

# Continuing Airworthiness Notice 73-006 Revision 2



## Robinson R44 II helicopters - Fuel System Electric Fuel Pump and Pressure Relief Valve (PRV)

6 December 2023

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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 information and guidance about an airworthiness concern 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.

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### Applicability:

Robinson R44 II helicopters fitted with a Lycoming IO-540 engine.

### Purpose:

This revision 2 Continuing Airworthiness Notice (CAN) clarifies the component maintenance requirements for R44 helicopters, adds a recommendation to replace components which have reached the manufacturers recommended replacement interval, and informs aircraft operators and maintainers that Robinson Helicopters Corporation (RHC) have revised the component maintenance requirements specified in the RHC R44 Maintenance Manual.

Refer to Section 1.102 *Additional Component Maintenance* in the RHC R44 Maintenance Manual dated September 2023, or later approved revision.

The RHC R44 Maintenance Manual is available on the RHC website at: <https://robinsonheli.com/r44-maint-manual/>

### The revised component maintenance requirements:

- Electric Fuel Pump P/N D743-1, -2, -3 and -4 must be replaced with a new P/N D743-3 pump at 2200 hours TTIS.
- Fuel Pressure Relief Valve P/N D321-1 must be replaced with a new or overhauled part at 12 years, or before 2200 hours TTIS.

### Background:

CAN 73-006 was originally issued in August 2021 to highlight a CAA finding with the Fuel Pressure Relief Valve (PRV) fitted on a Robinson R44 II involved in an accident on 12 June 2021.

The PRV on that aircraft was found to be bypassing an excessive amount of fuel at a much lower pressure than specified.

The CAA is aware of another Robinson R44 II helicopter which the pilot could not start. The PRV on this aircraft was also found bypassing an excessive amount of fuel due to an internal leak.

RHC provide a method for checking the PRV in situation for leaks. Refer to Section 12-83 *Pressure Relief Valve Leakage Check* on page 12.33 in the RHC R44 Maintenance Manual.

Note: This check is not included as a scheduled maintenance activity in the RHC R44 Maintenance Schedule.

The failure of the PRV is not considered likely to cause an engine failure. It appears that a combination of a failed PRV and a failed electric fuel pump could result in a loss of engine performance.

For that reason, CAA are advising operators and maintainers to replace these components at the manufacturers recommended replacement interval.

### Recommendation:

CAA recommend that R44 operators assess their aircraft records and ensure that they meet the maintenance requirements in the latest revision RHC R44 Maintenance Manual.

Components which have reached / exceeded the manufacturer's recommended replacement interval should be replaced as soon as possible.

The CAA would like to know if operators have any problems / anomalies related to the fuel systems on their R44 helicopter, including if they have any findings from PRV inspections (refer RHC R44 Maintenance Manual).

Please report findings to the CAA by completing a CA005 Defect Report form. Please provide as much engineering detail as possible. This will enable us to determine the extent of any issue with the PRVs and the R44 fuel system.

The form can be obtained from: [https://www.aviation.govt.nz/assets/forms/CA005D\\_Form.pdf](https://www.aviation.govt.nz/assets/forms/CA005D_Form.pdf) The completed form can be emailed to the CAA at: [ca005@caa.govt.nz](mailto:ca005@caa.govt.nz)