Overseas Territories Safety Bulletin

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Dangerous Goods

More people now shop online and with the greater use of lithium batteries there is an increased threat to aviation safety in the area of dangerous goods.

Incorrectly packaged and undeclared items have made their way onto aircraft with some very tragic results

Passengers may unwittingly bring forbidden items onto an aircraft. They may pack forbidden items in their luggage or have forbidden hold items taken from them in the cabin that are then placed in the aircraft hold. People sometimes also ship forbidden items that are then transported by air via mail or parcel couriers.

As part of their Safety Management System (SMS), operators conducting commercial air transport flights should do dangerous goods risk assessments. These should capture the mitigations in place to ensure the safe transportation of dangerous goods, including the carriage of lithium batteries and cells. These risk assessments must be carried out by all operators no matter if the operator does or does not hold a dangerous goods approval.

Airports are required to ensure information is effectively communicated to passengers about the types of dangerous goods that are forbidden for transport on an aircraft. Airport security screening staff must also receive regular dangerous goods training so that they are able to spot and detect the carriage of prohibited items.

Prevention of carriage is the best defence. So, what should an operator be asking and thinking about?

Is the required and correct information about dangerous goods forbidden from transport on aircraft provided to passengers and acknowledged by them at the required times in the run up to boarding a flight? Don’t forget about online passenger information and processes too.

Do check-in staff and those that accept cargo have readily accessible up to date information about hidden dangerous goods? Do check-in staff also have information on the items that are permitted to be carried by passengers and crew that includes the conditions that apply? Do you have a process to handle mobility aids?

Supporting this, do staff complete the correct category of dangerous goods training that reflects their role and your operation? Is this refreshed within 24 months of their last dangerous goods training?

Is your dangerous goods information kept up to date, coordinated and reflected in training?

If approved to carry dangerous goods, are all processes and paperwork carried out correctly? Is this regularly checked?

When things don't go to plan, is there a procedure for discovery of undeclared dangerous goods? Is there a procedure to deal with an overheating lithium battery, leaking or damaged dangerous goods?

If you are unsure of the answers to these questions or have answered 'no', then some further work is required. The 'yes' answers to these questions go some way to describe how you mitigate your dangerous goods risks and your internal audits should be checking these.

Both operators, with their agents, and airports need to work together to make sure items are carried safely and if things do go wrong everybody knows what to do. Lastly, remember to report any dangerous goods occurrences and share these. If things go unreported nobody has any idea if the mitigations are working and what needs fixing.

Further information and resources on dangerous goods can be found at:

- Lithium Batteries (UK CAA)
- Dangerous Goods posters (UK CAA)
- IATA Dangerous Goods
- FAA Dangerous Goods
- Transport Canada Dangerous Goods

Does your flight deck pre-flight oxygen check detect a system failure?

A recent report by the AAIB (EW/G2018/12/03) highlights how a pre-flight cockpit oxygen check can fail to detect a failure of the system. In this incident a blockage in the regulator prevented both pilots from getting any oxygen when they were dealing with a suspected de-pressurisation event.

The pre-flight checks may just confirm the system has the correct pressure, but this may not confirm that it will supply any oxygen when it is needed. In response to this incident, the operator has now amended the first flight of the day check to see if the system provides a one second flow of oxygen.

Could this happen in the aircraft you operate? Following any maintenance, how is the flight deck oxygen system checked? Would, and can your pre-flight checks detect such a failure?

Managing wildlife risks at your airport

Knowing that you have wildlife in and around your airport and doing nothing to manage this is simply not an option.

The vast majority of catastrophic strikes that have ever occurred have been with species already identified, recorded and common to the airfield.

It is, therefore, simply unacceptable to leave wildlife in-situ on the assumption that they have not been struck previously, or rarely been struck.

Preventing aircraft and wildlife being present in the same airspace is essential. Good recording of hazardous wildlife on the airfield, combined with documenting the deterrents used, and the results achieved, not only enables airports to demonstrate compliance with ICAO, but shows a proactive response to safety.

No matter how well you think you know your wildlife population, you cannot predict how they will behave all the time. One event or situation that breaks their routine can result in unexpected behaviour that could, in the wrong circumstances, conflict with an aircraft with catastrophic results.

In 2018 nearly 16,000 bird and wildlife strikes occurred across USA alone, that is more than 40 a day.

You cannot count on being as lucky as Chesley "Sully" Sullenberger in command of the Airbus passenger jet in New York after a strike with Canada Geese or, as in 2019 when a similar event, though with injuries, occurred with gulls at an airport outside Moscow. Bird and wildlife strikes all have the potential to be catastrophic, result in damage to aircraft or cause delays to operations at airports.

The critical requirement for all stakeholders is to be proactive in preventing birds and other wildlife from coming into contact with aircraft in the first place.

Though many civil airliners conform to certification standards designed to minimise damage and avoid an accident, even if birds below the standard mass are struck or ingested, this cannot protect against every eventuality. The impact forces involved vary significantly depending upon the component struck, the speed of the aircraft when struck or indeed the size and number of birds or wildlife struck. Small aircraft striking large wildlife or flocks are particularly susceptible with some general aviation aircraft having no certification standards for such impacts. Multiple strikes to both engines on take-off are precisely the reasons why events in the Hudson River and Moscow Cornfield occurred.

ICAO recognises this situation and provides standards and guidance to ensure airport operators assess and reduce these risks. To do this effectively, airport staff need:

- an understanding of the risk that wildlife species and their behaviours present on the airport and its vicinity;
- a knowledge of the management strategies/deterrents required to reduce the risk;
- to identify and assess the habitats that attract them and the behaviours within those habitats;
- to know how to record and report the species of wildlife attracted to airfield, their habitats and behaviours; and
- to know how to interpret the data in order that management plans can be formulated.

All this knowledge is built into a management plan which is then embedded into wildlife control policies and procedures on the airport, and implemented to reduce strike risks.

The plan, policies, procedures, records and evidence must be reviewed and audited by the airport operator. This is to ensure that the control/deterrent response stays relevant or amended to respond to changes. It will also improve species knowledge to ensure each airport continues to support a fully effective proactive wildlife hazard management plan.

So, in summary, the responsibility of the airport when it comes to wildlife hazard management is:

- to understand the threats and issues their wildlife pose to aircraft;
- to gather data on this wildlife to better understand its behaviour; and
- to manage a plan that mitigates the risk of the wildlife coming into contact with aircraft.

To reiterate, knowing that you have wildlife in and around your airport and doing nothing to manage this is simply not an option.

Doors

All doors, including baggage and service panel doors, should be correctly closed and secure before an aircraft departs. An open or lost door can lead to control difficulties, or in a worst-case scenario, loss of control. Items, or the door itself may damage the aircraft, create FOD or damage people or property on the ground. The reaction of any passengers can lead to further problems particularly in small aircraft.

After closing an aircraft door, it should be checked that it is correctly closed and secure. Pilots and apron staff should check the aircraft before departure. If ground handling staff are unsure if a door is closed or not because it did not feel right or does not look right, they must tell the pilot.

Items should be correctly and securely stowed to avoid doors being damaged which could then lead to them becoming unsecure. Pilots should report any issues with doors to Engineering, so they can rectify any issues.
