	<b>Service Bulletin</b>	
	<b>Flight Design GmbH</b> Zum Tower 4 01917 Kamenz Germany Tel.: +49 (0)3578 37335 0 Fax: +49 (0)3578 37335 69 E-Mail: <a href="mailto:airworthiness@flightdesign.com">airworthiness@flightdesign.com</a>	<b>SB-ASTM-CTLS -08</b> <b>Revision 00</b>

# Service Bulletin

## Replacement of Regulator A and Regulator B for ROTAX Engine Type 912iS SB-ASTM-CTLS -08

### 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 aircraft or could lead to suspension of warranty.
- **Note:** Information useful for better handling.

## 1 Planning Information

### 1.1 Affected Aircraft

Type: CT  
 Model: CTLS  
 Serial Number: Aircraft that have fuse boxes installed, as identified in concurrent Rotax SB-912 i-004iS.  
 As minimum, the following aircraft S/N are affected on the basis of the equipment installed when delivered ex-factory:  
 F-11-10-09; F-12-11-08; F-12-11-06; F-12-10-05; F-12-08-05;  
 F-12-08-04; F-12-07-05; F-12-07-04; F-12-06-06; F-12-06-01;  
 F-12-05-05; F-12-05-04; F-12-04-01; F-12-04-06; F-12-03-12;  
 F-12-03-11; F-12-03-10; F-12-03-09; F-13-12-10; F-13-12-09;  
 F-13-09-04; F-13-06-05; F-13-04-03; F-13-03-08; F-13-02-03;  
 F-13-02-02; F-13-02-01; F-13-01-08; F-13-01-07; F-13-01-06;  
 F-13-01-05.  
 Aircraft later than S/N F-14-01-03 are not affected.


Applicable Countries: Not limited

### 1.2 Concurrent Documents

Rotax Service Bulletin SB-912 i-004iS\_Replacement of regulator A and regulator B for ROTAX Engine Type 912 i (Series)

### 1.3 Reason

In rare cases a malfunction of the rectifier regulator with subsequent failure can occur. Only certain regulators with a manufacturing date code prior to 'week 29 of 2013' are affected.

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#### 1.4 Subject

Replacement of regulator A and regulator B for Rotax type 912 iS (Series)

#### 1.5 Compliance

At the initial 25 hrs inspection or within the next 100 hrs inspection this exchange of rectifier regulator A and regulator B of the engines and/or fuse boxes listed in section 1.1, according to the instructions in section 3 have to be carried out. If the engine is operated less than 100 hours during a year, so this exchange must be carried out at least till 01 June 2015.

▲ **Warning:** Non-compliance with these instructions could result in further damages, personal injuries or death.

#### 1.6 Approval

This SB is approved by the aircraft manufacturer i.a.w. ASTM F2483-12 for conduct on affected aircraft as defined in 1.1. Subsequent to complete and correct conduct of this SB the aircraft being modified will still meet the requirements of the applicable ASTM design and performance specification subsequent to the modifying.

#### 1.7 Type of Maintenance

Heavy

#### 1.8 Personnel Qualifications

All measures must be implemented by at least one of the following persons or organization:

- ROTAX – Distributors or their Service Center
- Persons with approved qualifications to the corresponding engine type. Only certified technicians (iRMT -Level: Line Maintenance) are qualified to work on these engines.

● **Note:** iRMT – Independent ROTAX Maintenance Technician.

#### 1.9 Release to Service

Conduct of this SB must be logged in the aircraft log book with date and signature of the responsible Person according to national regulations.

#### 1.10 Weight and Balance


Not affected

#### 1.11 References

##### 1. Drawings:

Information provided in this SB has been created to ensure a modification of the affected area and provides all required information in line with the Type Design drawings [KF 2400 0146\_00; KF 2400 0070\_00]. Therefore, separate availability of these drawing is not required.

##### 2. Documents:

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**Latest issues of:**

- [1] MMH-912i\_Maintenance Manual Heavy for ROTAX 912 i Series
- [2] MML-912i\_Maintenance Manual (Line) ROTAX 912 i Series
- [3] IM-912i\_Installation Manual ROTAX 912 i Series
- [4] SB-912 i-004iS\_Replacement of regulator A and regulator B for ROTAX Engine Type 912 i (Series)

**1.12 Superseded Documents**

- none -

**1.13 Contact Details**

For further information on conduct of this SB, or to report any Safety of Flight or Service Difficulty issues contact your Distributor responsible for your country. Your Distributor can be located via the Flight Design website: [www.flightdesign.com](http://www.flightdesign.com) under "Dealer Location".

Specific contact in USA:

Flight Design USA

P.O. Box 325 South Woodstock, CT 06267

Tel: 860 963 7272 / Fax: 860 963 7152

Web: [www.flightdesignUSA.com](http://www.flightdesignUSA.com)

E-Mail: [airworthiness@flightdesignUSA.com](mailto:airworthiness@flightdesignUSA.com)

In cases where the local distributor is not known or available contact Flight Design GmbH directly: [airworthiness@flightdesign.com](mailto:airworthiness@flightdesign.com).

**1.14 Disclaimer**

This Service Bulletin has been generated with utmost care. Nevertheless errors and misunderstandings can never be fully excluded. In case of any doubts the applicant of this Service Bulletin is requested to contact Flight Design immediately to clarify the issue.

**2 Resources**

**2.1 Workshop Conditions**


Proceed with this work only in a non-smoking area and not close to sparks or open flames.

**2.2 Parts**

ROTAX parts as specified, according to Rotax SB-912 i-004iS\_Replacement of regulator A and regulator B for ROTAX Engine Type 912 i (Series).

**2.3 Materials**

1. Self-locking nut DIN 985-M5, regular – 4 pcs;
2. TY-wraps CV-250 white – 8 pcs

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## 2.4 Tools

1. Wrench with size A/F 8 mm – 2 pcs;
2. Wrench with size A/F 30 mm – 1 pcs;
3. Allen Key with size SW 3 mm – 1 pcs;
4. Wrench with size A/F 7 mm – 1 pcs;
5. Wrench with size A/F 10 mm – 1 pcs;
6. Wrench with size A/F 25 mm – 1 pcs.

## 2.5 Special tools

- none -

## 2.6 Manpower

The described task can be performed within approximately 3 hours (working time).

The working time includes:

- Removal and installation of the Fuse Box from aircraft;
- Replacement of the Regulator A and Regulator B;
- Inspection of the Fuse Box installation.

The working time not includes:

- Engine test run.

## 2.7 Cost

ROTAX spare parts:


- will be provided by Rotax BRP-Powerrain GmbH free of charge on request by ROTAX Authorized Distributors or their Service Center;
- Replace parts must be returned F.O.B to ROTAX Authorized Distributors or their Service Center.

## 3 Instructions

- **Note:** Before maintenance, review entire documentation to make sure you have a complete understanding of the procedure and requirements.
- ▲ **Warning:** Switch off ignition and secure engine against unauthorized operation. Switch off all electric and avionics equipment. Remove engine cowlings and 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.

### 3.1 General

This chapter provides extended explanations for the sequential modifying steps.

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### 3.2 General Procedures

-none-

### 3.3 Detailed Procedure

#### 3.3.1 Fuse Box Removal

1. Make sure that negative terminal of aircraft battery is disconnected.
2. Cut securing TY-wraps marked by blue arrows, see Fig. 1. Then unplug the engine wiring harness and screw-out grounding connectors from the fuse box shown on Fig. 1 by red arrows.

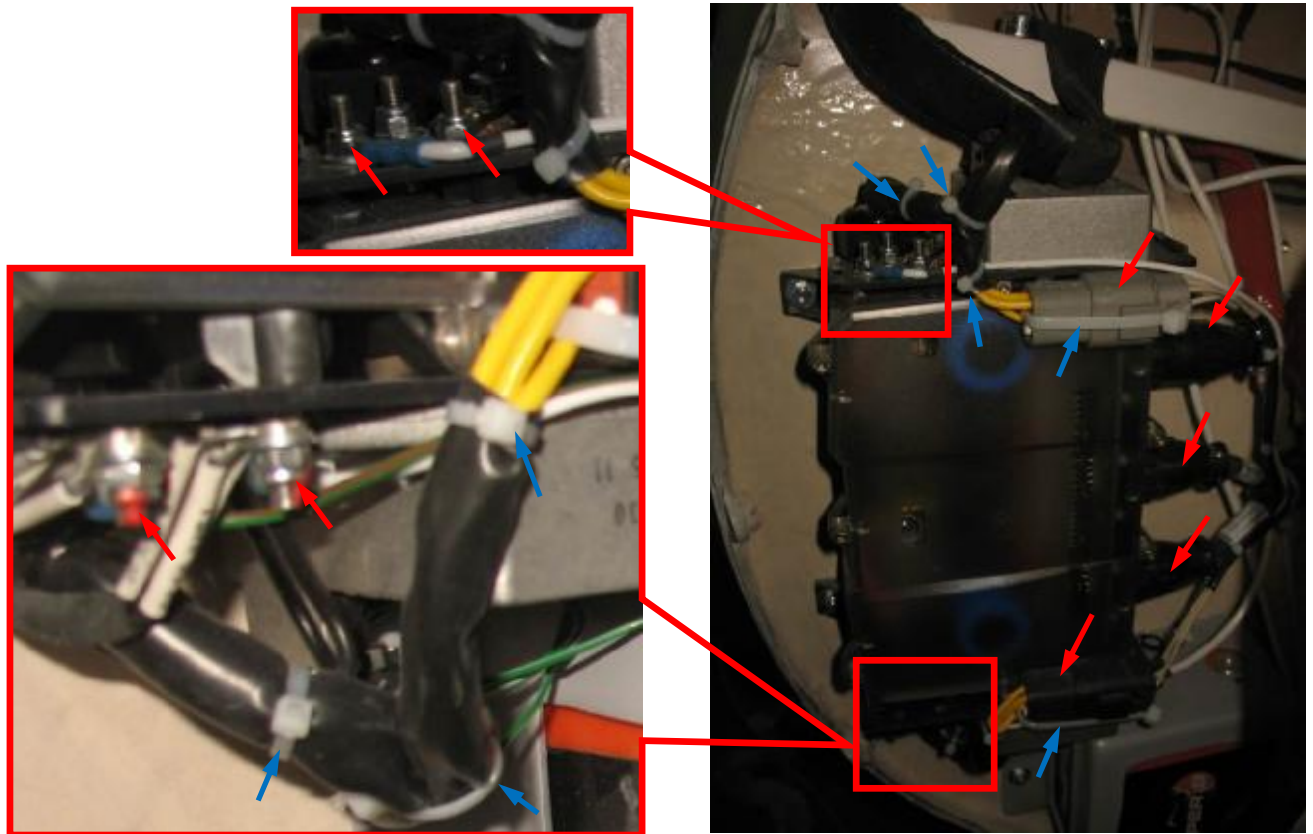


Fig. 1

• **Note:** Mark the connection point for each disconnected wire and socket.

3. Remove the attachment screws of the fuse box as marked on Fig. 2 and remove fuse box from aircraft.

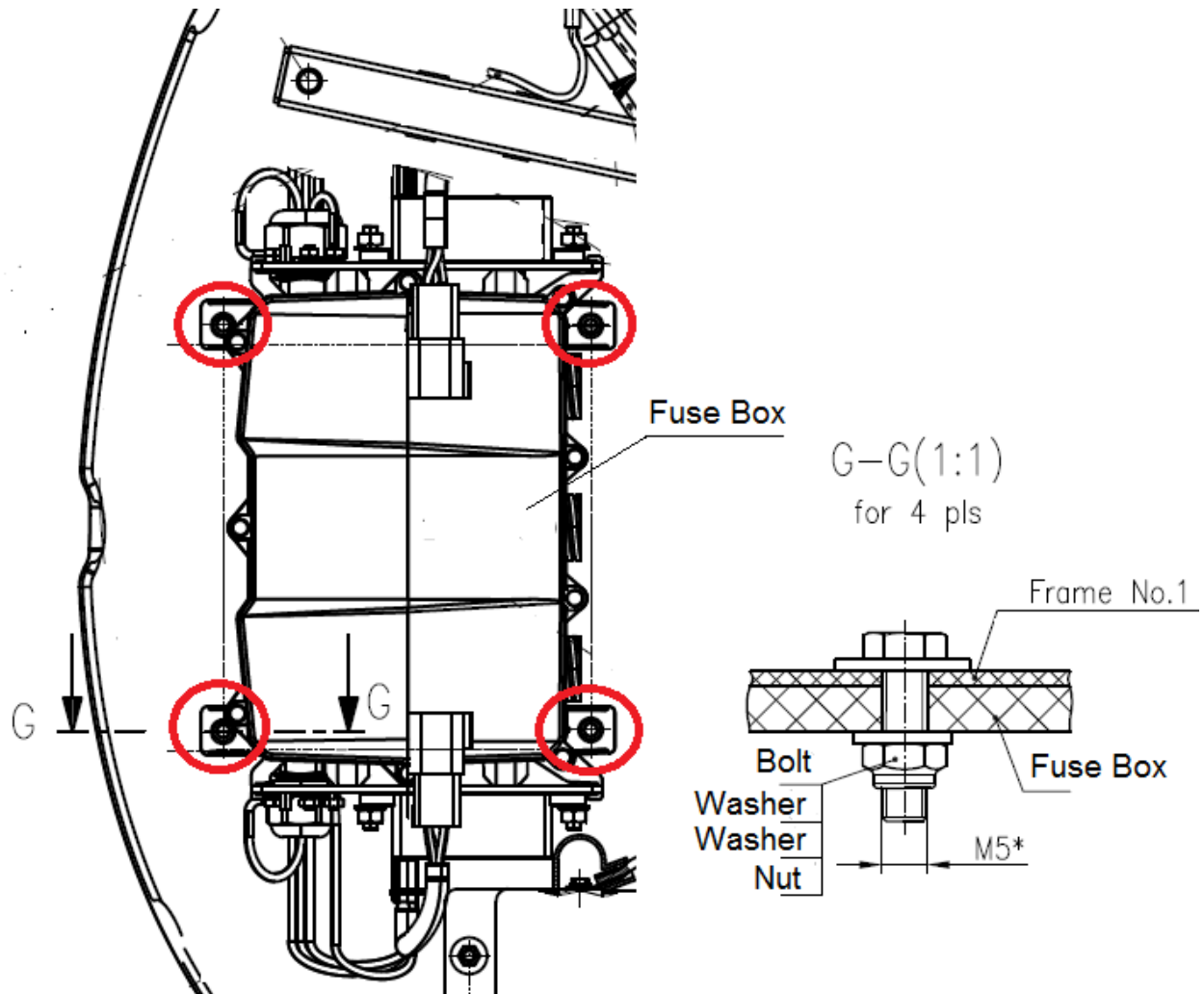


Fig. 2

- **Note:** Keep removed bolts and washer so as they will be used at the fuse box mounting.

### 3.3.2 Replacement of the Regulator A and Regulator B

Perform replacement of regulator A and regulator B as described in concurrent Rotax SB [4].

### 3.3.3 Installation Fuse Box


1. Install the fuse box in reverse order of 3.3.1 item 3.

- **Note:** For attachment of fuse box to airframe use kept bolts and washers at detaching and new self-locking nut M5, see 2.3 item 1.

2. Connect the engine wiring harness and grounding connectors to the fuse box in reverse order of 3.3.1 item 2 in according with marking. After that secure connectors and wirings with TY-wraps.

- **Note:** For connectors and wirings securing use a new TY-wraps, see 2.3 item 2.



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### 3.3.4 Inspection of the Fuse Box Installation

After the installation of the fuse box, use a multimeter to carry out a continuity test between regulator A and regulator B in the static condition, see Fig. 3. A continuity must not be present.

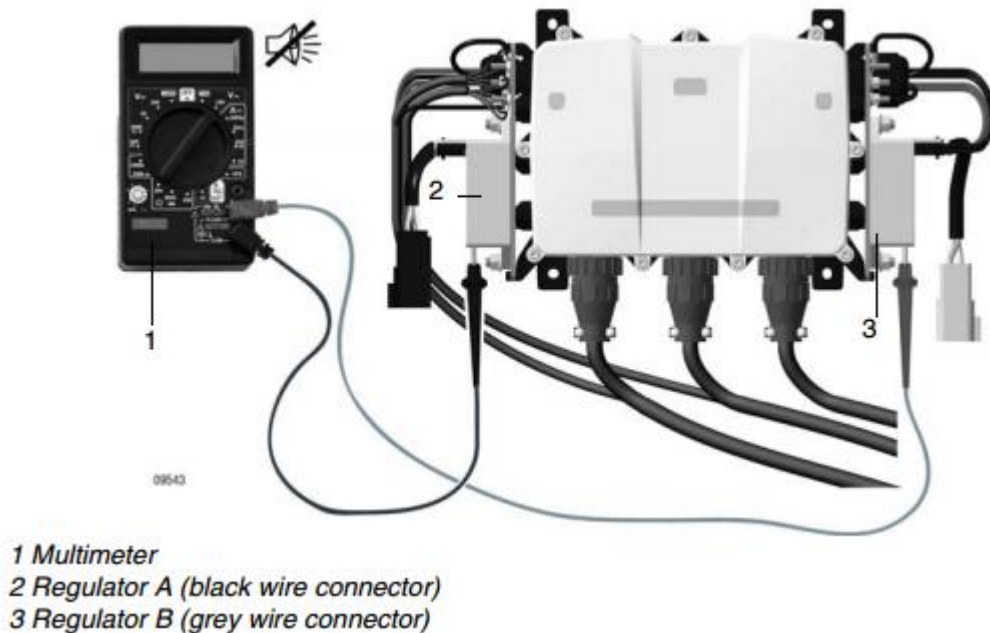


Fig. 3

- **Note:** If a conductive connection (continuity) is present, check the wiring connections in accordance with the requirements of the Installation Manual [3] and wiring diagram [KF 2400 0070\_00]. Until the error is not fixed, the engine must only be operated on the ground.
- **Note:** EMS ground may only be mounted to the regulator plate A (cooling plate of the fuse box) only. Aircraft ground may only be mounted on the regulator plate B (cooling plate of the fuse box) only.

### 3.3.5 Finishing Work

- Connect negative terminal of aircraft battery;
- Install engine cowlings.


### 3.3.6 Test Run

Conduct engine test run. See also chapter 12-20-00 current issue Maintenance Manual Line [2] of the engine type 912 i Series.

## 3.4 Documentation

Conduct of this SB must be logged in the aircraft log book with date and signature of the responsible Person conducting the SB. National regulations have to be considered.

Documentation must include documentation mandated by the concurrent Rotax SB [4].

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## 4 Appendix

### 4.1 Changes to Previous Revision

Original Issue – no changes

### 4.2 Feedback Template

No specific feedback required