

## SERVICE INFORMATION NO. SI 20-047

**NOTE:** SI's are used **only**:

- 1) To distribute information from DAI to our customers.
  - 2) To distribute applicable information / documents from our suppliers to our customers with additional information.
- Typically there is no revision service for SI's. Each new information or change of that will be send along with a new SI.

### I. TECHNICAL DETAILS

#### 1.1 Airplanes affected:

all DV 20 airplanes

#### 1.2 Subject:

EASA Emergency Airworthiness Directive No. 2011-0222-E  
ATA-Code: 72-20

#### 1.3 Reason:

EASA has issued Emergency Airworthiness Directive No. 2011-0222-E prescribing inspection of the crankshaft journal (power take off side) of certain crank shaft serial numbers and certain engine serial numbers in reference to Rotax Alert Service Bulletin ASB-912-059 within 4 flight hours or 30 days, whichever occurs first after the effective date of this AD.


#### 1.4 Information:

For detailed technical information refer to EASA Emergency Airworthiness Directive No. 2011-0222-E which is applicable without any further additions or restrictions.

### II. OTHERS

EASA Emergency Airworthiness Directive No. 2011-0222-E is attached to this Service Information.

In case of doubt contact BRP-Powertrain GmbH & Co. KG.

<b>EASA</b>	<b>EMERGENCY AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2011-0222-E</b></p> <p><b>Date: 15 November 2011</b></p> <p>Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.</p>
<p>This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 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 [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>	
<p><b>Type Approval Holder's Name:</b> BRP-Powertrain GmbH &amp; Co. KG</p>	<p><b>Type/Model designation(s):</b> Rotax 912 and 914 series engines</p>
<p>TCDS Numbers : EASA.E.121, EASA.E.122</p>	
<p>Foreign AD : Not applicable</p>	
<p>Supersedure : None</p>	
<b>ATA 72</b>	<b>Engine – Crankshaft – Inspection</b>
<p>Manufacturer(s): BRP-Powertrain GmbH &amp; Co. KG, BRP-Rotax GmbH &amp; Co. KG; Bombardier-Rotax GmbH &amp; Co. KG; Bombardier-Rotax GmbH</p>	
<p>Applicability:</p>	<p>Rotax 912 A1, 912 A2, 912 A3 and 912 A4 engines, all serial numbers (s/n). Rotax 912 F2, 912 F3 and 912 F4 engines, all s/n. Rotax 912 S2, 912 S3 and 912 S4 engines, all s/n. Rotax 914 F2, 914 F3 and 914 F4 engines, all s/n.</p> <p>These engines are known to be installed on, but not limited to, the following types of aeroplanes: <b>3-i</b> Sky Arrow 650 TC, 650 TCN, 650 TCNS and 710 RG; <b>Aeromot</b> AMT-200 Super Ximango and AMT-300 Turbo Super Ximango; <b>Aircraft Philipp</b> (formerly Alpa-Werke; Nitsche) AVO 68 series Samburo; <b>Aquila</b> AT01; <b>Cessna</b> 150 and A150 series; and <b>(Reims)</b> F150 and FA150 series; <b>Diamond</b> (formerly HOAC) H 36 Dimona, HK 36 series Super Dimona, DV 20 Katana and DA20-A1 Katana; <b>Evektor-Aerotechnik</b> EV-97 VLA; <b>Grob</b> G 109; <b>Issoire</b> APM-20 Lionceau; <b>Scheibe</b> SF 36R and SF 25C; <b>Stemme</b> S10-VT; <b>Tecnam</b> P 92-J, P 92-JS and P2002-JF; <b>W.D. Aircraft</b> D4 Fascination.</p> <p><b>Note:</b> The installation of these engines was either done by the respective <b>aeroplane manufacturer</b> or through modification of the aeroplane by Supplemental Type Certificate.</p>
<p>Reason:</p>	<p>During a production process review, a deviation in the manufacturing process of certain Part Number (P/N) 888164 crankshafts has been detected, which may have resulted in a latent defect.</p>

	<p>The affected crankshafts, identified by s/n in Appendix 1 of this AD, have been installed on a limited number of engines, but some crankshaft sets have also been shipped as spare parts.</p> <p>This condition, if not corrected, could lead to crack formation on the power take off side of the crankshaft journal, possibly resulting in failure of the crankshaft support bearing, in-flight engine shutdown and forced landing, damage to the aeroplane and injury to occupants.</p> <p>For the reasons described above, this AD requires the identification and inspection for cracks of all affected crankshafts and, depending on findings, corrective action.</p> <p>This AD also prohibits installation of an affected crankshaft on an engine, or installation of engine with an affected crankshaft installed on an aeroplane, unless the crankshaft has passed the inspection as required by this AD.</p>
Effective Date:	17 November 2011
Required Action(s) and Compliance Time(s)	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Within 4 flight hours or 30 days, whichever occurs first after the effective date of this AD, accomplish the following actions concurrently:</p> <p>(1.1) Identify the s/n of the P/N 888164 crankshaft installed on the engine. The affected P/N 888164 crankshafts are identified by s/n in Appendix 1 of this AD. Engines that are known have had an affected crankshaft installed, as delivered by BRP-Powertrain, are also identified by engine s/n in BRP-Powertrain Alert Service Bulletin ASB-912-059 and ASB-914-042 (single document), as applicable to engine type.</p> <p>(1.2) If the s/n of the crankshaft, identified as required by paragraph (1.1) of this AD, is listed in Appendix 1 of this AD, inspect the crankshaft for cracks, in accordance with the instructions of Section 3 of BRP-Powertrain ASB-912-059 or ASB-914-042, as applicable to engine type.</p> <p>(2) If, during the inspection as required by paragraph (1.2) of this AD, cracks are detected, before next flight, contact BRP-Powertrain for approved instructions and accomplish those instructions accordingly.</p> <p>(3) From the effective date of this AD, do not install an engine, having an affected P/N 888164 crankshaft installed, identified by s/n in Appendix 1 of this AD, on an aeroplane, unless the crankshaft has passed the inspection as required by paragraph (1.2) of this AD.</p> <p>(4) From the effective date of this AD, do not install an affected P/N 888164 crankshaft, identified by s/n in Appendix 1 of this AD, on an engine, unless the crankshaft has passed the inspection as required by paragraph (1.2) of this AD.</p>
Ref. Publications:	<p>BRP-Powertrain Mandatory SB-912-059 and SB-914-042 (same document) dated 15 November 2011.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p>
Remarks:	<p>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</p>

	<p>2. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification.</p> <p>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</p> <p>4. For any question concerning the technical aspects of the requirements in this AD, please contact:  BRP-Powertrain GmbH &amp; Co. KG  Telephone: +43 7246 601 0; Fax: +43 7246 601 9130;  E-mail: <a href="mailto:airworthiness@brp.com">airworthiness@brp.com</a>,  Website <a href="http://www.rotax-aircraft-engines.com">www.rotax-aircraft-engines.com</a>.</p>
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#### Appendix 1 – Affected P/N 888164 crankshafts

40232	40236	40238
40241 and 40242	40245	40248
40256 and 40257	40259	40264 and 40265
40267	40300	40302 and 40303
40310	40329	40335
40337	40349	40358 and 40359
40361	40373	40422 thru 40424 inclusive
40426	40428 thru 40430 inclusive	40432
40435 and 40436	40438 thru 40447 inclusive	40450
40453	40455 and 40456	40461 thru 40464 inclusive
40466	40469	40477 and 40478
40480	40486	40488
40507		