SAE Aerospace
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AEROSPACE STANDARD

SAE AS36100 | REV. A

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Superseding AS36100

Air Cargo Unit Load Devices – Performance Requirements and Test Parameters

RATIONALE

After publication of AS36100 [2005-02], application studies evidenced ULD designs could be affected by cumulating the worst (main deck) ultimate load conditions with the worst (lower deck) testing restraint conditions, at a significant risk of needlessly increasing ULD weight. The present revision A, proposed for TSO C90d reference, remedies this difficulty by introducing two separate ULD configurations and testing restraint conditions for each of concerned sizes A, B and M, thus allowing for distinct approval of lower deck or main deck units, as was the case with the predecessor reference document NAS 3610 (TSO C90c).

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NOTE: In accordance with SAE Technical Standards Board Rules, successive document revisions are indicated by letters A, B, C, etc.
N = New / **R** = Renumbered without change

1. SCOPE

This SAE Aerospace Standard (AS) defines the minimum performance requirements and test parameters for air cargo unit load devices requiring approval of airworthiness for installation in an approved aircraft cargo compartment and restraint system that complies with the cargo restraint and occupant protection requirements of Title 14 CFR Part 25, except for the 9.0g forward ultimate inertia force of § 25.561 (b)(3)(ii).

1.1 Purpose

The purpose of this Aerospace Standard is to establish the minimum requirements for airworthiness approval of air cargo pallets, nets and containers, generally designated as air cargo unit load devices.

Other aspects that do not directly pertain to airworthiness approval and testing are defined in other Aerospace Standards and Aerospace Recommended Practices, e.g.:

- ULD design specifications,
- ULD in service damage limits,
- ULD restraint malfunction limitations,
- ULD test methods,
- ULD load distribution models,
- ULD maximum allowable contours,
- ULD CG location control means,
- ULD pressure equalization methods,
- ULD utilization guidelines.

1.2 Field of Application

This Aerospace Standard applies to all airworthiness approved air cargo unit load devices intended for carriage on board civil transport category airplanes type certificated under Federal Aviation Regulations Title 14 CFR Part 25, "Airworthiness Standards: Transport Category Airplanes”.

It exclusively applies to unit load devices airworthiness approval and testing parameters. It does not apply to either aircraft design or aircraft operating requirements, which are provided by the approved Weight and Balance Manual for each aircraft type.

Air cargo unit load devices qualified prior to publication of this Aerospace Standard were TSO approved in accordance with the requirements of National Aerospace Standard NAS 3610 (latest published revision 10, 1st November 1990), "Cargo Unit Load Devices - Specification for -”, internationally recognized under ISO 8097 (latest published revision: 4th edition, 2000).

Air cargo unit load devices the size or type of which is not covered in this Aerospace Standard are to be airworthiness approved in accordance with the requirements of NAS 3610 revision 10, if their size or type is contained therein, or other equivalent criteria, if not.

NOTE: The requirements for cargo covers are not defined in this Aerospace Standard, except insofar as net restraint is incorporated therein.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.