

## TECHNISCHE INFORMATION NR. SI36-041

**HINWEIS:** Technische Informationen werden **nur** verwendet um:  
1) Informationen von DAI an unsere Kunden weiterzugeben.  
2) Informationen / Dokumente von unseren Zulieferern mit zusätzlichen Informationen an unsere Kunden weiterzugeben.  
Typischerweise unterstehen Technische Informationen keinem Revisionsdienst. Neue Informationen oder Änderungen derer werden durch eine neue Technische Information weitergegeben.

## SERVICE INFORMATION NO. SI36-041

**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. TECHNISCHE ANGABEN

#### 1.1 Betroffene Flugzeuge:

Alle

HK 36 R  
HK 36 TS  
HK 36 TC

Flugzeuge, die mit BRP-Rotax 912 Serie  
Motoren ausgerüstet sind.

#### 1.2 Gegenstand

ATA Code: 73  
BRP Rotax 912 Serie Motoren – Austausch der  
Kraftstoffpumpe

### I. TECHNICAL DETAILS

#### 1.1 Airplanes affected:

All

HK 36 R  
HK 36 TS  
HK 36 TC

aircraft equipped with BRP-Rotax 912 Series  
engines

#### 1.2 Subject

ATA Code: 73  
BRP Rotax 912 Series Engines – Fuel Pump  
Replacement

**1.3 Anlaß**

Die EASA hat die revidierte Lufttüchtigkeitsanweisung EASA AD No. 2007-0060R1-E veröffentlicht, welche den Austausch der Kraftstoffpumpe von BRP-Rotax 912 Motoren vorschreibt.

**1.4 Information**

Für detaillierte technische Informationen siehe das EASA AD 2007-0060R1-E welches ohne weitere Ergänzungen und Einschränkungen anwendbar ist.

**II. SONSTIGES**

Bei etwaigen Fragen kontaktieren Sie bitte BRP-Rotax GmbH & Co. KG oder Diamond Aircraft Industries GmbH.

Das EASA AD 2007-0060R1-E liegt dieser TI bei.

**1.3 Reason**

EASA has issued the revised AD No. 2007-0060R1-E which prescribes the fuel pump replacement of BRP-Rotax 912 engines.


**1.4 Information**

For detailed technical information see EASA AD 2007-0060R1-E which is applicable without any further additions or restrictions.

**II. OTHER INFORMATION**

In case of doubt contact BRP-Rotax GmbH & Co. KG or Diamond Aircraft Industries GmbH.

The EASA AD 2007-0060R1-E is attached to this SI.

<b>EASA</b>	<b>EMERGENCY AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No : 2007- 0060R1 - E</b></p> <p><b>Date: 20 April 2007</b></p>
No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.	
<b>Type Approval Holder's Name :</b> BRP-Rotax GmbH & Co. KG	<b>Type/Model designation(s) :</b> Rotax 912 A series Rotax 912 F series Rotax 912 S series
TCDS Number: EASA.E.121	
Foreign AD: N/A	
Supersedure: N/A	
<b>ATA 73</b>	<b>Engine Fuel and Control - Fuel Pump - Replacement</b>
<b>Manufacturer(s):</b>	BRP-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH;
<b>Applicability:</b>	<p>All versions of the engine type Rotax 912 A, 912 F and 912 S all serial numbers if Fuel pump part no. 892230, 892232, 892540 (standard version) or part no. 892235, 892236, 892545 (version including flexible fuel line), are installed.</p> <p>These engines are known to be installed on, but not limited to, the following aircraft types:</p> <p>Skyfox CA-25, CA-25N; Diamond (formerly HOAC) HK-36R Super Dimona, DV 20 Katana; Aeromot AMT-200 Super Ximango; Diamond DA20-A1 Katana; Evektor-Aerotechnik EV-97 Eurostar; Issoire APM-20 Lionceau; EIS (Fournier) RF-9; Scheibe SF 36R, SF 25C; Technoflug TFK-2 Carat; WD D4 BK Fascination; III Sky Arrow 650 TC, 650 TCN and 650 TCNS; ABS RF-9 motor glider (Fournier design);</p>
<b>Reason:</b>	Due to high fuel pressure, caused by exceeding pressure in front of the mechanical fuel pump (e.g. due to an electrical fuel pump), in limited cases a deviation in the fuel supply could occur. This can result in exceeding of the fuel pressure and might cause engine malfunction and/or massive fuel leakage.

	<p>Non-compliance with these instructions could result in engine damages, personal injuries or death.</p> <p>This Airworthiness Directive has been revised to incorporate reference to BRP Rotax SB-912-053, which has been issued to replace BRP Rotax ASB-912-053.</p> <p>If the operator has shown compliance with BRP Rotax ASB-912-053, as mandated by EASA Airworthiness Directive 2007-0060-E, no further action is required.</p>
Effective Date:	24 April 2007
Compliance:	<p>At the next maintenance event, or within the next 25 hours of engine operation, but not later than 01 July 2007, whichever occurs first after the effective date of this directive:</p> <p>-replace the affected fuel pumps with part no. 892230, 892232, 892540 by part no. 892542 or replace fuel pumps with part no. 892235, 892236, 892545 by part no. 892546</p> <p>After the effective date of this AD no person may install a replacement engine on any aircraft unless fuel pump part no. 892542 or part no. 892546 are installed.</p>
Ref. Publications:	BRP Rotax Service Bulletin SB-912-053, dated 13 April 2007, or later approved revision
Remarks :	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Methods of Compliance (AMOC) for this AD.</li> <li>2. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification.</li> <li>3. Enquiries regarding this Airworthiness Directive should be referred to the AD Focal Point - Certification Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a> .</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact BRP-Rotax GmbH &amp; Co.KG Ph.: +43 7246 601 0; Fax: +43 7246 601 760</li> </ol>

# **SERVICE BULLETIN**

## **REPLACEMENT**

## **OF FUEL PUMP**

### **FOR ROTAX® ENGINE TYPE 912 (SERIES)**

### **SB-912-053**

## **MANDATORY**

### **Repeating symbols:**

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.

### **1) Planning information**

#### **1.1) Engines affected**

All versions of the engine type:

- 912 A from S/N 4,410.684 to S/N 4,410.727
- 912 F from S/N 4,412.913 to S/N 4,412.925
- 912 S from S/N 4,923.282 to S/N 4,923.461

#### **all parts**

- Fuel pump part no. 892230, 892232, 892540 (standard version) and part no. 892235, 892236, 892545 (version including flexible fuel line), which was supplied as a spare part.
- Also affected are all engines and gearboxes in which the above mentioned fuel pumps were installed at engine repair/general overhaul as a spare part during the supply period starting January, 2006.
- ◆ **NOTE:** All engines and gearboxes that were already retrofitted with a new fuel pump part no. 892542 or 892546 are not affected.

#### **1.2) Concurrent ASB/SB/SI and SL**

none

#### **1.3) Reason**

Due to high fuel pressure, caused by exceeding pressure in front of the mechanical fuel pump (e.g. due to an electrical fuel pump), in limited cases a deviation in the fuel supply could occur. This can result in exceeding of the fuel pressure and might cause engine malfunction and/or massive fuel leakage.

#### **1.4) Subject**

Replacement of fuel pumps with part no. 892230, 892232, 892540 through part no. 892542 and Replacement of fuel pumps with part no. 892235, 892236, 892545 through part no. 892546 for ROTAX® engine type 912 (Series).

#### **1.5) Compliance**

- before the first installation\*
- At the next maintenance event, but within the next 25 hours of operation\*
- At the latest July 1<sup>st</sup> 2007\*

\* if the Alert Service Bulletin ASB-912-053 was not already performed.

▲ **WARNING:** The replacement has to be performed regardless the SB-912-050, "Checking or replacement of fuel pump part no. 892230/892235"!

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

### 1.6) Approval

The technical content is approved under the authority of DOA Nr. EASA.21J.048.

### 1.7) Manpower

Estimated man-hours:

Engine installed in the aircraft - - -manpower time will depend on installation and thus, 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

- Operator's Manual (OM)
- Illustrated Parts Catalog (IPC)
- Maintenance Manual (MM)

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

### 1.12) Other publications affected

The following documentations must be replaced as a consequence of this Service Bulletin and will become invalid therefore.

- SB-912-050 "Checking or replacement of fuel pump part no. 892230/892235", current issue
- ASB-912-053 "Replacement of fuel pump", current issue

### 1.13) Interchangeability of parts

All used parts which cannot be used must be returned F.O.B. to a ROTAX<sup>®</sup> Authorized Distributors or Service Centers.

## 2) Material Information

### 2.1) Material - cost and availability

Price and availability will be supplied on request by ROTAX<sup>®</sup> Authorized Distributors or their Service Centers.

### 2.2) Company support information

None

### 2.3) Material requirement per engine

parts requirement:

Fig.no.	New part no.	Qty/engine	Description	Old part no.	Application
	892542*	1	fuel pump assy.	892230/232/540	fuel system
	892546*	1	fuel pump assy. with fuel line	892235/236/545	fuel system
	950226**	1	gasket	950225	fuel pump

\* dependent of engine type (see IPC)

\*\* gasket is included in the fuel pump assy.

### 2.4) Material requirement per spare part

None

### 2.5) Rework of parts

None

## 2.6) Special tooling/lubricant-/adhesives-/sealing compound - Price and availability

Price and availability will be supplied on request by ROTAX® Authorized Distributors or their Service Centers. parts requirement:

Fig.no.	p/n	Qty/engine	Description	Old p/n	Application
	897651	as required	Loctite 243 blue	-	hex.nut fuel pump

## 3) Accomplishment / Instructions

### 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 (namely lock tabs, self-locking fasteners) 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) Instructions

#### 3.1.1) Replacement of the fuel pump

(see Fig.1)

1. Remove fuel pump (1).
2. Gasket (2) replaced by new part.

■ **CAUTION:** Install new gasket supplied with new fuel pump. Do not reuse old gasket.

◆ **NOTE:** On the sealing surfaces of the gearbox housing and the fuel pump no sealing compound has to be used.

3. Install fuel pump.

4. Tighten uniformly hex. nuts (3) with LOCTITE 243. Tightening torque 15 Nm (133 in.lb).

◆ **NOTE:** The additional use of LOCTITE 243 should be applied at each removal/replacement of the fuel pump and/or gasket. A rework of already installed fuel pumps part no. 892542 and 892546 is not necessary.

5. Install fuel line.

#### 3.1.2) Checking and replacement of the electric (auxiliary) fuel pump

Check output pressure and flow rate of electric (auxiliary) fuel pump as per current ROTAX Installation Manual. Repair or replace any pump that does not meet requirements.

- 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 compliance with section 1.5.

Confirm the implementation of the specified Service Bulletin in the Engine Log book.

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

#### 4) Appendix

The following drawings should provide additional information:

⚡ B LOCTITE 243

part no. (6 digit number)

XXXXXX  
XX.XXXXXX

S/N (6 or 8 digit number)

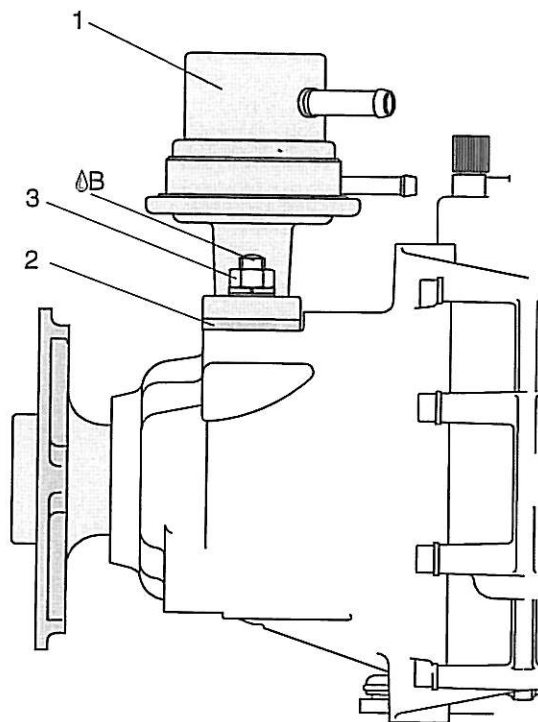


fig. 1

◆ 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.