

Emergency Airworthiness Directive

AD No.: 2025-0019-E

Issued: 16 January 2025

Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 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, or Annex Vb Part M.A.301, as applicable, 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 Annex Vb Part M.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:

Type/Model designation(s):

BRP-ROTAX GmbH & Co KG

Rotax 912i, 915i and 916i engines

Effective Date: 20 January 2025

TCDS Number(s): EASA.E.121

Foreign AD: Not applicable

Supersedure: None

ATA 71 and 24 – Engine / Electrical Power – Internal Generator – Inspection / Replacement of Oil Spray Nozzle

Manufacturer(s):

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

Applicability:

Rotax 912 iSc Sport, 915 iSc A, 915 iSc C24, 916 iSc A, 916 iSc B and 916 iSc C24 series engines, all models, all serial numbers (s/n).

These engines are known to be installed on various general aviation (EASA CS 23, CS LSA, CS-VLA or CS 22 certified) aeroplanes and powered sailplanes. Installation of these engines was done by either the respective aeroplane manufacturers or through a modification of the aeroplane by Supplemental Type Certificate (STC).

Definitions:

For the purpose of this AD, the following definitions apply:

The ASB: BRP-Rotax Alert Service Bulletin (ASB) ASB-912 i-016 R1 / ASB-915 i-016 R1 / ASB-916 i-006 R1 (Revision 1, published as a single document on 20 December 2024).



Affected part(s): Oil spray nozzle assembly, having Part Number (P/N) 456540, and generator stator assemblies, which match at least one of the following conditions:

- A) known to have been installed initially on engines having a s/n as listed in the Appendix of the ASB;
- B) known to have been delivered as 'spare part', as identified in the applicability section of the ASB;
- C) it cannot be excluded that they are affected by condition A) or B), as defined above,

except those parts which have been in operation for 200 FH or more, without any required maintenance action due to generator stator assembly cooling issues, or those which passed (no discrepancy found) an inspection in accordance with the instructions of the ASB.

Serviceable part(s): Oil spray nozzle assemblies, and generator stator assemblies, eligible for installation in accordance with the instructions of BRP-Rotax, which are not an affected part, as defined in this AD; or oil spray nozzles, having P/N 456540, manufactured (date of EASA Form 1, or equivalent statement of conformity) after 31 October 2024.

Reason:

An occurrence was reported from the production line, where it was found that due to a deviation in the manufacturing process, an excessive amount of LOCTITE has been applied at the sprag clutch housing and/or oil spray nozzle of several engines, which may lead to blockage of the oil nozzle. This blockage of the nozzle could possibly lead to inadequate cooling and damage to (both) the generators.

This condition, if not detected and corrected, could possibly lead to an uncommanded in-flight engine shutdown and consequent forced landing, possibly resulting in damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, BRP-Rotax published the ASB, as defined in this AD, to provide instructions for inspection of the oil spray nozzle and generator stator assemblies, defining criteria for determination of its serviceability, and for replacement of un-serviceable parts.

For the reason described above, this Emergency AD requires repetitive operational checks, and a one-time inspection of the engine oil spray nozzle and the generator stator assembly, as applicable, and, depending on findings, applicable corrective action(s). This AD also prohibits (re)installation of affected parts, as defined in this AD.

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

Required as indicated by this AD, unless the action(s) required by this EAD have been already accomplished:

Repetitive Operational Check:

(1) From the effective date of this AD, before each flight, accomplish an operational check to ensure the availability of the battery backup function in accordance with the instructions of the ASB (see Notes 1 and 2 of this AD).



Note 1: The action required by paragraph (1) of this AD may be accomplished, as appropriate: either by suitably authorised flight crew under the provisions of <u>Commission Regulation (EU) No.</u> 1321/2014 145.A.30(j)3, M.A.606(h)1 or CAO.A.040(c)(1), as applicable; or by the pilot-owner under the provisions of M.A.803 or ML.A.803, as applicable, of the same regulation.

Note 2: Before starting the engine under normal procedure, an additional first start on the battery only (back-up function as described in the ASB) must be accomplished, as introduced in the ASB; the use of any additional external power source (external ground power equipment, battery booster, etc.) is prohibited for these engine starts, part of the operational check, in order to solely acquire (check) the sufficient state of charge / health of the onboard battery.

Inspection:

(2) Within 25 FH or within 12 months, whichever occurs first after the effective date of this AD, accomplish a one-time inspection (functional check) of the oil spray nozzle and generator stator assembly, as applicable, in accordance with the instructions of the ASB.

Corrective Action(s):

- (3) If, during any operational check, as required by paragraph (1) of this AD, any discrepancy is detected, before next flight, contact BRP-Rotax for applicable repair instructions and, before next flight, accomplish those instructions accordingly.
- (4) If, during the inspection (functional check) as required by paragraph (2) of this AD, it is determined that the oil spray nozzle and/or generator stator assembly is un-serviceable, before next flight, replace the discrepant oil spray nozzle and/or generator stator assembly, as applicable, with serviceable part(s), as defined in this AD, in accordance with the instructions of the ASB.

Credit:

(5) Inspections and corrective action(s), as applicable, accomplished on an engine before the effective date of this AD, in accordance with the instructions of BRP-Rotax SB SB-912 i-016 / SB-915 i-016 / SB-916 i-006 at original issue, are acceptable to comply with the requirements of the paragraphs (2) and (4) of this AD, as applicable, for that engine.

Terminating Action:

(6) Accomplishment on an engine, of the inspection(s) as required by paragraph (2) of this AD and of the corrective action(s) as required by paragraph (4) of this AD, as applicable, constitutes terminating action for the repetitive operational checks as required by paragraph (1) of this AD for that engine.

Parts Installation:

(7) From the effective date of this AD, do not (re)install on any engine an affected part, and do not install on any aeroplane an engine having an affected part installed on it.

Ref. Publications:

BRP-Rotax SB ASB-912 i-016 / SB-915 i-016 / SB-916 i-006 (original issue) dated 16 December 2024, or ASB-912 i-016 R1 / SB-915 i-016 R1 / SB-916 i-006 R1 Revision 1 dated 20 December 2024.



The use of later approved revisions of the above-mentioned 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. The results of the safety assessment have indicated the need for immediate publication and notification, without the full consultation process.
- 3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
- 4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the EU aviation safety reporting system. This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), STC or other modification.
- 5. 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, Website www.flyrotax.com.