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of Transportation
Federal Aviation
Administration**

SAFO

Safety Alert for Operators

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Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo/all_safo

A SAFO contains important safety information and may include recommended action. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO. This is a guidance document. Its content is not legally binding in its own right and will not be relied upon by the Department as a separate basis for affirmative enforcement action or other administrative penalty. Conformity with the guidance document is voluntary only. Nonconformity will not affect rights and obligations under existing statutes and regulations.

Subject: Cargo Retention Methods Using Pallet Straps.

Purpose: This SAFO serves to warn operators that strapping cargo to a pallet to restrain cargo must be done in accordance with configurations explicitly permitted by the design approval holder's Federal Aviation Administration (FAA)-approved Weight and Balance Manual (WBM) or WBM supplement.

Background: In May of 2013, the FAA recommended in SAFO 13005 that all air carriers operating under Title 14 of the Code of Federal Regulations (14 CFR) Part 121 review their Weight and Balance (W&B) Programs with an emphasis on special cargo. The FAA followed up in August of 2013 with SAFO 13008, which recommended an in-depth review of part 121 W&B Programs along with cargo loading documents. While conducting the in-depth reviews, the FAA identified air carriers strapping cargo to pallets in configurations not permitted by the FAA-approved design approval holder's WBM or WBM supplement. These air carriers could not substantiate an approved WBM or WBM supplement for their strap-to-pallet configurations. Part 91, § 91.9 requires all operators of civil aircraft to have an approved Airplane Flight Manual (AFM) and operate within the limitations of that AFM. An air carrier's WBM is part of the limitations that are maintained within the AFM for each aircraft.

Discussion: In reviewing the part 121 air carriers' W&B Program, the FAA found that some do not comply with the requirements of § 91.9. These air carriers have developed their own W&B Program, which allows for restraint methods that are not approved and are contrary to the aircraft's FAA-approved AFM limitations. These methods may exceed the aircraft structural design capability.

Specifically, air carriers have submitted W&B Programs that contain methods for securing cargo on to cargo pallets by utilizing straps in lieu of the cargo nets required by the airplane WBM or WBM supplement. The FAA requires that the air carrier secure cargo in accordance with the airplane manufacturer's FAA-approved WBM or in accordance with the FAA-approved WBM supplement. The WBM or WBM supplement is created by the design approval holder of the cargo loading system installed. Strapping cargo to a pallet in a manner that is not defined in the WBM does not meet the airplane operating limitations defined in that WBM.

The WBM is part of the Operating Limitations section of the AFM. In accordance with part 21, § 21.41,

the Operating Limitations are part of the airplane type certificate and, therefore, can be modified only by changing the certificate. This is done by obtaining an amended or supplemental type certificate. Revisions to the AFM are approved as AFM supplements. Such approvals are based on a finding that, with the AFM revisions, the airplane continues to meet the applicable airworthiness standards. Section 91.9(a) requires that air carriers must comply with the Operating Limitations.

A few design approval holders have provided FAA-approved revised WBM and WBM supplements to accommodate strapping cargo to a pallet as a means of restraint. These approvals include the certified provisions for specific configurations that can be used for strapping the cargo directly to specific pallets. These WBMs define the operating limitations for this method. The FAA has approved the following WBMs and WBM supplements, to include but not limited to:

Manufacturer	Aircraft Model*	Approved WBM Identifier**
The Boeing Company	747-400BCF, -400F, -8F	Document D636H000
	767-300F	Document D636H000
	777F	Document D636H000
Israel Aerospace Industries (IAI)	767-200SF with STC ST01433SE installed	SB 368-00-077
	767-300SF with STC ST02040SE installed	SB 368-00-077

* The identified WBM or WBM supplement can only be used with the airplane model/serial numbers for which it is FAA-approved.

** The identified documents are not publicly available. To obtain a copy of the document, contact the specified manufacturer.

Recommended Action: Air carriers are reminded that they may only strap cargo to a pallet *only* when specifically permitted by the operating limitations defined in the airplane's WBMs.

Contact: Direct questions or comments regarding this SAFO to the Air Transportation Division at 9-AFS-200-Correspondence@faa.gov.