



SUBJ: External Load Devices for Human External Cargo
This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) is for registered owners and operators of **helicopters that incorporate external load devices such as cargo hooks and hoists**. This SAIB advises of a potential airworthiness concern regarding Human External Cargo (HEC) operations under Title 14 of the Code of Federal Regulations (14 CFR) part 133. These designs are installed either as part of the type design approval or an FAA-approved supplemental type certificate (STC).

At this time, the airworthiness concern is not an unsafe condition that would warrant airworthiness directive (AD) action under 14 CFR part 39.

Background

On December 21, 2017, the FAA was made aware of 14 CFR part 133 operators performing HEC operations using cargo hooks that do not comply with the §27.865 or §29.865 certification requirements for the carriage of HEC. HEC is defined in Advisory Circular (AC) 27-1B and AC 29-2C as “A person(s) that at some point in the operation is carried external to the rotorcraft.”

Civil Air Regulations (CAR) 6, 7, and 8 and 14 CFR parts 27 and 29 preceding October 1999 did not provide design requirements for the carriage of a human external to rotorcraft. Prior to October 1999, the design safety standards never envisaged the external carriage of humans using cargo hooks or hoists.

With the adoption of §27.865 at amendment 27-36 and §29.865 at amendment 29-43, the minimum level of safety was established for designs to permit the external carriage of humans under Part 133. These requirements ensure designs will not inadvertently release a human. This regulatory update revised the underlying assumptions used for the certification of cargo hooks and hoists, therefore, making HEC certification significant under §21.101(b). Type certificate (TC) and STC holders that want a design approved for use with HEC are required to comply with the requirements as identified in AC 21.101-1B.

Cargo hooks or hoists approved with a certification basis of §27.865 prior to 27-36; §29.865 prior to 29-43; or CAR 6, 7, or 8 are not eligible to be certificated for the carriage of humans.

Some industry stakeholders believe the use of a Portable Safety Device (PSD), also known as a Belly Band System or emergency anchor, serves as an adequate backup system to the primary hook. These systems are not eligible for certification under 14 CFR part 27 or 29 as they are not permanently installed. FAA Information for Operators 12015, dated September 10, 2012, and Safety Alert for Operators 18004, dated April 23, 2018, provide additional information on these systems.

Recommendations

The FAA recommends that all owners and operators of helicopters installed with cargo hooks or hoists that perform part 133 HEC operations verify the eligibility of their systems to carry humans. To be eligible, the Limitation section of Rotorcraft Flight Manual or Rotorcraft Flight Manual Supplement must contain wording that the design complies with the HEC certification requirements. The following statement is an example of acceptable wording.

The external load system meets the 14 CFR part 27/29 certification requirements for Human External Cargo (HEC).

HEC approval wording might also be found within the type certificate data sheet (TCDS) or STC.

Hook or hoist designs that do not explicitly state in the RFM, RFMS, TCDS, or STC that the design meets the certification requirements for HEC will generally fall into the following two categories.

1) For external loads designs certificated after October 1999, but prior to AC 27-1B Change 7 or AC 29-2C Change 7, both issued on February 4, 2016, the HEC eligibility documentation requirements were not explicit. In those cases:

a. For HEC-compliant designs, the design approval holder should contact their certificate management Aircraft Certification Office to amend their certificate or revise their RFM/RFMS in accordance with Change 7 of the applicable AC.

b. Designs that do not comply with the HEC requirements will need to incorporate design changes to be eligible for the carriage of humans external to the rotorcraft.

2) Cargo hooks and hoists certificated prior to October 1999, regardless of certification basis (Part 27, Part 29, CAR 6, CAR 7, or CAR 8) are not eligible for HEC. Those designs would have to be amended by the design approval holder to comply with the HEC requirements of §27.865 at amendment 27-36 and §29.865 at amendment 29-43, or later amendments, approved through the accountable ACO.

For Further Information, Contact

Mitchell Soth, Regulations and Policy Section, Rotorcraft Standards Branch, 10101 Hillwood Parkway, Fort Worth, Texas, 76177; phone: (817) 222-5110; fax: (817) 222-5961; e-mail: mitch.soth@faa.gov.