

Continuing Airworthiness Notice – 85-002 Rev 1



Engine Components Inc. (ECi) Plasma-faced Top Compression Rings

26 October 2007

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 and a serial number for the next CAN in that ATA Chapter.

The contents of this notice are ADVISORY ONLY and are NOT MANDATORY.

Applicability:

Engine Components Inc. (ECi) plasma-faced top compression rings fitted to Lycoming and Teledyne Continental Motors (TCM) series engines as listed in the table below:

Engine:	Type:	Ring P/N:	Ring Set P/N:
Lycoming	320/360/540 (5,125 inch bore)	AEL74241PL	ST203 & CN203
TCM	470	AEC648009PL	ST106 & CN106 ST108 & CN108
TCM	520/550	AEC648005PL	ST110 & CN110

Purpose:

This Continuing Airworthiness Notice (CAN) advises operators of engines listed in the above table to establish if ECi plasma-faced top compression rings are fitted to the engine, if an increase of oil venting from the crankcase breather is experienced in conjunction with the oil turning to a dark colour.

These symptoms usually develop within the first 100 hours TIS after installation of new rings.

Engine Components Inc. (ECi) Service Instruction No. 06-6 dated 23 October 2006 pertains to the subject of this CAN. A copy is available on the ECi website at <http://www.eci2fly.com>

Background:

The P/N of Lycoming ring set corrected to CN203 in revision 1 of this CAN. Engine Components Inc. (ECi) and the NZ CAA have received numerous reports of oil turning black with an increase of oil loss out the crankcase breather on engines fitted with ECi plasma-faced top compression rings. Investigation revealed delamination of the plasma coating on the top compression ring. The cause of the delamination is a combination of poor adhesion of the plasma-fill coating combined with high heat at the top compression ring face.

Recommendation:

Operators that experience an increase of oil venting from the crankcase breather in conjunction with the oil turning to a dark colour should establish if ECi plasma-faced top compression rings are fitted to the engine. Top compression rings which show any signs of delamination of the plasma coating should be replaced per ECi Service Instruction No. 06-6 and the engine manufacturer instructions.

Note: Refer to ECi Service Instruction No. 06-6 for further information.

Enquiries:

Enquiries with regard to the content of this Continued Airworthiness Notice should be sent to:

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