

AIP ENR 1.14 AIR TRAFFIC INCIDENTS

1. AUSTRALIAN TRANSPORT SAFETY BUREAU

1.1. About the ATSB

- 1.1.1. The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers.
- 1.1.2. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in:
 - a. independent investigation of transport accidents and other safety occurrences;
 - b. safety data recording, analysis and research; and
 - c. influencing safety action, including through public communications, education and safety recommendations.
- 1.1.3. The ATSB is established by the *Transport Safety Investigation Act 2003* (TSI Act) and conducts its investigations in accordance with the provisions of the Act. The fundamental objective of transport safety investigations is the prevention of accidents and incidents. Under the TSI Act, it is not a function of the ATSB to apportion blame or provide a means for determining liability. The ATSB does not investigate for the purpose of taking administrative, regulatory or criminal action.
- 1.1.4. The ATSB publishes all transport safety investigations, including identified safety issues and related safety actions, on the ATSB website www.atsb.gov.au.

1.2. Contact information

- 1.2.1. Reporting reportable matters
 - a. Immediately reportable matters via telephone **1800 011 034** (International: +61 2 6230 4470)
 - b. Written reports via <https://www.atsb.gov.au/mandatory/>
- 1.2.2. General enquiries
 - a. 1800 020 616 (International: +61 2 6257 2463)
 - b. Email: atsbinfo@atsb.gov.au
- 1.2.3. REPCON voluntary confidential reporting scheme:
 - a. Written reports via <https://www.atsb.gov.au/voluntary/>
 - b. Phone 1800 020 505 (International: +61 2 6230 5135)
- 1.2.4. Witness report of an accident or incident
 - a. Contact via <https://atsb.gov.au/witness/>
 - b. Telephone 1800 992 986 (International: +61 2 6257 3193)

2. REPORTING OF ACCIDENTS AND INCIDENTS

2.1. Introduction

- 2.1.1. The TSI Act specifies that certain accidents and incidents, known as *reportable matters*, must be reported to the ATSB by responsible persons. Depending on the severity of the accident or incident and the type of operation, reportable matters are defined in the Transport Safety Investigation Regulations 2021 (TSI Regulations) as either *immediately reportable matters* or *routine reportable matters*.
- 2.1.2. The ATSB is the repository for Australia's official aviation safety occurrence database. While the ATSB does not investigate all accidents and incidents, it still needs to be notified of safety occurrences so that the information can be used in future safety research and analysis.
- 2.1.3. The ATSB publishes a searchable database of de-identified aviation accidents and incidents since July 2003. The database can be used for research and analysis, and is available at <https://www.atsb.gov.au/avdata/>.

2.2. Aircraft that must report reportable matters

- 2.2.1. All Australian aircraft operating inside and outside of Australia, including:
 - a. Australian-registered (VH) aircraft on the Civil Aviation Safety Authority (CASA) civil aircraft register
 - b. aircraft listed with sport aviation bodies
 - c. type 1 and type 2 remotely piloted aircraft (RPA) (greater than 250 g or type certified)
- 2.2.2. All foreign civilian-registered aircraft operating inside Australia.
- 2.2.3. The following aircraft are excluded from reporting:
 - a. Australian Defence aircraft – being aircraft used by the Australian Defence Force (other than aircraft registered on CASA's civil aircraft register)
 - b. exempt foreign aircraft – being aircraft used in the military, customs or police services of a foreign country
 - c. an RPA that is not type 1 RPA or type 2 RPA (excluded RPA as defined by the Civil Aviation Safety Regulations 1998 (CASR) Part 101, micro RPA below 250 g)
 - d. model aircraft
 - e. small (uncrewed) balloons and light (uncrewed) balloons
 - f. tethered balloon with no persons on board and kites
 - g. rockets (not considered aircraft).

2.3. Responsible persons for reporting safety matters to the ATSB

- 2.3.1. Reportable matters known by responsible persons must be reported to the ATSB by that person unless that person believes, on reasonable grounds, that one or more other responsible persons:
 - a. have already reported the matter, or
 - b. will as soon as is reasonably practicable report the matter.
- 2.3.2. However, the ATSB still encourages all responsible persons with information about a reportable matter to report that information to the ATSB.
- 2.3.3. The following are responsible persons:
 - a. a crew member of the aircraft concerned

- b. the owner or operator of the aircraft
- c. a person performing an air traffic control service in relation to the aircraft
- d. a person performing a dedicated aerodrome rescue or firefighting service in relation to the aircraft
- e. a person who is licensed as an aircraft maintenance engineer and does any work in relation to the aircraft
- f. a member of the ground handling crew in relation to the aircraft
- g. a member of the staff of the CASA
- h. the operator of an aerodrome
- i. the insurer of the aircraft concerned
- j. a sport aviation body that administers aviation activities in relation to the aircraft.

2.4. Reporting of accidents and incidents

- 2.4.1. Immediately reportable matters must be reported by telephone to the ATSB on **1800 011 034** (toll-free) as soon as is reasonably practical. If telephoning from outside Australia, please use (+61) 2 6230 4470.
- 2.4.2. Immediately reportable matters also require a more detailed written report to be submitted within 72 hours. Written reports can be submitted via the ATSB's online reporting system <https://www.atsb.gov.au/mandatory/>, or via a data transfer from your company's safety management system database.
- 2.4.3. Routine reportable matters only require a written report to be submitted within 72 hours. Written reports can be submitted via the ATSB's online reporting system <https://www.atsb.gov.au/mandatory/>, or via a data transfer from your company's safety management system database.

3. REPORTABLE MATTERS

3.1. Introduction

- 3.1.1. Reportable matters are defined in the TSI Regulations via a combination of the type of safety occurrences (see 3.1.2) and the type of operation (see 3.1.3). The combination determines whether a safety occurrence is an immediately reportable matter, routine reportable matter, or not reportable.
- 3.1.2. The TSI Regulations refer to the following types of safety occurrences.
 - a. an aircraft accident
 - b. a reportable serious aircraft incident
 - c. a loss of a separation standard between aircraft
 - d. a declaration of an emergency in relation to the aircraft
 - e. a serious property damage incident (external)
 - f. an aircraft incident
 - g. an aircraft incident (external).
- 3.1.3. The TSI Regulations refer to four categories of aircraft operations, each with different reporting obligations:
 - a. Category A (passenger transport) aircraft operation
 - b. Category B (commercial non passenger) aircraft operation
 - c. Category C (non commercial) aircraft operation
 - d. Category D (type 2 RPA and certain uncrewed balloons) aircraft operation.

3.1.4. Note that the full names of Categories A to C primarily relate to crewed aircraft operations. Uncrewed aircraft, including remotely piloted aircraft (RPA), fit into these categories as follows:

- a. Category A: RPAs conducting passenger transport aircraft operations (future).
- b. Category B: type 1 RPA operations (heavier than 25 kg or with a type certificate) that is not an excluded RPA as per CASR Part 101.
- c. Category C: no uncrewed aircraft operations.
- d. Category D: type 2 RPA (at least 250 g and under 25 kg) that is not an excluded RPA as per CASR Part 101, and uncrewed balloons operations (payload of least 4 kg).

3.2. Reportable matters for each type of operation category

3.2.1. Category A operations have the most reporting requirements and Category D have the least requirements. The below table shows the types of safety occurrences that are either immediately reportable matters (telephone as soon as reasonably practicable and written report within 72 hours), or routine reportable matters (written report within 72 hours), for each type of operation category.

Category	Immediately reportable matters (IRM)	Routine reportable matters (RRM)
Category A (passenger transport) aircraft operations	<ul style="list-style-type: none"> • Aircraft accident • Reportable serious aircraft incident • Loss of separation standard between aircraft • Declaration of an emergency in relation to the aircraft • Serious property damage incident (external) 	<ul style="list-style-type: none"> • Aircraft incident • Aircraft incident (external)
Category B (commercial non-passenger) aircraft operations	<ul style="list-style-type: none"> • Aircraft accident • Loss of separation standard between aircraft • Serious property damage incident (external) 	<ul style="list-style-type: none"> • Reportable serious aircraft incident • Declaration of an emergency in relation to the aircraft • Aircraft incident • Aircraft incident (external)
Category C (non-commercial) aircraft operations	<ul style="list-style-type: none"> • Aircraft accident – limited to fatal aircraft-related injuries, serious aircraft-related injuries or missing aircraft • Loss of separation standard between aircraft • Serious property damage incident (external) 	<ul style="list-style-type: none"> • Aircraft accident other than reportable as an IRM • Reportable serious aircraft incident • Declaration of an emergency in relation to the aircraft • Aircraft incident (external)
Category D (type 2 RPA and uncrewed balloons) aircraft operations	<ul style="list-style-type: none"> • Aircraft accident – limited to fatal aircraft-related injuries or serious aircraft-related injuries • Serious property damage incident (external) 	<ul style="list-style-type: none"> • Aircraft accident other than reportable as an IRM • Loss of a separation standard between aircraft

3.3. Category A (passenger transport) aircraft operations

3.3.1. Passenger transport operation, including:

- a. air transport operations (scheduled or non-scheduled)
- b. balloon transport operations
- c. mining fly-in-fly-out operations
- d. scenic flights/joy flights
- e. parachuting operations
- f. (future) RPA passenger carrying operations
- g. aerial work operations that carry passengers who are not crew members (for example, marine pilot transfers).

3.3.2. Medical transport operation, including transporting medical patients, medical personnel, or supplies (blood, tissue etc).

3.3.3. Repositioning flights prior to conducting a substantive Category A operation.

3.4. Category B (commercial non-passenger) aircraft operations

3.4.1. Operation conducted for a commercial purpose – any non-passenger carrying crewed aircraft operation that is conducted for a commercial purpose, including:

- a. aerial work operations such as surveying, spotting, surveillance, aerial application, mustering, aerial photography, media operations, external load operations, search and rescue operations.
- b. flying training activities (such as training under a CASR Part 141 or Part 142 training organisation).

3.4.2. Crewed cargo transport operation.

3.4.3. Operating type 1 remotely piloted aircraft (medium or heavy RPA (heavier than 25 kg) or any RPA with a type certificate) that is not an excluded RPA as defined by CASR Part 101.

3.4.4. Repositioning flights prior to conducting a substantive Category B operation.

3.5. Category C (non-commercial) aircraft operations

3.5.1. All crewed non-commercial operations generally. This includes:

- a. recreational, sport, travel and pleasure flying
- b. flights where the pilot shares equally in costs with passengers (cost sharing)
- c. an aircraft with a special certificate of airworthiness
- d. operation (where the registered operator is an individual) without payment or reward
- e. community service flights.

3.6. Category D (type 2 RPA and certain uncrewed balloons) aircraft operations

3.6.1. Operating type 2 (very small or small) RPA (at least 250 g and under 25 kg) that is not an excluded RPA as defined by CASR Part 101.

3.6.2. Operating an uncrewed free medium or heavy balloon (payload at least 4 kg).

4. DEFINITIONS AND EXAMPLES OF TYPES OF REPORTABLE MATTERS

4.1. Introduction

4.1.1. Reportable matters are safety occurrences that involved the operation of the aircraft, including preparation for departure and during disembarkation.

4.1.2. Specifically, in relation to a particular crewed aircraft, reportable matters must occur during the period:

- a. beginning when the aircraft is being prepared for take-off; and
- b. ending when all passengers and crew members have disembarked after the flight.

4.1.3. For uncrewed aircraft, reportable matters must occur during the period:

- a. beginning when the aircraft is ready to move with the purpose of flight; and
- b. ending when the aircraft comes to rest at the end of the flight and the primary propulsion system is shut down.

4.2. Emergency declaration

4.2.1. A declaration of an emergency, in relation to an aircraft, means:

- a. a declaration, by a flight crew member of the aircraft, of an alert phase (PAN PAN) or a distress phase (MAYDAY); or
- b. a declaration by an air traffic service provider of a distress phase (DETRESFA) in relation to the aircraft.

4.3. Loss of separation standard between aircraft

4.3.1. A situation where the recognised separation standard (vertical, lateral or longitudinal) between aircraft that are being provided with an Air Navigation Service Provider separation service is infringed. This includes:

- a. loss of procedural or surveillance separation standards
- b. loss of prescribed runway or wake turbulence separation standards
- c. visual reference is lost during visual separation by a pilot or air traffic controller in controlled airspace.

4.4. Serious property damage incident (external)

4.4.1. In relation to the operation of an aircraft, damage to property outside the aircraft that would cost at least \$25,000 to repair or replace, that is caused by:

- a. contact with any part of the aircraft, including anything that is attached to the aircraft or that has become detached from the aircraft; or
- b. direct exposure to jet blast, propeller wash or rotor downwash from the aircraft.

4.5. Aircraft accident

4.5.1. A person suffers a fatal aircraft related injury (see 5.1) in relation to the operation of the aircraft; or

4.5.2. A person suffers a serious aircraft related injury (see 5.2) in relation to the operation of the aircraft; or

4.5.3. The aircraft sustains damage or structural failure, or there are reasonable grounds for believing that the aircraft has sustained damage or structural failure, which:

- a. adversely affects the structural strength, performance or flight characteristics of the aircraft; and
- b. would normally require major repair or replacement of the affected component;
- c. except for any of the following:
 - engine failure;

- engine damage limited to a single engine (including damage to its cowlings or accessories);
- damage to propellers, wing tips, antennas, probes, vanes, tyres, brakes, wheels, fairings, panels, landing gear doors or windscreens;
- damage such as small dents or puncture holes to the aircraft skin;
- minor damage to main rotor blades, tail rotor blades or landing gear;
- minor damage resulting from hail or bird strike (including holes in the radome); or

4.5.4. The aircraft is missing; or

4.5.5. The aircraft is completely inaccessible.

4.6. Reportable serious aircraft incident

4.6.1. A serious aircraft incident. That is, an incident involving circumstances indicating that there was a high probability of an aircraft accident (that is, a high probability of a fatal or serious aircraft related injury and/or the aircraft sustaining damage or structural failure); or

4.6.2. An incident in the following list of incidents that have the potential to be classified as a serious incident. (The International Civil Aviation Organization (ICAO) Annex 13 Attachment C list of examples of serious incidents is consistent with the TSI Regulations examples.)

4.6.3. Note that a *reportable serious aircraft incident* includes a serious aircraft incident (as per 4.6.1) even when not in the list of examples below, as well as any incident in the list of examples below (with clarifying notes) even if it might not meet the definition of a serious aircraft incident.

Reportable serious aircraft incident as defined by the TSI Regulations	Clarifying notes
A near collision requiring an avoidance manoeuvre to avoid a collision or an unsafe situation, or when an avoidance action would have been appropriate.	Immediate evasive action was required or should have been taken to avoid a collision. Includes during flight and on the ground.
A collision with anything other than an animal or a bird.	Unless resulting damage or injury qualifies it as an accident, an aircraft collides with another aircraft or collides with terrain (including water, trees and wires), a person, structure or object.
Where controlled flight into terrain was only marginally avoided.	Includes any legitimate terrain avoidance system warning 'pull up' type annunciation. Excludes anticipated or spurious annunciations that occur in VMC.
An aborted take-off on a closed, engaged or unassigned runway, or on a taxiway (other than an authorised operation by a helicopter).	

Reportable serious aircraft incident as defined by the TSI Regulations	Clarifying notes
A take-off from a closed, engaged or unassigned runway, or from a taxiway (other than an authorised operation by a helicopter).	
A landing or attempted landing on a closed, engaged or unassigned runway, on a taxiway (other than an authorised operation by a helicopter), or on an unintended landing location (such as a road).	Excludes helicopter landings on taxiways by authorised helicopter operations.
The retraction of a landing gear leg during landing, or a wheels-up landing.	Unless resulting damage or injury qualifies it as an accident.
The dragging, during landing, of a wing tip, engine pod or any other part of the aircraft.	Unless resulting damage or injury qualifies it as an accident. Includes during a go-around.
A significant failure to achieve predicted performance during take-off or initial climb.	
Fire or smoke in the cockpit, the passenger compartment or a cargo compartment, or engine fire, even if the fire was extinguished by the use of extinguishing agents.	Includes explosions. Excludes events involving fumes only.
An event requiring the emergency use of oxygen by a flight crew member.	Includes oxygen use for fumes, depressurisation.
Aircraft structural failure, engine disintegration or uncontained turbine engine failure.	Significant structural airframe failures, excluding dents, missing panels and minor skin damage
Multiple malfunctions of one or more aircraft systems seriously affecting the operation of the aircraft.	
Incapacitation of a flight crew member: - during a single pilot operation; or - during a multi-pilot operation, if the safety of the operation is compromised because of a significant increase in workload for the remaining flight crew members.	Incapacitation for any reason to the extent that their ability to perform any flight management role is significantly impaired. Includes remote pilots.
Fuel quantity level or distribution situations (such as insufficient fuel, fuel exhaustion, fuel starvation, or inability to use all usable fuel on board) requiring the declaration of an emergency by the pilot.	Includes when declaration of emergency would be expected but not done.
A runway incursion where a collision is narrowly avoided.	Only includes runway incursions classified with severity index A as per the <i>ICAO Manual on the Prevention of Runway Incursions</i> (Doc 9870)

Reportable serious aircraft incident as defined by the TSI Regulations	Clarifying notes
A take-off or landing incident such as under-shooting, overrunning or running off the side of a runway.	Over-running refers to either a rejected take-off or a landing where the aircraft continues beyond the runway threshold. Includes runway overruns into a displaced runway threshold area. Under-shoot refers to a landing that touches down prior to the designated landing area on a runway within the aerodrome perimeter.
Any of the following which caused, or could have caused, difficulties controlling the aircraft: - system failures (including loss of power or thrust) - weather phenomena - operations outside the approved flight envelope - any other occurrence.	Relates only those circumstances that require immediate intervention. Includes system alerts such as engine indications requiring inflight shutdowns, stall warnings during critical phases of flight. Includes complete or partial loss of engine power.
Failure of more than one redundant system mandatory for flight guidance and navigation.	
The unintentional or emergency release of a slung load or any other load carried external to the aircraft.	

4.7. Aircraft incidents

- 4.7.1. Any event that is associated with the operation of an aircraft and affects, or could affect, the safety of the operation of the aircraft.
- 4.7.2. The degree to which an occurrence “affects or could affect” the safety of the operation of the aircraft should be understood to mean occurrences that, if not corrected, could endanger the aircraft or its occupants. To be clear, a responsible person is required to report an aircraft incident whether or not it was actually corrected or able to be corrected.
- 4.7.3. If an event, without correction, does not endanger the aircraft or its occupants, then the ATSB would consider that it has not affected or could not affect the safe operation of the aircraft (and therefore an event that does not need to be reported).
- 4.7.4. Below are typical examples of aircraft incidents. For completeness, the list also includes occurrences that are aircraft accidents and/or reportable serious aircraft incidents, with notes to indicate this. However, the list is not exhaustive, and other operational events not in the list that meet the definition of an aircraft incident must be reported as aircraft incidents.

4.7.5. Operational related aircraft incident examples:

Incident	Definition	Clarifying note
Aircraft control incidents		
Hard landing	The vertical deceleration operational limits for the aircraft set out in the aircraft's flight manual are exceeded during the landing.	(Note damage criteria for accidents).
Airframe overspeed	The airspeed limit has been exceeded for the current aircraft configuration as published in the aircraft manual.	General airframe limits such as V_{NE} ; Extension speeds for flaps, slats, spoilers; Undercarriage extension speed. Minor overspeeds are not incidents. In determining whether the overspeed is minor, both the degree and duration of the overspeed event should be taken into account.
Stall warning	Any cockpit warning or alert that indicates the aircraft is approaching an aerodynamic stall.	Warnings and alerts that are reportable include: -aural stall warnings -stick shaker activations -stick pusher activations -alpha protection or alpha floor activations. Stall warnings that are intentionally generated during flying training or flight testing operations are not reportable.
Incorrect configuration	Where an aircraft system is incorrectly set for the current and/or intended phase of flight.	Landing gear not extended in preparation for landing; Inadvertent retraction of landing gear after landing; Incorrectly setting the flaps or slats; Incorrect application of carburettor heat (when carburettor icing occurred or was likely to have occurred). Incorrectly setting the auto flight system mode; Raising the flaps instead of the landing gear after becoming airborne. Minor configuration issues that are not reportable include: - Momentary EGPWS flap and gear warnings related to incorrect settings in the EGPWS - Configuration warnings on the application of take-off power that are resolved by the crew and the aircraft subsequently departs without incident.

Incident	Definition	Clarifying note
Control issues	Occurrences where there were difficulties controlling the aircraft either airborne or on the ground.	Minor control issues arising from: -Weather phenomenon (icing, severe turbulence, significant wind shear, thunderstorm encounter); -Wake turbulence; -Minor technical issues. (Note criteria for reportable serious aircraft incidents)
Weather events	Icing issue that affect the performance of the aircraft; Lightning strikes; Turbulence or windshear that affect aircraft performance;	(Note criteria for reportable serious aircraft incidents.)
Unstable approach	An aircraft completes an approach to landing when unstable under the following conditions: (i) instrument meteorological conditions at or below 1000 feet above ground level; (ii) visual meteorological conditions at or below 500 feet above ground level.	An approach is unstable when one or more of the following criteria is not met: -the aircraft is on the correct flight path; -only small changes in heading/pitch are necessary to maintain the correct flight path; -the airspeed is not more than $V_{REF} + 20$ kts indicated speed and not less than V_{REF} ; -the aircraft is in the correct landing configuration; -sink rate is no greater than 1000 feet/minute; -power setting is appropriate for the aircraft configuration and is not below the minimum power for the approach as defined by the operating manual; -all briefings and checklists have been conducted; -instrument landing system approaches flown within one dot of the glideslope and localiser; -a Category II or III instrument approach flown within the expanded localiser band; -a circling approach is flown with wings level on final approach when the aircraft reaches 300 feet above airport elevation. Does not include when the approach was discontinued due to being unstable.
Wheels up landing	An aircraft contacts the intended landing area with the landing gear retracted.	Includes intentional and unintentional wheels up landing. Includes amphibious aircraft landing on water with landing gear not retracted.

Incident	Definition	Clarifying note
		(Note – all wheels up landings are either accidents or reportable serious aircraft incidents.)
Aircraft loading incidents		
Loading related	<p>Incorrect loading of an aircraft if the loading adversely affected, or could have affected, any of the following:</p> <ul style="list-style-type: none"> (i) the aircraft's weight; (ii) the aircraft's balance; (iii) the aircraft's structural integrity; (iv) the aircraft's performance; (v) the aircraft's flight characteristics. 	<p>Incorrect load sheet provided to flight crew; Incorrect weight data input into flight computers; Incorrect passenger numbers or seating; Incorrect freight or baggage or incorrect loading; Freight shifting inflight or unrestrained freight; Incorrect fuel quantity or tank usage.</p> <p>Does not include events that were detected and corrected before flight.</p>
Cabin safety incidents		
Flight crew incapacitation	A flight crew member becomes incapacitated, such that their ability to perform normal flight duties is impaired.	<p>Incapacitation may be due to illness, injury, physiological or psychological factors, or environmental or other factors. Incapacitations may be short term or persist for the duration of the flight, and includes both partial and total incapacitation (Note criteria for reportable serious aircraft incidents)</p>
Depressurisation	Air pressure inside the cabin of a pressurised aircraft reduces to an extent that requires action by the flight crew.	(Note criteria for reportable serious aircraft incidents)
Cabin injuries	Crew and passenger injuries and incapacitations sustained as a direct result of an aircraft operation	<p>Injuries to flight crew, cabin crew or passengers if they are the result of:</p> <ul style="list-style-type: none"> - the movement of the aircraft due to a weather phenomenon like windshear or turbulence; - an abrupt aircraft manoeuvre, either airborne or on the ground - unrestrained objects. <p>Does not include workplace health and safety related injuries like slips, trips, falls, spillage of hot beverages, bumping head on overhead lockers or passenger illness unless the injury or illness is a</p>

Incident	Definition	Clarifying note
		direct result of the operation of the aircraft.
Unrestrained occupants / objects	Aircraft occupants, equipment or objects are not appropriately restrained for the aircraft operation or phase of flight.	Includes crew or passengers standing during take-off or landing, passenger not wearing seatbelts when required, and unrestrained galley equipment during critical flight phases.
Fire, smoke, and Fumes		
Fumes	Smells or odours not generally associated with normal aircraft operations	<p>Includes fumes from:</p> <ul style="list-style-type: none"> -dangerous goods -post compressor wash -oil / electrical smells. <p>Excludes (if no other consequences):</p> <ul style="list-style-type: none"> - fumes from galley oven contents or residual cleaning products -bird ingestion through air conditioning -passenger hand luggage contents. <p>(Note criteria for reportable serious aircraft incidents when incapacitation results from fumes). (Note separate reporting requirements for declaration of an emergency).</p>
Fire	Any fire that has been detected and confirmed in relation to an aircraft operation.	(All fire events are reportable serious aircraft incidents.)
Smoke	Smoke is reported to be emanating from: a) inside the aircraft; or b) an external component of the aircraft.	<p>(All smoke related events are reportable serious aircraft incidents.)</p> <p>Excludes passengers smoking inside the aircraft when the safety of the aircraft was not compromised.</p>
Flight preparation / Navigation incidents		
Lost / unsure of position	Uncertainty by flight crew in relation to an aircraft's position where the flight crew request assistance from an external source.	Applies to pilots that request navigational assistance from ATC, other aircraft, or other person outside the aircraft in determining their current position.
Pre-flight planning and preparation	Inadequate or incorrect pre-flight planning or preparation of an aircraft for flight that affected, or if not corrected, could have affected the safety of the operation of the aircraft.	<p>Inadequate or incorrect fuel planning; Navigation/flight planning issues including flight management computer data entry errors; Deficiencies or erroneous data in navigation databases; Inadequate pre-flight aircraft inspection.</p>

Incident	Definition	Clarifying note
Flight below safe altitude	An aircraft is operated below the designated or planned lowest safe altitude for the in-flight conditions and phase of flight.	Crew error to descend below the lowest safe altitude in IMC; Aircraft operating below lowest safe altitude without knowledge of terrain in the vicinity; ATC instruction to descend or operate below the lowest safe altitude Aircraft that continue the approach below minima with no visual reference to the runway; Intentional unauthorised low flight.
VFR into IMC	An aircraft operating under the visual flight rules enters instrument meteorological conditions.	(Note criteria for reportable serious aircraft incidents.)
Fuel related incidents		
Fuel contamination	The presence of a foreign substance in fuel loaded into an aircraft.	Fuel that is manufactured outside the technical specifications for the fuel grade or type; Contamination of fuel in aircraft fuel tanks or aircraft fuel systems; Incorrect fuel type for aircraft.
Fuel leak or venting	Unplanned loss of fuel from a fuel tank or fuel system.	Includes missing or insecure fuel cap.
Fuel starvation	Fuel supply to the engine(s) is interrupted although there is usable fuel on board the aircraft.	Mismanagement of the fuel system by the flight crew; Mechanical failure involving the fuel system; Unporting of the fuel standpipes during an aircraft manoeuvre. (Note criteria for reportable serious aircraft incidents.)
Low fuel	The aircraft's supply of fuel becoming so low that the safety of the aircraft is compromised.	Any occurrence where fixed fuel reserves are compromised. (Note the separate reporting requirements for a declaration of an emergency.)
Fuel exhaustion	When the engine stops because the aircraft has become completely devoid of useable fuel.	(All fuel exhaustion events are reportable serious aircraft incidents.)
Ground Proximity Warning		
TAWS/GPWS	A Terrain Avoidance and Warning System warning or alert.	Any Terrain Avoidance and Warning System (TAWS) warning or alert, such as from a Ground Proximity Warning System

Incident	Definition	Clarifying note
		<p>(GPWS) and Enhanced Ground Proximity Warning System (EGPWS)</p> <p>Excludes:</p> <ul style="list-style-type: none"> -expected or spurious terrain warnings in VMC -momentary EGPWS flap and gear warnings related to incorrect settings in the EGPWS -momentary EGPWS glideslope warnings where a safe approach is continued. <p>(Note criteria for reportable serious aircraft incidents.)</p>
Ground operations' incidents		
Near collision on ground	An aircraft has a near collision with another aircraft, vehicle, structure, person or object while it is operating on the ground or water.	<p>Near collision on taxiway or apron with another aircraft, vehicle, person or object. A near collision on the runway strip is a reportable serious aircraft incident.)</p> <p>(Note criteria for reportable serious aircraft incidents for near collisions.)</p> <p>(Note - all actual collisions are either an aircraft accident or a reportable serious aircraft incident depending on the level of damage.)</p>
Foreign object damage / debris	Loose objects on a runway or in an aircraft that have caused, or have the potential to cause, damage to an aircraft.	<p>Aircraft panels/parts that have dislodged from aircraft or vehicles and are a potential hazard to other aircraft; Tools or equipment left in an engine or avionics bay (found during preflight preparation); Loose objects in the cockpit/aircraft that result a hazardous condition.</p> <p>Excludes foreign objects on a runway that have had no interaction with an aircraft.</p>
Ground handling	Aircraft ground handling and aircraft servicing that have caused, or have the potential to cause, damage to the aircraft or injury.	Any hazardous condition such as vehicles colliding with a stationary aircraft or fuel spillages resulting from ramp operations (after the aircraft is being prepared for flight and before all passengers and crew have disembarked).

Incident	Definition	Clarifying note
Jet blast / prop wash / rotor wash	Air disturbance from a ground-running aircraft propeller, rotor, or jet engine that have caused or have the potential to cause damage or injury.	Jet blast or propeller wash that has the likelihood of causing injury to persons, or damage to aircraft or other objects. Also includes instances of helicopter rotor down wash where helicopters are hover taxiing or flying at low level.
Runway events		
Depart, approach, or lands on wrong runway	An aircraft approaches an area other than that authorised or intended for landing or departure.	(Note all take-off, aborted take-off, landing and attempted landings on closed or engaged runway, on a taxiway, or an unassigned runway, or roadway, are reportable serious aircraft incidents.)
Runway incursions	Incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.	<p>Incorrect presence means:</p> <p>(a) anything within the confines of the runway strip, irrespective of having an appropriate clearance, which hinders the operation of an arriving or departing aircraft; or</p> <p>(b) an aircraft, vehicle or person entering the confines of the flight path without a clearance to do so, regardless of other aircraft operations.</p> <p>(Note - A runway incursions where a collision is narrowly avoided is a reportable serious aircraft incident.)</p>
Runway excursion	An aircraft veers off the side of the runway or overruns the runway threshold.	<p>Includes displaced thresholds.</p> <p>(Note: runway veer-off or overrun incidents during take-off or landing is a reportable serious aircraft incident.)</p>
Runway under-shoot	An aircraft attempting a landing touches down prior to the designated landing area on a runway within the aerodrome perimeter.	<p>Includes aircraft landing on the runway surface before a displaced runway threshold.</p> <p>(Note - an aircraft touching down prior to the runway surface is a reportable serious aircraft incident.)</p>
Terrain collisions		
Collision with terrain and near collision with terrain	Any collision or near collision with terrain or water, including wirestrikes, or where controlled flight into terrain is only narrowly avoided	(Note – all collisions and near collisions (where avoidance manoeuvre was required or appropriate) are aircraft accidents or reportable serious aircraft incidents)

Incident	Definition	Clarifying note
Ground strike	Part of the aircraft drags on, or strikes, the ground or water in an unintended manner during take-off or landing.	A rotor or propeller makes contact with the ground during take-off or landing; An engine pod, wingtip, or tail contacts the ground during take-off or landing. (Note criteria for accidents and reportable serious aircraft incidents.)

4.7.6. Mechanical related aircraft incident examples:

Incident	Definition	Inclusions / exclusions
Airframe related incidents		
Doors /exits	An aircraft door (passenger, cargo, or emergency), or its component parts, has exhibited damage or has failed.	Excludes internal doors, like cockpit doors or lavatory doors.
Landing gear	An aircraft's landing gear, brakes, their component parts or tyres have failed.	Landing gear collapse due to mechanical malfunction; Use of emergency gear extension; Tyre deflation; Overheated or smoking brakes; Faults with float type undercarriages; Faults with emergency flotation devices in helicopters. Excluded: -failure of landing gear indication bulbs -flat tyres while standing or taxiing. (Note criteria for accidents and reportable serious aircraft incidents for landing gear collapse, and smoke and fire.)
Windows	A window of the aircraft has exhibited damage or has failed.	Separation of windows from the aircraft in flight; Shattering, cracking, crazing, or delamination of a window; Window heat arcing.
Wing/fuselage /empennage	Part of the fuselage, wing, or empennage has structurally failed.	Cracks; Debonding; Delamination. (Note criteria for reportable serious aircraft incidents for near collisions.)
Objects falling from aircraft	Objects that are inadvertently detached or dropped from an airborne aircraft.	Detached aircraft parts; Inadvertent release of towed banner

Incident	Definition	Inclusions / exclusions
		<p>Cameras or phones lost during open door operations.</p> <p>Excludes objects deliberately detached or dropped from an aircraft.</p> <p>(Note criteria for reportable serious aircraft incidents loss of a slung load or any other load carried external to the aircraft.)</p>
Powerplant / propulsion related incidents		
Abnormal engine indications	Any indications that an engine is malfunctioning or operating outside normal parameters.	<p>Abnormal engine instrument readings, such as engine power output or temperature, oil pressure or temperature, fuel pressure;</p> <p>Observation of abnormal sights or sounds by a crew member;</p> <p>Engine overspeed or over-torque warnings.</p>
Engine failure or malfunction	An engine malfunction that results in a total engine failure, a loss of engine power or rough running engine.	<p>Partial power loss (loss of RPM, surging, coughing);</p> <p>Inflight shutdown of a failing engine;</p> <p>Full power loss to an individual engine.</p> <p>(Note criteria for accidents and reportable serious aircraft incidents.)</p>
Propellers and rotor malfunctions	A failure or malfunction of any part of a propeller, helicopter rotor, or associated components.	<p>Failure of associated propeller accessories, such as feathering mechanisms, constant speed units, and reduction gearboxes;</p> <p>General reports of damage to a propeller or rotor including delamination.</p>
Transmission and gearboxes	The failure or malfunction of an aircraft transmission or gearbox or associated components.	
Systems related incidents		

Incident	Definition	Inclusions / exclusions
	<p>An aircraft system failure. This includes the following systems:</p> <ul style="list-style-type: none"> (i) air/pressurisation (ii) avionics/flight Instruments (iii) electrical (iv) fire protection (v) flight controls (vi) fuel (vii) hydraulics (viii) anti-ice protection (ix) datalink (remotely pilot aircraft) 	<p>Includes only when the operation of the aircraft was compromised or had the potential to compromise safety.</p> <p>(Note criteria for reportable serious aircraft incidents for failure of more than one redundant system.)</p>

4.7.7. Airspace related aircraft incident examples:

Incident	Definition	Inclusions / Exclusions
Aircraft separation related incidents		
Loss of separation	A situation where the recognised separation standard (vertical, lateral or longitudinal) between aircraft that are being provided with an Air Navigation Service Provider separation service is infringed	(Note separate reporting requirements for all loss of separation incidents).
Loss of separation assurance	A separation standard existed, however, planned separation was not provided by the ANSP separation service.	<p>LOSA is an occurrence where separation existed but:</p> <p>The potential conflict was not identified; or</p> <p>Separation was not planned or was inappropriately planned; or</p> <p>The separation plan was not executed or was inappropriately executed; or</p> <p>Separation was not monitored or was inappropriately monitored.</p>
Airborne Collision Alert System warnings	An airborne collision avoidance system resolution advisory alert or equivalent.	<p>Includes all systems, such as TCAS.</p> <p>Excludes traffic advisories.</p>
Collision or near collision	A collision or near collision between aircraft, either airborne or on the runway strip.	<p>Near collision is where immediate evasive action was required or should have been taken.</p> <p>(Note criteria for accidents and reportable serious aircraft incidents for all aircraft collisions and near collisions.)</p>
Other separation issues	Aircraft separation is a concern but does not meet the definition of Near collision.	Includes separation issues inside and outside controlled airspace.

4.8. Aircraft incident (external)

4.8.1. An aircraft incident (any occurrence associated with the operation of an aircraft that affects or could affect the safety of the operation of the aircraft) that originates from any of the following outside the aircraft:

- a. infrastructure
- b. flying and other objects
- c. animals or birds.

4.8.2. Below are typical examples of aircraft incidents (external). The list also notes when they meet additional requirements to be considered as reportable serious aircraft incidents or aircraft accidents. However, the list is not exhaustive, and other events not in the list that meet the definition of an aircraft incident (external) will also need to be reported.

4.8.3. Aerodrome related aircraft incident (external) examples:

Incident	Definition	Inclusions/exclusions
Aerodrome related	Where aircraft safety has been compromised due to the failure or inadequacy of any aerodrome infrastructure used in conjunction with aircraft operations, including: (i) runway lighting (including approach and slope guidance lighting); (ii) runway, taxiway or apron surface areas; (iii) signs and markings.	Must impact on the operation of an aircraft to be reportable.
Airways facility	Where aircraft safety has been compromised due to the failure or inadequacy of a facility used in connection with an aircraft operation, including: (i) a navigation aid; (ii) communications; (iii) radar/surveillance (including ADS-B); (iv) air traffic services; or (v) general operational services (e.g. briefing, Unicom, etc).	Must impact on the operation of an aircraft to be reportable. Navigation aids include ground-based and satellite-based aids.

4.8.4. Environment related aircraft incident (external) examples:

Incident	Definition	Inclusions/exclusions
Birdstrike or animal strike	A collision between an aircraft and an animal or a bird at a certified or registered aerodrome.	Includes birdstrikes (including when the pilot suspects a birdstrike) where the aircraft is in flight, or taking off or landing anywhere. Birdstrike and animal strikes where a carcass is found on a runway.

Incident	Definition	Inclusions/exclusions
		Excludes near strikes.
Collision or near encounter with flying object	Collision or near encounter with a flying object when the object interrupts flight or is sighted in the proximity of an aircraft.	Includes collision or near encounter with any RPA or model aircraft or parachute. (Note: if RPA is known to be type 1 or type 2 RPA, then reporting requirements for collision and near collision apply.)
Interference from ground	Near encounter between an airborne aircraft and an object when the object interrupts the aircraft's flight path, or a laser or spotlight being directed at an airborne aircraft that affects the flight; or any unauthorised communication, signal or system interference directed at an aircraft, air traffic control or air navigation aid.	Must impact on the operation of an aircraft to be reportable. Includes interference from laser pointer lights, kites, yacht masts, weather balloons.
Other	Other environmental issues that significantly affect the safety of a flight.	Includes insect nests or bodies, or dirt/sand blocking pitot tubes.

5. GUIDANCE FOR DETERMINING INJURY AND DAMAGE

5.1. Fatal aircraft related injury

- 5.1.1. A fatal aircraft-related injury is one where the person dies as a result of the injury within 30 days after the injury occurs, and the person suffers the injury as a result of:
- being in the aircraft during the operation; or
 - direct contact during the operation with any part of the aircraft, including parts which have become detached from the aircraft; or
 - direct exposure to jet blast during the operation.
- 5.1.2. Fatal aircraft-related injuries do not include:
- the injury results from natural causes (unless the person is a flight crew member);
 - the injury is intentionally self-inflicted;
 - the injury is intentionally caused by another person;
 - the injury is to a person who is a stowaway in a part of the aircraft that is not usually accessible to crew members or passengers after take-off.

5.2. Serious aircraft-related injury

- 5.2.1. A serious aircraft-related injury is when a person suffers a serious injury as a result of:
- being in the aircraft during the operation; or

- b. direct contact during the operation with any part of the aircraft, including parts which have become detached from the aircraft; or
- c. direct exposure to jet blast during the operation.

5.2.2. A serious injury is defined as an injury where any of the following apply:

- a. the injury requires, or would usually require, admission to hospital, for more than 48 hours, within 7 days after the day when the injury is suffered;
- b. the injury involves a fracture of any bone (other than a simple fracture of fingers, toes or nose);
- c. the injury involves lacerations which cause severe haemorrhage or severe nerve, muscle or tendon damage;
- d. the injury involves injury to any internal organ;
- e. the injury involves second or third degree burns, or any burns affecting more than 5% of the body surface;
- f. the injury involves exposure to hazardous chemicals, infectious substances or injurious radiation.

5.2.3. Serious aircraft-related injuries do not include when:

- a. the injury results from natural causes (unless the person is a flight crew member);
- b. the injury is intentionally self-inflicted;
- c. the injury is intentionally caused by another person;
- d. the injury is to a person who is a stowaway in a part of the aircraft that is not usually accessible to crew members or passengers after take-off.

5.3. Guidance for the determination of aircraft damage

5.3.1. Use this excerpt from ICAO Annex 13 Attachment E for guidance when determining if aircraft damage is considered to be an accident.

- a. If an engine separates from an aircraft, the event is categorised as an accident even if damage is confined to the engine.
- b. A loss of engine cowls (fan or core) or reverser components which does not result in further damage to the aircraft is not considered an accident.
- c. Occurrences where compressor or turbine blades or other engine internal components are ejected through the engine tail pipe are not considered accidents.
- d. A collapsed or missing radome is not considered an accident unless there is related substantial damage in other structures or systems.
- e. Occurrences of missing flaps, slats and other lift augmenting devices, winglets, etc., that are permitted for dispatch under the configuration deviation list (CDL) are not considered accidents.
- f. Retraction of a landing gear leg or wheels-up landing, resulting in skin abrasion only, when the aircraft can be safely dispatched after minor repairs or patching, and subsequently undergoes more extensive work to effect a permanent repair, would not be classified as an accident.
- g. If the structural damage is such that the aircraft depressurises, or cannot be pressurised, the occurrence is categorised as an accident.
- h. The removal of components for inspection following an occurrence, such as the precautionary removal of an undercarriage leg following a low-speed runway excursion, while involving considerable work, is not considered an accident unless significant damage is found.
- i. Occurrences that involve an emergency evacuation are not counted as accidents unless someone receives serious injuries or the aircraft has sustained significant damage.

Note 1.— Regarding aircraft damage which adversely affects the structural strength, performance or flight characteristics, the aircraft may have landed safely, but cannot be safely dispatched on a further sector without repair.

Note 2.— If the aircraft can be safely dispatched after minor repairs and subsequently undergoes more extensive work to effect a permanent repair, then the occurrence would not be classified as an accident. Likewise, if the aircraft can be dispatched under the CDL with the affected component removed, missing or inoperative, the repair would not be considered as a major repair and consequently the occurrence would not be considered an accident.

Note 3.— The cost of repairs, or estimated loss, such as provided by insurance companies may provide an indication of the damage sustained but should not be used as the sole guide as to whether the damage is sufficient to count the occurrence as an accident. Likewise, an aircraft may be considered a 'hull loss' because it is uneconomic to repair, without it having incurred sufficient damage to be classified as an accident.

6. DETAILS TO BE REPORTED

6.1. Immediately reportable matters

- 6.1.1. The type, model, nationality, registration marks and flight number (if any) of the aircraft the subject of the immediately reportable matter.
- 6.1.2. The kind of aircraft operation that the aircraft was engaged in at the time of the immediately reportable matter.
- 6.1.3. The name and contact details of the operator of the aircraft.
- 6.1.4. The nature of the immediately reportable matter.
- 6.1.5. A description of any damage to the aircraft or any other property.
- 6.1.6. A description of any dangerous goods on board the aircraft.
- 6.1.7. Whether a person died, or was seriously injured, as a result of the immediately reportable matter.
- 6.1.8. Where the immediately reportable matter occurred (including a description of the location, or the geographical coordinates).
- 6.1.9. The aircraft's place of departure and destination.
- 6.1.10. The day and local time when the immediately reportable matter occurred.
- 6.1.11. A description of the following in relation to the immediately reportable matter:
 - a. what happened;
 - b. how and why it happened.
- 6.1.12. in relation to the responsible person's name reporting the matter, their name and a method of contacting the person that will enable the person to be promptly contacted for an inquiry into the matter.

6.2. Written reports (Immediately and Routine reportable matters) excluding bird/animal strikes

- 6.2.1. The name and contact details of the person making the report.
- 6.2.2. The person's role in relation to the aircraft concerned.
- 6.2.3. The type, model, nationality, registration marks and flight number (if any) of the aircraft.
- 6.2.4. The name of the owner of the aircraft.

- 6.2.5. The name and contact details of the operator of the aircraft.
- 6.2.6. If the aircraft was under hire when the reportable matter occurred, the name of the hirer.
- 6.2.7. The name and nationality of the pilot, and the type and licence number of the licence held by the pilot.
- 6.2.8. The name and nationality of each other flight crew member (if any), and the type and licence number of the licence held by each of them.
- 6.2.9. The Aviation Reference Number (issued by CASA) of each flight crew member (if the person has an Aviation Reference Number).
- 6.2.10. The day and local time when the reportable matter occurred.
- 6.2.11. If, when the reportable matter occurred, the aircraft was in flight:
 - c. (a) the place where the flight started; and
 - d. (b) the place where the flight ended, or was intended to end; and
 - e. (c) the purpose of the flight.
- 6.2.12. Unless the reportable matter occurred at an airport, the location of the aircraft immediately after the occurrence of the reportable matter, including the geographical coordinates of that location.
- 6.2.13. The number of persons on board the aircraft when the reportable matter occurred.
- 6.2.14. The nature of the reportable matter, including:
 - a. its outcome or effect on the flight of the aircraft; and
 - b. the phase of the aircraft's flight when the matter occurred; and
 - c. the weather conditions; and
 - d. the airspace designation; and
 - e. the altitude at which the matter occurred; and
 - f. if the matter occurred at, or in relation to, an airport—the name of the airport; and
 - g. if the matter occurred on, or in relation to, a runway—the runway number; and
 - h. if the matter involved a collision with an animal, including a bird animal or a bird —the nature of the collision; and
 - i. the causes of the occurrence (if known), including any human performance issues; and
 - j. any safety action carried out to prevent a recurrence of the matter; and
 - k. the nature and extent of any damage to the aircraft.
- 6.2.15. The physical characteristics of the area where the reportable matter occurred (e.g. the terrain, vegetation cover, and existence and location of any buildings, runways or aerodromes).
- 6.2.16. The flight rules under which the aircraft was operating at the time of the reportable matter.
- 6.2.17. The kind of aircraft operation the aircraft was engaged in at the time of the reportable matter (including the CASR Part number and general activity).
- 6.2.18. If the matter resulted in a death or serious injury, and the aircraft carried an emergency locator transmitter—whether the emergency locator transmitter was fixed or portable and whether it was activated at the time the immediately reportable matter occurred.
- 6.2.19. If the aircraft's pilot has died:
 - a. (a) the pilot's date of birth; and
 - b. (b) the pilot's total flying hours on all aircraft and flying hours on the same type of aircraft.
- 6.2.20. If any crew members have died or been seriously injured as a result of the reportable matter—how many, and their names and nationalities.

- 6.2.21. If any passengers have died or been seriously injured as a result of the reportable matter—how many, and their names and nationalities.
- 6.2.22. If any other persons have died or been seriously injured as a result of the reportable matter—how many, and their names and nationalities.

6.3. Written reports – aircraft incidents (external) bird/animal strikes

- 6.3.1. The name and contact details of the person making the report.
- 6.3.2. The day and local time when the reportable matter occurred.
- 6.3.3. The nature of the reportable matter, including:
 - a. if the matter occurred at, or in relation to, an airport, the name of the airport, and if it occurred on, or in relation to, a runway, the runway number; and
 - b. the nature and extent of any damage to the aircraft.
- 6.3.4. Any other information that the person making the report considers appropriate such as the species, number of birds/animals seen and struck, weather conditions.

7. PROTECTING OF EVIDENCE FOR INVESTIGATIONS

- 7.1.1. The TSI Act provides powers to ATSB transport safety investigators to obtain information necessary to conduct investigations into reportable matters. However, investigations always seek, where possible, to obtain information in cooperation with the owner.
- 7.1.2. The TSI Act makes provision for an offence if a person engages in reckless conduct that adversely affects an investigation that is either being conducted at that time or could be later conducted into an immediately reportable matter. Practically, this means that potential evidence relating to all immediately reportable matters must be protected, including recorded data (flight recorder, cockpit voice recorder, air traffic communications etc), wreckage and damaged parts, and related documents, unless authorised by the ATSB or informed that the ATSB will not be investigating the matter.
- 7.1.3. Similarly, the ATSB may issue a ‘protection order’ for the purpose of protecting evidence that might be relevant to an investigation. This may direct that specified things, or things in a specified class of things, must not be removed or interfered with except with the permission of the ATSB.
- 7.1.4. These provisions do not apply if the conduct was necessary for any of:
 - a. to ensure the safety of persons, animals or property
 - b. to remove deceased persons or animals from an accident site
 - c. to move a transport vehicle, or the wreckage of a transport vehicle, to a safe place
 - d. to protect the environment from significant damage or pollution.