



Preventing the Transport of Undeclared Dangerous Goods

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Undeclared Dangerous Goods Pose Serious Risks

Many everyday items, such as lithium or wet batteries, including equipment containing such batteries, aerosol products, cylinders of gases, fire extinguishers and paint-related products, are classified as dangerous goods. The safe transport of such items by air requires the collective effort of shippers, air operators and other organisations in the transport chain.

In two recent incident reports to CAAS, a shipper was found to have offered a large quantity of undeclared perfumery products containing alcohol for transport by air in a general cargo consignment. Another offered two large cylinders of undeclared compressed nitrogen gas for transport by air. In both instances, the shippers and freight forwarders involved were unaware of the extent of inherent hazards of its contents.

When dangerous goods are not labelled, documented, packed, marked and loaded on an aircraft with relevant safety information provided to the flight crew according to safety regulations, such goods pose a safety risk to the aircraft and its occupants when transported by air.

Fortunately, in both instances, alert cargo acceptance staff of the air operators' handling agents identified the dangerous goods marks and labels and acted appropriately, preventing the undeclared dangerous goods from being accepted for loading onto the aircraft.

Indeed, the safety risk of undeclared dangerous goods via air transport cannot be ignored. Between 2018 and 2022, CAAS received an average of 12 reports each year involving undeclared dangerous goods cargo. In the majority of these incidents, the undeclared dangerous goods contents were detected by cargo handling staff during cargo acceptance or security screening and prevented from being transported on an aircraft.

Root Causes of Undeclared Dangerous Goods

From CAAS' investigations, unfamiliarity and negligence on the part of personnel handling goods in the transport chain were often the root causes or contributing factors of such incidents:

- 1) Shippers that do not regularly handle the transport of dangerous goods by air are often at higher risk of causing incidents of undeclared dangerous goods. This is as their personnel typically do not have regular experience at identifying dangerous goods and are less familiar with the regulations governing the transport of such goods. As a result, even though packages were clearly affixed with dangerous goods marks and labels, some shippers and freight forwarders were unaware of the inherent hazards and risks, and unintentionally offered such goods for transport in general cargo consignments.

- 2) In other instances, the personnel involved were sometimes careless, and/or did not adhere to established procedures, and as a result failed to detect hidden dangerous goods prior to offering them for transport by air.

Detecting and Preventing Hidden or Undeclared Dangerous Goods

Shippers and their agents (freight forwarders, packers, logistics and transport service providers etc.) involved in offering general cargo consignments for transport by air should establish clear procedures requiring personnel to identify hidden dangerous goods when receiving, processing and handling goods. They should also be required to provide relevant information to their staff and customers to aid in their identification of hidden dangerous goods. Such information may include:

- generic descriptions of items and the potential hidden dangerous goods within (e.g., instruments that may conceal mercury switches, laboratory equipment that may contain flammable substances or oxidizers, ship spares that may contain flares or cylinders of compressed gases etc.),
- samples of dangerous goods marks and labels, and
- safety data sheets containing transport information for substances to determine their dangerous goods classification.



Cargo acceptance staff of air operators' handling agents represent the air operator's first line of defence against undeclared dangerous goods. Consequently, it is imperative that cargo acceptance staff are competent and remain vigilant in identifying signs or indications of undeclared dangerous goods in general cargo consignments offered for acceptance by shippers or their agents.

Training cargo security screening staff to identify dangerous goods by using various screening equipment is another effective measure towards ensuring that hidden dangerous goods do not get transported in general cargo consignments.

While not all dangerous goods may be detected using security screening equipment, some dangerous goods such as gas cylinders, aerosol sprays, fire extinguishers and even lithium batteries may be detected by trained cargo security screening staff using an x-ray machine.



Monitoring Service Providers for Outsourced Functions

Increasingly, shippers, air operators and their agents are outsourcing some of their functions (e.g. packing, warehousing, transportation etc.) to service providers for various reasons. Processes such as receiving goods from customers into the warehouse may be solely performed by a service provider, without the involvement of the organisation's employees.

To fulfill their responsibilities in the transport of dangerous goods by air, organisations should verify that service provider personnel are educated on the safety risks of undeclared dangerous goods, tasked with identifying hidden dangerous goods, and provided with relevant information to aid in this purpose. In addition, organisations should also supervise and monitor service providers handling outsourced functions to ensure consistency in complying with procedures and safety regulations.

Collective Effort Among Stakeholders is Key to Increase Safety Awareness

Preventing undeclared dangerous goods will require the collective efforts of all parties in the transport chain. An increased awareness of the safety risks of such occurrences, along with the effective implementation of measures, will help to ensure compliance with safety regulations in the transport of dangerous goods by air.



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