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Tlgr. : CIVILAIR OSLO
Telex : 77011 idal n

LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX - 1

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

92-017 UTSKIFTING AV STEMPELBOLTENS LAGER

Påbudet gjelder:

Rotax 501 og 505 med serienummer opp til 3.332.827, installert i, men ikke begrenset til PIK-20E motorseilfly.

Påbudet omfatter:

Bytt ut stempelboltens lager med en ny, som har delnummer 832320, i samsvar med Rotax Service Bulletin Nr. 505-05

Tid for utførelse:

1. Innen 100 driftstimer etter 03.03.92.

2. Innen tre driftstimer dersom motorens maks tillatte temperatur har vært overskredet.

Referanse:

Finsk AD M 1891/91.

03.03.92

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDP's nummer.

e.s.trykk-Oslo

e s trvkk - Oslo

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX - 2

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-021A KONTROLL AV KAMAKSEL

Påbudet gjelder:

Rotax 912 A- og UL-serien som har serienummer som listet i vedlagte kopi av østerisk AD nr. 92.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av østerisk AD nr. 92/1.

Tid for utførelse:

Til de tider og intervaller som beskrevet i vedlagte kopi av østerisk AD nr. 92/1, med virkning fra denne LDP's gyldighetsdato.

Referanse:

Østerisk AD nr. 92/1.

Gyldighetsdato:

01.07.97

Bilag til LDP 97-021A

Airworthiness Directive Nr. 92/1

Rotax 912 A-Series
Rotax 912 UL-Series

1. Affected Engine:
   a) Rotax 912 A-Series, S/N 4,380.661 up to S/N 4,380.701
   b) Rotax 912 UL-Series, S/N 4,153.383 up to S/N 4,153.500 and S/N 4,400.001 up to S/N 4,400.031

2. Subject: Inspection of cam-shaft

3. Reason: The hardness of the cam-shaft could be beyond the designated values

4. Action: All affected Rotax 912 A-Series and Rotax 912 UL-Series must comply with the actions required by Bombardier Rotax Technical Bulletin Nr. 912-18 R1 issued 18. March 1997, which becomes herewith part of this AD.

5. Compliance:
   Part I: before next flight and thereafter at every 50-hours in service
   Part II: latest at 600 total hours in service

6. Accomplishment: The required action has to be accomplished by the manufacturer, or through an approved service center or by a licensed/qualified person. An entry into the aircraft/engine Log has to be done.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX - 3

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-048 UTFØRELSE AV ROTAX TECHNICAL BULLETIN NR. 912-02 R1

Påbudet gjelder:

Rotax 912 A motorer.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av østerrisk AD no. 75.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av østerrisk AD no. 75, med virkning fra denne LDP's gyldighetsdato.

Referanse:

østerrisk AD no. 75.

Gyldighetsdato:

01.08.97

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

Airworthiness Directive
No. 75

Affected Aircrafts:	Rotax 912 A Series, Engine for Powered Sailplanes
Subject:	Ignition for Rotax 912 A Series, all engines up to S/N 4,076.022
Reason:	Corrosion between stator and igniter housing causes insufficient ground connection which may result in ignition troubles.
Action and Compliance:	See Bombardier Rotax Technical Bulletin Nr. 912-02 Rev. 1 issued on October 25, 1993, which becomes herewith part of this AD.
Accomplishment and log book entry:	the required action has to be accomplished by an approved service station or by a licensed/qualified person and to be entered in the powered sailplane log.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX -4

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-049 UTFØRELSE AV ROTAX TECHNICAL BULLETIN NR. 912-06

Påbudet gjelder:

Rotax 912 A motorer.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av østerrisk AD no. 80.

Tid for utførelse:

Før første flyging.

Referanse:

Østerrisk AD no. 80.

Gyldighetsdato:

01.08.97

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

AIRWORTHINESS DIRECTIVE

No. 80

Affected Engine:	Rotax 912 A Series, Engine for Powered Sailplanes
Subject:	Ignition for 912 A Series, Engine No. 4,076.062 up to 4,076.220
Reason:	Production problems may have caused inadequate cable lug connection on to grounding cable of SMD- Ignition Unit, which may result in engine misfiring or stoppage.
Action.	See Bombardier Rotax Technical Bulletin No. 912-06 issued on 21.November 1994, which becomes herewith part of this AD.
Compliance:	Before next flight, but not later then 31. December 1994
Accomplishment and Logbook entry:	The required action has to be accomplished by an approved service station or by a licensed/qualified person and to be entered in the powered sailplane log.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX -5

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-050 UTFØRELSE AV ROTAX TECHNICAL BULLETIN NR. 912-07

Påbudet gjelder:

Rotax 912 A motorer.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av østerrisk AD no. 82.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av østerrisk AD no. 82, med virkning fra denne LDP's gyldighetsdato.

Referanse:

Østerrisk AD no. 82.

Gyldighetsdato:

01.08.97

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

AIRWORTHINESS DIRECTIVE

No. 82

Affected Engines:	Engines for Powered Sailplanes, Rotax 912 A Series
Subject:	SMD-Ignition for Rotax 912 A Series, Engines beginning with S/N 4,076.064 and subsequent.
Reason:	Ignition troubles would occure in aereas with heavy radio tranmission.
Action and Compliance:	See Bombardier Rotax Technical Bulletin No. 912-07 issued on January 1.1995, which becomes herewith part of this AD.
Accomplishement and Logbook entry:	The required action has to be accomplished by an approved service station or by a licensed/qualified person and to be entered in the powered sailplane log.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX -6

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-051 UTFØRELSE AV ROTAX TECHNICAL BULLETIN NR. 912-09

Påbudet gjelder:

Rotax 912 A motorer, serienr. t.o.m. 4,076.244.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av østerrisk AD no. 83.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av østerrisk AD no. 83, med virkning fra denne LDP's gyldighetsdato.

Referanse:

Østerrisk AD no. 83.

Gyldighetsdato:

01.08.97

AIRWORTHINESS DIRECTIVE

No. 83

Affected Engines:	Engine Rotax 912 A - Series up to S/N 4,076.244 incl.
Subject:	Possible contamination of carburetors.
Reason:	Several carburetors have been found with contamination (dirt, remains of rubber from fuel lines and Loctite, resin-like substance, sediments etc.) in the float chamber. This contamination could possibly cause a partial or complete blockage of the idle or main jet or other ducts vital for operation, leading to poor performance or stoppage of engine.
Action:	See Bombardier Rotax Technical Bulletin No. 912-09 issued August 30, 1995 which becomes herewith part of this AD.
Compliance:	Within 10 flighthours; at rough engine operation before next flight.
Accomplishement and Logbook entry:	The required action has to be accomplished by an approved service station or by a licensed/qualified person and to be entered in the aircraft/engine log.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX -7

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-052 UTFØRELSE AV ROTAX TECHNICAL BULLETIN NR. 912-08

Påbudet gjelder:

Rotax 912 A motorer, serienr. fra 4,076.264 t.o.m. 4,380.752.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av østerrisk AD no. 84.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av østerrisk AD no. 84, med virkning fra denne LDP's gyldighetsdato.

Referanse:

Østerrisk AD no. 84.

Gyldighetsdato:

01.08.97

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

Bilag til LDP 97-052

AIRWORTHINESS DIRECTIVE

No. 84

Affected Engines:	Rotax 912 A - Series engines S/N 4,076.064 up to S/N 4,380.752 incl .
Subject:	SMD-Electronicmodule P/N 965 356
Reason:	On subjected engines which ignition units are equipped with SMD-Electronic-module P/N 965 356 troubles could occure in aereas with heavy radio transmission leading to poor performance or stoppage of engine.
Action:	See Bombardier Rotax Technical Bulletin No. 912-08 issued August 16, 1995 which becomes herewith part of this AD.
Compliance:	At next 100 hour inspection, but not later then December 31, 1995.
Accomplishement and Logbook entry:	The required action has to be accomplished by an approved service station or by a licensed/qualified person and to be entered in the aircraft/engine log.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX -8

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2004-061 SPREKKONTROLL AV VEIVHUS

Påbudet gjelder:

Rotax 912 A/F/S OG 914F motorer som beskrevet i vedlagte kopi av Østerisk AD No. A-2004-01.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av Østerrisk AD No. A-2004-01.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av østerrisk AD no. A-2004-01.

Referanse:

Østerrisk AD no. A-2004-01.

Gyldighetsdato:

2004-12-01

Kansellert

2007-05-02

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

This Airworthiness Directive is published by the ACG, on behalf of EASA, the Primary Airworthiness Authority for the affected product.

AIRWORTHINESS DIRECTIVE

No. A-2004-01

Inspection for possible cracks in the crankcase of Rotax 912 A/F/S Series and Rotax 914 F Series engines

1. Applicability: Rotax 912 A Series engines
Rotax 912 F Series engines
Rotax 912 S Series engines
Rotax 914 F Series engines

2. Subject: Inspection for possible cracks in crankcase

3. Reason: During operation certain cracks in the crankcase were detected.

4. Action: A detailed visual inspection of the crankcase has to be carried out within the compliance time.

The technical information of Bombardier Rotax Service Bulletin SB-912-029 R2 and SB-914-018 R2, issue JANUARY 2004, are herewith part of this AD.

5. Compliance:

a) initial inspection within 50 flight hours, but not later than 01 June 2001, according referenced Bombardier Rotax SB-912-029 R2 for engines of type 912 A and 912 F concerned therein under Group A

b) initial inspection within 50 flight hours, but not later than 01 January 2002, according referenced Bombardier Rotax SB-914-018 R2 for engines of type 914 F concerned therein under Group A

c) initial inspection within 50 flight hours, but not later than 01 March 2003, according referenced Bombardier Rotax SB-912-029 R2 for engines of type 912 A, 912 F and 912 S concerned therein under Group B

d) initial inspection within 50 flight hours, but not later than 01 March 2004 according referenced Bombardier Rotax SB-912-029 R2 for engines of type 912 A, 912 F and 912 S concerned therein under Group C respectively Bombardier Rotax SB-914-018 R2 for engines type 914 F concerned therein under Group C

e) every 100 flight hours inspection according referenced Bombardier Rotax SB-912-029 R2 respectively SB-914-018 R2 on all referenced engines

6. Accomplishment: Inspect within 50 hours Time-in-Service (TIS) after the effective date of this AD, October 01,2004.
The required action has to be accomplished by the manufacturer or by a licensed/qualified person. An entry into the aircraft log has to be done.

7. Effective Date: 01. October 2004 and replaces ACG AD No. 107R3 dated 01. February 2003

EASA-Approval:
This AD is approved under reference EASA No 2004-9379 dated 07.09.2004

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX -9

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2004-062B "REPLACEMENT OF COOLANT / REDUCTION OF CYLINDER HEAD TEMPERATURE LIMITS"

Påbudet gjelder:

Rotax 912 A/F/S OG 914F motorer som beskrevet i vedlagte kopi av Austro Control AD No. A-2004-004R2.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av Austro Control AD No. A-2004-004R2.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av Austro Control AD No. A-2004-004R2.

Anm. Denne LDP erstatter LDP 2004-062A.

Referanse:

Østerrisk AD No. A-2004-004R2.

Gyldighetsdato:

2006-03-31.

Kansellert
2007-10-24

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

This Airworthiness Directive is published by ACG as Primary Airworthiness Authority for the affected product on behalf of EASA.

1. Applicability: Rotax 912 A Series engines
Rotax 912 F Series engines
Rotax 912 S Series engines
Rotax 914 F Series engines

installed in, but not limited to, certificated products of following manufacturers:
Aero Ltd., Aeromot, Alpi, Aquila, Diamond Aircraft Austria, Diamond Aircraft Canada, Issoire Aviation, Sauper, Scheibe, Sky Arrow, Stemme, Tecnam, WD Flugzeug, and installed in various aircrafts by Supplemental Type Certificates (STC).

This list is not exhaustive.

2. Subject: Replacement of coolant/Reduction of Cylinder Head Temperature Limits

3. Reason: Under certain powerplant installation and operating conditions boiling of conventional glycol/water coolant can occur before reaching maximum permissible cylinder head temperatures (CHT). This can lead to loss of coolant and subsequent engine overheat.

4. Action: To insure safe operation corrective actions have to be performed on aircrafts with affected engines installed within the compliance time stated below.
Corrective Actions have to contain at minimum actions a) and c) **or** b) and c). Effects of these measures on the powerplant installation and on compliance with aircraft related requirements (e.g. engine cooling, engine operating limitations, a.s.o.) have to be reviewed by the affected aircraft manufacturers in accordance with aircraft related certification requirements before these measures are being introduced. Therefore affected aircraft manufacturers have to bindingly define if actions, and which actions have to be taken in addition and at the same time to the below listed engine related measures (e.g. alteration of indicator markings, airplane flight manual revisions, a.s.o.).

a) Use of "EVANS NPG+" coolant

Glycol/water coolants of any mixing ratio have to be replaced with the waterless coolant EVANS NPG+ (specification in accordance with Rotax SB912-043/914-029, chapter 2, Material Information) in accordance with Rotax SB912-043/914-029, chapter 3.2, Changing the Coolant, and chapter 4, Appendix.

The max. CHT limits of 150°C for the Rotax 912 A/F series engines and 135°C for the Rotax 912 S series and 914 F series engines remain unchanged.

b) Use of conventional glycol/water coolant (mixing ratio 50/50)

Following measures have to be taken if the glycol/water coolant (mixing ratio 50/50) shall remain in use:

i) The open-up pressure of the coolant pressure vessel cap has to be checked. The open-up pressure is marked on the cap.

ii) If a different open-up pressure than "1,2 bar" is marked on the cap, than the cap has to be replaced by a new pressure vessel cap, Rotax P/N 922.070.

iii) Max. CHT limits have to be reduced to following values:
Rotax 912 A/F/S series: max. 120°C
Rotax 914 F series: max. 120°C

c) Following changes to the installation and operating manuals have to be considered:

i) Operator's Manuals Rotax 912 A/F series
Chapter 10, operating limits
CHT
Use of EVANS NPG+..... max. 150°C
Use of glycol/water- ..... max. 120°C
coolant (50/50), and use of a 1,2 bar pressure vessel cap

ii) Operator's Manuals Rotax 912 S series und 914 F series
Chapter 10, operating limits
CHT
Use of EVANS NPG+..... max. 135°C
Use of glycol/water- ..... max. 120°C
coolant (50/50), and use of a 1,2 bar pressure vessel cap

iii) Installation Manual Rotax 912 A series
Chapter 7.1, operating limits
CHT
Use of EVANS NPG+..... max. 150°C
Use of glycol/water- ..... max. 120°C
coolant (50/50), and use of a 1,2 bar pressure vessel cap

iv) Installation Manual Rotax 912 F series
Chapter 6.1, operating limits
CHT
Use of EVANS NPG+..... max. 150°C
Use of glycol/water- ..... max. 120°C
coolant (50/50), and use of a 1,2 bar pressure vessel cap

v) Installation Manual Rotax 912 S series
Chapter 7.1, operating limits
CHT
Use of EVANS NPG+..... max. 135°C
Use of glycol/water- ..... max. 120°C
coolant (50/50), and use of a 1,2 bar pressure vessel cap

vi) Installation Manual Rotax 914 F series
Chapter 8.1, operating limits
CHT
Use of EVANS NPG+..... max. 135°C
Use of glycol/water- ..... max. 120°C
coolant (50/50), and use of a 1,2 bar pressure vessel cap

Further investigations are ongoing to re-establish the original CHT limits as far as possible. If positive results are attained this airworthiness directive will be revised accordingly.

5. Compliance: Latest August 31, 2006

6. Accomplishment: The required actions have to be accomplished either by the manufacturer, or a licensed/qualified person/organization, depending on national regulations. Accomplishment of the AD has to be confirmed in the aircraft log according to national regulations.

7. Effective Date: Immediately after receipt, replaces AD A-2004-004 R1

EASA-Approval:
This AD is approved under reference EASA No 2005-6413 dated November 22, 2005

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX -10

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2007-013 "ENGINE - CRANKCASE - INSPECTIONS"

Påbudet gjelder:

Rotax motorer i 912 serien og 914 serien som beskrevet i vedlagte kopi av EASA AD 2007-0025

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av EASA AD 2007-0025.

Anm. Denne LDP erstatter LDP 2004-061 som var basert på Østerrisk AD A-2004-01.

Tid for utførelse:

Tiltakene som er angitt under "Compliance" skal gjennomføres etter siste inspeksjon dato som krevet av LDP 2004-061, og deretter med 110 timers intervall som angitt i EASA AD 2007-0025.

Referanse:

EASA AD 2007-0025

Gyldighetsdato:

2004-12-01 (*Gyldighetsdatoen for LDP 2004-061*).

EASA	AIRWORTHINESS DIRECTIVE
	**AD No : 2007-0025** **Date: 01 February 2007**

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.

Type Approval Holder's Name :	**Type/Model designation(s) :**
BRP-Rotax GmbH & Co. KG	Rotax 912 series and Rotax 914 series

TCDS Number : Austria TW8/89, TW9-ACG, TW10-ACG

Foreign AD : Not applicable

Supersedure : Austro Control GmbH A-2004-01 (EASA Approval No 2004-9379)

ATA 72	**Engine – Crankcase – Inspections**
Manufacturer(s):	BRP-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH;
Applicability:	Rotax 912 A series engines up to serial number (s/n) 4,410.689 inclusive; Rotax 912 F series engines up to s/n 4,412.914 inclusive; Rotax 912 S series engines up to s/n 4,923.308 inclusive; Rotax 914 F series engines up to s/n 4,420.606 inclusive; and any other Rotax type 912 and 914 series engine whose crankcase assembly has been replaced by a crankcase having a serial number up to s/n 27811 inclusive. These engines are known to be installed on, but not limited to, the following aircraft types: **3-i** Sky Arrow 650 TC, 650 TCN, 650 TCNS and 710 RG; **Aeromot** AMT-200 Super Ximango and AMT-300 Turbo Super Ximango; **Aircraft Philipp** (formerly Alpla-Werke; Nitsche) AVO 68 series Samburo; **Aquila** AT01; **Cessna** 150 and A150 series; **Diamond** (formerly HOAC) H 36 Dimona, HK 36 series Super Dimona, DV 20 Katana and DA20-A1 Katana; **Evektor-Aerotechnik** EV-97 VLA; **Grob** G 109; **Issoire** APM-20 Lionceau; **Reims Aviation** F150 and FA150 series; **Scheibe** SF 36R and SF 25C;

	Stemme S10-VT; **Tecnam** P 92-J, P 92-JS and P2002-JF; **W.D. Aircraft** D4 Fascination. **Note:** installation of these engines may have been done either by the respective aircraft manufacturer or by an aircraft modification through a Supplemental Type Certificate.
Reason:	This Airworthiness Directive (AD) results from reports of cracks in the engine crankcase. Austro Control GmbH (ACG) addressed the problem by issuing AD No 107R3 which was superseded by ACG AD A-2004-01. The present AD supersedes the ACG AD A-2004-01.On one hand, introduction by Rotax of an optimized crankcase assembly has permitted to reduce applicability of the new AD, when based on engines' serial numbers (s/n).On the other hand, applicability is extended for some engines that may have been fitted with certain crankcase s/n, supplied as spare parts. In addition, accomplishment instructions given through the relevant Service Bulletins (SB) have been detailed to better locate engine's areas that are to be scrutinised. The aim of this AD is to ensure that the requested engine power is available at any time to prevent a sudden loss of power that could lead to a hazardous situation in a low altitude phase of flight.
Effective Date:	01 October 2004 [the effective date of AD A-2004-01]
Compliance:	From the last inspection date, as requested by ACG AD A-2004-01, repeat thereafter not to exceed 110 hours, Time In Service, Inspection of the engine crankcase for cracks and oil leaks as detailed in the accomplishment instructions of the corresponding Service Bulletins given as Reference Publications. Note: In lieu of inspecting the engine crankcase assembly, a review of the engine logbook or maintenance records is acceptable if the crankcase serial number can be definitely identified from that review.
Ref. Publications:	BRP-Rotax Mandatory Service Bulletins, SB-912-029 R3 and SB-914-018 R3 or later approved revisions.
Remarks :	1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Method of Compliance (AMOCs) for this AD. 2. Required actions and the risk allowance have granted publication and notification of an immediate AD, ruling out the public consultation process. 3. Enquiries regarding this AD should be addressed to the AD Focal Point, Certification Directorate, EASA; E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact BRP-Rotax GmbH & Co.KG Ph.: +43 7246 601 0; Fax: +43 7246 601 760

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

ROTAX -11

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2007-056 **"ENGINE FUEL AND CONTROL - COOLANT SPECIFICATION - MODIFICATION"**

Påbudet gjelder:

Rotax motorer i 912 serien og 914 serien som beskrevet i vedlagte kopi av EASA AD 2007-0155.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av EASA AD 2007-0155.

Anm. Denne LDP erstatter LDP 2004-062B som var basert på Østerrisk AD A-2004-04R2.

Tid for utførelse:

Innen den frist som er beskrevet i EASA AD 2007-0155.

Referanse:

EASA AD 2007-0155.

Gyldighetsdato:

2007-10-24.

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

EASA	AIRWORTHINESS DIRECTIVE
	**AD No : 2007- 0155** **Date: 29 May 2007**

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.

Type Approval Holder's Name :	**Type/Model designation(s) :**
BRP-Rotax GmbH & Co. KG	Rotax 912 A series Rotax 912 F series Rotax 912 S series Rotax 914 F series

TCDS Number: EASA.E.121 and EASA.E.122

Foreign AD: N/A

Supersedure: Austrian AD A-2004-004R2, EASA Approval Number 2005-6413

ATA 73	**Engine Fuel and Control – Coolant Specification - Modification**
Manufacturer(s):	BRP-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH & Co. KG; Bombardier-Rotax GmbH;
Applicability:	All versions of the engine type Rotax 912 A, 912 F, 912 S and 914 F These engines are known to be installed on, but not limited to, the following aircraft types: 3-i Sky Arrow 650 TC, 650 TCN, 650 TCNS and 710 RG; Aeromot AMT-200 Super Ximango and AMT-300 Turbo Super Ximango; Aircraft Philipp (formerly Alpla-Werke; Nitsche) AVO 68 series Samburo; Aquila AT01; Cessna 150 and A150 series; Diamond (formerly HOAC) H 36 Dimona, HK 36 series Super Dimona, DV 20 Katana and DA20-A1 Katana; Evektor-Aerotechnik EV-97 VLA; Grob G 109; Issoire APM-20 Lionceau; Reims Aviation F150 and FA150 series; Scheibe SF 36R and SF 25C; Stemme S10-VT; Tecnam P 92-J, P 92-JS and P2002-JF; W.D. Aircraft D4 Fascination

Reason:	Under certain powerplant installation and operating conditions, boiling of conventional coolant with a mixing ratio of 50% coolant and 50% water can occur before reaching maximum permissible cylinder head temperatures (CHT). This can lead to evaporation of the coolant and in consequences to loss of coolant in the coolant system, causing the engine to overheat. This condition, if not corrected could result in engine damage or an accident. Technical investigation shows the possibility to use the conventional 50% coolant and 50% water mixture on specified installations, where due to the installation conditions (radiator installation, radiator size e.g.) on the airframe confirms that the upper limit of 120°C for the coolant (50% coolant- 50% water) will not be exceeded and an evaporation will not occur in the specified limits of operation, these limits –efficiency of coolant system- on the airframe must be demonstrated by the airframe manufacturer due their certification process. This Airworthiness Directive is issued to extend the compliance time on the use of conventional glycol/water coolant in order to allow time for the airframe manufacturer to show compliance for their installation of the coolant system to proof and release the proper coolant. Limitation and restriction for use of glycol/water coolant to max. 120°C and the use of 18 psi (1,2 bar) pressure cap P/N: 922070 before determination of the achievable maximum coolant temperature and cylinder head temperature remain unchanged.
Effective Date:	12 June 2007
Compliance:	To insure safe operation, corrective actions have to be performed on aircrafts with affected engines installed until December 31, 2007: - Change of coolant specification: incorporate the mandatory use of waterless coolant into the relevant documentation of the aircraft. Alternatively the use of conventional coolant is possible. In such case the new operating limit (coolant temperature) has to be applied. The work/compliance has to be performed in accordance with the accomplishment instructions of BRP Rotax Service Bulletin SB-912-043 R2 / SB-914-029 R2: - Replacement of the radiator cap - Check cooling system - Efficiency of the cooling system - Determination of the achievable maximum coolant temperature and cylinder head temperature Effects of these measures on the powerplant installation and on compliance with aircraft related requirements, have to be reviewed by the affected aircraft manufacturers in accordance with aircraft related certification requirements, before these measures are being introduced.
Ref. Publications:	BRP Rotax Service Bulletin SB-912-043 R2 and SB-914-029 R2, dated 10 November 2006, or later approved revision

Remarks :	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. 2. This AD was posted as PAD 07-068 on 30 April 2007 for consultation until 28 May 2007. No comments were received during this period. 3. Enquiries regarding this Airworthiness Directive should be referred to the AD Focal Point - Certification Directorate, EASA. E-mail: ADs@easa.europa.eu . 4. For any question concerning the technical content of the requirements in this AD, please contact BRP-Rotax GmbH & Co.KG Ph.: +43 7246 601 0; Fax: +43 7246 601 760 email: airworthiness@brp.com