

### LUFTVÄRDIGHETSDIREKTIV (LVD)

M-Motorer Rotax 912 motorserier LVD Nr 2-3405

Sektion 2. Utlandstillverkad flygmateriel

Denna LVD har utfärdats för att omfatta alla de nationella luftfartyg som inte regleras av EASA utan av det svenska regelverket BCL-M.

TITEL: Byte av Bränslepump slang på Rotax 912 motorserier.

GÄLLER Rotax 912 A1 och 912 A2, 912 A3, 912 A4 Motorer, alla serienummer

(s/n). Rotax 912 F2, 912 F3 och 912 F4 Motorer, alla serienummer (s/n).

Rotax 912 S2, 912 S3, 912 S4 Motorer, alla serienummer (s/n).

Rotax 912UL och 912ULS Motorserier.

REVISION: -

**ÅTGÄRD:** Utför åtgärder i enlighet med bifogad EASA AD 2012-0097R1alternativt

Emergency MPD 2012-002-E. Refererade AD-er finns även tillgängliga

på följande Internetadress: http://ad.easa.europa.eu/ad och

http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11

&mode=detail&id=5046

TID FÖR ÅTGÄRD: Enligt EASA AD 2012-0097R1 och Emergency MPD 2012-002-E men

med denna LVD:s beslutsdatum som utgångspunkt.

UNDERLAG: Enligt EASA AD 2012-0097R1 och Emergency MPD 2012-002-E BRP-

Powertrain ASB-912-061R1 och ASB-912-061ULR1 daterad 31 maj 2012 eller senare revisioner. För alternativa underlag/förfaringssätt att uppfylla denna LVD, se "Alternative Methods of Compliance" i refererade

EASA AD 2012-0097R1och Emergency MPD 2012-002-E.

**REFERENS:** EASA AD 2012-0097R1och Emergency MPD 2012-002-E

BESLUTSDATUM: 07 juni 2012

**BESLUT:** TSL 2012-2747

Åtgärder enligt LVD utgör nödvändig förutsättning för ifrågavarande flygmateriels luftvärdighet. Referens BCL M 1.11.

Anteckning om åtgärd, som vidtagits i enlighet med LVD, skall införas i teknisk journal för berörd flygmateriel med hänvisning till ifrågavarande LVD-nummer. Angivet underlag refererar till senast gällande revision/utgåva.

Postadress Gatuadress Telefonnummer Faxnummer 601 73 NORRKÖPING Olai Kyrkogata 35 0771-503 503 011-185256

EASA	AIRWORTHINESS DIRECTIVE			
	AD No.: 2012-0097R1			
	Date: 01 June 2012			
C	Note: This 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.			
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].				
Type Approval Holder's Name :		Type/Model designation(s):		
BRP-Powertrain GmbH & Co. KG		Rotax 912 series engines		
TCDS Number:	EASA.E.121			
Foreign AD:	Not applicable			
Revision:	This AD revises EASA Emergency AD 2012-0097-E dated 31 May 2012, which superseded EASA Emergency AD 2012-0093-E dated 26 May 2012.			
ATA 73	Engine Fuel and Control – Fuel Pump Pressure Side Hose – Replacement			
Manufacturer(s):	BRP-Powertrain GmbH & Co. KG, BRP-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH.			
Applicability:	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.			
	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; <b>Aircraft Philipp</b> (formerly Alpla-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>Tecnam</b> P 92-J, P 92-JS and P2002-JF; <b>W.D. Aircraft</b> D4 Fascination.			
		on of these engines was either done by the respective cturer or through modification of the aeroplane by Certificate.		
Reason:	installed on certain latent defect on a lir	eld confirmed a non-compliance of pressure side fuel hoses P/N 893114 fuel pumps, which may have resulted in a mited number of engines. The affected fuel hoses may not accordance with the specification.		
	This condition, if no	t corrected, could lead to detachment of particles from the		

EASA AD No.: 2012-0097R1

fuel hose and irregularities in the carburettor function, possibly resulting in inflight engine shutdown and forced landing, damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, EASA issued Emergency AD 2012-0093-E to require the replacement of the pressure side fuel hose on certain fuel pumps, identified by P/N 893114. That AD also prohibited installation of an affected engine on an aeroplane, unless the fuel pump installation of that engine had been corrected as required by the AD.

Since that AD was issued, the relevant BRP-Powertrain Alert Service Bulletin (ASB) ASB-912-061 has been revised (R1) to correct the list of affected P/N 893114 fuel pumps, identified by s/n. As some of these pumps (including potentially defective hoses) have been delivered as spares, they could also be installed on other engines than those specified by s/n in BRP-Powertrain ASB-912-061R1.

For the reasons described above, this AD retains the requirements of EASA Emergency AD 2012-0093-E, which is superseded, expands the Applicability to all Rotax 912 series engines and corrects Table 1 - Affected P/N 893114 fuel pumps. In addition, 2 aeroplane types have been removed from the Applicability of this AD: Aeromot AMT 300 Turbo Super Ximango and Stemme S10 VT have a Rotax 914 engine installed, not a Rotax 912.

This AD has been revised to correct Table 1 of the Required Action(s) and Compliance Time(s) section, which did not contain all affected s/n fuel pumps.

#### Effective Date:

01 June 2012 [same as original AD]

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

Required as indicated, unless accomplished previously:

- (1) Before next flight after the effective date of this AD, accomplish the following actions concurrently:
  - (1.1) Inspect the P/N 893114 fuel pump installed on the engine to identify the s/n of the pump. In lieu of this inspection, a review of engine installation- or maintenance records is acceptable to identify the s/n of the fuel pump, provided those records can be relied upon for that purpose, and the s/n of the fuel pump can be conclusively identified from that review. Engines that are known to have had an affected fuel pump installed, as delivered by BRP-Powertrain, are also identified by engine s/n in BRP-Powertrain Alert Service Bulletin (ASB) ASB-912-061R1.

Table 1 – Affected P/N 893114 fuel pumps, identified by s/n:

11.3117 through 11.3325 inclusive
11.4036 through 11.4355 inclusive
11.4516 through 11.4595 inclusive
12.0251 through 12.0270 inclusive

- (1.2) If the s/n of the fuel pump, identified as required by paragraph (1.1) of this AD, is listed in Table 1 of this AD, replace the pressure side fuel hose in accordance with the instructions of Section 3) of BRP-Powertrain ASB-912-061R1.
- (2) From the effective date of this AD, do not install a P/N 893114 fuel pump, identified by s/n in Table 1 of this AD, on an engine, unless the pressure side fuel hose of that pump has been replaced as required by paragraph (1) of this AD.
- (3) From the effective date of this AD, do not install a Rotax 912 engine on an aeroplane, unless that engine has been inspected and, depending on

EASA AD No.: 2012-0097R1

	findings, corrected as required by paragraph (1) of this AD.		
Ref. Publications:	BRP-Powertrain ASB-912-061R1, dated 31 May 2012.  The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.		
Remarks:	<ol> <li>If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> </ol>		
	<ol><li>The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication.</li></ol>		
	<ol> <li>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>.</li> </ol>		
	<ol> <li>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: <u>airworthiness@brp.com</u>, Website: <u>www.rotax-aircraft-engines.com</u>.</li> </ol>		



# Civil Aviation Authority EMERGENCY MANDATORY PERMIT DIRECTIVE



Number: 2012-002-E

Issue date: 6 June 2012

this Mandatory Permit		009 as amended the following action required by bry for applicable aircraft registered in the United		
Type Approval Holder's Name:		Type/Model Designation(s):		
BRP - Powertrain GmbH & Co. KG		Rotax 912		
Title:	Fuel Pump - Pressur	Fuel Pump - Pressure side fuel hose replacement		
Manufacturer:	BRP - Powertrain Gm	BRP - Powertrain GmbH & Co. KG		
Applicability:	Rotax 912UL and 912	Rotax 912UL and 912ULS series engines		
Reason:	number (P/N) 893114 which does not meet  This condition, if not of from the hose and encarburettor function, planding.  This MPD therefore in for contamination and on engines fitted with 893114. A new hose suspect fuel hose.  This MPD also prohib pump on an aircraft, the substantial of the substan	This MPD therefore instructs immediate inspection of the fuel system for contamination and replacement of the pressure side fuel hose used on engines fitted with certain serial numbers (S/N) of fuel pump P/N 893114. A new hose part number is called up as a replacement for the		
Effective Date:	7 June 2012	7 June 2012		

### Compliance/Action:

1. For Rotax 912UL and 912ULS engines of the following serial numbers:

Note: serial number ranges quoted are inclusive.

912UL S/N. 6,770.549 to 6,770.552

6,770.674 to 6,770.685

912ULS S/N. 6,779.365 to 6,779.367

6,779.378 to 6,779.382 6,779.522 to 6,779.553 6,779.560 to 6,779.561 6,779.582 to 6,779.601 6,779.603 to 6,779.623 6,779.676 to 6,779.705

6,779.709

6,779.709 6,779.853 to 6,779.882 6,779.890 to 6,779.893 6,779.908 to 6,779.913 6,779.962 to 6,779.991 6,780.017 to 6,780.019 6,780.053 to 6,780.054 6,780.064 to 6,780.072 6,780.074 to 6,780.075 6,780.077 to 6,780.079

6.780.087

These engines are known to have been delivered with fuel hoses which are now considered not to meet specification. Before next flight accomplish the following actions, if not already accomplished.

- 1.1. If no fuel pump change has been carried out since entry into service, carry out fuel system inspections and replace the pressure side hose with a new side hose P/N 874336, in accordance with the full instructions of BRP-Powertrain ASB 912-061R1.
- 1.2. If a fuel pump change has been carried out since entry into service, determine the P/N and S/N of the replacement fuel pump fitted. If this fuel pump is P/N 893114 with a S/N included in table 1, carry out fuel system inspections and replace the pressure side hose with a new side hose P/N 874336, in accordance with the full instructions of BRP-Powertrain ASB 912-061R1.
- 2. For all other Rotax 912UL and 912ULS series engines:

These engines are only potentially affected if they have had a fuel pump replacement after 31 October 2011. Determine from records whether a fuel pump replacement has been carried out since this date. If no replacement has been carried out, then no further action is required.

### 2.1 If the engine has had a fuel pump replacement since this date, Compliance/Action: then accomplish the following actions before next flight, if not already accomplished: 2.2 Determine the P/N and S/N of the replacement pump fitted. If this pump is P/N 893114 with a S/N included in table 1, carry out fuel system inspections and replace the pressure side hose with a new hose P/N 874336 in accordance the full instructions of BRP-Powe ASB 912-061R1. 3. Ensure any hose removed from service as a result of this MPD is not re-used. 4. From the effective date of this MPD, do not install an engine having an affected fuel pump P/N 893114 with a S/N as listed in table 1 on an aircraft unless this MPD has been satisfied. Table 1 –Fuel pump Part No. 893114 – Serial Nos. Covered by this MPD 11.3117 to 11.3325 inclusive 11.4036 to 11.4355 inclusive 11.4516 to 11.4595 inclusive 12.0251 to 12.0270 inclusive Ensure compliance with this MPD is recorded in the aircraft logbook BRP-Powertrain ASB-912-061ULR1 dated 31 May 2012. (ASB-912-Reference Publications: 061R1 is referenced in this bulletin). The use of later revisions of this document is acceptable for compliance with this MPD. A subsequent re-issue of this document as "SB" rather than an "ASB" document may also be used to satisfy this MPD. This MPD was not posted for consultation because of the urgency Remarks: of the requirement.

2. Enquiries regarding this Mandatory Permit Directive should be referred to: Airworthiness Evaluation and Surveillance, Civil Aviation Authority, Safety Regulation Group, Aviation House,

Gatwick Airport South, West Sussex RH6 0YR.

E-mail: department.certification@caa.co.uk

Tel: +44 (0)1293 573074

Fax: +44 (0)1293 573976