

CAA Continuing Airworthiness Notice – 05/01

R22 and R44 Cargo Hook Gimbal Failure

A failure of an Onboard Systems cargo hook gimbal has occurred recently in New Zealand while conducting fertilizer application from an underslung fertilizer bucket with a Robinson R44 helicopter. A similar system is used on an R22 cargo hook.

The investigation is underway with the assistance of NZ based metallurgists and the results of their analysis will be published on the CAA website in the coming weeks.

Meanwhile in the interests of safety, CAA considers that operators attention should be drawn to an Onboard Systems Service Bulletin 159-015-00 issued 23 June 2005 as a result of this incident in New Zealand. It contains information on the cracking area and inspection requirements. Operators and engineers are advised to follow these requirements until more definite information is obtained on the failure mode.

While the manufacturers bulletin infers that the operator's bucket could be at fault or the engineers installation is faulty – that was based only on basic photographs that CAA provided to them and at this early stage of CAA's investigation it appears that the bucket has been specifically engineered to provide a slow opening with a 2.5 second actuator which therefore provides a lower torque reaction - possibly lower than many fertilizer buckets currently in use. The installation was carried out by an experienced engineer well versed in cargo hook installations, so operators are advised to keep an open mind at this stage, but ensure that they pay close attention to their cargo hooks and not just when used in the agricultural role.

Further maintenance information on Onboard Systems Cargo Hooks can be obtained from customer support on the Onboard Systems website:
www.onboardsystems.com

Any further information from the helicopter industry concerning this matter can be directed to Tom McCready: mccreadyt@caa.govt.nz

Yours faithfully,



Owen Olls
Airworthiness Specialist
ollso@caa.govt.nz