

# Continuing Airworthiness Notice – 05-006



## Cargo Hook Systems – Inspection and Maintenance Requirements

1 March 2017

---

Issued by the Civil Aviation Authority of New Zealand in the interests of aviation safety. A Continuing Airworthiness Notice (CAN) is intended to alert, educate, and make recommendations to the aviation community. A CAN contains non-regulatory information and guidance that does not meet the criteria for an Airworthiness Directive (AD). The inspections and practices described in this CAN must still be carried out in accordance with the applicable NZCAR Parts 21, 43 and 91. CAN numbering is by ATA Chapter followed by a sequential number for the next CAN in that ATA Chapter.

---

### Applicability:

Cargo Hook Systems – Inspection and Maintenance Requirements.

### Purpose:

To advise operators and maintainers of cargo hook systems that compliance with manufacturer provided Instructions for Continuing Airworthiness (ICA) is required to ensure the hook system is kept in an airworthiness condition. This Continuing Airworthiness Notice (CAN) focusses on wear and damage found on Onboard Systems Cargo Hooks. Cargo hook systems from other manufacturers (e.g. Breeze Eastern) suffer the same wear and damage as identified in this CAN. All cargo hook systems must be maintained in accordance with the applicable manufacturer ICA.

### Background:

This CAN is prompted by reports of finding excessively worn and damaged parts on numerous Onboard Systems Cargo Hooks, prior to scheduled overhaul. Worn/damaged parts found include, but are not limited to load beams, keepers and cams. Load beams have been found with excessive wear. Keepers have been found bent, excessively worn and cracked. Service experience has found that if the cam is worn, the required force to release the load beam can be up to 60% higher than the release force specified by the manufacturer. For further detail of a worn/damaged load beam and a keeper, refer to the enclosed photographs. In the New Zealand operational environment cargo hooks are used for many types of external load operations and subjected to arduous working conditions. Among the many applications, cargo hooks are used to sling a large bucket and a spinner to disperse fertilizer pellets. The torque effect of the spinner is transferred through the load ring into the load beam, which could result in accelerated fretting and wear of the load beam. The finish, type and material of the load ring could also result in accelerated fretting and wear of the load beam.

### Requirements:

For Onboard Systems cargo hooks:

- Overhaul requirements: The overhaul requirements are specified in the overhaul schedule of the applicable Onboard Systems Component Maintenance Manual (CMM). A cargo hook overhaul is required every 1000 hours TIS for external load beam operations, or 5 years TSN, or 5 years since overhaul, whichever occurs first.
- Annual/100 hour inspection requirements: The cargo hook should be removed and cleaned to inspect for cracks, gouges, dents, nicks, corrosion, and missing or loose fasteners. The applicable Onboard Systems CMM provides the wear, gouge and nick limits which are acceptable to the manufacturer. The annual/100 hour inspection is required every 100 hours TIS for external load beam operations, or annually, whichever occurs first.
- Monthly preventative maintenance: Certain monthly maintenance actions are required for Onboard Systems cargo hooks, which are provided in the applicable Onboard Systems CMM.

The CAA recommends compliance with manufacturer specified inspection/maintenance requirements for cargo hook systems, and recommends the use of manufacturer approved load rings. During any cargo hook system inspection, if defects are found, accomplish correctives actions before commencing an external load operation.

Onboard Systems ICA are available from <http://www.onboardsystems.com/> For other types of cargo hook systems refer to the manufacturer for the applicable ICA. Enquiries regarding this CAN should be sent to:

Owen Olls  
Airworthiness Specialist  
Email: [owen.olls@caa.govt.nz](mailto:owen.olls@caa.govt.nz)  
Phone: 04 560 9569

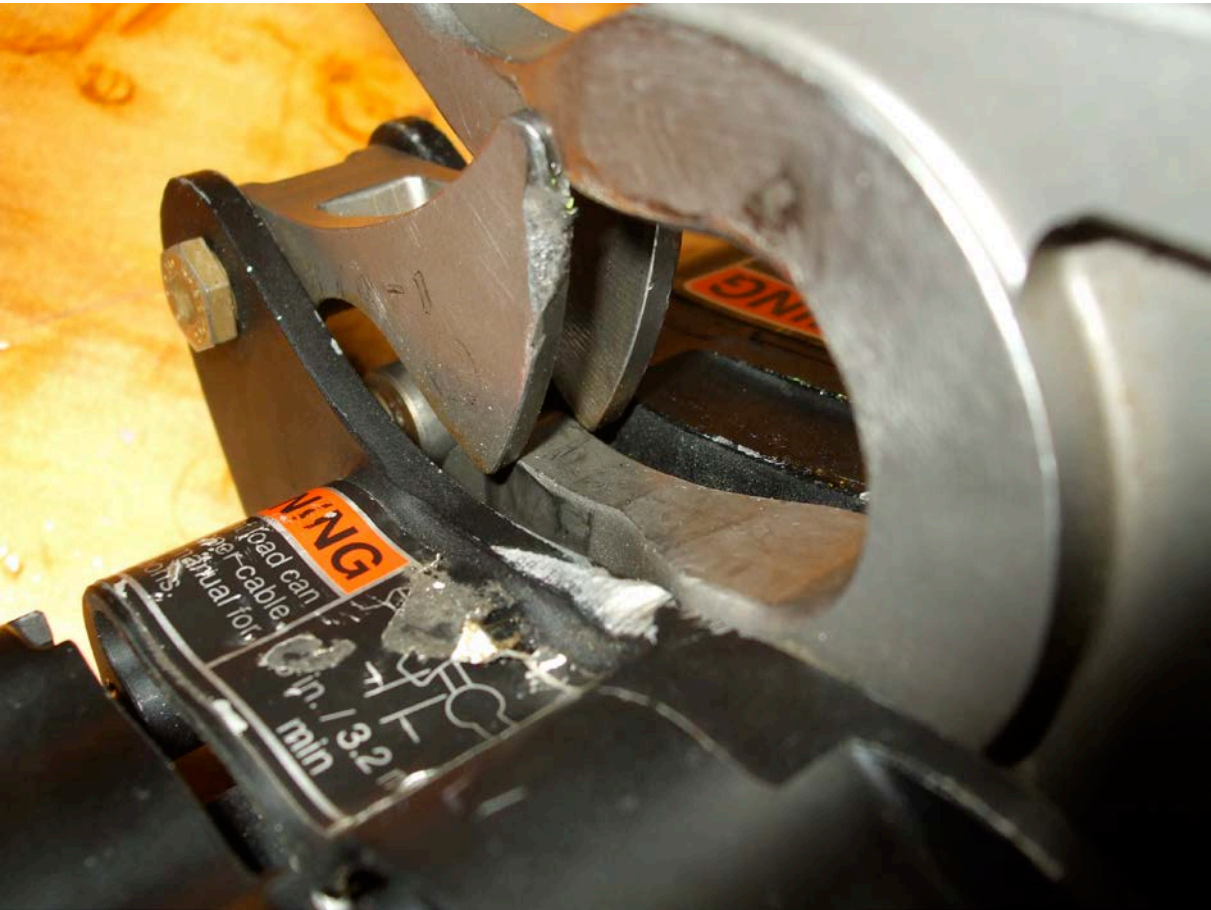


Load beam in the left of the photo – A new replacement part.

Load beam in the right of the photo – Worn beyond manufacturer acceptable limits.



Load beam - Wear beyond manufacturer acceptable limits.



Keeper wear.



Keeper wear.