

Continuing Airworthiness Notice – 14-003



Defective MS21042L3 Nuts

3 May 2021

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:

Self-locking nuts P/N MS21042L3 (standard aircraft hardware).

Purpose:

This Continuing Airworthiness Notice (CAN) is issued to bring attention to an issue reported to the CAA recently, where MS21042L3 nuts appeared to lose their self-locking function during installation.

Background:

Issues relating to product quality with MS21042 nuts have been well documented, including FAA SAIB HQ-14-16, and CAA CAN 14-001, referred to below. Due to variations in the quality oversight of the manufactures of 'standard parts', the potential exists for quality escapes, which can severely impact airworthiness.

In this recent case, a relatively small batch (300) of MS21042L3 nuts were received from an American organisation towards the end of 2019. These nuts appeared to pass the requirements for prevailing torque (self-locking) during initial installation. However, after a short period in service they were found to have 'backed off'. Follow-up inspection showed that the affected nuts retained little (if any) self-locking function following installation, to the extent that they could be run down using one finger. Tests of un-used nuts from this batch showed a 100% failure rate. The affected batch of nuts have been quarantined, and the issue notified to the FAA and the supplier for their action.

Recommendation:

Maintainers should review the FAA SAIB referred to below. Where new MS21042 self-locking nuts are used, engineers should consider applying at least one re-torque cycle on initial installation to confirm the retention of self-locking properties.

Please advise CAA of any concerns related to this, or any defective 'standard parts' via the CAA005D process.

References:

FAA [SAIB HQ-14-16](#)

CAA [CAN 14-001](#)