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Transport Malta

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Occurrence Reporting

Introduction

According to Regulation (EU) 965/2012, (EU) No 1321/2014 Annex I (Part M) and Annex II (Part-145), owners of aircraft, operators of aircraft and maintenance organizations are required to report to the Competent Authorities, any identified condition of an aircraft or component which endanger or which, if not corrected or addressed, would endanger an aircraft, its occupants, any other person, equipment or installation affecting aircraft operations.

Regulation (EU) No 376/2014 **on the reporting, analysis and follow-up of occurrences in civil aviation,** and Regulation (EU) No 2015/1018 laying down a list classifying occurrences in civil aviation**.** (EU) No 376/2014 amends (EU) No 996/2010 **on the investigation and prevention of accidents and incidents in civil aviation.**

TM CAD has published Issue 2 Revision 0 of Occurrence Reporting - Information and Guidance on Mandatory and Voluntary Occurrence Reporting to the Transport Malta Civil Aviation Directorate Document reference CAD-OR which introduces the TM-CAD Occurrence reporting portal. This document presents two Annexes CAD-OR.01 and CAD-OR.02 which provide a step-by-step guide on the filing of Occurrence Reports.

Reference may also be made to EASA website on the subject for further information.

Occurrence Reporting Timescales

Reporting

This IAN is also intended to bring to the attention of organizations and personnel responsible for the occurrence reporting of the requirement to report occurrences within the timescales established by the regulations.

Occurrences shall be reported within 72 hours of the reporter/organisation becoming aware of the occurrence, unless exceptional circumstances prevent this.

It is worth stating that organizations should not strive to present any corrective actions or investigation report with the initial occurrence report as this may cause a delay in communication of the occurrence report. It is perfectly acceptable to submit a report on first opportunity, based on the information available and submit follow-up report(s) on the same occurrence to provide additional information and/or investigation results at a later stage.

Occurrence reporting managers (usually safety and quality/compliance managers) shall promote awareness and enforce this requirement within their organizations. This will ensure timely reporting in accordance with approved procedures and regulations.

Evaluation and Feedback

For organisations which have developed and apply a risk identification procedure acceptable to TM CAD, that identifies an actual or potential aviation safety risk as a result of their analysis of occurrences or group of occurrences reported, shall transmit within 30 days from the date of notification of the occurrence by the reporter, preliminary results of the analysis and action taken to TM-CAD. The report of the final results of the analysis should be made available to TM-CAD by no later than 3 months from the date of notification of the occurrence.

Notwithstanding the above, TM CAD may request information, clarification or mitigating action from the organizations following a report as deemed necessary.

Procedures

Procedures in the CAME, MOE/MOM, and MTOE pertaining to the organisation's Occurrence reporting and management shall establish a system for the collection, evaluation, processing, analysis and storage of details of occurrences. Analysis of the occurrences shall be conducted to identify the safety hazards and determine any appropriate corrective or preventive action required to improve aviation safety.

This is based on the probability and severity of the occurrence in terms of safety.

It is recommended to utilise the following tables and guidelines for the evaluation of the tolerability of risks as presented in **ICAO (2013), Safety Management Manual (SMM) Doc 9859.**

Table 1 - Severity Table

Level	Descriptor	Severity Description (customize according to the nature of the organisation)
1	Insignificant	No significance to aircraft-related operational safety
2	Minor	Degrades or affects normal aircraft operational procedures or performance
3	Moderate	Partial loss of significant/major aircraft systems or results in abnormal flight operations procedures application.
4	Major / Hazardous	Complete failure of significant/major aircraft systems or results in emergency application of flight operations procedures.
5	Catastrophic	Loss of Aircraft/Hull or Lives

Table 2 - Risk Index Matrix

Level	Descriptor	Probability Description
A	Frequent	Is expected to occur in most circumstances
B	Occasional	Will probably occur at some time
C	Remote	Might occur at some time
D	improbable	Could occur at some time
E	Exceptional	May occur only in exceptional circumstances

Table 3 - Risk Index Matrix (severity x probability)

Probability	Severity				
	1. Insignificant	2. Minor	3. Moderate	4. Major / Hazardous	5. Catastrophic
A. Frequent	Moderate (1A)	Moderate (2A)	High (3A)	Extreme (4A)	Extreme (5A)
B. Occasional	Low (1B)	Moderate (2B)	Moderate (3B)	High (4B)	Extreme (5B)
C. Remote	Low (1C)	Low (2C)	Moderate (3C)	Moderate (4C)	High (5C)
D. Improbable	Negligible (1D)	Low (2D)	Low (3D)	Moderate (4D)	Moderate (5D)
E. Exceptional	Negligible (1E)	Negligible (2E)	Low (3E)	Low (4E)	Moderate (5E)

Table 4 - Risk acceptability (tolerability) table

Risk Index	Tolerability	Action Required (customise as appropriate)
5A, 5B, 4A	Extreme Risk	Stop Operation or process immediately. Unacceptable under the existing circumstances. Do no permit any operation until sufficient control measures have been implemented to reduce the risk to an acceptable level. Top management approval required.
5C, 4B, 3A	High Risk	Caution. Ensure that risk assessment has been satisfactorily completed and declared preventive controls are in place. Senior management approval of risk assessment before commencement of the operation or process.
1A, 2A, 2B, 3B, 3C, 4C, 4D, 5D, 5E	Moderate Risk	Perform or review risk mitigation as necessary. Departmental approval of risk assessment.
1B, 1C, 2C, 2D, 3D, 3E, 4E	Low Risk	Risk mitigation or review is optional.
1D, 1E, 2E	Negligible Risk	Acceptable as is. No risk mitigation required.

Safety Risk Assessment

Safety risk is the projected probability (likelihood) and severity of the consequence or outcome from an existing hazard or situation. The component of both probability and severity are combined to determine the risk index (Table 3).

Severity assessment can be based upon level/number of casualties (fatalities/injury) from the passengers, employees and persons on the ground and damage to aircraft, property and equipment. (Refer to Table 1)

Probability assessment can be determined by taking into consideration the history of occurrences, similarities and interdependencies, the extent of usage of equipment and procedures, the number of personnel involved in the procedures in question and organisation culture.

Risk Mitigation

Risk mitigating action is applicable whenever an unacceptable current tolerability level of an unsafe event or ultimate consequence is identified.

Risk mitigation actions are measures to reduce the likelihood of re-occurrence and the severity. When mitigating action is not possible the operation shall be stopped in case of a creditable outcome of unacceptable consequences.

Risk mitigation involves corrective actions in the form mechanism and defence to block or prevent a hazard from escalating into an unsafe event or ultimate consequence.

The mechanism and defence would usually involve procedures, practices, maintenance data, competence assessment and training of personnel, HF issues, troubleshooting and reliability programmes, incorporation of SB/AD's and liaison with OEM.

Management of Occurrences

Systematic Management of reports enables the organisation to control and evaluate occurrences as part of Safety Management. The system should categorise and analyse safety events, monitor trends, check historical records and implement reliability programmes (when applicable), share information, perform evaluation of events and monitor corrective actions implementation.

Depending on the size of organisation, databases and software platforms which tailor for the needs in the management of occurrences should be considered for use.

In the case of maintenance error occurrence/event, maintenance organisations should use MEDA (Maintenance Error Decision Aid) tools or equivalent for the determination of root causes.