SERVICE INFORMATION LETTER

SERVICE INFORMATION LETTER NO. SIL20A1-010

NOTE: Service Information Letters are used only:

1. To distribute information from Diamond Aircraft Industries (DAI) to our customers.
2. To distribute applicable information/documents from our suppliers to our customers with additional information.

NOTE: Typically there is no revision service for Service Information Letter (SIL). Each new information or change will be sent along with a new SIL.

1. TECHNICAL DETAILS

1.1 Aircraft Affected

All DA20-A1 aircraft with Rotax 912-A3 engine.

1.2 Subject

FAA Airworthiness Directive No 2011-14-09
ATA Code: 74 - Ignition

1.3 Reason

FAA AD No.: 2011-14-09

The FAA has issued the Airworthiness Directive No.: AD 2011-14-09 mandating accomplishment with Rotax Service Bulletin SB-912-058, which prescribes the replacement of the washer P/ N 944072 on the Flywheel hub at certain engine series

1.4 Information

For detailed technical information refer to FAA AD 2011-14-09 which is applicable without any further additions or restrictions. This AD supersedes AD 2011-11-03.

Note: This AD is specific to certain serial numbers only, Check the AD for this informaiton

2. OTHERS

FAA AD No.: 2011-14-09 is attached to this SI.
Rotax Mandatory SB 912-058 is attached to this SI.

Contact BRP-Rotax GmbH & Co. KG, DAI or your local authorized Diamond Service Center.

SERVICE INFORMATION LETTER

To obtain satisfactory results, procedures specified in this service information letter must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service information letter. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service information letter if it is not incorporated. If you no longer own the aircraft to which this service information letter applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft Industries Inc. at the address below.

Diamond Aircraft Industries Inc. 1560 Crumlin Sideroad, London, Ontario, Canada N5V 1S2

Customer Support: Phone: (519) 457-4041 Fax: (519) 457-4045 E-mail: custsupp@diamondair.com
Technical Publications: Phone: (519) 457-4030 Ext. 3173 E-mail: techpubs@diamondair.com

2011-14-09 Various Aircraft: Amendment 39-16744; Docket No. FAA-2011-0714; Directorate Identifier 2011-CE-024-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective July 25, 2011.

Affected ADs

(b) This AD supersedes AD 2011-11-03; Amendment 39-16702.

Applicability

(c) This AD applies to all serial numbers of the following aircraft, equipped with a Rotax Aircraft Engines 912 A series engine, serial number 4,410.888 through 4,410.899, installed and certificated in any category:

Group 1 Airplanes (airplanes previously affected by AD 2011-11-03)

Type Certificate Holder	Aircraft Model	Engine Model
Aeromot-Indústria Mecânico-Metalúrgica Ltda	AMT-200	912 A2
Diamond Aircraft Industries	HK 36 R “SUPER DIMONA”	912 A
Diamond Aircraft Industries Inc.	DA20-A1	912 A3
HOAC-Austria	DV 20 KATANA	912 A3
Iniziative Industriali Italiane S.p.A.	Sky Arrow 650 TC	912 A2
SCHEIBE-Flugzeugbau GmbH	SF 25C	912 A2

Group 2 Airplanes (airplanes not previously affected by AD 2011-11-03)

Type Certificate Holder	Aircraft Model	Engine Model
DIAMOND AIRCRAFT INDUSTRIES GmbH	HK 36 TS and HK 36 TC	912 A3

Subject

(d) Air Transport Association of America (ATA) Code 74: Ignition.

Reason

(e) The mandatory continuing airworthiness information (MCAI) states:

During a production process review, a deviation in hardening of certain Part Number (P/N) 944072 washers has been detected, which exceeds the hardness of the design specification.

The affected washers are part of the magneto ring flywheel hub installation and have been installed on a limited number of engines. No defective washers have been shipped as spare parts.

This condition, if not corrected, could lead to cracks in the washer, loosening of the magneto flywheel hub and consequent ignition failure, possibly resulting in damage to the engine, in-flight engine shutdown and forced landing, damage to the aeroplane and injury to occupants.

For the reasons described above, this AD requires, for the affected engines, the replacement of the P/N 944072 washer and associated gasket ring P/N 950141 with serviceable parts, having the same P/N.

This AD also prohibits installation of an affected engine on an aeroplane, unless the washer on that engine has been replaced as required by this AD.

Actions and Compliance

(f) Unless already done, do the following actions:

(1) Replace washer, part number (P/N) 944072, and associated gasket ring, P/N 950141, on the magneto ring flywheel hub with FAA-approved serviceable parts with the same P/Ns. Do the replacements following the Accomplishment Instructions in Rotax Aircraft Engines Mandatory Service Bulletin SB-912-058 and SB-914-041 (same document), dated April 15, 2011.

(i) For Group 1 airplanes (airplanes previously affected by AD 2011-11-03): Within the next 10 hours time-in-service (TIS) after June 16, 2011 (the effective date retained from AD 2011-11-03) or within 4 months after June 16, 2011 (the effective date retained from AD 2011-11-03), whichever occurs first.

(ii) For Group 2 airplanes (airplanes not previously affected by AD 2011-11-03): Within the next 10 hours TIS after July 25, 2011 (the effective date of this AD) or within 4 months after July 25, 2011 (the effective date of this AD), whichever occurs first.

(2) Do not install a Rotax Aircraft Engines 912 A series engine listed in paragraph (c) of this AD unless the washer, P/N 944072, and the gasket ring, P/N 950141, have been replaced as required in paragraph (f)(1) of this AD.

(i) For Group 1 airplanes (airplanes previously affected by AD 2011-11-03): As of June 16, 2011 (the effective date retained from AD 2011-11-03).

(ii) For Group 2 airplanes (airplanes not previously affected by AD 2011-11-03): As of July 25, 2011 (the effective date of this AD).

FAA AD Differences

Note: This AD differs from the MCAI and/or service information as follows: EASA AD 2011-0067-E, dated April 15, 2011, requires returning the removed P/N 944072 to Rotax Aircraft Engines. We are not requiring this because FAA regulation, specifically 14 CFR 43.10, already requires disposition of unairworthy parts.

Other FAA AD Provisions

(g) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to Attn: Sarjapur Nagarajan, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4145; fax: (816) 329-4090. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) Reporting Requirements: For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave., SW., Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

Related Information

(h) Refer to MCAI European Aviation Safety Agency (EASA) AD No. 2011-0067-E, dated April 15, 2011, and Rotax Aircraft Engines Mandatory Service Bulletin SB-912-058 and SB-914-041 (same document), dated April 15, 2011, for related information.

Material Incorporated by Reference

(i) You must use Rotax Aircraft Engines Mandatory Service Bulletin SB-912-058 SB-914-041, dated April 15, 2011, to do the actions required by this AD, unless the AD specifies otherwise.

(1) On June 16, 2011 (76 FR 31465, June 1, 2011), the Director of the Federal Register previously approved the incorporation by reference of Rotax Aircraft Engines Mandatory Service Bulletin SB-912-058 SB-914-041, dated April 15, 2011.

(2) For service information identified in this AD, contact BRP-Rotax GmbH & Co. KG, Welser Strasse 32, A-4623 Gunskirchen, Austria; phone: +43 7246 601 0; fax: +43 7246 601 9130; Internet: http://www.rotax-aircraft-engines.com.

(3) You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(4) You may also review copies of the service information incorporated by reference for this AD at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Kansas City, Missouri, on July 1, 2011.
Earl Lawrence,
Manager, Small Airplane Directorate,
Aircraft Certification Service.

ROTAX AIRCRAFT ENGINES

SERVICE BULLETIN

REPLACEMENT OF WASHER PART NO. 944072 (FLY WHEEL HUB) FOR ROTAX® ENGINE TYPE 912 AND 914 (SERIES)

SB-912-058
SB-914-041

MANDATORY

Symbols used:

Please, pay attention to the following symbols throughout this document emphasizing particular information.

▲ WARNING: Identifies an instruction, which if not followed, may cause serious injury or even death.

■ CAUTION: Denotes an instruction which if not followed, may severely damage the engine or could lead to suspension of warranty.

◆ NOTE: Information useful for better handling.

| || A revision bar outside of the page margin indicates a change to text or graphic.

1) Planning information

1.1) Engines affected

All versions of the engine type:

- 912 A from S/N 4,410.888 up to S/N 4,410.899
- 912 F from S/N 4,412.986 up to S/N 4,412.987
- 912 S from S/N 4,924.087 up to S/N 4,924.139 / 4,924.141 up to 4,924.166
- 914 F from S/N 4,420.970 up to S/N 4,420.990 / 4,420.997 / 4,421.001 up to 4,421.003
- Washers delivered as spare part no. 944072 are not affected.

1.2) Concurrent ASB/SB/SI and SL

none

1.3) Reason

A deviation in hardening process could cause an exceeding of hardness of certain washer. This deviation could lead to cracks in the washer and could cause loosening of fly wheel, ignition failure or engine damage.

1.4) Subject

Replacement of washer part no. 944072 (fly wheel hub) for ROTAX® engine type 912 and 914 (Series).

1.5) Compliance

- Required within the next 10 flight hours of operation after the effective date of this Service Bulletin, but at the latest before 31 August 2011. The replacement of washer part no. 944072 identified by the engine serial number (S/N) listed in section 1.1) must be conducted according to the following instructions in section 3.

▲ WARNING: Non-compliance with these instructions could result in engine damages, personal injuries or death.

1.6) Approval

The technical content of this document is approved under the authority of DOA ref. EASA.21J.048.

d05072.fm

1.7) Manpower

Estimated man-hours:
engine installed in the aircraft - - - manpower time will depend on installation and therefore no estimate is available from the engine manufacturer.

1.8) Mass data

change of weight - - - none.
moment of inertia - - - unaffected.

1.9) Electrical load data

no change

1.10) Software accomplishment summary

no change

1.11) References

In addition to this technical information refer to current issue of
- Maintenance Manual (MM)

◆ NOTE: The status of Manuals can be determined by checking the table of amendments of the Manual. The 1st column of this table is the revision status. Compare this number to that listed on the ROTAX WebSite: www.rotax-aircraft-engines.com. Updates and current revisions can be downloaded for free.

1.12) Other publications affected

none

1.13) Interchangeability of parts

- All washers according to section 1.1) must be returned F.O.B to a ROTAX® Authorized Distributor or their Service Center.

◆ NOTE: Used parts should be tagged with a respective "UNSERVICEABLE" mark.

2) Material Information

2.1) Material - cost and availability

Price and availability will be supplied on request by ROTAX® Authorized Distributors or their Service Center.

2.2) Company support information

- Shipping cost, down time, loss of income, telephone costs etc. or cost of conversion to other engine versions or additional work, as for instance simultaneous engine overhaul is not covered in this scope and will not be borne or reimbursed by ROTAX®.

2.3) Material requirement per engine

parts requirement:

Fig.no.	New p/n	Qty/engine	Description	Old p/n	Application
	944072	1	washer 17/36/5		fly wheel hub
	950141	1	gasket ring A8x13		crank case

2.4) Material requirement per spare part

none

2.5) Rework of parts

none

2.6) Special tooling/lubricant-/adhesives-/sealing compound

none

3) Accomplishment / Instructions

◆ NOTE: Before maintenance, review the entire documentation to make sure you have a complete understanding of the procedure and requirements to prevent mistakes from an incomplete review of all of the information in this document.

Accomplishment

All the measures must be taken and confirmed by the following persons or facilities:

- ROTAX® -Airworthiness representative
- ROTAX® -Distributors or their Service Centers
- Persons approved by the respective Aviation Authority

▲ WARNING: Proceed with this work only in a non-smoking area and not close to sparks or open flames. Switch off ignition and secure engine against unintentional operation. Secure aircraft against unauthorized operation. Disconnect negative terminal of aircraft battery.

▲ WARNING: Risk of scalds and burns! Allow engine to cool sufficiently and use appropriate safety gear while performing work.

▲ WARNING: Should removal of a locking device (e.g. lock tabs, self-locking fasteners, etc.) be required when undergoing disassembly/assembly, always replace with a new one.

◆ NOTE: All work has to be performed in accordance with the relevant Maintenance Manual.

3.1) Replacement of washer part no. 944072

See fig. 1.

1. Remove ignition cover (1).
2. Lock the crankshaft in accordance with the relevant Maintenance Manual (Line).
3. Remove hex. screw (4) in accordance with the relevant Maintenance Manual (Heavy).

◆ NOTE: Fly wheel hub does not have to be removed unless it has become loose.

■ CAUTION: If the fly wheel hub has loosened during the dissassembly and/or in case of doubt, then remove, clean and install the fly wheel hub in accordance with the relevant Maintenance Manual. In this case the tightening torque is 45 Nm (33.2 ft.lb) + 180° angle to rotation.

4. Install hex. screw (4). **Tightening torque 120 Nm (89 ft.lb).**

■ CAUTION: During installation the new washer (2) part no. 944072 must be used.

5. Remove locking pin of crankshaft in accordance with the relevant Maintenance Manual.
6. Check trigger coil gap, if necessary adjust it in accordance with the relevant Maintenance Manual.
7. Install ignition cover (1). The hex. screws (6) are locked with Loctite 221. Tightening torque 5 Nm (44 in. lb.).

- Restore aircraft to original operating configuration.
- Connect negative terminal of aircraft battery.

3.2) Test run

Conduct test run including ignition check and leakage test.

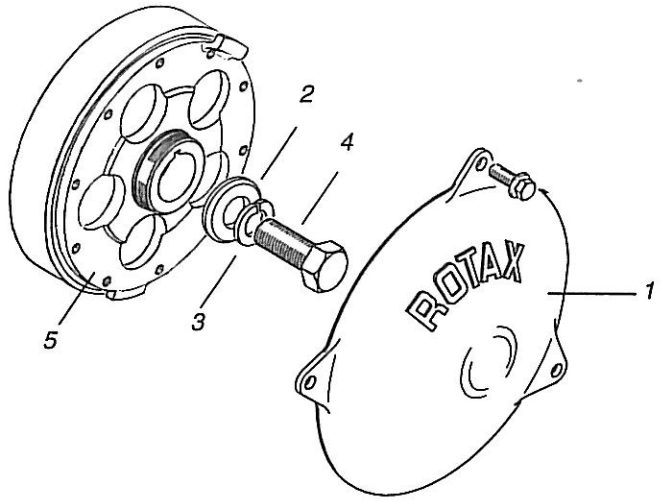
3.3) Summary

These instructions (section 3) have to be conducted in accordance with compliance in section 1.5.
The execution of the mandatory Service Bulletin must be confirmed in the logbook.

Approval of translation to best knowledge and judgement - in any case the original text in German language and the metric units (SI-system) are authoritative.

4) Appendix

the following drawings should convey additional information:



1 *ignition cover*
2 *washer 17/36/5*
3 *lock washer*
4 *hex. screw M16x1,5x40*
5 *fly wheel hub*
6 *hex. screw M6x16*

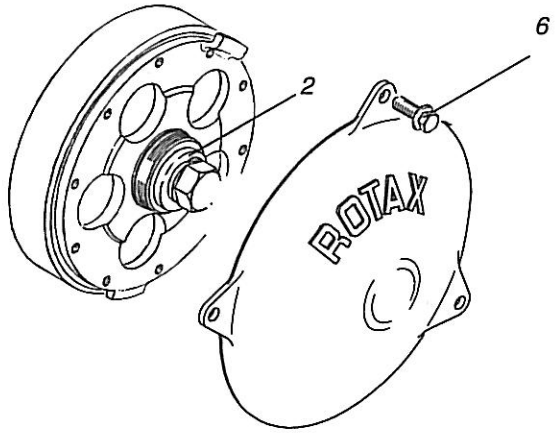


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Fig. 1

magneto ring, fly wheel hub, ignition cover

◆ NOTE: The illustrations in this document show the typical construction. They may not represent full detail or the exact shape of the parts which have the same or similar function.
Exploded views are **not technical drawings** and are for reference only. For specific detail, refer to the current documents of the respective engine type.