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23 December 2016

To: All Part 146, 148 and 145 Organisations

Dear CAA Delegates

Guidance Regarding Modifications Using “Belly-Bands” for Human External Cargo (HEC) Operations

The CAA letter dated 17 February 2011 re: Suspension of Persons Beneath Helicopters refers.

In this letter, clarification was provided regarding the use of cargo hooks that are not approved for human sling load operations (commonly referred to as Human External Cargo, or HEC operations). It was stated that an operator may perform HEC operations with a hook system that is not approved for HEC, by installing a belly band-type system; provided that the operator has a modification with a Flight Manual Supplement (FMS) that meets the requirements of Rule 133.71, thereby modifying the cargo hook limitations to allow HEC.

Rule 133.255 includes the requirement that the cargo hook or similar devices (the interpretation is that includes belly band-type systems) meet the requirements of Part 21 Subpart C.

The CAA is of the view point that a belly band-type system does not require a STC, as it is not permanently installed on the rotorcraft and many of these systems are not supplied with a Form 1 (or equivalent). Since the use of the belly band is to enable the change to the cargo hook limitations to allow HEC operations as per the scenario in the above mentioned letter, then any change to the limitations or installation of a belly-band may require a major modification (or STC).

The CAA in the interim will process major modification authorisation requests from Design Delegation Holders (DDH) for “belly-band” or “heli-bridle” type systems. As with any major modification authorisation request, these will be dealt with on a case-to-case basis, and may still result in the CAA requesting a STC should it be deemed appropriate for the particular application.

The following guidelines need to be addressed in each major modification authorisation request for belly band type systems –

- Approval status, limitations and characteristics of the installed cargo hook;
- The PSD materials meets the accepted industry standard of National Fire Protection Association (NFPA) 1983, or equivalent;
- The system includes installation requirements and instructions (including rigging instructions) necessary for safe operations and continued serviceability;


- The cargo hook must have dual-action, primary and backup quick release mechanisms that comply with the requirements of CAR 133.
- There are provisions for a quick release of the belly band;
- A supplementary crew member must be carried at all times;
- There is an ability to jettison without endangering or damaging the helicopter;
- There is no sudden and/or unacceptable shift in the centre of gravity;
- The system is rigged such that the impact load imposed on the system or rotorcraft when the load is transferred from the cargo hook to the belly band system is minimised;
- A FMS must be developed incorporating the appropriate operational procedures, emergency procedures, minimum crew requirements, pilot rigging (installation & removal) instructions, and any changes to the operating limitations (e.g. if the use of the bellyband/heli-bridle is required in order to allow HEC operations with an otherwise NHEC-rated cargo hook);
- Summary of how compliance to Part 133 requirements will be achieved; and
- Summary of the system safety aspects of the combined HEC system including scenarios of intentional and inadvertent releases (this should also address the dual action, primary & backup release mechanisms).

Although the DDH of the Part 146 organisation will be authorised to approve the modification, the CAA will approve the FMS drafted by the Part 146 organisation. CAA ACU will authorise these specifically in consultation with the CAA HAU. The operator should develop operations and training procedures that include procedures for emergency release of the belly band and the primary attaching means in case either system fails to release.

It should also be noted that the CAA will not authorise HEC operations modifications to single reciprocating-engine rotorcraft. In addition, certain types of HEC operations may be limited to Class 1 performance rotorcraft only in terms of Part 91.127(d)(3).

CAA will also be raising a new AC incorporating the above as a basis for guidance material regarding the use of HEC operations with belly band type systems.

Yours faithfully,



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