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**Abstract**

**Cost Benefit Analysis for Freighter Fire Suppression**

The National Transportation Safety Board has recommended that fire suppression systems be installed in the cargo compartments of all freighter airplanes operating under 14 CFR Part 121. In response to this recommendation, FAA requested that a cost/benefit analysis be carried out relating to the installation of on-board fire detection and extinguishment systems in freighter airplanes.

Potential benefits will result from a reduction in Injuries (Fatal and Serious) to personnel, a reduction in the damage incurred to the aircraft and its cargo, and a reduction in the damage that might be incurred to property on the ground. Potential costs are those that might be incurred from the installation and operation of fire suppression systems.

It was concluded from the study that Halon fire suppression systems, or alternatives that are likely to be developed for below floor cargo compartments, are unlikely to be cost beneficial for the cargo compartments of freighter airplanes.

However, other fire suppression systems, including those currently being considered for the cargo compartments of combi aircraft, may prove to be cost beneficial, particularly on larger freighter aircraft.