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 <b>適航指令發布單</b> <b>Airworthiness Directive Issuance Form</b>			
民航局 AD 編號 AD number	CAA-2017-10-006 修訂	發布日期 Date issued	2017/12/26
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	Rotax 912 A1, 912 A2, 912 A3 and 912 A4 engines, Rotax 912 F2, 912 F3 and 912 F4 engines, Rotax 912 S2, 912 S3 and 912 S4 engines, Rotax 912 iSc2 Sport and 912 iSc3 Sport engines, and Rotax 914 F2, 914 F3 and 914 F4 engines, all serial numbers. These engines are known to be installed on, but not limited to, the aeroplane types and models as listed in Appendix 1 of this AD. The installation of these engines was either done by the respective aeroplane manufacturer, or through modification of the aircraft by Supplemental Type Certificate (STC).		
主旨摘要	Reciprocating Engine - Valve Push Rod Assembly - Inspection / Replacement		
民航局 CAA <input type="checkbox"/> 本國產品 Native products <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authorities <input type="checkbox"/> FAA <input type="checkbox"/> Germany LBA <input checked="" type="checkbox"/> EASA <input type="checkbox"/> CAA-NL <input type="checkbox"/> Brazil <input type="checkbox"/> UK CAA <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> Japan CAB <input type="checkbox"/> DGAC <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____		
	設計國 AD 編號 Original AD number	2017-0208Correction	
	1. 直接採用原 AD 之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) _ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將 AD 執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	ATA 72. Ref. Publications: BRP Rotax SB-912 i-008 / SB-912-070 / SB-914-052 (single document) Revision 1 dated 12 October 2017.		
註： 1. AD 內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a> Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6331~3, Fax：(02)2545-8464, e-mail： <a href="mailto:adcaa@mail.caa.gov.tw">adcaa@mail.caa.gov.tw</a>			



## Airworthiness Directive

**AD No.:** 2017-0208

**[Correction: 22 December 2017]**

**Issued:** 13 October 2017

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EC) 216/2008, Article 14(4) exemption].

### Design Approval Holder's Name:

BRP-ROTAX GmbH & Co KG

### Type/Model designation(s):

Rotax 912 and 914 engines

**Effective Date:** 27 October 2017

**TCDS Number(s):** EASA.E.121 and EASA.E.122

**Foreign AD:** Not applicable

**Supersedure:** None

### ATA 72 – Reciprocating Engine – Valve Push Rod Assembly – Inspection / Replacement

#### Manufacturer(s):

BRP-Rotax GmbH & Co KG (formerly BRP-Powertrain GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH)

#### Applicability:

Rotax 912 A1, 912 A2, 912 A3 and 912 A4 engines, Rotax 912 F2, 912 F3 and 912 F4 engines, Rotax 912 S2, 912 S3 and 912 S4 engines, Rotax 912 iSc2 Sport and 912 iSc3 Sport engines, and Rotax 914 F2, 914 F3 and 914 F4 engines, all serial numbers.

These engines are known to be installed on, but not limited to, the aeroplane types and models as listed in Appendix 1 of this AD. The installation of these engines was either done by the respective aeroplane manufacturer, or through modification of the aircraft by Supplemental Type Certificate (STC).

#### Reason:

Power loss and engine RPM drop were reported on Rotax 912/914 engines in service. It was 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 is republished to correct the ATA Chapter number.

#### **Required Action(s) and Compliance Time(s):**

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: For the purpose of this AD, Group 1 engines are those having a serial number (s/n) as listed in the SB (see Note 2 of this AD); or engines, 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 3 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, before next flight, replace that valve push-rod and its affected parts (see Note 4 of this AD) with serviceable ones in accordance with the instructions of the SB.



Note 4: for the purpose of this AD, an affected part is listed in Table 2 of this AD.

Table 2 – Affected Part

Part	Part Number
Vale 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 allowed to install on any engine a valve push-rod (see Note 1 of this AD), provided it is determined it was not manufactured between 08 June 2016 and 02 October 2017 inclusive.

**Ref. Publications:**

BRP Rotax SB-912 i-008 / SB-912-070 / SB-914-052 (single document) Revision 1 dated 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, EASA can approve Alternative Methods of Compliance for this AD.
2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
4. For any question concerning the technical content of the requirements in this AD, please contact: BRP-Rotax GmbH & Co KG, Telephone: +43 7246 601 0, Fax: +43 7246 601 9130, E-mail: [airworthiness@brp.com](mailto:airworthiness@brp.com), Website [www.flyrotax.com](http://www.flyrotax.com).



Appendix 1 – List of Aircraft known to have Rotax engine(s) installed,  
either done by the respective aircraft manufacturer or through modification of the aircraft by  
Supplemental Type Certificate

Type Certificate Holder	Type/model
Aero AT SP z.o.o.	AT-3R100
Aero-East-Europe	Sila 450C
Aeromot-Indústria Mecânico-Metalúrgica	AMT-200 “Super Ximango” and AMT-300 “Turbo Super Ximango”
Aircraft Design and Certification Ltd.	D4 “Fascination”
Aquila Aviation GmbH	Aquila AT01
Textron Aviation (formerly Cessna Aircraft Company)	150 and A150 aeroplanes (and Reims F150 and FA150), modified by various STC
Costruzioni Aeronautiche TECNAM S.r.l.	P92, P2002, P2006T and P2008 JC
Czech Sport Aircraft A.S.	PS-28 “Cruiser”
Diamond Aircraft Industries GmbH	H 36 “Dimona”, HK 36 “Super Dimona”, DV 20 “Katana”
Diamond Aircraft Industries Inc.	DA20-A1 “Katana”
E.I.S. Aircraft GmbH	RF 5 “Sperber”
Evektor spol. s.r.o.	EV-97 VLA, SportStar RTC
Flight - Design	CTLS-ELA
Grob Aircraft AG	G109
Issoire Aviation	APM-20 “Lionceau”
M&D Flugzeugbau GmbH & Co. KG	AVO 68 aeroplanes “Samburo”
Magnaghi Aeronautica S.p.A.	Sky Arrow 650 TC, 650 TCN, 650 TCNS and 710 RG
Korff Luftfahrt	Taifun 17 E II
Pipistrel	Virus SW 121,
S.C. Constructii Aeronautice	IAR-46, IS-28M2/GR
Scheibe Aircraft GmbH	SF 25 C, SF 36 R
Skyfox Aviation	CA-25N
Sportavia Puetzer	RF-9 ABS
Stemme AG	S10-VT, ASP S15-1, TSA-M S6

