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Transport Malta

AIRWORTHINESS DIRECTIVE

ENGINE – Valve Push Rod Assembly – INSPECTION/REPLACEMENT	
AD No:	2018-0001
Issue Date:	11 May 2018
Effective Date:	11 May 2018
Type Approval Holder Name: BRP-POWERTRAIN GmbH & Co. KG	Type/Model Designation(s): Rotax 912 and 914 engines
Related Mandatory Continuing Airworthiness Information Reference: EASA AD No: 2017-0208, dated 13 October 2017 Rotax SB-912i-008R1, dated 12 October 2017 Rotax SB-912-070R1, dated 12 October 2017 Rotax SB-914-052R1, dated 12 October 2017	
Supersedure N/A	
Related EASA Service Information Bulletin reference: N/A	
Manufacturer(s): BRP-Powertrain GmbH & Co. KG	
Applicability: All engines of Series Rotax 912UL, 912ULS, 914UL engines. For Serial numbers affected refer to Rotax SB SB-912 i-008iS/SB-912-070UL / SB914-052UL at latest revision	
Justification: Power loss and engine RPM drop have been reported on Rotax 912/914 engines in service. It has been determined that, due to a quality control deficiency in the manufacturing process of certain valve push-rod assemblies manufactured between 08 June 2016 and 02 October 2017 inclusive, partial wear on the rocker arm ball socket may occur, which may lead to malfunction of the valve train. This condition, if not detected and corrected, may lead to rough engine operation and loss of power, possibly resulting in a forced landing with consequent damage to the aeroplane and injury to occupants. To address this potential unsafe condition, BRP-Rotax issued Service Bulletin (SB) SB-912 i-008 / SB-912-070 / SB-914-052 (single document), providing applicable instructions.	

For the reason described above, this AD requires a one-time inspection and, depending on findings, replacement of affected parts.

This AD also prohibits installation of affected parts on an engine. This AD, for the uncertified engine variants, mirrors the EASA AD 2017-0208, which was for the certified engine variants.

Compliance:

Required as indicated unless accomplished previously:

Note 1: Valve push-rod assemblies Part Number (P/N) 854861 are hereafter referred to as “valve push-rod” in this AD.

Note 2: BRP Rotax SB-912 i-008 / SB-912-070 / SB-914-052 (single document) is hereafter referred to as “the SB” in this AD.

Note 3: BRP Rotax SB-912 i-008iS / SB-912-070UL / SB-914-052UL (single document) is hereafter referred to as “the Applicability SB” in this AD.

Note 4: For the purpose of this AD, Group 1 engines are those having a serial number (s/n) as listed in the Applicability SB (see Note 3 of this AD); or an engine, having any s/n, on which a valve push-rod (see Note 1 of this AD) has been replaced in service between 08 June 2016 and the effective date of this AD inclusive. Group 2 engines are those that are not Group 1.

Inspection:

- (1) For Group 1 engines (see Note 4 of this AD): Within the compliance time identified in Table 1 of this AD, as applicable, visually inspect the push-rod ball sockets of each valve push-rod in accordance with the instructions of the SB.

Table 1 – Visual Inspection of Affected Assembly

Engine Flight Hours (FH) since first installation on an aircraft	Compliance Time
160 FH or less	Before exceeding 170 FH since first installation of the engine on an aircraft, or within 3 months after the effective date of this AD, whichever occurs first.
More than 160 FH	Within 10 FH or 3 months, whichever occurs first after the effective date of this AD

Corrective action:

- (2) If, during the inspection as required by paragraph (1) of this AD, a valve push-rod having black surface is detected (reference Fig. 1 in the SB), before next flight, replace that valve push-rod and its affected parts (see Note 5 of this AD) with serviceable ones in accordance with the instructions of the SB.

Note 5: for the purpose of this AD, an affected part is listed in Table 2 of this AD.

Table 2 – Affected Part

Part	Part Number
Valve push-rod assembly	854861
Rocker arm left	854383
Rocker arm right	854393

Part installation:

- (3) For Group 1 and Group 2 engines: From the effective date of this AD, it is prohibited to install on any engine a valve push-rod (see Note 1 of this AD) manufactured between 08 June 2016 and 02 October 2017 inclusive

Reference Publications:

BRP-Rotax SB-912 i-008iS / SB-912-070UL / SB-914-052UL (single document) Initial Issue 12 October 2017

BRP-Rotax SB-912 i-008 R1 / SB-912-070 R1 / SB-914-052 R1 (Single Document) Revision 1 12 October 2017

The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD

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.