

Continuing Airworthiness Notice – 27-021 Rev 1



MD Helicopters 369 series, 500N and 600N fitted with a Cyclic Pitch Torque Tube P/N 369H7133-3 or -7

27 January 2023

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:

MD Helicopters 369 series, 500N and 600N fitted with a Pilots Interconnecting Cyclic Pitch Torque Tube Assembly P/N 369H7133-501 or -BSC, consisting of the failed part known as Torque Tube P/N 369H7133-3 or -7.

Note:

This Continuing Airworthiness Notice (CAN) is revised to advise operators and maintainers that MDHI have released Service Letter SL369H-158, SL369D-142, SL369E-097, SL369F-088, SL500N-044, SL600N-038 (issued as a single document) and updated the relevant aircraft ICA and introduced an inspection for the pilots interconnecting cyclic pitch torque tube assembly. The inspection includes a freedom of movement check of the torque tube and bearings.

Purpose:

This CAN is issued to alert operators and maintainers of a defect reported to the CAA of finding a significant crack in cyclic torque tube with P/N 369H7133-7 on a Hughes 369E (MD500E) helicopter.

Investigation to date has revealed a spiral crack around the circumference of the cast tube that initiated from the casting hole with a small crack also found at the opposite side of the casting hole.

Refer to the photo on page 2 of this CAN for further detail of the location of the crack found in the torque tube with P/N 369H7133-7.

Background:

This CAN is prompted by a significant crack found in cyclic torque tube with P/N 369H7133-7 on a Hughes 369E (MD500E) helicopter which resulted in limited cyclic control.

While applying urea on a maize crop and coming out of a turn from a topdressing run there was a loud thump and the cyclic move forward hitting the forward stop. The nose of the aircraft then pitched up. By dropping the collective and the swing of the topdressing bucket aft the aircraft nose then pitched forward the cyclic was still hard on the forward stop, but enough control was gained to land the aircraft safely on a track running through the maize crop.

Recommendation:

The CAA strongly recommends the following actions:

- Review Service Letter SL369H-158, SL369D-142, SL369E-097, SL369F-088, SL500N-044, SL600N-038 (issued as a single document) and updated the relevant aircraft ICA and introduced an inspection for freedom of movement of the torque tube and bearings.
- Take precautions when cleaning the interior of the helicopter to ensure that cleaning products, including water cannot contaminate the torque tube bearings.

Note:

If any defects are found in the Pilots Interconnecting Cyclic Pitch Torque Tube Assembly P/N 369H7133-501 or -BSC, complete a CA005 Defect Report form and submit the completed form to the CAA at CA005@caa.govt.nz or report findings via the online reporting system available at <https://occurrences.caa.govt.nz/ProdUI/>

Please include all findings and any other relevant technical information. A CA005D Defect Report form can be obtained from <https://www.aviation.govt.nz/about-us/forms/Filter/?SearchTerm=&Rule=8>

Refer to the photo below for further detail of the location of the crack found in a cyclic torque tube with P/N 369H7133.

Location of the crack found in Cyclic Torque Tube P/N 369H7133-7.

