

EMERGENCY AIRWORTHINESS DIRECTIVE

ENGINE – CYLINDER HEAD SECTION – INSPECTION/REPLACEMENT

Supceded by: 2013-002-E

AD No:	2013-001-E		
Issue Date:	13th March 2013		
Effective Date:	14th March 2013		
Type Approval Holder Name:	Type/Model Designation(s):		
BRP-POWERTRAIN GmbH & Co. KG	Rotax 912 and 914 engines		
Related Mandatory Continuing Airworthiness Information Reference:			
EASA EAD No: 2013-0055-E, dated 06 March 2013 EASA EAD No: 2013-0064-E, dated 12 march 2013			
Related EASA Service Information Bulletin reference:			
N/A			
Manufacturer(s):			
BRP-Powertrain GmbH & Co. KG, BRP-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH			
Applicability:			
All versions of the engine type:			
Engine Type	Serial Number		
912 UL	from S/N 6,770.826 up to S/N 6,770.874 inclusive/6,770.877 up to 6,770.884 inclusive/6,770.888 up to S/N 6,770.892 inclusive.		
912 ULS	S/N 6,779.708/from S/N 6,780.435 up to S/N 6,780.436 inclusive/6,780.706 up to 6,780.735 inclusive/6,780.761 up to 6,780.917 inclusive/6,780.919 up to 6,780.985 inclusive/6,780.987 up to 6,781.004 inclusive/6,781.006 up to 6,781.051 inclusive/6,781.058 up to 6,781.059 inclusive/6,781.064 up to 6,781.075 inclusive/6,781.100/6,781.173 up to 6,781.180 inclusive.		
914 UL	from S/N 7,682.341 up to S/N 7,682.360 inclusive/7,682.389 up to 7,682.403 inclusive/7,682.425 up to 7,682.504 inclusive/7,682.526 up to 7,682.532 inclusive/7,682.576 up to 7,682.595 inclusive		
Justification:			
<p>During a production test run, a non-compliance of the installed cylinder head assembly of cylinder no. 2 and 3 (2/3) was detected, which may result in a latent defect on a limited number of engines. The affected cylinder heads may not have been manufactured in accordance with the specification.</p> <p>This condition, if not detected and corrected, could lead to an oil leak in the intake channel in the area of the valve guide. The affected non-conforming cylinder heads may have small machined through holes, which can increase the oil consumption and can lead to oil starvation, possibly resulting in engine stoppage or in-flight engine shutdown and forced landing, with consequent risk of damage to the aeroplane and injury to occupants. For the reasons described above, this AD requires inspection of the affected cylinder head assemblies and, depending on findings, replacement of the cylinder head assembly.</p>			

This AD also prohibits installation of an affected engine on an aeroplane, unless the affected cylinder head assembly of that engine has passed the inspection as required by this AD.

Compliance:

Required as indicated, unless accomplished previously:

- (1) Within 5 flight hours or 20 days, whichever occurs first after the effective date of this AD, inspect the cylinder head assembly of cylinder no. 2 and 3 (2/3) in accordance with the instructions of Section 3 of BRP-Powertrain Alert Service Bulletin (ASB) ASB-912-062 or ASB-914-044 (published as a single document), as applicable to engine type.
- (2) If, during the inspection as required by paragraph (1) of this AD, excessive deposits (oil or carbon) are found on one of the spark plugs, before next flight, replace the affected cylinder head assembly with a serviceable one in accordance with the instructions of Section 3 of BRP-Powertrain ASB-912-062 or ASB-914-044, as applicable to engine type.
- (3) From the effective date of this AD, do not install any affected engine (type and s/n as listed in the Applicability section of this AD) on an aeroplane, unless that engine has been inspected and, depending on findings, corrected as required by this AD.

Reference Publications:

BRP-Powertrain ASB-912-062 and ASB-914-044 (published as a single document), dated 05 March 2013.
EASA EAD No: 2013-0055-E dated 06 March 2013.
EASA EAD No: 2013-0064-E dated 12 March 2013.

Remarks:

1. If requested and appropriately substantiated, TM CAD can approve Alternative Methods of Compliance for this AD.
2. Enquiries regarding this AD should be referred to the Airworthiness Inspectorate, Transport Malta Civil Aviation Directorate. E-mail: civil.aviation@transport.gov.mt.
3. For any question concerning the technical aspects of the requirements in this AD, please contact: BRP-Powertrain GmbH & Co. KG, Telephone: +43 7246 601 0; Fax: +43 7246 601 9130; E-mail: airworthiness@brp.com, Website www.rotax-aircraft-engines.com.