



Airworthiness Directive

AD No.: 2017-0242

Issued: 06 December 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:

CZECH SPORT AIRCRAFT a.s.

Type/Model designation(s):

PS-28 Cruiser aeroplanes

Effective Date: 20 December 2017

TCDS Number(s): EASA.A.546

Foreign AD: Not applicable

Supersedure: None

ATA 85 – Reciprocating Engine – Valve Push Rod Assembly – Inspection / Replacement

Manufacturer(s):

For the aeroplane: Czech Sport Aircraft a.s. (CSA)

For the engines: BRP-Rotax GmbH & Co KG (formerly BRP-Powertrain GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH)

Applicability:

PS-28 Cruiser aeroplanes, all manufacturer serial numbers, if equipped with a Rotax 912 ULS2 engine.

Reason:

Power loss and engine RPM drop was 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 01 May 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.



EASA previously issued AD 2017-0208, applicable to BRP-Rotax 912 and 914 certified engines to require inspection of affected parts. PS-28 Cruiser aeroplanes may be equipped with a Rotax 912 ULS2 engine, certified as part of the aeroplane type design, on which the same unsafe condition may exist or develop. Consequently, CSA issued Service Bulletin (SB) SB-CR-044 (hereafter referred to as “the SB” in this AD), to provide instructions for identification and replacement of the affected parts. BRP-Rotax issued SB-912-070UL provides additional information.

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.

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: Engines with a serial number (s/n) as listed in BRP-Rotax SB-912-070UL, and engines with any other s/n on which a valve push-rod (see Note 1 of this AD) has been replaced in service between 01 May 2016 and the effective date of this AD (inclusive), are collectively referred to as “affected engine” in this AD.

Note 3: Group 1 aeroplanes are those that have an affected engine (see Note 2 of this AD) installed. Group 2 aeroplanes do not have an affected engine installed.

Inspection:

- (1) For Group 1 aeroplanes: 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 (see Note 1 of this AD) 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 (see Note 1 of this AD) 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, affected parts are those listed in Table 2 of this AD.



Table 2 – Affected Parts

Part Name	P/N
Vale push-rod assembly	854861
Rocker arm left	854383
Rocker arm right	854393

Part / Engine installation:

- (3) For Group 1 and Group 2 aeroplanes: From the effective date of this AD, it is allowed to install an engine having a valve push-rod (see Note 1 of this AD) installed, or to install a valve push-rod on an engine, provided that, prior to installation, it is determined that the valve push-rod was not manufactured between 01 May 2016 and 02 October 2017 (inclusive).

Ref. Publications:

Czech Sport Aircraft a.s. SB-CR-044 original issue, dated 30 November 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.
4. For any question concerning the technical content of the requirements in this AD, please contact: Czech Sport Aircraft a.s., Na Záhonech 212, 686 04 Kunovice, Czech Republic, Telephone: +420 576 514 032, Fax: +420 576 519 394, Email: office@czechsportaircraft.com.

