
| Police | Aircraft operating on a Police Air Operators Certificate. |
| EMS | Emergency medical services, patient transport, accident response. |

3.2 Phase of Flight descriptions:

| | |
|---------------|---|
| Parked | On ramp with flight crew on board. |
| Taxiing | <ul style="list-style-type: none"> • From commencement of moving (including pushback) to start of take-off run. • From completion of landing run to terminal gate or point of stopping engines, whichever occurs later. |
| Take-off | Start of take-off run to lift-off. |
| Initial Climb | Lift-off to a height of 1500ft or aircraft 'clean-up' whichever occurs last. |
| Climb | End of initial climb to top of climb. |
| Cruise | Top of climb to top of descent including en-route climb or descent. |
| Descent | Top of descent to a height of 1500ft. |
| Holding | Flying to a set procedure at a point which intentionally delays the aircraft, usually according to a set procedure at a 'fix'. |
| Landing | A height of 1500ft to threshold. 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, including spinning. |
| Hover | Airborne and stationary. |

4 Environmental Details relates to in-flight occurrences. Provides flight data in support of the narrative.

5 Description of Occurrence relates to all occurrences.

5.1 This should be a clear and concise description of the occurrence, preferably starting with a brief title indicating the type of occurrence. The description should contain details of what happened or what was found; what immediate action was taken to contain the situation; any additional information, comments or recommendations which it is considered might assist subsequent assessment of the report and/or investigation.

5.2 Wherever possible the description should be supported by the results of subsequent investigation and details of any action taken by the reporter's organisation to avoid a recurrence.

6 Ground Staff Report can relate to in-flight as well as ground occurrences. Provides maintenance/ engineering data in support of the description of occurrence.

6.1 In the case of reports submitted from a component manufacturer or overhaul/repair organisation, the information in this block will provide the primary identification data for the occurrence. Nevertheless, if any of the information applicable to other sections of the form is available and relevant, it should also be provided.

6.2 The ground phases listed on the form are defined as follows:

| | |
|-----------------|---|
| Maintenance | Aircraft undergoing maintenance, overhaul or repair, or at the manufacturer's facility. |
| Ground Handling | Movements of aircraft on the ground other than as defined in 'Taxiing'. |
| Unattended | Standing, with no personnel on board. |

7 Reporting Organisation relates to all occurrences.

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.

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 is important both in terms of assessing the occurrence and disseminating the details to others.

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 significantly reduce any requirements for follow-up activity. The date sent and any requests for strip/ repair data should also be entered.

7.4 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.

8 Additional Information relates to all occurrences.

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.

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.

9 Acknowledgement of Reports

- 9.1 Acknowledgement of reports is facilitated by monthly occurrence listings through the CAA website. If, exceptionally, individual acknowledgement is required, please contact Safety Data direct.
- 9.2 An occurrence may be reported confidentially. Please clearly annotate the top of the form 'CONFIDENTIAL' and mark the envelope 'Personal for Head of Safety Data'. Safety Data will respect the confidentiality and contact you personally. If you are considering submitting a confidential report it may be more appropriate to submit a whistleblowing report, see section 7.4.

ATC Occurrence Report Form – SRG 1602

UK Civil Aviation Authority

CAA Occurrence Number



ATS OCCURRENCE REPORT

NOTES: (i) See Instructions and Explanatory Notes.

(ii) When completed, please send to: Safety Data, Civil Aviation Authority, Safety Regulation Group,
 Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.
 e-mail: sdd@caa.co.uk
 Fax: 01293 573972 Tel: 01293 573220

(iii) Fill in boxes 1-56 as required.

Original to Safety Data
 Make additional photocopies as required

Please complete this form online, print, sign and send it to the above address.

| | | | | | | | |
|--|--|--|--|--|--|---|--|
| CATEGORIES OF OCCURRENCE | | | | | | | |
| 1 ACCIDENT <input type="checkbox"/> | | AIRPROX <input type="checkbox"/> | | INCIDENT <input type="checkbox"/> | | ABANL <input type="checkbox"/> | |
| | | | | | | (CA939 Action <input type="checkbox"/> YES <input type="checkbox"/> NO) | |
| INFRINGEMENT <input type="checkbox"/> | | | | | | | |
| NB Signal action is required for Accident and AIRPROX as per MATS Part 1 Section 6. | | | | | | | |
| 2 Occurrence Position | | 3 FL <input type="checkbox"/> ALT/HT (FT) <input type="checkbox"/> | | 4 Date (dd/mm/yyyy) | | 5 Time - UTC (HH:MM) | |
| 6 Day <input type="checkbox"/> Night <input type="checkbox"/> | | | | | | | |
| OPERATOR | | CALLSIGN/REGN | | TYPE | | FROM TO | |
| 7 | | 8 | | 9 | | 10 11 | |
| | | | | | | 12 | |
| | | | | | | 13 | |
| | | | | | | MODE C DISPLAYED | |
| | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| 15 | | 16 | | 17 | | 18 19 | |
| | | | | | | 20 | |
| | | | | | | 21 | |
| | | | | | | MODE C DISPLAYED | |
| | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| 23 | | 24 | | 25 | | 26 27 | |
| | | | | | | 28 | |
| | | | | | | 29 | |
| | | | | | | MODE C DISPLAYED | |
| | | | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| 31 RTF Frequencies | | 32 Radar Equipment | | 33 Equipment Unserviceabilities | | 34 QNH | |
| 35 Runway in use | | | | | | | |
| 36 CLASS & TYPE OF AIRSPACE | | | | 37 ATS PROVIDED | | | |
| 38 SID/STAR/ROUTE | | | | | | | |
| 39 Was prescribed separation lost? | | 40 Min Separation | | 41 Alert Activation | | 42 Traffic info given by ATC? | |
| <input type="checkbox"/> YES <input type="checkbox"/> NO | | HorizontalNM | | Collision <input type="checkbox"/> Conflict Alert <input type="checkbox"/> | | <input type="checkbox"/> YES <input type="checkbox"/> NO | |
| | | Verticalft | | TCAS <input type="checkbox"/> STCA <input type="checkbox"/> SMF <input type="checkbox"/> | | | |
| 43 Avoiding action given by ATC? | | | | | | | |
| <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | |
| 44 BRIEF TITLE Summary | | | | | | | |
| 45 NARRATIVE - use a diagram if necessary (Aerodromes submit weather report including local and regional QNH). | | | | | | | |
| continue on a separate sheet if necessary. | | | | | | | |
| 46 Name | | 47 On duty as | | 48 ATS Unit | | 49 Time since last break | |
| | | | | | | | |
| 50 Start time of shift (UTC) | | 51 Radar recordings held | | | | | |
| | | <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | |
| 52 RTF recordings held | | 53 List other agencies advised | | 54 Sign | | 55 Date (dd/mm/yyyy) | |
| <input type="checkbox"/> YES <input type="checkbox"/> NO | | | | | | | |
| | | SRG 1603 (CA 1262) action? <input type="checkbox"/> | | | | | |
| 56 Address | | | | | | | |
| Telephone..... | | | | | | | |

ADVICE ON THE COMPLETION OF THE CAA OCCURRENCE REPORT FORM SRG1602

USE AND EXPLANATION OF TERMS IN BOX 1

- ACCIDENT: A UK reportable accident.
- AIRPROX: A situation in which, in the opinion of a pilot or a controller, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved was or may have been compromised.
- INCIDENT: Any Occurrence not appropriate to the other categories.
- ABANL: An Alleged Breach of Air Navigation Legislation, as a Supplementary Report whenever CA939 action is taken.
- INFRINGEMENT: An alleged unauthorised infringement of regulated airspace.

EXPLANATORY NOTES (Please also refer to MATS Part 1, Section 6)

- GENERAL: Try to complete **ALL** boxes. If **NOT APPLICABLE** use N/A, or if **NOT KNOWN** use N/K. Avoid use of technical jargon, hieroglyphics and abbreviations.
- BOX 1: Should the Occurrence involve more than one category (e.g. an ABANL could arise from an INFRINGEMENT), tick both categories.
- BOXES 7 TO 14 }
BOXES 15 TO 22} These boxes cater for up to three involved aircraft. Use the narrative for additional aircraft.
BOXES 23 TO 30}
- BOX 39: **Must** be completed if prescribed separation was required to be achieved in accordance with MATS Part 1 or 2.
- BOX 40: Should contain your estimate, where possible, of the minimum separation achieved and must be completed for an AIRPROX. This will be coded for computer input purposes and amended if necessary after investigation.
- BOX 44: This box should contain a simple, one-line statement summarising the Occurrence, i.e. 'Co-ordination problems', 'Level bust', 'Overload' etc.
- BOX 51/52: Relevant RTF and Radar recordings can be vitally important to subsequent investigations. Retention action should be considered for all reports and is to be in accordance with MATS Part 1 and any local procedures.
- BOX 53: It is important to ensure that any **involved** agency (e.g. Pilot, Operator, ATSU) is informed of the reporting action. This box should also indicate those organisations required by MATS Part 1 to be informed (e.g. AAIB for an aircraft accident).

REPORTING TIME

Reports must be despatched within 96 hours of the event unless exceptional circumstances prevent this.

ACKNOWLEDGEMENT OF REPORTS

Acknowledgement of reports (other than CONFIDENTIAL – see below) is normally given via Safety Data's monthly list of 'ATC Reported Occurrences'. If, exceptionally, individual acknowledgement is required, please contact Safety Data direct.

UNIT MANAGEMENT ACTION

Reporters are requested to send a copy to the Unit Management. This is for local assessment and any immediate follow-up action. Additional input and/or covering comment from Unit Management is highly desirable for both Safety Data evaluation and any follow-up investigation.

CONFIDENTIAL REPORTS

A report may be submitted confidentially. Please clearly annotate the top of the form 'CONFIDENTIAL'. The second copy need not be forwarded to local management. BOXES 46 to 56 should be completed. The CAA will respect the confidentiality and the Head of Safety Data will contact you personally.

Engineering Occurrence Report Form – SRG 1603

UK Civil Aviation Authority

CAA Occurrence Number



ATS ENGINEERING OCCURRENCE REPORT

- NOTES: (i) See Instructions and Explanatory Notes.
 (ii) When completed, please send to: Safety Data, Civil Aviation Authority, Safety Regulation Group, Aviation House, Gatwick Airport South, West Sussex, RH6 0YR.
 e-mail: sdd@caa.co.uk
 Fax: 01293 573972 Tel: 01293 573220
 (iii) Fill in boxes 1-25 as appropriate.
Please complete this form online, print, sign and send it to the above address.

Original to Safety Data
 Make additional photocopies as required

| | | | | |
|--|--|--|---|--|
| 1 Categories of Occurrence | | | | |
| ACCIDENT <input type="checkbox"/> | | INCIDENT <input type="checkbox"/> | | PROCEDURAL <input type="checkbox"/> |
| | | | | FAILURE <input type="checkbox"/> |
| | | | | HAZARD <input type="checkbox"/> |
| 2 Occurrence Location | 3 Date (dd/mm/yyyy) | 5 Duration | 6 ATS Facility | |
| | 4 Time (UTC) | | <input type="checkbox"/> RTF <input type="checkbox"/> Radar <input type="checkbox"/> Nav-aid <input type="checkbox"/> Other: | |
| 7 Service Affected | 8 Equipment Type/Manufacturer | | 9 Frequency | 10 Callsign |
| | | | | 11 Equipment Location |
| 12 Facility Configuration | | 13 Equipment Status | | 14 Previous Defects/Occurrences? |
| <input type="checkbox"/> In service or <input type="checkbox"/> Out of service, <input type="checkbox"/> Main Mode or <input type="checkbox"/> Standby/Test <input type="checkbox"/> Channel A(1) or <input type="checkbox"/> B(2) or <input type="checkbox"/> Other : External Information Source: | | | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Known |
| | | | | 15 RTF Frequencies/Radar Source |
| 16 NARRATIVE - use a diagram if necessary (attach copies of all relevant information) | | | | |
| continue on additional forms if necessary. | | | | |
| 17 Recordings impounded | 18 Can the information be disseminated in the interests of flight safety? | 20 Name | | 23 Address & Telephone number (if the reporter wishes to be contacted privately) |
| <input type="checkbox"/> No <input type="checkbox"/> Yes - Details | <input type="checkbox"/> YES <input type="checkbox"/> NO | 21 Organisation/Position | | |
| 19 Other fault report action | | 22 Start time and duration of shift | | 24 Signature |
| <input type="checkbox"/> ATC CA 1261/CA4114 <input type="checkbox"/> Local Reporting <input type="checkbox"/> Other: | | | | 25 Date (dd/mm/yyyy) |

ADVICE ON THE COMPLETION OF THE CAA ATS ENGINEERING MOR FORM SRG1603

USE AND EXPLANATION OF TERMS IN BOX 1

Circle one or more category of Occurrence.

- ACCIDENT: A UK reportable accident.
INCIDENT: A reportable occurrence (see 'General').
PROCEDURAL: A reportable occurrence attributed to procedural aspects including operation and maintenance of any facility on the ground.
FAILURE: A reportable occurrence attributed to any defect in or malfunctioning of any facility on the ground.
HAZARD: A potential accident, incident or failure.
General: A reportable occurrence is defined in the Air Navigation Order or CAP 382.

EXPLANATORY NOTES (Please also refer to MATS Part 1, Section 6)

GENERAL: Try to complete all boxes. If NOT APPLICABLE use N/A, or if NOT KNOWN use N/K. Jargon, and uncommon abbreviations are to be avoided.

BOX 2: Location of Occurrence.

BOX 5: The period over which the Occurrence condition existed. Instantaneous, indefinite or unknown classifications must be identified.

BOX 6: The facility type **must** be ticked or stated.

BOX 7: More than one element **could** be ticked.

DETAILS OF THE EQUIPMENT ATTRIBUTING TO THE OCCURRENCE

BOX 9: **Frequency** (Radio) appropriate to equipment and occurrence, if applicable.

BOX 10: **Callsign** – Navaid identification, SSR code or RTF callsign.

BOX 11: **Location** – identify station or other physical location of equipment.

BOX 12: More than one element **could** be identified. Additional channels, diversity, etc. must be stated where applicable. External information source completed with the equipment and/or the station/location.

BOX 13: More than one element **could** be ticked. The categories apply to the subject equipment at the time of the Occurrence.

BOX 15: Identification of appropriate RTF frequencies/radar source is necessary to secure recordings which may be vital to subsequent investigations.

BOX 17: If records impounded, state source, effective date and retaining station.

BOX 19: Other fault reporting action, including contact with agencies, must be stated. It is important to ensure that any involved agency is informed of the reporting action. Normal, immediate fault action takes precedence over MOR reporting action.

ACKNOWLEDGEMENT OF REPORTS

Acknowledgement of reports (other than CONFIDENTIAL – see below) is normally given via Safety Data's monthly list of 'ATC Reported Occurrences'. If, exceptionally, individual acknowledgement is required, please contact Safety Data direct.

UNIT MANAGEMENT ACTION

Reporters are requested to send a copy to the Unit Management. This is for local assessment and any immediate follow-up action. Additional input and/or covering comment from Unit Management is highly desirable for both Safety Data evaluation and any follow-up investigation.

CONFIDENTIAL REPORTS

A report may be submitted confidentially. Please clearly annotate the top of the form 'CONFIDENTIAL'. The second copy need not be forwarded to local management. BOXES 20 to 25 should be completed. The CAA will respect the confidentiality and the Head of Safety Data will contact you personally.

Appendix B Occurrences to be Reported

1 Introduction

- 1.1 The formal definition of a reportable occurrence is contained in the applicable legislation and further amplified in this CAP. 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.
- 1.2 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.
- 1.3 Those occurrences that must always be reported (e.g. fires, uncontained engine failures, critically low fuel states, close proximity between aircraft, etc.) can easily be listed but it is impossible to define precisely every significant hazard that requires reporting. What is judged to be reportable on one class of aircraft may not be so on another and the absence or presence of a single factor, human or technical, can transform a minor occurrence into a significant hazard or an accident. Judgement by the reporter of the degree of hazard or potential hazard involved is therefore essential in many cases.
- 1.4 In the case of organisations providing a service or facility for aircraft operating over or in the UK (e.g. Air Traffic Services, airfields etc.) any occurrence meeting the required criteria should be reported regardless of the nationality of the aircraft involved.

Part 1: List of Aircraft Operations, Maintenance, Repair and Manufacture Related Occurrences 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 - 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), "ETOPS" (extended range twin operations), "RNAV" (area navigation), or a design or maintenance programme, may have specific reporting requirements for failures or malfunctions associated with that approval or programme.

CONTENTS

- 1 Aircraft flight operations**
- 2 Aircraft Technical**
- 3 Aircraft Maintenance and Repair**
- 4 Ground Services and Facilities**

1 Aircraft flight operations

1.1 Operation of the aircraft

a) Avoidance manoeuvres:

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

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

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

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

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

f) Occurrences close to or above V_1 resulting from or producing a hazardous or potentially hazardous situation (e.g. rejected take-off, tail strike, engine-power loss etc.).

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

- h) Unintentional significant deviation from airspeed, intended track or altitude (more than 300 ft) regardless of cause.
- i) Descent below decision height/altitude or minimum descent height/altitude without the required visual reference.
- j) Loss of position awareness relative to actual position or to other aircraft.
- k) Breakdown in communication between flight crew "CRM" (crew resource management) or between flight crew and other parties (cabin crew, ATC [air traffic control] engineering).
- l) Heavy landing - a landing deemed to require a "heavy landing check".
- m) Exceedance of fuel imbalance limits.
- n) Incorrect setting of an "SSR" (secondary surveillance radar) code or of an altimeter subscale.
- o) Incorrect programming of, or erroneous entries into, equipment used for navigation or performance calculations, or use of incorrect data.
- p) Incorrect receipt or interpretation of radio-telephony messages.
- q) Fuel system malfunctions or defects, which had an effect on fuel supply and/or distribution.
- r) Aircraft unintentionally departing from a paved surface.
- s) Collision between an aircraft and any other aircraft, vehicle or other ground object.
- t) Inadvertent and/or incorrect operation of any controls.
- u) Inability to achieve the intended aircraft configuration for any flight phase (e.g. landing gear and gear doors, flaps, stabilisers, slats etc.).
- v) A hazard or potential hazard which arises as a consequence of any deliberate simulation of failure conditions for training, system checks or training purposes.
- w) Abnormal vibration.
- x) Operation of any primary warning system associated with manoeuvring the aircraft e.g. configuration warning, stall warning (stick shaker), over-speed warning etc. unless:
 - i) the crew conclusively established that the indication was false and provided that the false warning did not result in difficulty or hazard arising from the crew response to the warning; or
 - ii) operated for training or test purposes.
- y) "GPWS" (Ground Proximity Warning System)/"TAWS" (Terrain Awareness And Warning System) "warning" when:
 - i) the aircraft comes into closer proximity to the ground than had been planned or anticipated; or
 - ii) the warning is experienced in instrument meteorological conditions or at night and is established as having been triggered by a high rate of descent (mode 1); or
 - iii) the warning results from failure to select landing gear or landing flaps by the appropriate point on the approach (mode 4); or
 - iv) any difficulty or hazard arises or might have arisen as a result of crew response to the "warning" e.g. possible reduced separation from other traffic. This could include warning of any mode or type i.e. genuine, nuisance or false.

- z) GPWS/TAWS "alert" when any difficulty or hazard arises or might have arisen as a result of crew response to the "alert".
- aa) ACAS RA (Air Collision Avoidance System, Resolution Advisory). Note: TCAS (Traffic alert and Collision Avoidance System) is a form of ACAS. All ACAS RAs should be reported, regardless of the cause.
- ab) Jet or prop blast incidents resulting in significant damage or serious injury.
- ac) Landing at the wrong airfield.

1.2 **Emergencies**

- a) Fire, explosion, smoke or toxic or noxious fumes, even though fires were extinguished.
- b) The use of any non-standard procedure by the flight or cabin crew to deal with an emergency when:
 - i) the procedure exists but is not used;
 - ii) the procedure does not exist;
 - iii) the procedure exists but is incomplete or inappropriate;
 - iv) the procedure is incorrect;
 - v) the incorrect procedure is used.
- c) Inadequacy of any procedures designed to be used in an emergency, including when being used for maintenance, training or test purposes.
- d) An event leading to an emergency evacuation.
- e) Depressurisation.
- f) The use of any emergency equipment or prescribed emergency procedures in order to deal with a situation.
- g) An event leading to the declaration of an emergency ("Mayday" or "PAN").
- h) Failure of any emergency system or equipment, including all exit doors and lighting, to perform satisfactorily, including when being used for maintenance, training or test purposes.
- i) Events requiring any use of emergency oxygen by any crew member.

1.3 **Crew incapacitation**

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

1.4 **Injury**

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

1.5 **Meteorology**

- a) A lightning strike which resulted in damage to the aircraft or loss or malfunction of any essential service.
- b) A hail strike which resulted in damage to the aircraft or loss or malfunction of any essential service.
- c) Severe turbulence encounter, an encounter resulting in injury to occupants or deemed to require a "turbulence check" of the aircraft.
- d) A windshear encounter.
- e) Icing encounter resulting in handling difficulties, damage to the aircraft or loss or malfunction of any essential service.

1.6 **Security**

- a) Unlawful interference with the aircraft including a bomb threat or hijack.
- b) Difficulty in controlling intoxicated, violent or unruly passengers.
- c) Discovery of a stowaway.

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 NATS Wake Turbulence Analysis Team. Severe encounters, meeting the definition of an occurrence, e.g. involving max control input, high angles of pitch/bank, the need to 'go-around' etc, should also be reported to the CAA.
- d) Targeting of an aircraft with a laser or high-powered light.
- e) Any other occurrence of any type considered to have endangered or which might have endangered the aircraft or its occupants on board the aircraft or persons on the ground.

2 Aircraft technical

2.1 **Structural**

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

- a) damage to a Principal Structural Element (PSE) that has not been designated as damage-tolerant (life-limited element). PSEs are those which contribute significantly to carrying flight, ground, and pressurisation loads, and the failure of which could result in a catastrophic failure of the aircraft;
- b) defect or damage exceeding admissible damages to a PSE that has been designated as damage-tolerant;
- c) damage to or defect exceeding allowed tolerances of a structural element, the failure of which could reduce the structural stiffness to such an extent that the required flutter, divergence or control reversal margins are no longer achieved;

- d) damage to or defect of a structural element, which could result in the liberation of items of mass that may injure occupants of the aircraft;
- e) damage to or defect of a structural element, which could jeopardise proper operation of systems. See paragraph 2.2 below;
- 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 Appendix for examples):

- a) loss, significant malfunction or defect of any system, subsystem or set of equipment when standard operating procedures, drills etc. could not be satisfactorily accomplished;
- b) inability of the crew to control the system, for example:
 - i) uncommanded actions,
 - ii) incorrect and/or incomplete response, including limitation of movement or stiffness,
 - iii) runaway,
 - iv) mechanical disconnection or failure;
- c) failure or malfunction of the exclusive function(s) of the system (one system could integrate several functions);
- d) interference within or between systems;
- e) failure or malfunction of the protection device or emergency system associated with the system;
- f) loss of redundancy of the system;
- g) any occurrence resulting from unforeseen behaviour of a system.
- h) for aircraft types with *single* main systems, subsystems or sets of equipment:
the loss, significant malfunction or defect in *any* main system, subsystem or set of equipment.
- i) for aircraft types with *multiple* independent main systems, subsystems or sets of equipment:
the loss, significant malfunction or defect of *more than one* main system, subsystem or set of equipment.
- j) operation of any primary warning system associated with aircraft systems or equipment unless the crew conclusively established that the indication was false, provided that the false warning did not result in difficulty or hazard arising from the crew response to the warning;
- k) leakage of hydraulic fluids, fuel, oil or other fluids which resulted in a fire hazard or possible hazardous contamination of aircraft structure, systems or equipment, or risk to occupants;
- l) malfunction or defect of any indication system when this results in the possibility of misleading indications to the crew;
- m) any failure, malfunction or defect if it occurs at a critical phase of the flight and is relevant to the system operation;

- n) significant shortfall of the actual performances compared to the approved performance which resulted in a hazardous situation (taking into account the accuracy of the performance-calculation method) including braking action, fuel consumption etc.;
- o) asymmetry of flight controls; e.g. flaps, slats, spoilers etc.

The Appendix to this Schedule gives a list of examples of reportable occurrences resulting from the application of these general criteria to specific systems.

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

- a) Flameout, shutdown or malfunction of any engine.
- b) Overspeed or inability to control the speed of any high-speed rotating component (for example: APU, air starter, air cycle machine, air turbine motor, propeller or rotor).
- c) Failure or malfunction of any part of an engine or powerplant resulting in any one or more of the following:
 - i) non-containment of components/debris;
 - ii) uncontrolled internal or external fire, or hot gas breakout;
 - iii) thrust in a direction different from that demanded by the pilot;
 - iv) thrust-reversing system failing to operate or operating inadvertently;
 - v) inability to control power, thrust or revolutions per minute;
 - vi) failure of the engine mount structure;
 - vii) partial or complete loss of a major part of the powerplant;
 - viii) dense visible fumes or concentrations of toxic products sufficient to incapacitate crew or passengers;
 - ix) inability, by use of normal procedures, to shutdown an engine;
 - x) inability to restart a serviceable engine.
- d) An uncommanded thrust/power loss, change or oscillation which is classified as a Loss Of Thrust or power Control (LOT/C):
 - i) for a single-engine aircraft; or
 - ii) where it is considered excessive for the application; or
 - iii) where this could affect more than one engine in a multi-engine aircraft, particularly in the case of a twin-engine aircraft; or
 - iv) for a multi-engine aircraft where the same, or similar, engine type is used in an application where the event would be considered hazardous or critical.
- e) Any defect in a life-controlled part causing its withdrawal before completion of its full life.
- f) Defects of common origin which could cause an in-flight shut-down rate so high that there is the possibility of more than one engine being shut down on the same flight.
- g) An engine limiter or control device failing to operate when required or operating inadvertently.
- h) Exceedance of engine parameters.
- i) Foreign Objects Damage (FOD).

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:
 - i) an overspeed of the propeller;
 - ii) the development of excessive drag;
 - iii) a thrust in the opposite direction to that commanded by the pilot;
 - iv) a release of the propeller or any major portion of the propeller;
 - v) a failure that results in excessive imbalance;
 - vi) the unintended movement of the propeller blades below the established minimum in-flight low-pitch position;
 - vii) an inability to feather the propeller;
 - viii) an inability to change propeller pitch;
 - ix) an uncommanded change in pitch;
 - x) an uncontrollable torque or speed fluctuation;
 - xi) the release of low-energy parts.

Rotors and transmission

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

APUs

- d) Shut down or failure when the APU is required to be available by operational requirements, e.g. ETOPS, minimum equipment list (MEL).
- e) Inability to shut down the APU.
- f) Overspeed.
- g) Inability to start the APU when needed for operational reasons.

2.4 **Human factors**

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

2.5 **Other occurrences**

- a) Any incident where any feature or inadequacy of the aircraft design could have led to an error of use that could contribute to a hazardous or catastrophic effect.
- b) An occurrence not normally considered as reportable (e.g., furnishing and cabin equipment, water systems), where the circumstances resulted in endangering the aircraft or its occupants.
- c) A fire, explosion, smoke or toxic/noxious fumes.
- d) Any other event which could endanger the aircraft, or affect the safety of the occupants of the aircraft, or people or property in the vicinity of the aircraft or on the ground.
- e) Failure or defect of passenger address system resulting in loss of, or inaudible, passenger address system.
- f) Loss of pilot seat control during flight.

3 Aircraft maintenance and repair

- a) Incorrect assembly of parts or components of the aircraft found during an inspection or test procedure not intended for that specific purpose.
- b) Hot bleed air leak resulting in structural damage.
- c) Any defect in a life-controlled part causing retirement before completion of its full life.
- d) Any damage or deterioration (e.g. fractures, cracks, corrosion, delamination, disbonding etc.) resulting from any cause (e.g. as flutter, loss of stiffness or structural failure) to:
 - i) a primary structure or a Principal Structure Element (PSE) (as defined in the manufacturers' Repair Manual) where such damage or deterioration exceeds allowable limits specified in the Repair Manual and requires a repair or complete or partial replacement;
 - ii) a secondary structure which consequently has or may have endangered the aircraft;
 - iii) the engine, propeller or rotorcraft rotor system.
- e) Any failure, malfunction or defect of any system or equipment, or damage or deterioration thereof found as a result of compliance with an airworthiness directive or other mandatory instruction issued by a regulatory authority, when:
 - i) it is detected for the first time by the reporting organisation implementing compliance;
 - ii) on any subsequent compliance, it exceeds the permissible limits quoted in the instruction and/or published repair/rectification procedures are not available.
- f) Failure of any emergency system or equipment, including all exit doors and lighting, to perform satisfactorily, including when being used for maintenance or test purposes.
- g) Non-compliance or significant errors in compliance with required maintenance procedures.
- h) Products, parts, appliances and materials of unknown or suspect origin.
 - i) Misleading, incorrect or insufficient maintenance data or procedures that could lead to maintenance errors.
- j) Any failure, malfunction or defect of ground equipment used for testing or checking of aircraft systems and equipment when the required routine inspection and test procedures did not clearly identify the problem, where this results in a hazardous situation.

4 Ground Services and Facilities

4.1 Air Navigation Services (ANS)

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.

Appendix 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.

1 Air conditioning/ventilation

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

2 Autoflight system

- a) failure of the autoflight system to achieve the intended operation while engaged;
- b) significant reported crew difficulty to control the aircraft linked to autoflight system functioning;
- c) failure of any autoflight system disconnect device;
- d) uncommanded autoflight mode change.

3 Communications

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

4 Electrical system

- a) loss of one electrical distribution system (AC/DC);
- b) total loss or loss of more than one electrical generation system;
- c) failure of the back up (emergency) electrical generation system.

5 Cockpit/Cabin/Cargo

- a) pilot seat control loss during flight;
- b) failure of any emergency system or equipment, including emergency evacuation signalling system, all exit doors, emergency lighting, etc.;
- c) loss of retention capability of the cargo loading system.

6 Fire protection system

- a) fire warnings, except those immediately confirmed as false;
- b) undetected failure or defect of fire/smoke detection/protection system, which could lead to loss or reduced fire detection/protection;
- c) absence of warning in case of actual fire or smoke.

7 Flight controls

- a) asymmetry of flaps, slats, spoilers, etc.;
- b) limitation of movement, stiffness or poor or delayed response in the operation of primary flight control systems or their associated tab and lock systems;
- c) flight control surface 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.

8 Fuel system

- a) fuel quantity indicating system malfunction resulting in total loss or wrong indication of fuel quantity on board;
- b) leakage of fuel which resulted in major loss, fire hazard, significant contamination;
- c) malfunction or defects of the fuel jettisoning system which resulted in inadvertent loss of significant quantity, fire hazard, hazardous contamination of aircraft equipment or inability to jettison fuel;
- d) fuel system malfunctions or defects which had a significant effect on fuel supply and/or distribution;
- e) inability to transfer or use total quantity of usable fuel.

9 Hydraulics

- a) loss of one hydraulic system (ETOPS only);
- b) failure of the isolation system;
- c) loss of more than one hydraulic circuit;
- d) failure of the back-up hydraulic system;
- e) inadvertent ram air turbine extension.

10 Ice detection/protection system

- a) undetected loss or reduced performance of the anti-ice/de-ice system;
- b) loss of more than one of the probe-heating systems;
- c) inability to obtain symmetrical wing de-icing;
- d) abnormal ice accumulation leading to significant effects on performance or handling qualities;
- e) crew vision significantly affected.

11 Indicating/warning/recording systems

- a) malfunction or defect of any indicating system when the possibility of significant misleading indications to the crew could result in an inappropriate crew action on an essential system;
- b) loss of a red warning function on a system;
- c) for glass cockpits: loss or malfunction of more than one display unit or computer involved in the display/warning function.

12 Landing gear system/brakes/tyres

- a) brake fire;
- b) significant loss of braking action;
- c) 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.

13 Navigation systems (including precision approach systems) and air data systems

- a) total loss or multiple navigation equipment failures;
- b) total or multiple air data system equipment failures;
- c) significant misleading indications;
- d) significant navigation errors attributed to incorrect data or a database coding error;
- e) unexpected deviations in lateral or vertical path not caused by pilot input;
- f) problems with ground navigational facilities leading to significant navigation errors not associated with transitions from inertial navigation mode to radio navigation mode.

14 Oxygen for pressurised aircraft

- a) loss of oxygen supply in the cockpit;
- b) loss of oxygen supply to a significant number of passengers (more than 10 %), including when found during maintenance or training or testing.

15 Bleed air system

- a) hot bleed air leak resulting in fire warning or structural damage;
- b) loss of all bleed air systems;
- c) failure of bleed air leak detection system.

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 **Near collision incidents** (encompassing specific situations where one aircraft and another aircraft/the ground/a vehicle/person or object are perceived to be too close to each other):
 - a) separation minima infringement;
 - b) inadequate separation;
 - c) "near-CFIT" (near-controlled flight into terrain);
 - d) runway incursion where avoiding action was necessary.
- 2 **Potential for collision or near collision** (encompassing specific situations having the potential to be an accident or a near collision, if another aircraft is in the vicinity):
 - 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:
 - i) aircraft deviation from applicable published ATM procedures;
 - ii) unauthorised penetration of airspace;
 - iii) deviation from aircraft ATM-related equipment carriage and operations, as mandated by applicable regulation(s).
- 3 **ATM-specific occurrences** (encompassing those situations where the ability to provide safe ATM services is affected, including situations where, by chance, the safe operation of aircraft has not been jeopardised). This shall include the following occurrences:
 - a) inability to provide ATM services:
 - i) inability to provide air traffic services;
 - ii) inability to provide airspace management services;
 - iii) inability to provide air traffic flow management services;
 - b) failure of Communication function;
 - c) failure of Surveillance function;
 - d) failure of Data Processing and Distribution function;
 - e) failure of Navigation function;
 - f) ATM system security.

- 4 **"ATC" (air traffic control) Navigation and Communications** - significant malfunction or deterioration of service.
- 5 **An aircraft was or could have been endangered by impairment of any member of ground staff** (e.g. ATC, "AD" (aircraft dispatchers), Maintenance, etc.).
- 6 **ATC overload.**
- 7 **Failure or unplanned shutdown of a major operational ATC computer system,** requiring reversion to manual back-up and resulting in disruption to the normal flow of air traffic.

Appendix to Part 2

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

- 1 Provision of significantly incorrect, inadequate or misleading information from any ground sources, e.g. ATC, Automatic Terminal Information Service (ATIS), meteorological services, navigation databases, maps, charts, manuals, etc.
- 2 Provision of less than prescribed terrain clearance.
- 3 Provision of incorrect pressure reference data (i.e. altimeter setting).
- 4 Incorrect transmission, receipt or interpretation of significant messages when this results in a hazardous situation.
- 5 Separation minima infringement.
- 6 Unauthorised penetration of airspace.
- 7 Unlawful radio communication transmission.
- 8 Failure of ANS ground or satellite facilities.
- 9 Major ATC/ATM failure or significant deterioration of aerodrome infrastructure.
- 10 Aerodrome movement areas obstructed by aircraft, vehicles, animals or foreign objects, resulting in a hazardous or potentially hazardous situation.
- 11 Errors or inadequacies in marking of obstructions or hazards on aerodrome movement areas resulting in a hazardous situation.
- 12 Failure, significant malfunction or unavailability of airfield lighting.