

ROSETTA STONE
FOR
SPACE MISHAPS

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Author: Air Force Safety Center / Space Safety Division

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Chapter 1

Introduction

Forward

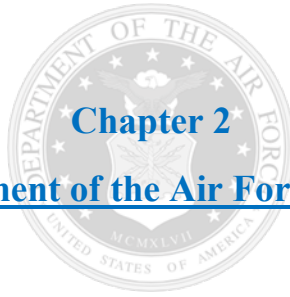
The purpose of the Rosetta Stone is to provide a single document that captures the definitions of accidents, close calls, hazards, incidents, mishaps, and other classifications across USG agencies. It is a **non-authoritative reference, non-directive reference** to bridge understanding across US government agencies on definitions in space terminology as it applies to mishap investigations and government regulations, directives, and instructions. It incorporates differences in terminology from governmental and non-governmental perspectives, as well as nationally and internationally. This is an actively curated, living document designed to grow and update with the space enterprise. Inputs are welcome from across the community to continue to grow harmony across agencies and improve cooperation.

Layout

This document is formatted into two sections. Section One identifies mishap terms by agency. Section Two identifies mishap terms by definition. In Section Two, each definition has a sub-section identifying which term is used by each agency (if the term is used at all by each agency respectively) and along with the definition of the term as it is defined by each agency, since each agency tends to define the same term differently.

The content in each of two sections is identical. The purpose for formatting the content in two ways is for ease of use by the reader. The first way of identifying terms may come more naturally for some readers, while the second way of identifying terms may come more naturally for other readers.

Section One is identified by colored tabs with the name of each agency. Section Two is identified by colored tabs with the name of each definition.



Chapter 2

Department of the Air Force (DAF)

Hazard

DAFI 91-204:

A real or potential condition that could lead to an unplanned event or series of events (i.e., mishap) resulting in death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment.

Incident

DAFI 91-204:

A planned or unplanned occurrence or series of occurrences resulting in injury or damage that does not meet mishap or nuclear surety reporting criteria.

Mishap

DoDI 6055.07:

An unplanned event or series of events that results in damage to DoD property; occupational illness to DoD personnel; injury to on or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; or damage to public or private property, or injury or illness to non-DoD personnel, caused by DoD activities.

DAFI 91-204:

In addition to the definition in DoDI 6055.07 (DoD Mishap), mishaps are classified by total direct mishap cost and the severity of injury/occupational illness.

Class A Mishap

DoDI 6055.07:

The resulting total cost of damages to Government and other property is \$2.5 million or more, a DoD aircraft is destroyed (excluding UAS Groups 1, 2, or 3), or an injury or occupational illness results in a fatality or permanent total disability.

DAFI 91-204:

In addition to the definition in DoDI 6055.07, a mishap resulting in permanent loss of primary mission capability of a DAF space vehicle.

Class B Mishap

DoDI 6055.07:

The resulting total cost of damages to Government and other property is \$600,000 or more, but less than \$2.5 million. An injury or occupational illness results in permanent partial disability, or when three or more personnel are hospitalized for inpatient care (which, for mishap reporting purposes only, does not include just observation or diagnostic care) because of a single mishap.

DAFI 91-204:

In addition to the definition in DoDI 6055.07, permanent degradation of primary or secondary mission capability of a DAF space vehicle or the permanent loss of secondary mission capability of a DAF space vehicle.

Class C Mishap

DoDI 6055.07:

The resulting total cost of property damages to Government and other property is \$60,000 or more, but less than \$600,000; or a nonfatal injury or illness that results in 1 or more days away from work, not including the day of the injury.

DAFI 91-204:

In addition to the definition in DoDI 6055.07, a mishap resulting in one or more of the following;

- (1) When determining if the mishap is Lost Time Case, count the number of days the employee was unable to work because of the injury or illness, regardless of whether the person was scheduled to work on those days. Weekend, holidays, vacation days, or other days off are included in the total number of days, if the employee would not have been able to work on those days.
- (2) An occupational injury or illness resulting in permanent change of job.
- (3) Permanent loss or degradation of tertiary mission capability of a space vehicle.

Class D Mishap

DoDI 6055.07:

The resulting total cost of property damage is \$25,000 or more, but less than \$60,000; or a recordable injury or illness not otherwise classified as a Class A, B, or C mishap.

DAFI 91-204:

In addition to the definition in DoDI 6055.07, any work-related mishap resulting in a recordable injury or illness not otherwise classified as a Class A, B, or C mishap. These are cases where, because of injury or occupational illness, the employee only works partial days, has restricted duties, or was transferred to another job, required medical treatment greater than first aid, or experienced loss of consciousness (does not include G-loss of consciousness). In addition, a significant injury (e.g., fractured/cracked bone, punctured eardrum, any laser eye injury) or occupational illness (e.g., occupational cancer (mesothelioma), chronic irreversible disease (beryllium disease)) diagnosed by a physician or other licensed health care professional must be reported even if it does not result in death, days away from work, restricted work, job transfer, medical treatment greater than first aid, or loss of consciousness.

Class E Mishap

DoDI 6055.07:

Class / Type E Mishaps are not listed within DoDI 6055.07.

DAFI 91-204:

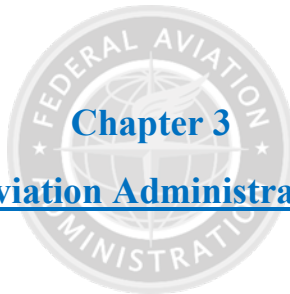
A work-related mishap that falls below Class D criteria. Most Class E mishap reporting is voluntary; however, see discipline-specific safety manuals for a list of events requiring mandatory reporting.

DAFMAN 91-222:

A work-related mishap that falls below Class D criteria. Most Class E mishap reporting is voluntary; however, see discipline-specific safety manuals for a list of events requiring mandatory reporting.

Definitions Not Used

- Accident
- Close Call



Chapter 3

Federal Aviation Administration (FAA)

Anomaly

Means any condition during licensed or permitted activity that deviates from what is standard, normal, or expected, during the verification or operation of a system, subsystem, process, facility, or support equipment.

Legacy Requirements

As defined in 14 CFR § 401.5:FAA AC No. 450.173-1:

The following mishap related definitions, as defined Title 14 Code of Federal Regulations (14 CFR) § 401.5, apply to “legacy”¹ operators conducting operations under parts 415 and 417 for expendable launch vehicles (ELVs), part 431 for reusable launch vehicles (RLVs), or part 435 for reentry vehicles.

Launch Accident

Means,

- (1) An event that causes a fatality or serious injury (as defined in 49 CFR 830.2) to any person who is not associated with the flight;
- (2) An event that causes damage estimated to exceed \$25,000 to property not associated with the flight that is not located at the launch site or designated recovery area;
- (3) An unplanned event occurring during the flight of a launch vehicle resulting in the impact of a launch vehicle, its payload or any component thereof:
 - (i) For an expendable launch vehicle, outside designated impact limit lines; and
 - (ii) For a reusable launch vehicle, outside a designated landing site.
- (4) For a launch that takes place with a person on board, a fatality or serious injury to a space flight participant or crew member.

¹ Following the publication of the FAA's Streamlined Launch and Reentry Requirements final rule, the mishap related definitions identified in § 401.5 remain in effect for a five-year period starting December 10, 2020. After March 10, 2026, parts 415, 417, 431 and 435 will be removed and the definitions in § 401.5 will no longer apply.

Launch Incident

Means an unplanned event during the flight of a launch vehicle, other than a launch accident, involving a malfunction of a flight safety system or safety-critical system, or a failure of the licensee's or permittee's safety organization, design, or operations.

Mishap

Means a launch or reentry accident, launch or reentry incident, launch site accident, failure to complete a launch or reentry as planned, or an unplanned event or series of events resulting in a fatality or serious injury (as defined in 49 CFR 830.2), or resulting in greater than \$25,000 worth of damage to a payload, a launch or reentry vehicle, a launch or reentry support facility or government property located on the launch or reentry site.

Reentry Accident

Means,

- (1) Any unplanned event occurring during the reentry of a reentry vehicle resulting in the impact of the reentry vehicle, its payload, or any component thereof, outside a designated reentry site;
- (2) An event that causes a fatality or serious injury (as defined in 49 CFR 830.2) to any person who is not associated with the reentry;
- (3) An event that causes damage estimated to exceed \$25,000 to property not associated with the reentry and not located within a designated reentry site; and
- (4) For a reentry that takes place with a person on board, a fatality or serious injury to a space flight participant or crew member.

Reentry Incident

Means any unplanned event occurring during the reentry of a reentry vehicle, other than a reentry accident, involving a malfunction of a reentry safety-critical system or failure of the licensee's or permittee's safety organization, procedures, or operations.

Streamlined Launch and Reentry Requirements (Part 450)

As defined in 14 CFR § 401.7:

On December 10, 2020, the FAA published its Streamlined Launch and Reentry Requirements final rule in the Federal Register². Effective March 10, 2021, this rule streamlines and increases flexibility in the FAA’s commercial space launch and reentry regulations, and removes obsolete requirements. It consolidates and revises multiple regulatory parts and applies a single set of licensing and safety regulations across several types of operations and vehicles. As part of this effort, the FAA consolidated multiple mishap related definitions, as defined in § 401.5, into a single consolidated mishap definition in § 401.7. Legacy operators are required to come into compliance with part 450 no more than five years, March 10, 2026, after the effective date of part 450.

The following definitions apply to operations conducted under 14 CFR part 450.

² 79566 Federal Register / Vol. 85, No 238 / Thursday, December 10, 2020 / Rule and Regulations

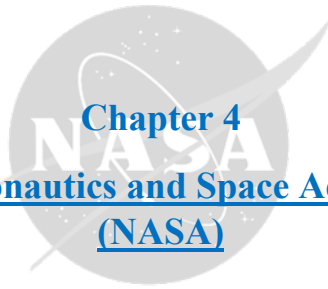
Mishap

Means any event, or series of events associated with a licensed or permitted activity resulting in any of the following:

- (1) A fatality or serious injury (as defined in 49 CFR 830.2);
- (2) A malfunction of a safety-critical system;
- (3) A failure of the licensee's or permittee's safety organization, safety operations, safety procedures;
- (4) High risk, as determined by the FAA, of causing a serious or fatal injury to any space flight participant, crew, government astronaut, or member of the public;
- (5) Substantial damage, as determined by the FAA, to property not associated with licensed or permitted activity;
- (6) Unplanned substantial damage, as determined by the FAA, to property associated with licensed or permitted activity;
- (7) Unplanned permanent loss of a launch or reentry vehicle during licensed activity or permitted activity;
- (8) The impact of hazardous debris outside the planned landing site or designated hazard area; or
- (9) Failure to complete a launch or reentry as planned as reported in § 450.213(b).

Definitions Not Used

- Class / Type A, B, C, D, E



National Aeronautics and Space Administration (NASA)

Accident

NPR 8715.3D:

A severe perturbation to a mission or program, usually occurring in the form of a sequence of events, that can cause safety adverse consequences, in the form of death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment.

Close Call

NPR 8621.1D:

Property Damage:

Total direct cost of mission failure and property damage of less than \$20,000, but event has the mishap potential using a worst case estimate.

Injury:

Injury requiring first aid or less, but event has the mishap potential using a worst case estimate.

Event

NPR 8621.1D:

A real-time occurrence describing on discrete action, typically an error, failure, or malfunction (e.g., pipe broke, power lost, lightning struck, and person opened valve).

Hazard

NPR 8621.1D:



A state or a set of conditions, internal or external to a system, having the potential to cause harm.

Incident

NPR 8621.ID:

An occurrence of a mishap or a close call.

Mishap

NPR 8621.ID:

A NASA mishap is an unplanned event resulting in at least one of the following:

- (1) Occupational injury or occupational illness to non-NASA personnel caused by NASA operations.
- (2) Occupational injury or occupational illness to NASA personnel caused by NASA operations.
- (3) Destruction of or damage to NASA property, public or private property, including foreign property, caused by NASA operations or NASA-funded research and development projects.
- (4) NASA mission failure before the scheduled completion of the planned primary mission.

Type A Mishap

NPR 8621.ID:

A mishap resulting in one or more of the following:

- (1) Occupational injury or illness in a fatality or a permanent total disability.
- (2) Total direct cost of mission failure and property damage of \$2,000,000 or more.
- (3) Crewed aircraft hull loss.
- (4) Unexpected aircraft departure from controlled flight for all aircraft except when departure from controlled flight has been pre-

briefed (e.g., upset recovery training, high AOA envelope testing, aerobatics, or Out of Controlled Flight for training) or mitigated through the flight test process inherent at each Center.

Type B Mishap

NPR 8621.ID:

A mishap causing an occupational injury or illness resulting in permanent partial disability; hospitalization for inpatient care or three or more people within 30 workdays of the mishap; or a total direct cost of mission failure and property damage of at least \$500,000, but less than \$2,000,000.

Note: Hospitalization does not include any hospital stay intended only for medical testing, diagnosis, or observation to determine nature or extent of injury or illness.

Type C Mishap

NPR 8621.ID:

A mishap resulting in a non-fatal OSHA-recordable occupational injury or illness causing days away from work, restricted duty, or transfer to another job beyond the day or shift on which the mishap; hospitalization for inpatient care of one or two people within 30 workdays of the mishap; or a total direct cost of mission failure and property damage of at least \$50,000 but less than \$500,000.

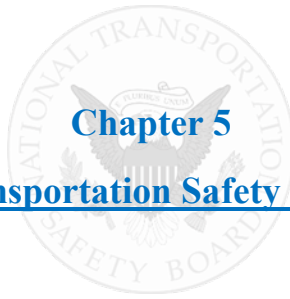
Type D Mishap

NPR 8621.ID:

A mishap resulting in a non-fatal OSHA-recordable occupational injury or illness that does not meet the definition of a Type C mishap of a total direct cost of the mission failure and property damage of at least \$20,000, but less than \$50,000.

Definitions Not Used

- Type E



Chapter 5

National Transportation Safety Board (NTSB)

Accident

FAA & NTSB Memorandum of Agreement:

A commercial space launch / re-entry mishap that results in:

A fatality or serious injury to any person, regardless of whether the person was on board the commercial space launch or re-entry vehicle.

Incident

FAA & NTSB Memorandum of Agreement:

A commercial space launch / re-entry mishap that results in:

Damage to property from debris (intact vehicle, vehicle fragments, payload, or any planned jettison bodies or substances) that could reasonably be expected to cause death or serious injury, and the property is not associated with commercial space launch or re-entry activities or the launch site.

Other Classifications

49 C.F.R. § 830.2

Fatal injury:

Any injury which results in death within 30 days of the accident

Serious injury:

Any injury which:

- (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury received;
- (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
- (3) causes severe hemorrhages, nerve, muscle, or tendon damage;
- (4) involves any internal organ, or;
- (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

Definitions Not Used

- Close Call
- Hazard
- Mishap
- Thresholds – Class / Type A, B, C, D, E

Chapter 6

Definitions

Accident

FAA & NTSB Memorandum of Agreement: FAA and NTSB

A commercial space launch / re-entry mishap that results in:

A fatality or serious injury to any person, regardless of whether the person was on board the commercial space launch or re-entry vehicle.

NPR

∴ NASA

A severe perturbation to a mission or program, usually occurring in the form of a sequence of events, that can cause safety adverse consequences, in the form of death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment.

Anomaly

Means any condition during licensed or permitted activity that deviates from what is standard, normal, or expected, during the verification or operation of a system, subsystem, process, facility, or support equipment.

Close Call

FAA AC No. 450.173-1: FAA

The FAA recommends use of the NASA mishap report format, as documented in NASA Procedural Requirements (NPR) 8621.1 – Requirements for Mishap and Close Call Reporting, Investigating, and

Recordkeeping, as revised, which includes the following sections:

- Section 1: Signature pages, list of consultants, and executive summary.
- Section 2: Narrative description and facts (what, when, where, & how).
- Section 3: Type of data gathered and data analysis.
- Section 4: Findings.
- Section 5: Recommendations.
- Section 6: Minority Report.

NPR 8621.1D: NASA

Property Damage:

Total direct cost of mission failure and property damage of less than \$20,000, but event has the mishap potential using a worst case estimate.

Injury:

Injury requiring first aid or less, but event has the mishap potential using a worst case estimate.

Event

NPR 8621.1D:

A real-time occurrence describing on discrete action, typically and error, failure, or malfunction (e.g., pipe broke, power lost, lightning struck, and person opened valve).

Hazard

DAFI 91-204:

A real or potential condition that could lead to an unplanned event or series of events (i.e., mishap) resulting in death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment.

FAA & NTSB Memorandum of Agreement: FAA and NTSB

A commercial space launch / re-entry mishap that results in:

A fatality or serious injury to any person, regardless of whether the person was on board the commercial space launch or re-entry vehicle.

NPR 8621.ID: NASA

A state or set of conditions, internal or external to a system, having the potential to cause harm.

Incident

DAFI 91-204: DAF

A planned or unplanned occurrence or series of occurrences resulting in injury or damage that does not meet mishap or nuclear surety reporting criteria.

NPR 8621.1D: NASA

An occurrence of a mishap or a close call.

49 CFR Part 830: FAA

Means an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.

Legacy Requirements

As defined in 14 CFR § 401.5:FAA AC No. 450.173-1:

The following mishap related definitions, as defined Title 14 Code of Federal Regulations (14 CFR) § 401.5, apply to “legacy”¹ operators conducting operations under parts 415 and 417 for expendable launch vehicles (ELVs), part 431 for reusable launch vehicles (RLVs), or part 435 for reentry vehicles.

¹ Following the publication of the FAA’s Streamlined Launch and Reentry Requirements final rule, the mishap related definitions identified in § 401.5 remain in effect for a five-year period starting December 10, 2020. After March 10, 2026, parts 415, 417, 431 and 435 will be removed and the definitions in § 401.5 will no longer apply.

Launch Accident

Means,

- (5) An event that causes a fatality or serious injury (as defined in 49 CFR 830.2) to any person who is not associated with the flight;
- (6) An event that causes damage estimated to exceed \$25,000 to property not associated with the flight that is not located at the launch site or designated recovery area;
- (7) An unplanned event occurring during the flight of a launch vehicle resulting in the impact of a launch vehicle, its payload or any component thereof:
 - (iii) For an expendable launch vehicle, outside designated impact limit lines; and
 - (iv) For a reusable launch vehicle, outside a designated landing site.
- (8) For a launch that takes place with a person on board, a fatality or serious injury to a space flight participant or crew member.

Launch Incident

Means an unplanned event during the flight of a launch vehicle, other than a launch accident, involving a malfunction of a flight safety system or safety-critical system, or a failure of the licensee's or permittee's safety organization, design, or operations.

Mishap

DoDI 6055.07: DAF

An unplanned event or series of events that results in damage to DoD property; occupational illness to DoD personnel; injury to on or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; or damage to public or private property, or injury or illness to non-DoD personnel, caused by DoD activities.

DAFI 91-204: DAF

In addition to the definition in DoDI 6055.07 (DoD Mishap), mishaps are classified by total direct mishap cost and the severity of injury/occupational illness.

Means a launch or reentry accident, launch or reentry incident, launch site accident, failure to complete a launch or reentry as planned, or an unplanned event or series of events resulting in a fatality or serious injury (as defined in 49 CFR 830.2), or resulting in greater than \$25,000 worth of damage to a payload, a launch or reentry vehicle, a launch or reentry support facility or government property located on the launch or reentry site.

NPR 8621.ID: NASA

A NASA mishap is an unplanned event resulting in at least one of the following:

- (1) Occupational injury or occupational illness to non-NASA personnel caused by NASA operations.
- (2) Occupational injury or occupational illness to NASA personnel caused by NASA operations.
- (3) Destruction of or damage to NASA property, public or private property, including foreign property, caused by NASA operations or NASA-funded research and development projects.
- (4) NASA mission failure before the scheduled completion of the planned primary mission.

Reentry Accident

Means,

- (1) Any unplanned event occurring during the reentry of a reentry vehicle resulting in the impact of the reentry vehicle, its payload, or any component thereof, outside a designated reentry site;
- (2) An event that causes a fatality or serious injury (as defined in 49 CFR 830.2) to any person who is not associated with the reentry;
- (3) An event that causes damage estimated to exceed \$25,000 to property not associated with the reentry and not located within a designated reentry site; and
- (4) For a reentry that takes place with a person on board, a fatality or serious injury to a space flight participant or crew member.

Reentry Incident

Means any unplanned event occurring during the reentry of a reentry vehicle, other than a reentry accident, involving a malfunction of a reentry safety-critical system or failure of the licensee's or permittee's safety organization, procedures, or operations.

Streamlined Launch and Reentry Requirements (Part 450)

As defined in 14 CFR § 401.7:

On December 10, 2020, the FAA published its Streamlined Launch and Reentry Requirements final rule in the Federal Register². Effective March 10, 2021, this rule streamlines and increases flexibility in the FAA’s commercial space launch and reentry regulations, and removes obsolete requirements. It consolidates and revises multiple regulatory parts and applies a single set of licensing and safety regulations across several types of operations and vehicles. As part of this effort, the FAA consolidated multiple mishap related definitions, as defined in § 401.5, into a single consolidated mishap definition in § 401.7. Legacy operators are required to come into compliance with part 450 no more than five years, March 10, 2026, after the effective date of part 450.

The following definitions apply to operations conducted under 14 CFR part 450.

Class / Type A Mishap

DoDI 6055.07: DAF

The resulting total cost of damages to Government and other property is \$2.5 million or more, a DoD aircraft is destroyed (excluding UAS Groups 1, 2, or 3), or an injury or occupational illness results in a fatality or permanent total disability.

DAFI 91-204: DAF

In addition to the definition in DoDI 6055.07, a mishap resulting in permanent loss of primary mission capability of a DAF space vehicle.

NPR 8621.1D: NASA

A mishap resulting in one or more of the following:

- (1) Occupational injury or illness in a fatality or a permanent total disability.
- (2) Total direct cost of mission failure and property damage of \$2,000,000 or more.
- (3) Crewed aircraft hull loss.
- (4) Unexpected aircraft departure from controlled flight for all aircraft except when departure from controlled flight has been pre-briefed (e.g., upset recovery training, high AOA envelope testing, aerobatics, or Out of Controlled Flight for training) or mitigated through the flight test process inherent at each Center.

Class / Type B Mishap

DoDI 6055.07: DAF

The resulting total cost of damages to Government and other property is \$600,000 or more, but less than \$2.5 million. An injury or occupational illness results in permanent partial disability, or when three or more personnel are hospitalized for inpatient care (which, for mishap reporting purposes only, does not include just observation or diagnostic care) because of a single mishap.

DAFI 91-204: DAF

In addition to the definition in DoDI 6055.07, permanent degradation of primary or secondary mission capability of a DAF space vehicle of the permanent loss of secondary mission capability of a DAF space vehicle.

NPR 8621.1D: NASA

A mishap causing an occupational injury or illness resulting in permanent partial disability; hospitalization for inpatient care or three or more people within 30 workdays of the mishap; or a total direct cost of mission failure and property damage of at least \$500,000, but less than \$2,000,000.

Note: Hospitalization does not include any hospital stay intended only for medical testing, diagnosis, or observation to determine nature or extent of injury or illness.

Class / Type C Mishap

DoDI 6055.07: DAF

The resulting total cost of property damages to Government and other property is \$60,000 or more, but less than \$600,000; or a nonfatal injury or illness that results in 1 or more days away from work, not including the day of the injury.

DAFI 91-204: DAF

In addition to the definition in DoDI 6055.07, a mishap resulting in one or more of the following;

- (1) When determining if the mishap is Lost Time Case, count the number of days the employee was unable to work because of the injury or illness, regardless of whether the person was scheduled to work on those days. Weekend, holidays, vacation days, or other days off are included in the total number of days, if the employee would not have been able to work on those days.
- (2) An occupational injury or illness resulting in permanent change of job.
- (3) Permanent loss or degradation of tertiary mission capability of a space vehicle.

NPR 8621.ID: NASA

A mishap resulting in a non-fatal OSHA-recordable occupational injury or illness causing days away from work, restricted duty, or transfer to another job beyond the day or shift on which the mishap; hospitalization for inpatient care of one or two people within 30 workdays of the mishap; or a total direct cost of mission failure and property damage of at least \$50,000 but less than \$500,000.

Class / Type D Mishap

DoDI 6055.07: DAF

The resulting total cost of property damage is \$25,000 or more, but less than \$60,000; or a recordable injury or illness not otherwise classified as a Class A, B, or C mishap.

DAFI 91-204: DAF

In addition to the definition in DoDI 6055.07, any work-related mishap resulting in a recordable injury or illness not otherwise classified as a Class A, B, or C mishap. These are cases where, because of injury or occupational illness, the employee only works partial days, has restricted duties, or was transferred to another job, required medical treatment greater than first aid, or experienced loss of consciousness (does not include G-loss of consciousness). In addition, a significant injury (e.g., fractured/cracked bone, punctured eardrum, any laser eye injury) or occupational illness (e.g., occupational cancer (mesothelioma), chronic irreversible disease (beryllium disease)) diagnosed by a physician or other licensed health care professional must be reported even if it does not result in death, days away from work, restricted work, job transfer, medical treatment greater than first aid, or loss of consciousness.

NPR 8621.ID: NASA

A mishap resulting in a non-fatal OSHA-recordable occupational injury or illness that does not meet the definition of a Type C mishap of a total direct cost of the mission failure and property damage of at least \$20,000, but less than \$50,000.

Class E Mishap

DODI 6055.07: DAF

Class / Type E Mishaps are not listed within DoDI 6055.07.

DAFI 91-204: DAF

A work-related mishap that falls below Class D criteria. Most Class E mishap reporting is voluntary; however, see discipline-specific safety manuals for a list of events requiring mandatory reporting.

DAFMAN 91-222: DAF

A work-related mishap that falls below Class D criteria. Most Class E mishap reporting is voluntary; however, see discipline-specific safety manuals for a list of events requiring mandatory reporting.

Other Classifications

49 C.F.R § 830.2 Fatal injury: NTSB

Any injury which results in death within 30 days of the accident.

Serious injury: NTSB

Any injury which:

- (1) Requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received;
- (2) results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
- (3) causes severe hemorrhages, nerve, muscle, or tendon damage;
- (4) involves any internal organ; or
- (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

Annex A

References

1. Department of Defense Instruction 6055.07, *Mishap Notification, Investigation, Reporting, and Record Keeping*, June 6, 2011; Incorporating Change 1, August 31, 2018. <https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605507p.pdf>
2. Department of the Air Force Instruction 91-204, *Safety Investigation and Reports*, 10 March 2021. https://static.e-publishing.af.mil/production/1/af_se/publication/dafi91-204/dafi91-204.pdf
3. Department of the Air Force Manual 91-222, *Space Safety Investigations and Reports*, 17 June 2019; Incorporating Guidance Memorandum, 1 August 2023. https://static.e-publishing.af.mil/production/1/af_se/publication/afman91-222/afman91-222.pdf
4. Federal Aviation Administration Advisory Circular 450.173-1 – Part 450, *Mishap Plan – Reporting, Response, and Investigation Requirements*, 12 August 2021. https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentID/1040146
5. NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping, NPR 8621.1D, 06 July 2020 (updated w/Change 4). <https://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=8621&s=1D>
6. NASA General Safety Program Requirements, NPR 8715.3D, 16 December 2021. https://nodis3.gsfc.nasa.gov/displayDir.cfm?Internal_ID=N_PR_8715_003D
7. 49 Code of Federal Regulations (CFR) Part 830, *Definitions*, 13 July 2022. <https://www.ecfr.gov/current/title-49/subtitle-B/chapter-VIII/part-830/subpart-A/section-830.2>

8. FAA and NTSB, *Memorandum of Agreement Concerning Commercial Space Mishap Investigations*, 09 September 2022.
<https://www.faa.gov/sites/faa.gov/files/2022-09/NTSB-FAA-Commercial-Space-MOA.pdf>

Annex B

Acronyms and Glossary

AC – Advisory Circular
AOA – Angle of Attack
CFR – Code of Federal Regulations
DAF – Department of the Air Force
DAFI – Department of the Air Force Instruction
DoD – Department of Defense
DoDI – Department of Defense Instruction
FAA – Federal Aviation Administration
NASA – National Aeronautics and Space Administration
NPR – NASA Procedural Requirements
NTSB – National Transportation Safety Board
OSHA – Occupational Safety and Health Administration
UAS – Unmanned Aircraft System
USG – United States Government

