

# FLIGHT DESIGN

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## Supplement S3 to the Airplane Maintenance Manual (AMM) CTLS-LSA with ROTAX 912 iS

Airplane Type : CT

Airplane Model : CTLS-LSA

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Airplane Registration Number : \_\_\_\_\_

Airplane Serial Number : \_\_\_\_\_

Document Number : AF 0480 0011

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## 1

Supplement revisions are provided by Flight Design GmbH as available. The updates shall be manually entered to the individual printed version of the AMM by the Pilot/Owner of the aircraft.

Supplement updates are provided in electronic format (pdf file) directly to aircraft Pilots/Owners, when the Pilot/Owner leaves the correct contact information with Flight Design GmbH. Supplement updates are also provided through the webpage of Flight Design GmbH, in the section Service Documents:

[http://www.flightdesign.com/index.php?page=service.](http://www.flightdesign.com/index.php?page=service)

It is the duty of the aircraft Pilot/Owner to ensure that the supplement contains all updates applicable to his aircraft serial number. Updates are done by manually removing invalid sections and inserting new or updated sections. Supplement update must be logged in the subsequent table.

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# CHAPTER 01 – INTRODUCTION

## Contents

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### 01-00.1 General

This Supplement to the Airplane Maintenance Manual (AMM) contains the data necessary to carry out the maintenance of the CTLS-LSA with ROTAX 912 iS, ROTAX 912 iS Sport or ROTAX 912 iSc Sport installed. This Supplement contains a full description of the systems options and maintenance instructions thereof. The Supplement provides only the additional information that results from the differences of the ROTAX 912 iS, ROTAX 912 iS Sport or ROTAX 912 iSc Sport engine installation. All other information of the basic Aircraft Maintenance Manual (AMM), that is not covered here, remain valid.

Use the following additional sources of information together with this AMM:

1. Applicable Service Notifications including referenced Service Instructions,
2. Applicable Service Bulletins including referenced Service Instructions,
3. Applicable Safety Alerts including referenced Service Instructions.
4. ROTAX 912i series manuals issued by ROTAX for the affected engine S/N:
  - Operator's Manual OM-912i
  - Maintenance Manual (Line Maintenance) MML-912i
  - Maintenance Manual (Heavy Maintenance) MMH-912i

▲ **Warning:** This document is valid only for the aircraft S/N identified on the cover sheet (call-sign might change). It may not be transferred to any other operated aircraft.

▲ **Warning:** This document may be applied only to CTLS aircraft that have been factory produced with the ROTAX 912 iS injection engine.

● **Note:** Unless explicitly stated otherwise: When using only the term ROTAX 912 iS within this manual, this is intended to refer to all engine versions ROTAX 912 iS, ROTAX 912 iS Sport and iSc Sport.

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## 01-00.2 Approval

The contents of this manual is approved on the basis of Manufacturer Self Declaration against the applicable ASTM industry standard.

## 01-00.3 Certification Basis

The engines Rotax 912 iS and iS Sport are in compliance with ASTM F2339. The engine Rotax 912 iSc Sport is Type Certified in compliance with CS-E Amdt. 3.

The engine installation to the airframe is in compliance with ASTM F2245.

This supplement to the AMM is generated in compliance with ASTM F2483, and is part of the Required Product Information per ASTM F2745.

The revision level of the standards applicable to the specific S/N is identified on the aircraft's Statement of Compliance.

## 01-00.4 Manufacturer Contact

The aircraft is manufactured by:

Flight Design GmbH

Zum Tower 4

01917 Kamenz

Germany

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

e-mail: [info@flightdesign.com](mailto:info@flightdesign.com)

## 01-00.5 Recovery of Certification Data

If the original manufacturer will lose the ability to support the make and model of this aircraft, you can recover certification documentation through the following contact:

EUA Engineering Ukraine Ltd.

Rabochaya 82a

73000 Kherson

Ukraine

## 01-00.6 General Safety Information

Consider the following warnings to avoid unnecessary risks while you carry out maintenance of the aircraft:

- ▲ **Warning:** Only the personnel with adequate qualification may carry out an inspection and maintenance work.
- ▲ **Warning:** You shall carry out inspection and maintenance in accordance with respective national safety requirements.
- ▲ **Warning:** Before you begin any work, you shall read and understand all relevant sections of this AMM. In case of any doubt or missing information you shall first contact the manufacturer for advice.
- ▲ **Warning:** Consider the safety notes in this supplement as unconditional.

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## 01-00.7 Source to Purchase Parts

Spare parts can be ordered directly with the airplane manufacturer:

Flight Design GmbH

Zum Tower 4

01917 Kamenz

Germany

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

e-mail: [customer.care@flightdesign.com](mailto:customer.care@flightdesign.com)

or through the Flight Design distributor or service center that is responsible for your area. You can find contact details of the distributors and service centers on the Flight Design web page.

## 01-00.8 List of Disposable Replacement Parts

<i>Chapter</i>	<i>Item</i>	<i>Overhaul</i>	<i>Replacement Time</i>
71-00.3.3	Air filter	no	1 year
28-00.3.3	Fuel Filter	no	50h
79-00.3.3	Oil filter	no	50h
74	Spark plugs	no	200 h

## 01-00.9 Recommended Torque Values

Refer to basic AMM.

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# CHAPTER 02 – ORGANIZATION AND HANDLING OF THE SUPPLEMENT

## Contents

- 02-00.1 Supplement Structure
  - 02-00.1.1 Chapter and Subchapter Structure
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  - 02-00.1.5 Abbreviations
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  - 02-00.2.2 List of Effective Sections
  - 02-00.2.3 Feedback Template

## 02-00.1 Supplement Structure

### 02-00.1.1 Chapter and Subchapter Structure

This AMM Supplement is structured using the ATA 100 structure for system / subsystem as guideline. This is reflected in the main header of each Chapter, Section and in the section numbers. Four digits are used that represent:

25-60  
System-Subsystem  
Chapter No.-Section No.

The contents of chapter and subchapter are structured similarly, so that you can find required information quickly. For your convenience each chapter contains its own table of contents.

### 02-00.1.2 Page Numbering System

Pages are numbered using a combination of the chapter and section number, followed by the page number, each separated with a dash "-".

### 02-00.1.3 Figures

Figures are numbered using a combination of the chapter and section number, followed by a sequential number that starts with 1 for each subsystem, each separated with a dash "-".

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#### 02-00.1.4 Warnings, Cautions and Notes

Please pay attention to the following symbols which are used throughout this document to emphasize certain information:

- ▲ **Warning:** Used to identify an instruction which if not followed may cause serious injury or even death.
- **Caution:** Used to identify an instruction which if not followed may damage the aircraft severely or lead to the warranty suspension.
- **Note:** Information useful for better handling.

“Shall”, “will”, “should” and “may”:

The words “shall” or “will” are used to express a mandatory requirement or instruction. The word “should” is used to express non-mandatory provisions that are nevertheless highly recommended. The word “may” is used to express permissible provisions.

#### 02-00.1.5 Abbreviations

The table below contains the abbreviations used in this AMM.

<b>Abbreviation</b>	<b>Meaning</b>
AMM	Airplane Maintenance Manual
FAA	Federal Aviation Administration
LSA	Light Sport Aircraft
POH	Pilot's Operating Handbook
TBO	Time Between Overhaul
TBR	Time Between Replacement

### 02-00.2 Supplement Handling

#### 02-00.2.1 Record of Revisions

This supplement has a Record of Revisions. Use the Record of Revisions to show when changes were included in this supplement.

#### 02-00.2.2 List of Effective Sections

This supplement has a List of Effective Sections. The List of Effective Sections shows you the number and effective date of each section of this supplement. This system implies that revisions are always done section wise; when information in one section changes, all pages of that section get changed.

#### 02-00.2.3 Feedback Template

Use the Feedback Template provided by the basic AMM to inform manufacturer about difficulties experienced during maintenance.

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## CHAPTER 04 – AIRWORTHINESS LIMITATIONS

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- 04-00.1 General
- 04-00.2 Environmental Limitations
- 04-00.3 Operational Limitation
- 04-00.4 Life Limited Components

#### 04-00.1 General

This Section shows the mandatory limitations established by the airframe manufacturer. These limitations shall be obeyed by the maintenance personnel.

In addition to this, the manufacturer recommends you to comply with the maintenance time limits and to work with the maintenance checklists (refer to CHAPTER 05 – TIME LIMITS AND MAINTENANCE CHECK).

In any case you must comply with the national maintenance requirements.

#### 04-00.2 Environmental Limitations

Limitations provided in the basic aircraft AMM remain valid.

#### 04-00.3 Operational Limitation

Limitations provided in the basic aircraft AMM remain valid.

#### 04-00.4 Life Limited Components

The engine installation does not include life limited components. Time limits as listed in CHAPTER 05 shall be used to ensure continued airworthiness of the Flight Design CTLS-LSA.

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# CHAPTER 05 – TIME LIMITS AND MAINTENANCE CHECK

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SECTION 05-30 – UNSCHEDULED MAINTENANCE CHECK	

## 05-00.1 General

This chapter contains time limits and maintenance checklists for the CTLS-LSA. We highly recommend you to comply with the maintenance time limits and to work with the maintenance checklists.

## 05-00.2 Levels of Certification

Levels of certification used in this manual are:

**Pilot/Owner:** The owner of an aircraft who holds a pilot certificate but who has not received any specific authorized training. Note: FAA regulations authorize SLSA aircraft owners who hold at least a sport pilot certificate to perform maintenance as outlined in 14CFRPart43.

**RLSA-M:** The holder of a LSA Repairman certificate with a maintenance rating. This is generally considered the minimum level of certification to perform line maintenance of LSA.

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- A&P:** An Airframe and Powerplant mechanic as defined by 14 CFR Part 65 in the U.S. or equivalent certification in other countries.
- **Note:** For certificated persons such as an A&P, RLSA-M or persons working under the auspices of a Repair Station, prior experience will be considered when determining the training required.
  - **Note:** Participation in training described in this manual shall not be construed as an implicit authorization by Flight Design to perform inspections or repairs beyond the limitations set forth in the applicable regulations of the governing aviation authority.

For and questions or comments regarding maintenance procedures or minimum levels of certification, email Flight Design at [airworthiness@flightdesign.com](mailto:airworthiness@flightdesign.com).

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## SECTION 05-10 – TIME LIMITS

### 05-10.1 General

All scheduled maintenance checks have time limits. You shall do the scheduled maintenance within the time limits.

### 05-10.2 Scheduled Maintenance Time Limits

The table below contains scheduled maintenance time limits recommended by the manufacturer. Different tolerances may apply due to national regulations, depending from the type of operation.

<i>Scheduled Maintenance</i>	<i>Task at these times</i>	<i>Tolerance</i>
100 hour check *	At 100 hours since new and every 100 hour interval. Do the work of 100 hour check. Perform all engine 100 hour inspection items per engine manufacturer maintenance manual Perform all propeller 100 hour inspection items per propeller manufacturer maintenance manual	±10 hours
25 hour check *	At 25 hours since new or at 25 hours after change or overhaul of engine and/or propeller. Perform all engine 100 hour inspection items per engine manufacturer maintenance manual Perform all propeller 25 hour inspection items per propeller manufacturer maintenance manual	±5 hours
"Other times" checks	At specified time interval from checklist since new and every specified time interval. Do the work for "other times" interval specified in checklist	±10 hours
Annual check	At 12 month from new and every 12 month interval. Do the work of annual check.	±30 days

\* All of the (engine) maintenance intervals relate to the number of operating hours of the engine, whereas all time during the engine is running is counted towards the total number of operating hours, irrespective of load factor of the engine, such as idling or take-off power.

### 05-10.3 Component Time Limits

The following table lists airplane components which must be replaced or overhauled (as specified) at a specific time.

To allow monitoring the permissible service life the installation or removal of each item must be recorded in the aircraft documentation.

- **Caution:** Under specific environmental circumstances the replacement or overhaul of components may be required before reaching the time limits as listed below. Also, authorized extensions or exceeding of time limits may exist from particular component manufacturers.

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<b>Chapter</b>	<b>Item</b>	<b>Overhaul</b>	<b>Replacement</b>
71-00.3.2	Engine shock mount	no	2000 h or with engine replacement, whichever comes first
28-00 75-00 79-00 71-00.3.3	All engine rubber parts, such as: <ul style="list-style-type: none"> <li>▪ All rubber hoses of the cooling system</li> <li>▪ All rubber hoses of the fuel system (incl. Teflon hoses, fuel pump and insulating flange if this is fixed with fuel hoses)</li> <li>▪ All rubber hoses of the lubrication</li> <li>▪ Connecting hose of the air intake system</li> </ul>	no	5 years
71-00.3.2	Engine ROTAX® 912iS / iSc	2000h or 15 years whichever comes first (1)	On condition

(1) Refer to latest information issued by BRP- ROTAX® concerning the TBO, (Service Bulletins, Service Information, Maintenance Manual for ROTAX® Engine Type 912i Series.

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## SECTION 05-20 – SCHEDULED MAINTENANCE CHECK

### 05-20.1 General

Perform the scheduled maintenance checks in this Section at the intervals (operating hours and calendar time) marked in SECTION 05-20 with a “□” or at the time specified.

- **Note:** Only persons authorized by the National Aviation Authority of the country where the airplane is registered may perform these checks.
- **Note:** The inspection level for each item is a general visual inspection unless differently specified.
- **Note:** The Maintenance Manual of the ROTAX® 912 iS engine contains the periodic maintenance schedule for this engine. We highly recommend you to perform the 100-hour checks of the engine at the same time with the airframe inspection.

### 05-20.2 Scheduled Maintenance Checklist CTLS-LSA

#### 05-20.2.1 Identification

Name of Pilot/Owner		Call-sign	
Aircraft S/N	F-____-____-____	Operating Hours	
Engine S/N		Operating Hours TTSN/ TTSO	
Propeller S/N		Operating Hours TTSN/ TTSO	
Maintenance Organization		Name of Inspector	
Hours since Last Scheduled Inspection		Type of Last Scheduled Inspection	<input type="checkbox"/> 100h <input type="checkbox"/> annual <input type="checkbox"/> other:_____
Date of Inspection		Type of Inspection	<input type="checkbox"/> 100h <input type="checkbox"/> annual <input type="checkbox"/> other:_____

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### 05-20.2.2 Aircraft Records

This chapter of AMM is not affected by this Supplement

### 05-20.2.3 Run-Up

▲ **Warning:** Run-up shall be performed before any inspection.

▲ **Warning:** Run-up shall continue until all temperatures are acceptable for take-off.

<i>Inspection and/or Required Maintenance Checklist</i>	<i>100hour</i>	<i>Annual</i>	<i>Other Times</i>	<i>Minimum Level of Certification</i>	<i>Initials / Remarks</i>																																																					
<b>Engine and engine compartment</b> Clean for leakage check	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner																																																						
<b>Run up of engine:</b> Conduct per following checklist, fill pre-inspection values only:	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner																																																						
<table border="1"> <thead> <tr> <th><b>Systems</b></th> <th><b>Pre-inspection</b></th> <th><b>Post-inspection</b></th> </tr> </thead> <tbody> <tr> <td><b>Engine oil.</b> Check the level of oil and follow the Operator's Manual for all versions of ROTAX® 912 iS or SECTION 12-10.</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Brakes and parking brake.</b> Check for proper operation</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Starter.</b> Smooth operation, starting properties</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Oil pressure.</b> 3...5 bar / 44...73 PSI</td> <td>bar/PSI</td> <td>bar/PSI</td> </tr> <tr> <td><b>Engine Instruments.</b> Check engine parameters</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Ignition ground test.</b> (See Operator's Manual for ROTAX® 912 iS)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Oil temperature.</b> 90...110°C / 190...230°C</td> <td>°C/°F</td> <td>°C/°F</td> </tr> <tr> <td colspan="3">▲ <b>Warning:</b> Ensure that cylinder head temperature (CHT) and oil temperature are within limits.</td> </tr> <tr> <td><b>Cabin heat</b></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Idle RPM.</b> Tachometer should read 1400 RPM</td> <td>RPM</td> <td>RPM</td> </tr> <tr> <td><b>Engine full power RPM.</b> Tachometer should read 4900 to 5000RPM</td> <td>RPM</td> <td>RPM</td> </tr> <tr> <td rowspan="2"> <b>Ignition check.</b> Set RPM to 4000.  Turn "OFF" LANE selector switch A. Record rpm drop. Must not be more than 180.  Turn "ON" LANE selector switch A.  Turn "OFF" LANE selector switch B. Record rpm drop. Must not be more than 180.  Turn "ON" LANE selector switch B. </td> <td>RPM</td> <td>RPM</td> </tr> <tr> <td>RPM</td> <td>RPM</td> </tr> <tr> <td><b>Directional stability of nose gear</b></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td colspan="3">▲ <b>Warning:</b> Allow engine to cool down to 149°C (300°F) (CHT) before shutdown. Shut down the engine, set the ignition switch and the master switch to the off position. Remove ignition key from the aircraft.</td> </tr> <tr> <td>Check for fuel and exhaust odors in cabin</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Check for fuel stains on floor</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>						<b>Systems</b>	<b>Pre-inspection</b>	<b>Post-inspection</b>	<b>Engine oil.</b> Check the level of oil and follow the Operator's Manual for all versions of ROTAX® 912 iS or SECTION 12-10.	<input type="checkbox"/>	<input type="checkbox"/>	<b>Brakes and parking brake.</b> Check for proper operation	<input type="checkbox"/>	<input type="checkbox"/>	<b>Starter.</b> Smooth operation, starting properties	<input type="checkbox"/>	<input type="checkbox"/>	<b>Oil pressure.</b> 3...5 bar / 44...73 PSI	bar/PSI	bar/PSI	<b>Engine Instruments.</b> Check engine parameters	<input type="checkbox"/>	<input type="checkbox"/>	<b>Ignition ground test.</b> (See Operator's Manual for ROTAX® 912 iS)	<input type="checkbox"/>	<input type="checkbox"/>	<b>Oil temperature.</b> 90...110°C / 190...230°C	°C/°F	°C/°F	▲ <b>Warning:</b> Ensure that cylinder head temperature (CHT) and oil temperature are within limits.			<b>Cabin heat</b>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Idle RPM.</b> Tachometer should read 1400 RPM	RPM	RPM	<b>Engine full power RPM.</b> Tachometer should read 4900 to 5000RPM	RPM	RPM	<b>Ignition check.</b> Set RPM to 4000. Turn "OFF" LANE selector switch A. Record rpm drop. Must not be more than 180. Turn "ON" LANE selector switch A. Turn "OFF" LANE selector switch B. Record rpm drop. Must not be more than 180. Turn "ON" LANE selector switch B.	RPM	RPM	RPM	RPM	<b>Directional stability of nose gear</b>	<input type="checkbox"/>	<input type="checkbox"/>	▲ <b>Warning:</b> Allow engine to cool down to 149°C (300°F) (CHT) before shutdown. Shut down the engine, set the ignition switch and the master switch to the off position. Remove ignition key from the aircraft.			Check for fuel and exhaust odors in cabin	<input type="checkbox"/>	<input type="checkbox"/>	Check for fuel stains on floor	<input type="checkbox"/>	<input type="checkbox"/>
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<b>Brakes and parking brake.</b> Check for proper operation	<input type="checkbox"/>	<input type="checkbox"/>																																																								
<b>Starter.</b> Smooth operation, starting properties	<input type="checkbox"/>	<input type="checkbox"/>																																																								
<b>Oil pressure.</b> 3...5 bar / 44...73 PSI	bar/PSI	bar/PSI																																																								
<b>Engine Instruments.</b> Check engine parameters	<input type="checkbox"/>	<input type="checkbox"/>																																																								
<b>Ignition ground test.</b> (See Operator's Manual for ROTAX® 912 iS)	<input type="checkbox"/>	<input type="checkbox"/>																																																								
<b>Oil temperature.</b> 90...110°C / 190...230°C	°C/°F	°C/°F																																																								
▲ <b>Warning:</b> Ensure that cylinder head temperature (CHT) and oil temperature are within limits.																																																										
<b>Cabin heat</b>	<input type="checkbox"/>	<input type="checkbox"/>																																																								
<b>Idle RPM.</b> Tachometer should read 1400 RPM	RPM	RPM																																																								
<b>Engine full power RPM.</b> Tachometer should read 4900 to 5000RPM	RPM	RPM																																																								
<b>Ignition check.</b> Set RPM to 4000. Turn "OFF" LANE selector switch A. Record rpm drop. Must not be more than 180. Turn "ON" LANE selector switch A. Turn "OFF" LANE selector switch B. Record rpm drop. Must not be more than 180. Turn "ON" LANE selector switch B.	RPM	RPM																																																								
	RPM	RPM																																																								
<b>Directional stability of nose gear</b>	<input type="checkbox"/>	<input type="checkbox"/>																																																								
▲ <b>Warning:</b> Allow engine to cool down to 149°C (300°F) (CHT) before shutdown. Shut down the engine, set the ignition switch and the master switch to the off position. Remove ignition key from the aircraft.																																																										
Check for fuel and exhaust odors in cabin	<input type="checkbox"/>	<input type="checkbox"/>																																																								
Check for fuel stains on floor	<input type="checkbox"/>	<input type="checkbox"/>																																																								
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<i>Inspection and/or Required Maintenance Checklist</i>	<i>100hour</i>	<i>Annual</i>	<i>Other Times</i>	<i>Minimum Level of Certification</i>	<i>Initials / Remarks</i>
Check fuel valve off function				<input type="checkbox"/>	<input type="checkbox"/>
<b>Notes:</b>   					

#### 05-20.2.4 Post Run-Up, Pre-inspection and Preparations

<i>Inspection and/or Required Maintenance Checklist</i>	<i>100hour</i>	<i>Annual</i>	<i>Other Times</i>	<i>Minimum Level of Certification</i>	<i>Initials / Remarks</i>
<b>Airframe, engine, propeller</b> Perform a walk around to detect damage, fluid leaks or other abnormalities, Check visual the installation geometry between fuselage/ wing/ empennage and engine/ propeller/ cowl Check leveling of aircraft on ground.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Engine cowling</b> Remove engine cowling. Refer to Section 71-00.3.1	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Spinner</b> Remove spinner as defined in the basic aircraft AMM	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
Make record of all malfunctions and abnormalities	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	

#### 05-20.2.5 Propulsion System

<i>Inspection and/or Required Maintenance Checklist</i>	<i>100hour</i>	<i>Annual</i>	<i>Other Times</i>	<i>Minimum Level of Certification</i>	<i>Initials / Remarks</i>
<b>Cleaning.</b> Clean the engine as required in the Maintenance Manual for ROTAX® Engine Type 912 Series.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Engine.</b> Conduct 100 hrs inspection as per Maintenance Manual for ROTAX® Engine Type 912 iS Series.	<input type="checkbox"/>	<input type="checkbox"/>		A&P	

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<b>Inspection and/or Required Maintenance Checklist</b>	<b>100hour</b>	<b>Annual</b>	<b>Other Times</b>	<b>Minimum Level of Certification</b>	<b>Initials / Remarks</b>
<b>Engine.</b> Conduct 200 hrs inspection as per Maintenance Manual for ROTAX® Engine Type 912 iS Series.			200 hrs	A&P	
<b>Engine.</b> Conduct 600 hrs inspection as per Maintenance Manual for ROTAX® Engine Type 912 iS Series.			600 hrs	A&P	
<b>Engine cowling.</b> Inspect for cracks, chafing, heat damage, delamination, exhaust or fluid leaks, condition of fastening system, and condition of paint.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Engine control panel.</b> Check for full range of travel, stop adjustment and required friction. Remove cover and check levers for damage, cracks, corrosion. Check cables for wear and security. Refer to Section 76-00.3.1.3	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Cooling air ducts, engine baffling and cylinder cooling fins.</b> Check for obstructions, cracks, wear and general condition. Check for signs of abnormal temperatures. Refer to CHAPTER 75	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Oil and coolant radiator.</b> Check for obstructions, leaks and security of attachment. If necessary clean cooling ribs. Refer to Section 75-00.3.1	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Coolant hoses and lines.</b> Check for damage, leakage, hardening from heat, porosity, for loose connections and secure attachments. Check routing for kinks and restricted elbows. Check fire protection shielding. Refer to CHAPTER 75	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Oil Lines.</b> Inspect for damage, leakage, hardening from heat, porosity, security of connections and attachments. Verify routing for kinks or restricted elbows. Check fire protection shielding. Refer to CHAPTER 79	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Oil tank vent line.</b> Check for proper routing, for obstructions and clear passage. Refer to CHAPTER 79	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Fuel lines.</b> Check for damage, leakage, hardening from heat, porosity, secure connections and attachments. Verify routing for kinks or restricted elbows. Steel fuel lines if applicable additionally check for cracks and for scuffing marks. Check fire protection shielding on the all fuel lines in engine and pilot compartment.	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	

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<i>Inspection and/or Required Maintenance Checklist</i>	<i>100hour</i>	<i>Annual</i>	<i>Other Times</i>	<i>Minimum Level of Certification</i>	<i>Initials / Remarks</i>
Refer to Section 28-00.3					
<b>Gascolator.</b> Open the gascolator, remove the filter and check for cleanliness. Clean filter and re-install. Check gascolator drain valve for correct function and leakage. Refer to Section 28-00.3	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Fuel shut off valve.</b> Check for security of attachment and signs of fuel leaks. Check that valve engages noticeable into the position ON/OFF. Refer to Section 28-00.3	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Fuel Flow Rate.</b> Check the value of fuel flow rate as defined in the basic aircraft AMM. Fuel flow rate:           L 40 / ____ / (l/h) R 40 / ____ / (l/h).	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Fuel contamination test.</b> Take fuel samples from both wings. Inspect for contamination, as defined in the basic aircraft AMM.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Induction system.</b> Check connection of manifolds between NACA-Inlet, Air filter box and carburetors for damage, security of attachments and condition. Inspect connected air hoses for condition and leakage. Refer to Section 71-00.3.3	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Air filter box.</b> Check that the sealing surfaces are in good condition and clean. Inspect and clean filter. Replace if necessary. Clean air filter box inside. Check the drain hole at the bottom of the box for obstructions or blockage. Refer to Section 71-00.3.3	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Cabin heater.</b> Check heat shroud and heater attachments. Check the manifold for holes and attachments. Check the heater activation system for proper operation. Check activation system for wear and security of attachments, as defined in the basic aircraft AMM		<input type="checkbox"/>		Pilot/Owner	
<b>Exhaust system.</b> Checks attachment screws and springs for security and fit. Inspect system for damage and missing parts. Visual inspection of muffler, exhaust pipes and mounting flanges for cracks, corrosion and leakage. Refer to CHAPTER 78	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Exhaust muffler.</b> Remove heat shroud from muffler and inspect muffler for condition, corrosion and leakage			200h	RLSA-M	

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<i>Inspection and/or Required Maintenance Checklist</i>	<i>100hour</i>	<i>Annual</i>	<i>Other Times</i>	<i>Minimum Level of Certification</i>	<i>Initials / Remarks</i>
Refer to CHAPTER 78					
<b>▲ Warning:</b> Failure to inspect Muffler for leaks could result in Carbon monoxide entering the cabin, leading to serious injury or death!					
<b>Firewall.</b> Inspect for cracks, delamination, buckling, and other signs of damage. Inspect all items attached to firewall for security. Inspect fire protection coat for condition, signs of overheating and full coverage of firewall.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Engine mount.</b> Lift up the nose landing gear off of the ground and inspect for deformation, cracks, corrosion, damage from heat, loose hardware, chafing by cables, wires, hoses, etc., and make sure that any flexible item is secured to the engine mount. Check mounting bolts for condition and visual signs for loss of torque. If necessary check correct torque value (see 200h). Refer to Section 71-00.3.2	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Engine mount.</b> Check mounting bolts for condition and correct values. At engine (4 bolts M10): 35 Nm At shock mounts (4 bolts M10): 35 Nm At firewall (6 bolts M8): 22.5 Nm Replace safety wire where necessary Refer to Section 71-00.3.2			200h	RLSA-M	
<b>Engine shock mounts.</b> Inspect for porosity, cuts, damage and deformations Refer to Section 71-00.3.2	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Battery attachment.</b> Inspect for security of mounting and condition as defined in the basic aircraft AMM. Ensure that the vent holes are clean.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Starter.</b> Check security of attachment and electrical connections, as defined in the basic aircraft AMM.	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Electrical wiring system.</b> Verify the complete electrical wiring system for security, damage, wear and secure fit. Check all cable connections for tight fit, good contact, corrosion and condition.	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	
<b>Other engine external accessories.</b> Inspect screws and nuts of all other external engine parts and accessories for tight fit.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Foreign objects.</b> Check the engine compartment for foreign objects.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	

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## 05-20.2.6 Return to Service

<i>Inspection and/or Required Maintenance Checklist</i>	<i>100hour</i>	<i>Annual</i>	<i>Other Times</i>	<i>Minimum Level of Certification</i>	<i>Initials / Remarks</i>
<b>Engine Compartment.</b> Make sure that engine compartment is free of any tools, parts, and foreign objects. Reinstall all access panels, fairings, etc., which were removed for the inspection.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Engine.</b> Check the presence of the oil in the oil tank, cooling liquid in the expansion tank. Make sure that the coolant level in the overflow bottle is between <b>min</b> and <b>max</b> marks as required by the Operator's Manual for all versions of ROTAX® 912 iS. Check that the engine compartment is free of tools, rags, and any other foreign objects.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Engine.</b> Run the engine for no more than two minutes at 1400 to 1800 RPM. After shutdown, check for the oil filter leaks, and any other components removed during this inspection. Install the cowlings, if there are no leaks detected.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Engine.</b> Warm up the engine at 2000 to 2500 RPM. Check all aircraft systems to ensure proper operation. During the engine warming, operate the engine systems at appropriate engine speeds and complete all checks listed on the Run-up checklist; fill data to the post-inspection column. Check the wheel brakes and parking brake for functioning.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Airworthiness Directives.</b> Verify all airworthiness directives, Service Bulletins, service information complied with.	<input type="checkbox"/>	<input type="checkbox"/>		Pilot/Owner	
<b>Aircraft records.</b> Input all necessary entries in the logbooks and any other required records. Service time Records, Equipment list and weight and balance Records – update, if necessary	<input type="checkbox"/>	<input type="checkbox"/>		RLSA-M	

All service items required by Service Notifications, Service Bulletins, Safety Alerts and Airworthiness Directives and all prescribed scheduled maintenance checks are successfully accomplished. The aircraft is airworthy and meets the condition specified in the aircraft data sheet.

Service station: \_\_\_\_\_ Next inspection when \_\_\_\_\_ hours of operation has been reached.  
Place, Date

Name, signature of mechanic

Name, signature of inspector

stamp

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## 05-20.3 Flight-Line Check

### 05-20.3.1 General

The flight-line checks include the pre-flight and post-flight checks. Do these checks each day the airplane is used.

### 05-20.3.2 Pre-Flight Check

Perform all Preflight Inspection items as defined in the aircraft POH and POH Supplement(s) before the first flight of the day to make sure that the general condition of the airplane and of the engine is good. It is important for flight safety. Look in the airplane log-book for problems before doing the pre-flight check.

▲ **Warning:** Do all the steps of the pre-flight check carefully. Accidents can occur if the pre-flight check is not done correctly.

### 05-20.3.3 Post-Flight Check

Re-do all Preflight Inspection items as defined in the aircraft POH and POH Supplement(s) after the last flight of the day.

You shall also:

- Refuel the airplane (Section 12-10.2.1).
- Record in the log book each problem found in flight and during post-flight check.
- Park the airplane.

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## **SECTION 05-30 – UNSCHEDULED MAINTENANCE CHECK**

Please contact the aircraft manufacturer for further instructions.

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## CHAPTER 11 – PLACARDS AND MARKINGS

### Contents

- 11-00.1 General
- 11-00.2 Placards and Markings

### 11-00.1 General

This chapter provides you with information about exterior and interior placards and markings.

### 11-00.2 Placards and Markings

The aircraft is equipped with the following markings and placards:

<i>Item</i>		<i>Location</i>
Fuel Type and Quantity	<div style="border: 1px solid black; padding: 5px;"> <p><b>APPROVED FUEL TYPES AND QUANTITY:</b></p> <p style="text-align: center;"><b>MOGAS</b></p> <p style="text-align: center;">EN 228 Super min. RON 95 EN 228 Super plus min. RON 95</p> <p style="text-align: center;"><b>AVGAS</b></p> <p style="text-align: center;">AVGAS 100LL ASTM D910</p> <p style="text-align: center;"><b>65 l (17 US.gal) total, 63 l (16.5 US.gal) usable</b> - per side -</p> </div>	Adjacent to each fuel tank filler cap
	Header Tank Volume 6 l (1.6 US.gal), 4 l (1.1 US.gal) usable	On the header tank left side

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## SECTION 12-10 – REPLENISHING

### 12-10.1 General

This section provides instructions concerning replenishing procedures.

### 12-10.2 Replenishing Practices

#### 12-10.2.1 Refueling and Defueling

Fuel content: 136 l (36) total, distributed to:  
- 2 wing tanks each with 65 l (17.2 US.gal)  
- one header tank with 6 l (1.6 US.gal).

Maximum Usable fuel: 130 l (34.3) total, provided by:  
- 2 wing tanks each with 63 l (16.7 US.gal)  
- one header tank with 4 l (1.1 US.gal).

Fuel specification: MOGAS EN228 Super;  
MOGAS EN228 Super Plus;  
AVGAS 100 LL (ASTM D910).

- **Note:** The header tank has no separate filler opening. The header tank automatically fills when the selected wing tank contains fuel.

#### 12-10.2.1.1 Type of Maintenance

Line

#### 12-10.2.1.2 Minimum Level of Certification

Pilot/Owner

#### 12-10.2.1.3 Procedure

##### A. Recommended Special Tools and Parts

<i>Item</i>	<i>Quantity</i>	<i>Unit</i>
None		

##### B. Refueling

<i>Step</i>	<i>Action</i>	<i>Reference</i>
1	Turn the engine off.	
2	Set parking brake	
3	Remove the filler cap situated on the upper surface of wing skin.	
4	Fill the fuel tank with fuel	
5	Install the fuel filler cap	
6	Do steps 3-5 for the other wing	

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### C. Defueling

<b>Step</b>	<b>Action</b>	<b>Reference</b>
1	Turn the engine off.	
2	Set parking brake	
3	Put a container below the gascolator drain valve.	
4	Open the gascolator drain valve. Drain all accessible fuel from the tanks.	
5	Close the gascolator drain valve.	

### 12-10.2.2 Fuel Contamination Test

#### 12-10.2.2.1 Type of Maintenance

Line

#### 12-10.2.2.2 Minimum Level of Certification

Pilot/Owner

#### 12-10.2.2.3 Procedure

##### A. Recommended Special Tools and Parts

<b>Item</b>	<b>Quantity</b>	<b>Unit</b>
Transparent fuel tester	1	pcs

##### B. Fuel Contamination Test

Do this test each day you operate the airplane.

<b>Step</b>	<b>Action</b>	<b>Reference</b>
1	Put the fuel tester under the header tank drain valve.	
2	Open the drain valve.	
3	When the container is half full, close the drain valve.	
4	Let the fuel in the glass container stand for 1minute.	
5	Examine the fuel. Look for small drops of water in the bottom of glass container. Look for small particles of solid material.	
6	Repeat steps 1 – 5 for the drain valve of the gascolator.	
7	Test is passed when no contamination (drops of water, particles or similar) is found.	

##### C. Troubleshooting.

If you find any contamination of the fuel you must do the following:

<b>Step</b>	<b>Action</b>	<b>Reference</b>
1	Repeat the fuel contamination test.	
2	If you still find contamination after three tests, drain the fuel tank.	12-10.2.1
3	When contaminations other than water had been detected, clean filter mesh at gascolator.	28-00.3.1
4	When contaminations other than water had been detected and filter mesh at Gascolator shows noticeable clogging, exchange fine fuel filter in engine compartment.	28-00.3.1
5	Flush the tank and fill with clean fuel.	12-10.2.1
6	Re-do contamination test after re-fuelling	

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## 12-10.2.3 Fuel Flow Rate Check

### 12-10.2.3.1 Type of Maintenance

Line

### 12-10.2.3.2 Minimum Level of Certification

Repairman, Light Sport Aircraft-Maintenance (RLSA-M) or higher.

### 12-10.2.3.3 Procedure

#### A. Recommended Special Tools and Parts

Item	Quantity	Unit
Transparent container	1	pcs
Measuring jug, fuel and ethanol resistant, min. 4 l (1 US.gal). Alternatively, transparent container as above with calibrated volume markings	1	pcs
Marking pen that will write on the transparent container	1	pcs

#### B. Fuel Flow Rate Check

Check the fuel flow per minute of each tank through the gascolator exactly and note and compare with the previous fuel flow rate. If there is a drop more than 5%, then check full system (bows in fuel lines) and if still a difference, check the fuel filters in the wings.

Step	Action	Reference
1	Set the plane on the prepared platform.	
2	Set a fuselage on horizon level, using supports under the main wheels.	
3	Fill fuel tank in the left wing with minimum 5 liters of fuel. Open the gascolator drain valve. Fuel will drain by gravity.	
4	When fuel does not drain automatically, close the drain valve and then push the tail of the aircraft down and hold it in this position for a minute. This will start the fuel flow. Re-open the drain valve again.	
6	Let fuel flow for 3 minutes. Apply markings of the fuel level on the container after each minute.	
7	Close drain valve after exactly 3 minutes	
8	Use measure jug to measure the drained volume per minute. Required minimum flow rate is 40 liter (10.6 US.gal) per hour. This is equal to 667 ml (0.176 US.gal/min) per minute	
9	Drain all fuel from the left wings tank.	12-10.2.1
10	Repeat procedure for the right wing tank.	

#### C. Troubleshooting.

If fuel flow rate on either or both sides is less than 40 l / hour, it is necessary to check:

Step	Action	Reference
1	Check fuel hoses for absence of kinks. Fix, when found.	
2	Check gascolator filter mesh for contamination and clean.	28-00.3.1
3	Repeat the fuel flow test.	

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## CHAPTER 28 – FUEL SYSTEM

### Contents

28-00.1	General
28-00.2	Description
28-00.3	Maintenance Practices
28-00.3.1	Fuel System Inspections
28-00.3.2	Fuel Pump Removal and Installation
28-00.3.3	Fuel Hoses and Lines Replacement

### 28-00.1 General

This chapter provides description of the Fuel System.

### 28-00.2 Description

The fuel system consists of:

- integrated in to each wing fuel tank with capacity of 65 l (17.2 US.gal) with sight gauges at the root rib
- Header tank in the rear fuselage with capacity of 6 l (1.6 US.gal) with fuel level warning sensor
- fuel lines
- fuel tank selector valve
- separate fuel shut-off valve
- electrical fuel pump set
- gascolator with filter screen
- fine fuel filter
- fuel system drainage
- fuel tank venting
- two fuel flow meters (optional)

The principal scheme of fuel system is shown on Fig 28-00.1.

A fuel tank is integrated into the leading edge of each wing. The fuel tanks are each divided into two sections by an anti-sloshing rib (Fig. 28-00-2). Fuel is filled into the outer section via a fuel filler opening on the upper side of each wing. Each tank outlet has a coarse screen which can be removed via a maintenance plate in the root rib for visual inspection and cleaning. Fuel is fed by gravity via two fuel lines to the fuel selector. After fuel selector, fuel flows to the header tank. The header tank volume is selected so that even with virtually empty tanks, enough fuel is available in a sideslip to ensure engine power for landing. The header tank has a drainable sump. The fuel system must be drained at this point before the first flight of the day and after filling up with fuel.

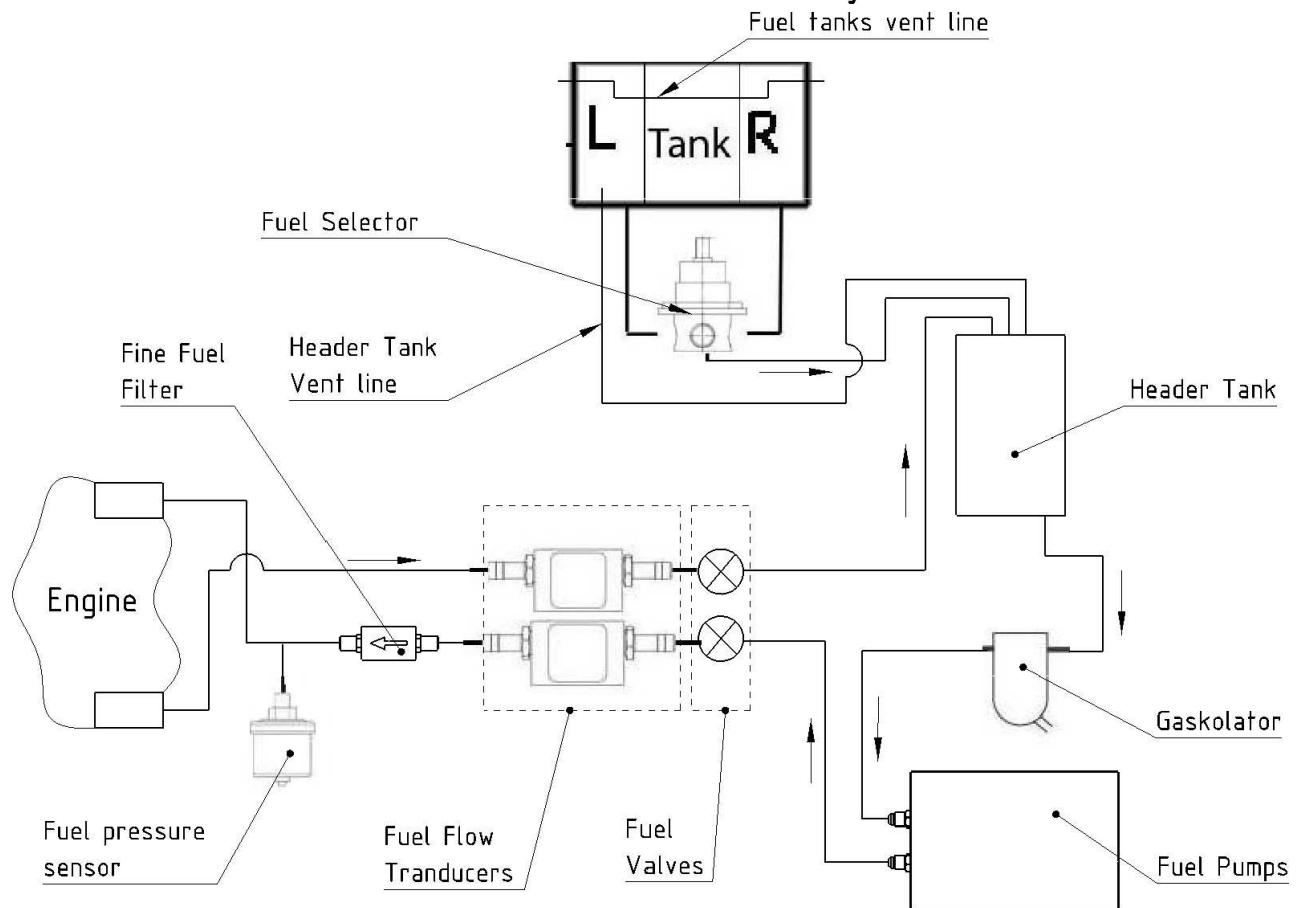
The fuel is fed from the header tank to the gascolator which has a fine filter mesh included. The gascolator is the lowest point in the fuel system and has a drain valve. The fuel system must be drained at this point before the first flight of the day and after filling up with fuel. The fuel flows from the gascolator to the electrical fuel pumps, placed under left baggage compartment. The fuel shutoff valve is located directly before the line passes through the fire wall.

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From shutoff valve fuel flows through a fine filter to the injection lines, the injection valves and the fuel pressure regulator. The fuel pressure regulator keeps injection pressure at the desired level and allows surplus fuel to feed back to the header tank. The back-flow line is also blocked when the fuel shut-off valve is closed.

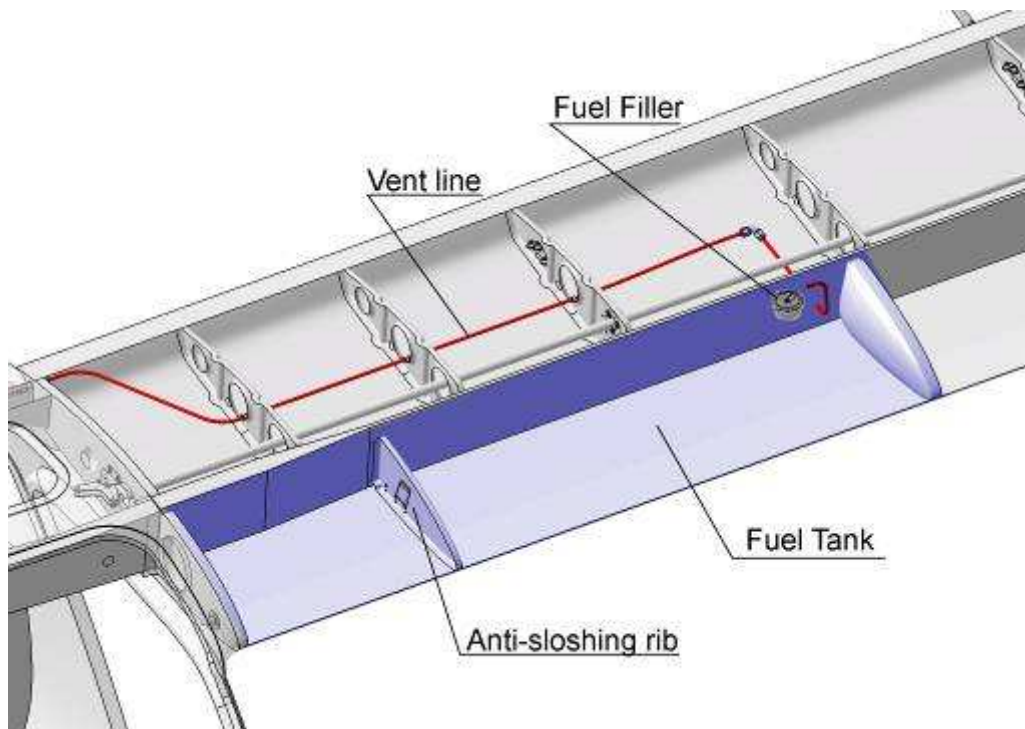
The Fuel System is presented schematically on the following diagram (Fig. 28-00-1).

### Scheme of fuel system



**Fig. 28-00-1. Scheme of Fuel System**

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**Fig. 28-00-2**

To open the fuel filler cap, the lever in the cap must be raised and turned 90° anti-clockwise. The cap can then be removed. The cap is properly shut when the lever is pressed down into position (Fig. 28-00-3).



*Incorrect position*



*Correct position*

**Fig. 28-00-3**

Fuel flows via a flapper valve into the inner section of the fuel tank inboard of the anti-sloshing rib. The flapper does not completely seal the inner tank. But it does greatly restrict the return flow of fuel into the outer chamber when one wing is low (sideslip).

A special epoxy covering is applied to the inner surface of the fuel tank. The covering is resistant to fuel and ethanol and ensures continued leak resistance of the tank.

The outlet with integrated coarse screen is installed in the wing root rib. The outlet can be removed via a maintenance plate in the root rib for visual inspection and cleaning. The maintenance plate is provided with a sight gauge. When wings attached to the fuselage the sight gauges are visible to the occupants (Fig. 28-00-4).

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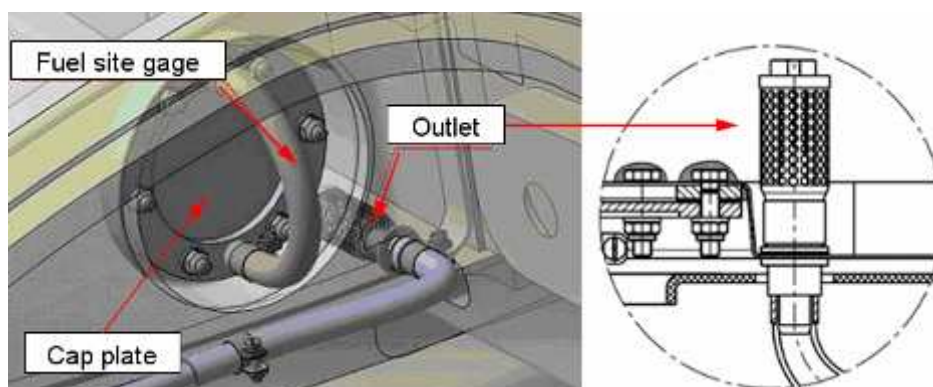


Fig. 28-00-4

The tanks are vented via tubes in the outer tank sections, the air coming from NACA inlets on the outer side of each of the upper winglets. The vent tube is led through the outer tank section in a loop. In this way, no fuel can escape into the vent tubes should the aircraft be parked at a slant.

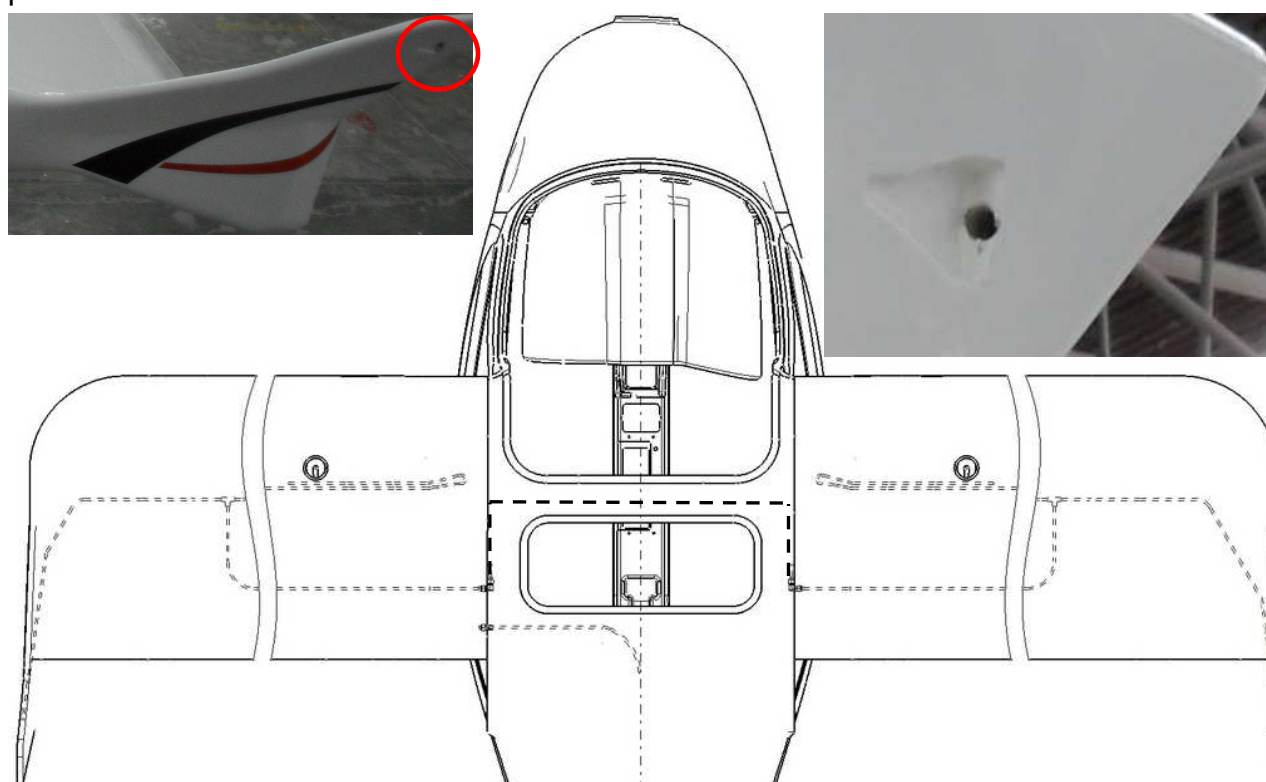
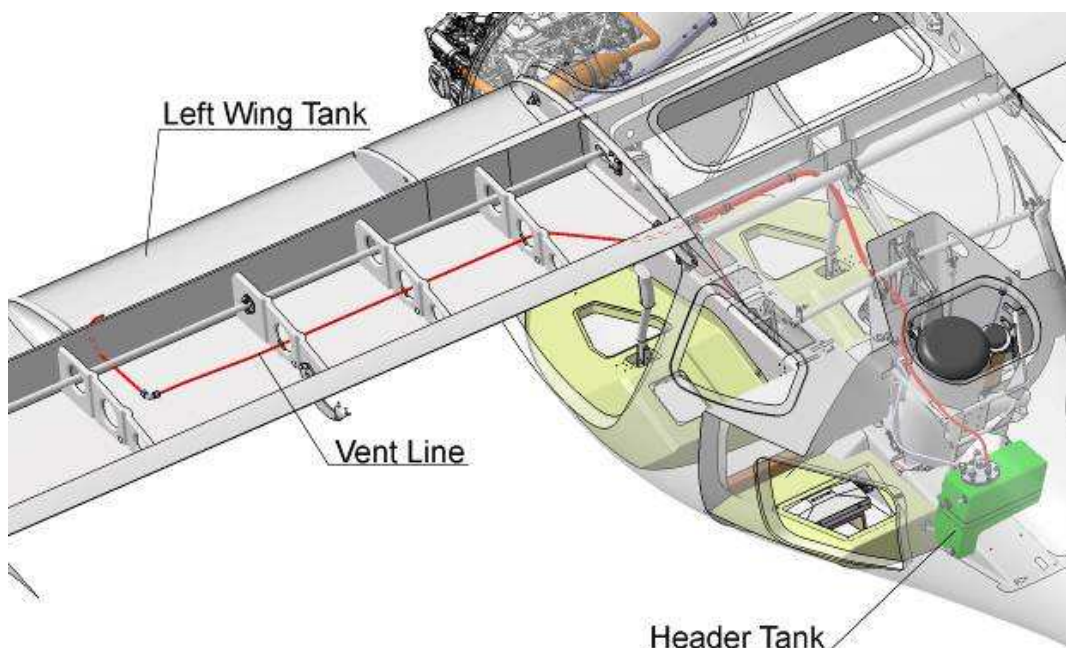


Fig. 28-00-5

The header tank has venting line routed to the left wing tank. The vent tube is led through the tank along the upper wing skin to the highest point of fuel tank. Due to this, overflow fuel from the header tank goes to the left wing tank and cannot be spilled (Fig. 28-00-5).

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**Fig. 28-00-6**

Fuel selector is placed behind occupants at the fuel selector box (Fig. 28-00-7). The fuel selector normal operating position is “both”, a single tank is only selected temporarily to correct a possible fuel imbalance. Selection of a single tank is announced by the EMS to remind the pilot to go back to “both”. The selector valve does not allow to shut off the fuel flow.

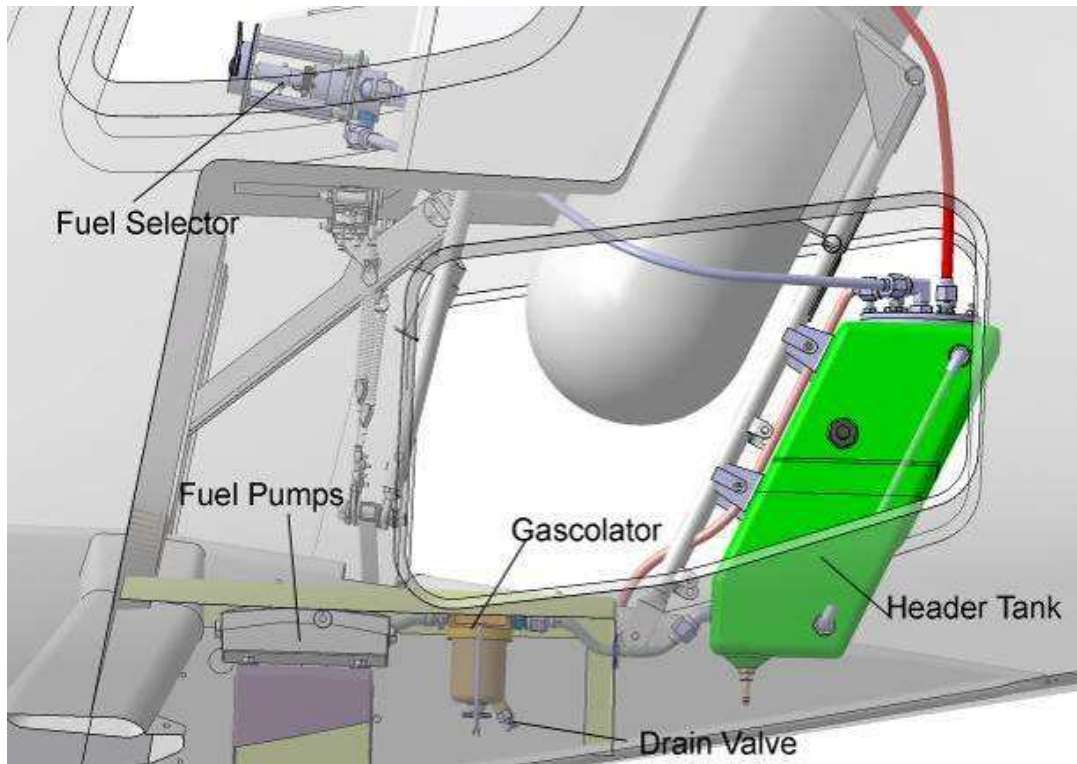


**Fig. 28-00-7**

The fuel pumps block and gascolator are located in left side of luggage compartment and covered with composite box with hatch for inspection and maintenance.

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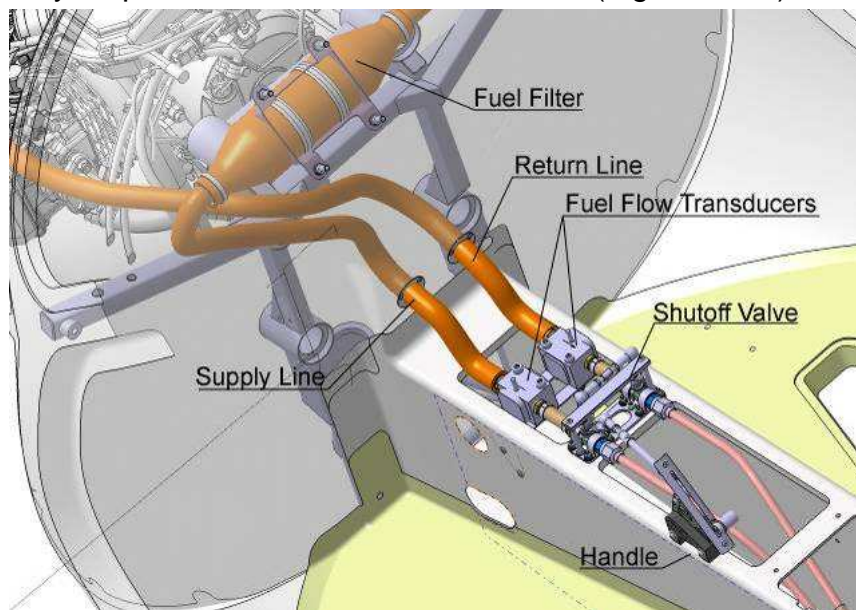




**Fig. 28-00-8**

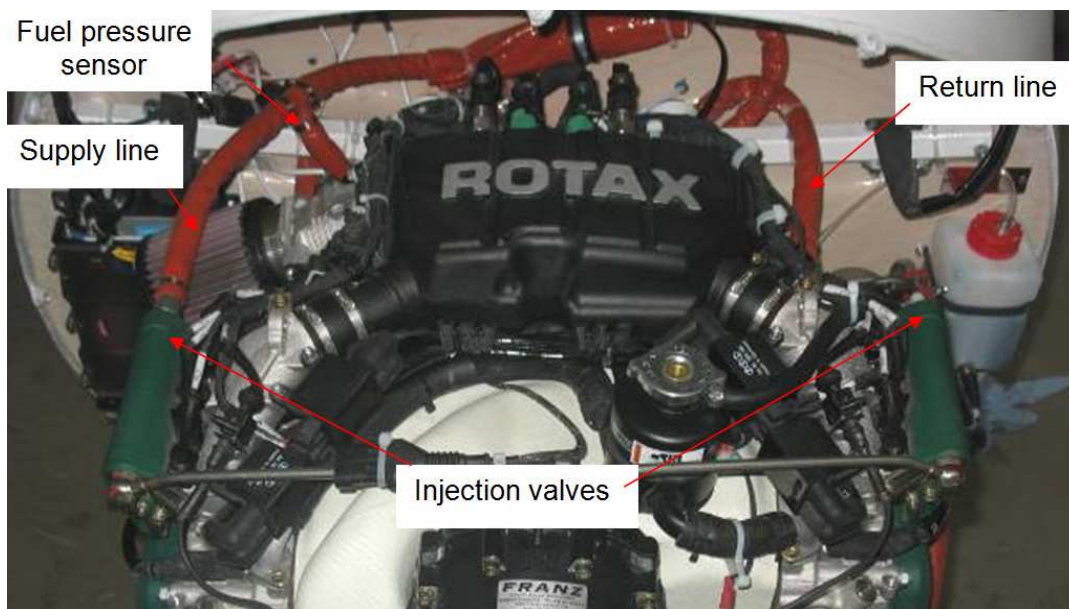
The fuel shutoff valve is located after Fuel pumps, on the tunnel. This valve closes both, feed line and back flow line and therefore completely separates the engine compartment. As an option two fuel flow transducers can be placed after the shutoff valve. Fuel consumption metering is achieved by the difference between the feed line and the back flow line fuel flow. If fuel the flow transducers are not set, the fuel consumption is calculated by the engine control unit (ECU).

From the shutoff valve fuel flows through the very fine fuel filter to the injection lines, fuel pressure sensor, the injection valves and the fuel pressure regulator. The fuel pressure regulator feeds any surplus fuel back to the header tank (Fig. 28-00-8).



**Fig. 28-00-9**

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**Fig. 28-00-10**

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## 28-00.3 Maintenance Practices

### 28-00.3.1 Fuel System Inspections

#### 28-00.3.1.1 Type of Maintenance

Line

#### 28-00.3.1.2 Minimum Level of Certification

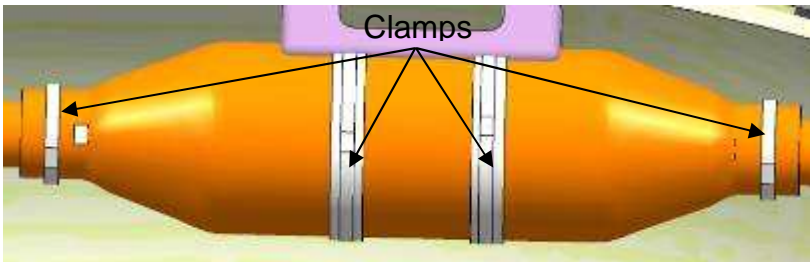
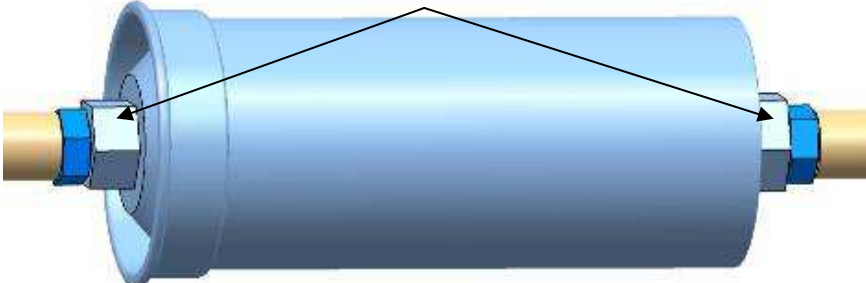
Repairman, Light Sport Aircraft-Maintenance (RLSA-M) or higher

#### 28-00.3.1.3 Procedure

##### A. Recommended Special Tools and Parts


Item	Quantity	Unit
None		

##### B. Fuel Filter Inspection

Step	Action	Reference
1	Inspect the fuel filter if the fuel pressure is less than normal or a sharp drop off in pressure is observed.	
2	Inspect all fuel lines for damage, leakages, connections securing. Verify lines routing for kinks or restricted elbows.	
3	Check fuel hoses fire sleeves in engine compartment for hardening from heat, porosity, connections securing.	
4	Move handle to position ON to open fuel shutoff valve.	
5	Drain rest of the fuel from fuel lines through gascolator to sufficient container. To drain the fuel push to the gascolator drain valve and turn it.	
6	Loose four screwed clamps, and remove fireproof covering 	
7	Unscrew fitting nuts and detach fuel lines from the filter. Remove filter. When necessary – replace filter. 	
8	Install fuel filter in reverse order of step 8.	
9	Fill fuel to fuel system and operate fuel pumps. Check system to be free from leakage.	
10	Complete installation in reverse order of Step 7, above.	

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### C. Gascolator Inspection

1	Drain all fuel from the system.	
2	Remove lock wire from Gascolator and remove gascolator bowl. 	
3	Clean gascolator bowl and inspect for damage, cracks and scuffing marks.	
4	Clean gascolator filter screen.	
5	Assemble gascolator in reverse order.	

### D Shut off valve Inspection



1	Remove lower instrument panel.	
2	Inspect shut off valve attachment and for leakage. Check that valve engages noticeable into the position ON/OFF. Ensure that both valves open / close simultaneously.	

### E Fuel Tanks Inspection

1	Drain all fuel from the system.	
2	Remove the wings as per instructions in the basic AMM.	
3	Inspect external surfaces of fuel tank for leakages and foreign objects.	
4	Inspect sight gauges for security and presence of fuel leakage, and readable indication. Replace gauges if necessary	
5	Inspect Fuel filler caps for proper locking and leakage.	
6	Check that the placards are present and readable.	
7	Unscrew 6 nuts M6, securing the cap plate at the root rib. Inspect inner surfaces of fuel tanks, condition of sealant and inner structure. Clean if required.	
8	Inspect fuel flap in slosh rib for proper functioning and attachment.	
9	Inspect the strainer at the fuel tank outlet for contamination through opening in root rib. Clean if required.	
11	Check fuel vent lines and connections for leakage and blockage. Blow through if required.	
12	Remove all remains of the old Hylomar sealant and of the old rubber seal ring KF 2800 0009 from the cap plate and from the flange at the wing.	
13	Apply the Hylomar Universal Blue onto the surfaces of the root rib ring, of the cap plate, and onto both contact surfaces of the rubber seal ring.	

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14		
15	Install the rubber seal ring and press it to the root rib ring.	
16	Install the cap plate and press it.	
17	Install the washers and the self-locking nuts M6.	
18	<p>Do pre-tightening of the nuts, in a sequence shown on picture below, thus the cap plate is not askew.</p> 	
19	<p>Tighten the nuts in the following sequence:</p> <ul style="list-style-type: none"> <li>• Apply the tightening torque 2 Nm for each nut.</li> <li>• Apply the tightening torque 6 Nm for each nut.</li> <li>• Apply the tightening torque 9 Nm for each nut.</li> </ul>	
20	Carefully remove excessive Hylomar Universal Blue.	
21	When the Hylomar Universal Blue is fully hardened, close the fuel outlet with the suitable cap, for example – with the clamped fuel hose. Place the wing on the support so that the root rib is lower than the wing tip.	
22	Fill the fuel tank with 30...35L (8...9 U.S. gallons) of the fuel. Check that the fuel sight gage is filled with fuel.	
23	In 12 hours do visual inspection of the repaired area of the root rib for the fuel leaks.	
24	Drain all fuel from the wing through the fuel outlet. Check that the fuel sight gage empties with fuel level going down.	

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## 28-00.3.2 Fuel Pumps Block Removal and Installation

### 28-00.3.2.1 Type of Maintenance

Line

### 28-00.3.2.2 Minimum Level of Certification

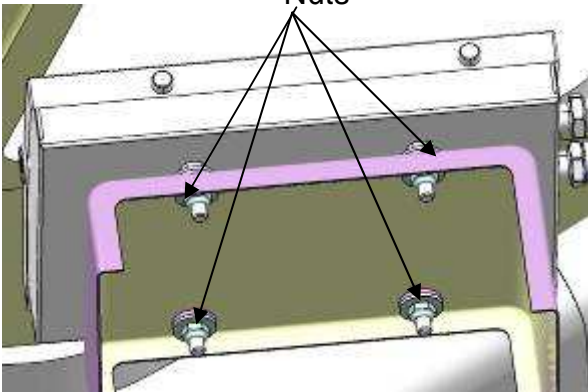
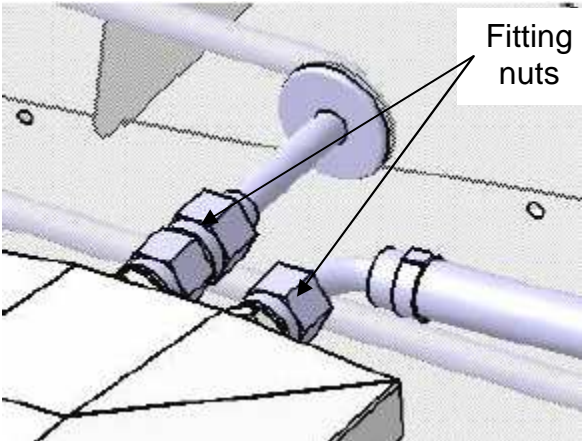
Repairman, Light Sport Aircraft-Maintenance (RLSA-M) or higher

### 28-00.3.2.3 Procedure

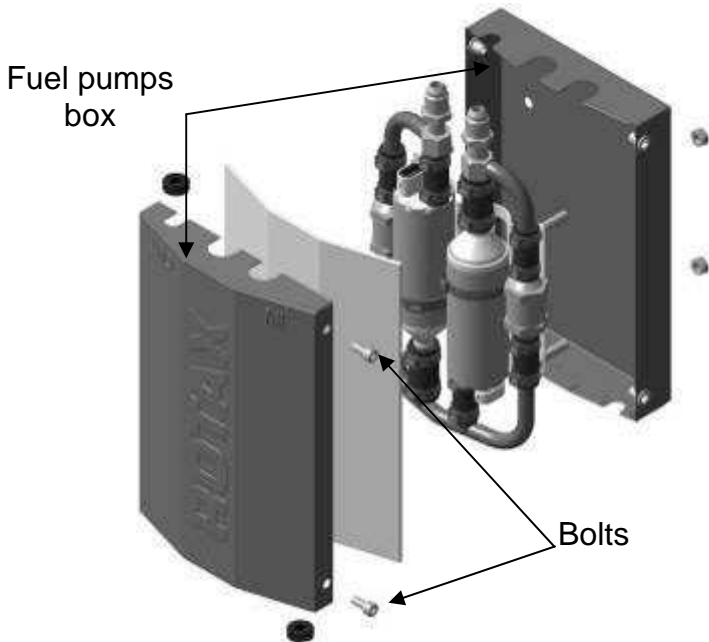
#### A. Recommended Special Tools and Parts

Item	Quantity	Unit
None		

#### B. Fuel Pumps Block Removal

Step	Action	Reference
1	Drain fuel through gascolator to sufficient container.	12-10.2.1.
2	Open cover in left luggage compartment floor to gain access to the fuel system components.	
3	<p>Unscrew 4 nuts from support:</p>  <p>Unscrew fitting nuts and disconnect hoses from Fuel pump.</p>  <p>Remove Fuel Pumps bloc. Unscrew 4 bolts, and remove Fuel Pumps box.</p>	

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	 <p>Fuel pumps box</p> <p>Bolts</p>	
4	Inspect the Fuel Pumps for damage, corrosion and leakages before re-installation.	
5	Install Fuel Pumps in reversed order	

### 28-00.3.3 *Fuel Hoses and Lines Replacement*

#### 28-00.3.3.1 Type of Maintenance

Line

#### 28-00.3.3.2 Minimum Level of Certification

Airframe and Powerplant mechanic (A&P)

#### 28-00.3.3.3 Procedure

For fuel lines being part of the ROTAX<sup>®</sup> engine, refer to the ROTAX<sup>®</sup> Maintenance Manual valid for your individual engine.

For all other fuel lines, contact aircraft manufacturer for further instructions.

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# CHAPTER 71 – ENGINE

## Contents

71-00.1	General
71-00.2	Description
71-00.3	Maintenance Practices
71-00.3.1	Engine Cowlings Removal
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71-00.3.3	Air Induction Inspection
71-00.3.4	Starter Replacement
71-00.3.5	Generator Replacement
71-00.3.6	Other Engine Maintenance

## 71-00.1 General

This chapter provides description of the engine systems.

## 71-00.2 Description

The engine of the CTLS-LSA is a standard ROTAX® 912 iS or iSc engine.

- **Note:** For simplicity reasons this manual will refer to the ASTM compliant engine version Rotax 912 iS. Any instructions provided in reference to this engine automatically applies as well to the otherwise technically identical Type Certified engine version Rotax 912 iSc, unless explicitly noted otherwise.

It is a horizontally opposed, four cylinder, fuel injected four stroke engine with central camshaft pushrod driven overhead valves, liquid-cooled cylinder heads and a ram air cooling of the cylinders, dry sump, pump-fed lubrication system with integrated pressure regulator. The propeller is attached to the engine by an integrated gearbox (2.43 : 1 reduction) with a mechanical shock absorber and overload clutch. It is equipped with a fully redundant electronic engine management system, including fuel injection and electronic dual characteristic ignition. The engine has an electric starter and two integrated generators, whereas one is normally used to support the engine, while the second generator powers the aircraft systems.

The engine is equipped with a closed circuit water cooling system of the cylinder heads with an expansion tank and overflow bottle.

The oil pump is driven by the camshaft. The oil system incorporates an oil cooler and a oil tank.

All details of the engine design are provided in the Operator's Manual OM-912i provided by the engine manufacturer for the installed engine.

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## 71-00.3 Maintenance Practices

### 71-00.3.1 Engine Cowlings Removal

The upper and lower cowling cover the engine compartment. The cowlings are connected together and attached to the fuselage. The cowlings are connected with quick fasteners.

The upper cowling provides an inspection hatch for access to oil and coolant tanks.

The lower cowling provides air-inlets for engine cooling, air induction, cabin heat and mounting position for the optional landing light.

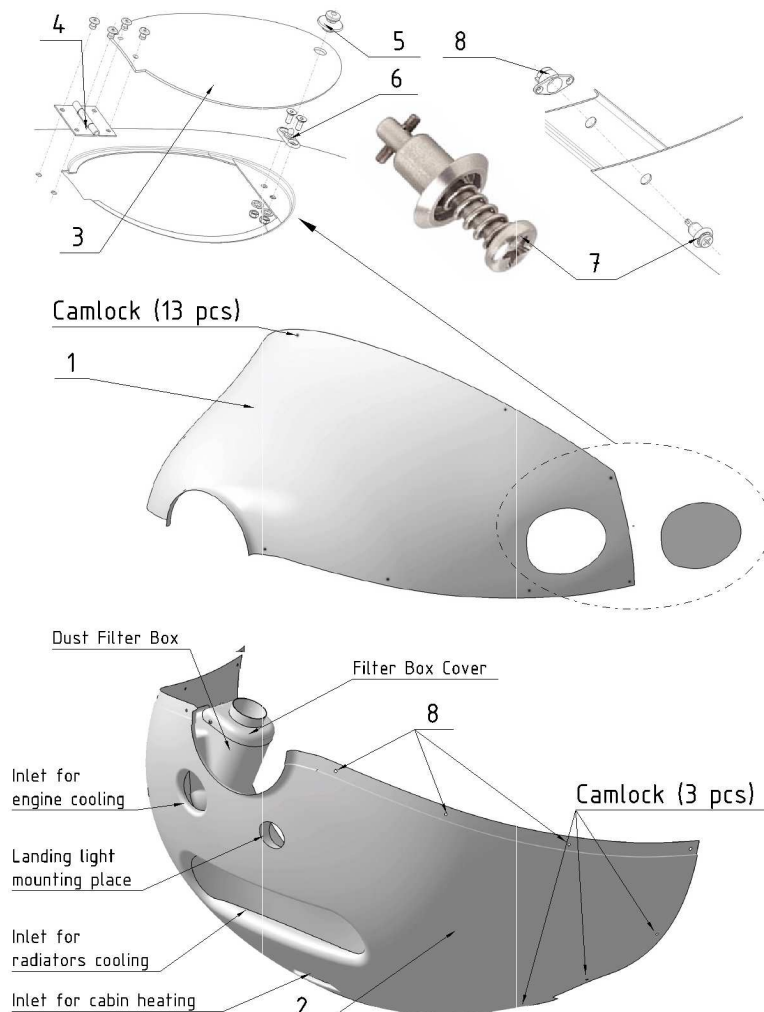


Fig. 71-00-1

Fig.	Item	Part Name	Torque	Reference
71-00-1	1	Cowling, Engine, Upper		KF71100100
	2	Cowling, Engine, Lower		KF71100203
	3	Plate, Hatch		KF71100112
	4	Hinge 50x31x1.1mm		C9997732I
	5	Button TENAX 01		C9997541A
	6	Button TENAX 04		C9997541B
	7	Camlock Stud		C9996903Z
	8	Receptacle 212-12ND		C9996911A

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### 71-00.3.1.1 Type of Maintenance

Line

### 71-00.3.1.2 Minimum Level of Certification

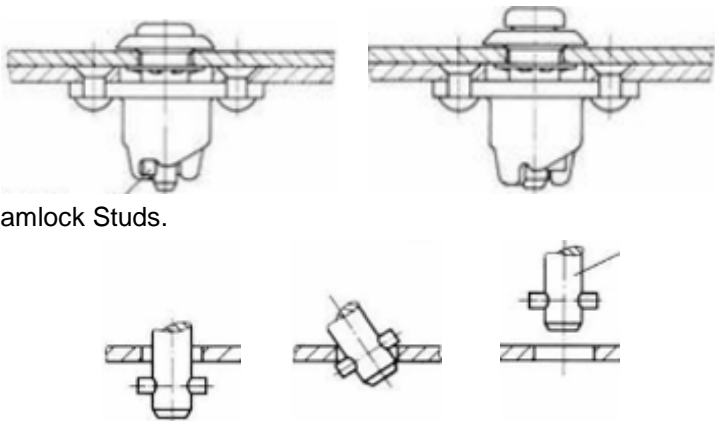
Pilot/Owner

### 71-00.3.1.3 Procedure

#### A. Recommended Special Tools and Parts

Item	Quantity	Unit
None		

#### B. Engine Cowlings Removal

Step	Action	Reference
1	Place chocks on the wheels and confirm that the ignition switch is OFF	71.2.1
2	<p>Unscrew 13 Camlock Studs 7 of upper cowling: Press and turn with the screwdriver to quarter-turn;</p>  <p>Remove Camlock Studs.</p> <p>Remove Upper Cowling 1.</p>	
3	Loosen clamp on the hose routed to the airbox.	71-00.3.3.3
4	Unscrew 6 Camlock Studs 7 of lower cowling. Remove Lower Cowling 2.	
5	Inspect the Cowlings and Camlock Studs for damage. Replace Camlock Studs if required	
6	Clean cowlings	
7	Install Cowlings in reversed direction order	

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### 71-00.3.2 Engine Mount Inspection

The engine is attached to the primary aircraft structure by a strong steel engine mount.

The small engine mount is attached directly to engine. The small engine mount is attached to the Big Engine mount with rubber shock mounts.

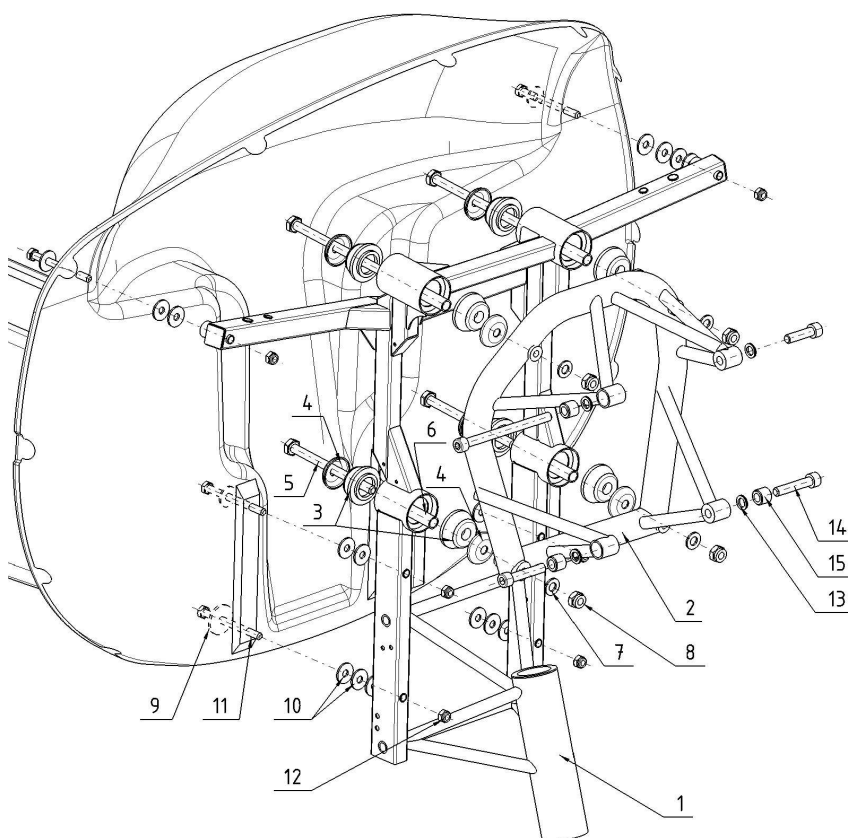


Fig. 71-00-2

Fig.	Item	Part Name	Torque	Reference		
71-00-2	1	Big Engine Mount		KF71200100		
	2	Small Engine Mount		C9997796X		
	3	Shock Mount		C9997789L		
	4	Shock Mount Washer		Part of set C9997789L		
	5	Screw M10		KF71000009, KF71000010, KF71000011, KF71000013		
	6	Spacer		KF71000005, KF71000006, KF71000007, KF71000008		
	7	Washer		C9996506		
	8	Self-Locking Nut M10	35 Nm	C9996337		
	9	Washer		KF71000012		
	10	Washer		C9996567		
	11	Screw M8		C9996259V		
	12	Self-Locking Nut M8	22.5 Nm	C9996336		
	13	Lock Washer 10.7		C9996570D		
	14	Screw M10	35 Nm	KF71200001, KF71200002, KF71200004,		
	15	Spacer Bush		KF71000018		
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### 71-00.3.2.1 Type of Maintenance

Line

### 71-00.3.2.2 Minimum Level of Certification

Repairman, Light Sport Aircraft-Maintenance (RLSA-M) or higher

### 71-00.3.2.3 Procedure

#### A. Recommended Special Tools and Parts

Item	Quantity	Unit
Padded support	1	Pcs

#### B. Engine Mount Inspection

Step	Action	Reference
1	Remove upper and lower cowlings	71-00.3.1
2	Lift the forward fuselage by pushing down the tail at the narrowest part so that the Nose Wheel is at least 25 cm (10 inch) off the ground.	
3	Insert the padded support securely just behind the firewall (under the fuselage bottom).	
4	Inspect the Engine Mounts 1 and 2 for deformations, cracks, paint delaminating, corrosion, loose hardware, chafing by cables, wires, hoses, etc., and make sure that any flexible item is secured to the engine mount.	
5	Inspect the rubber Shock Mounts for porosity, cuts, damage and deformations.	
6	Inspect the presence of lock wire on engine mounting Screws M10 item 14. Replace safety wire if necessary.	
7	Inspect engine mounting screws for condition and tightening. Check markings of marked bolts, remove safety wire and re-torque bolts that are safety wired. Re-install safety wire when done and where applicable.	

### 71-00.3.3 Air Intake Inspection

Air is fed into the engine from a NACA inlet at the right side of the lower cowling, through a cylindrical air filter installed in the filter box at the lower cowling and through throttle body socket which fills airbox with sufficient airflow.

Airbox is equipped with two pressure sensors and two temperature sensors for both injection manifolds.

Air intake to fuel injectors flow through intake manifolds. This process is controlled by ECU, and provide optimized fuel consumption.

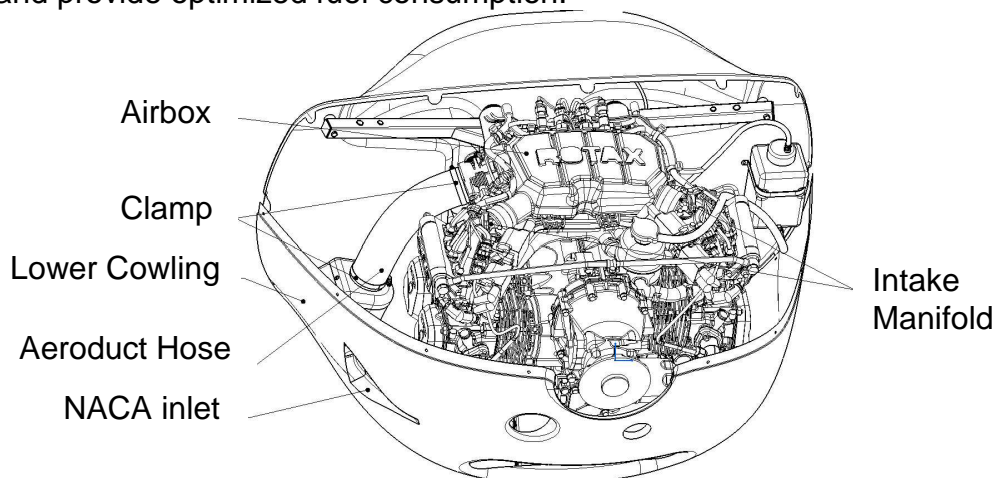


Fig. 71-00-3. Air Intake System

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### 71-00.3.3.1 Type of Maintenance

Line

### 71-00.3.3.2 Minimum Level of Certification

Pilot/Owner

### 71-00.3.3.3 Procedure

#### A. Recommended Special Tools and Parts

Item	Quantity	Unit
None		

#### A. Air Intake System Inspection; Airfilter Removal and Installation / Exchange

Step	Action	Reference
1	Remove upper cowling	71-00.3.1
2	Check Aeroduct hose for damage, security of attachments and condition.	
3	Check the Air filter installation. Inspect tightening of securing clamps.	

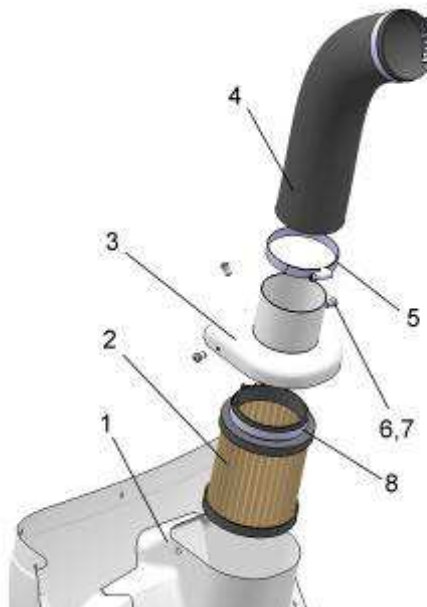


Fig. 71-00-4. Air Filter installation

Fig.	Item	Part Name	Torque	Reference
71-00-4	1	Lower cowling with dust filter box		KF71100203
	2	Air filter		C9997191C
	3	Cover		KC28001021
	4	Aeroduct Hose		C9993188A
	5	Clamp 60-80mm/9mm		C9997723B
	6	Bolt M4x10		C9996159
	7	Rivet Nut M4		C9996833
	8	Clamp		C9997791C

#### B. Dust Filter Inspection.

Step	Action	Reference
1	Loose Clamps 5 and remove Aeroduct Hose 4.	
2	Unscrew three Screws 6 and remove Cover 3.	

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3	Check conditions of dust filter. Clean Air Filter 2 and Lower Cowling Filter Box 1. Replace Filter if required.	
4	Check the drain hole at the bottom of the dust filter box for obstructions or blockage.	
5	Check incoming air line for damage, security of attachments and condition.	
6	Install air filter in reverse order.	

### **71-00.3.4 Starter Replacement**

#### **71-00.3.4.1 Type of Maintenance**

Line

#### **71-00.3.4.2 Minimum Level of Certification**

Airframe and Powerplant mechanic (A&P).

Refer to the applicable Rotax engine maintenance manual for further task specific requirements.

#### **71-00.3.4.3 Procedure**

Refer to the maintenance manual provided by the engine manufacturer for the specific engine.

### **71-00.3.5 Generator Replacement**

#### **71-00.3.5.1 Type of Maintenance**

Heavy

#### **71-00.3.5.2 Minimum Level of Certification**

Airframe and Powerplant mechanic (A&P).

Refer to the applicable Rotax engine maintenance manual for further task specific requirements.

#### **71-00.3.5.3 Procedure**

Refer to the maintenance manual provided by the engine manufacturer for the specific engine.

### **71-00.3.6 Other Engine Maintenance**

This maintenance practice covers all maintenance items that affect the core engine directly, that are not otherwise defined within this AMM and that are appropriately defined within the applicable Rotax engine maintenance manual.

#### **71-00.3.6.1 Type of Maintenance**

Heavy

#### **71-00.3.6.2 Minimum Level of Certification**

Airframe and Powerplant mechanic (A&P).

Refer to the applicable Rotax engine maintenance manual for further task specific requirements.

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### **71-00.3.6.3 Procedure**

Refer to the maintenance manual provided by the engine manufacturer for the specific engine.

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## CHAPTER 73 – ENGINE FUEL AND CONTROL

Refer to the maintenance manual provided by the engine manufacturer for your engine for description and maintenance instructions on the engine-mounted portion of the fuel system.

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## CHAPTER 74 – IGNITION

Refer to the maintenance manual provided by the engine manufacturer for your engine for description and maintenance instructions on the ignition system including spark plugs.

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# CHAPTER 75 – COOLING

## Contents

- 75-00.1 General
- 75-00.2 Description
- 75-00.3 Maintenance Practices
  - 75-00.3.1 Cooling Inspection
  - 75-00.3.2 Cooling Hoses and Lines Replacement

### 75-00.1 General

This chapter provides description and information concerning maintenance of engine cooling.

### 75-00.2 Description

The engine is provided with liquid cooling. The coupled water and oil radiators are installed in front of the engine just behind the air-inlet. The fresh air flow through the radiators enclosure and cool down coolant liquid and oil. An optional water thermostat can be included to the system to further stabilize engine temperatures.

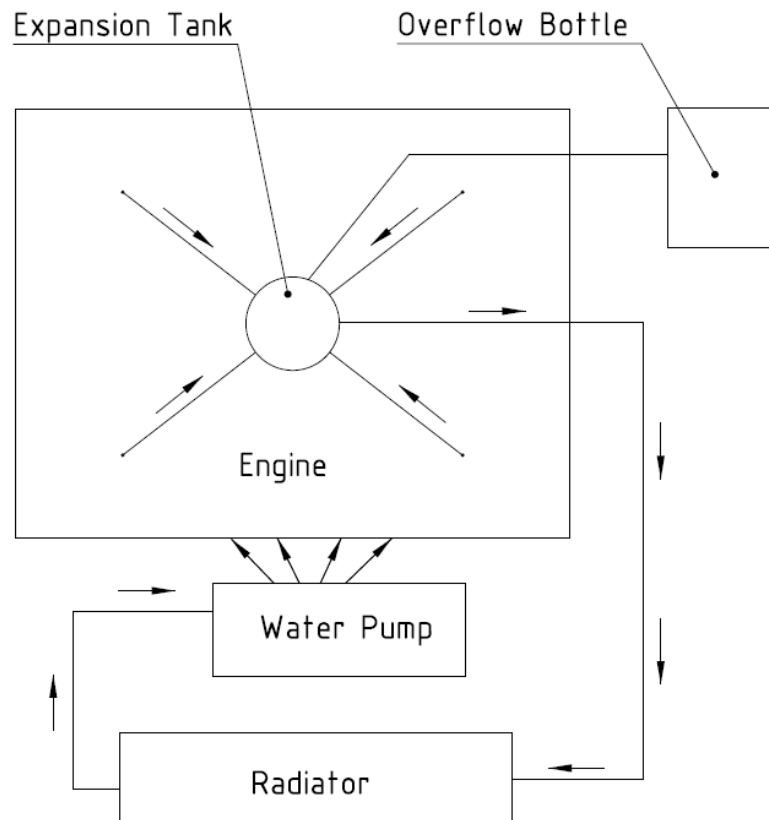
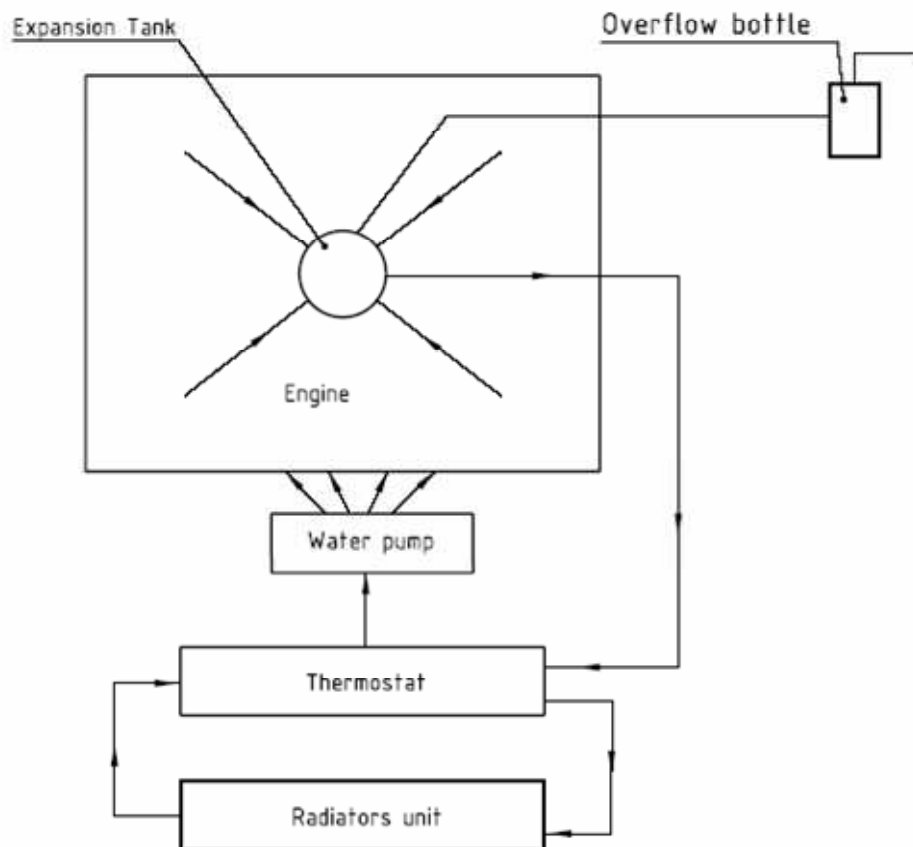


Fig. 75-00-1 Cooling system diagram without thermostat

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Supplement S3 to the AMM CTLS-LSA – CTLS-LSA with ROTAX 912iS	AF 0480 0011	00	05-Aug-12	75-00-1
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**Fig. 75-00-2. Cooling system diagram with thermostat**

From the top of the cylinder heads the coolant passes on to the expansion tank. Since the standard location of the radiator is below engine level, the expansion tank located on top of the engine allows for coolant expansion. The expansion tank is closed by a pressure cap (with excess pressure valve and return valve). As the temperature of the coolant rises, the excess pressure valve opens and the coolant will flow via a hose at atmospheric pressure to the transparent overflow bottle. When cooling down, the coolant will be sucked back into the cooling circuit. The overflow bottle is attached to the airframe structure. For cooling system employed components (radiator, extension tank, overflow bottle, thermostat (if use) and the set of connection fittings) supply together with engine by engine manufacturer. Engine manufacturer provided all requirements to cooling system parts. Cylinder head temperatures are measured by means of temperature probes installed in cylinder heads.

Air cooling of cylinders provided by a composite cooling shroud is installed on the top of crankcase. It directs fresh air from cowling air inlet to all cylinders.

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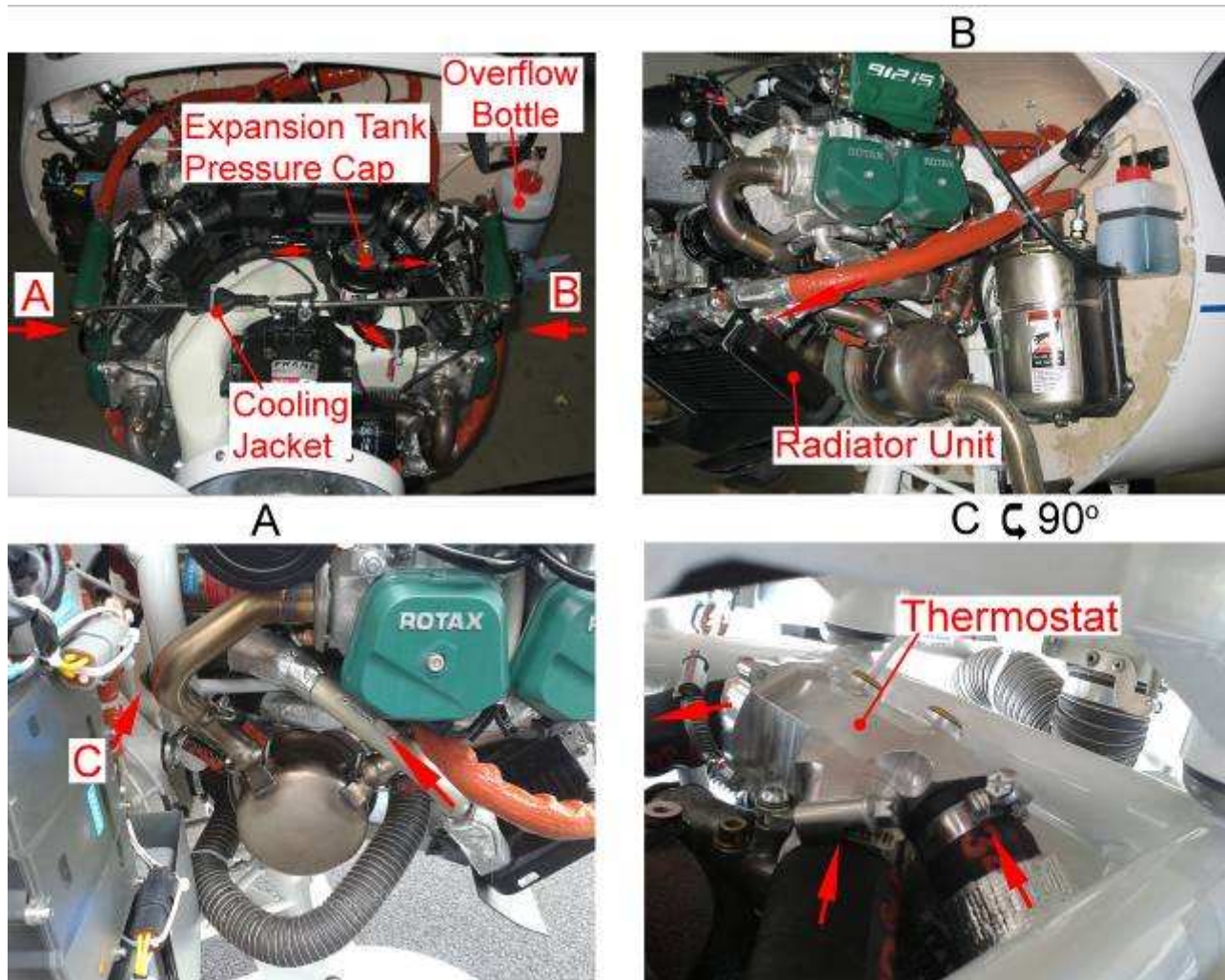


Fig. 75-00-3. Cooling System

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## 75-00.3 Maintenance Practices

### 75-00.3.1 Cooling Inspection

#### 75-00.3.1.1 Type of Maintenance

Line

#### 75-00.3.1.2 Minimum Level of Certification

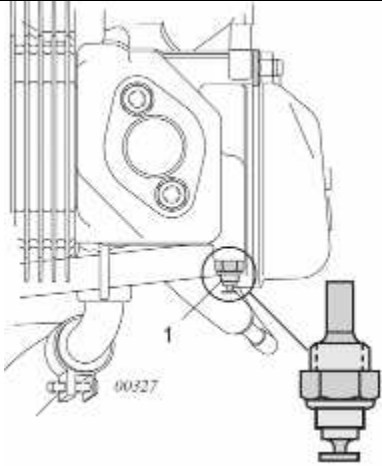
Pilot/Owner

#### 75-00.3.1.3 Procedure

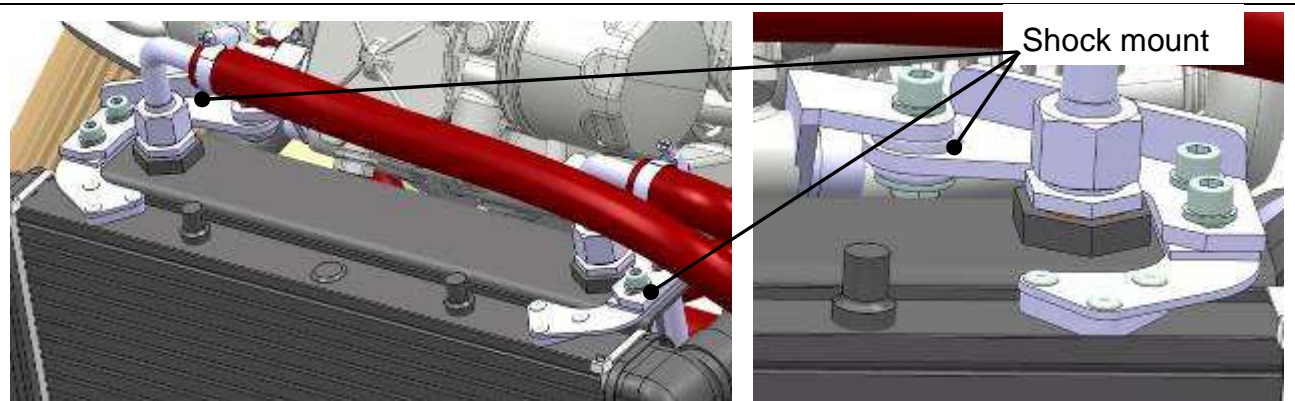
##### A. Recommended Special Tools and Parts

Item	Quantity	Unit
None		

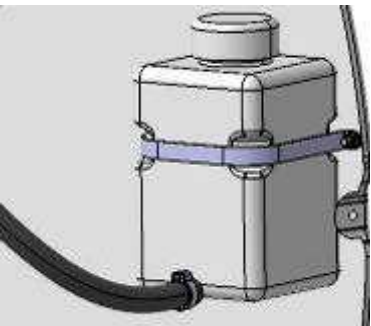
##### B. Cooling Inspection

Step	Action	Reference
1	Inspect connections for leaks.	
2	Check coolant level. Replenish if required.	
3	Inspect cylinders for dents, cracks and cooling jacket for chafing marks and burn spots. If damage observed – replace cooling jacket.	
4	Check the securing and conditions of Cylinder Head Temperature (CHT) sensor. Tighten sensor with torque 10Nm and secured with Loctite 221.	
		
<b>Fig. 75-00-4. Cylinder Head Temperature sensor.</b>		
5	Check conditions of cooling lines and connections for leaks. Check cooling lines for damage, overheating marks. Replace cooling line or clamp if required.	
6	Inspect Expansion Tank, Pressure Cap and Overflow Bottle for damage and abnormalities.	
7	Inspect Radiator Unit and its mounting points. Check Shock mounts conditions and connections tightening.	

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**Fig. 75-00-5. Radiators Unit mounting**

8	<p>Remove clamp from overflow bottle hose and disconnect the hose from nipple. Remove clamp from vent tube, and disconnect it from nipple. Inspect overflow bottle vent line for damage and blockage. Replace if required. Drain coolant in clean container.</p> <p>Connect compression pump to hose free end and provide overpressure 0.2 bar/3 psi for one hour. Check all connection places for leakages.</p>		
9	<p>Connect and secure cooling hose in reversed direction order.</p>		

### **75-00.3.2 Cooling Hoses and Lines Replacement**

Contact manufacturer for further instructions.

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# CHAPTER 76 – ENGINE CONTROLS

## Contents

76-00.1	General
76-00.2	Description
76-00.3	Maintenance Practices
76-00.3.1	Throttle Box Inspection

### 76-00.1 General

This chapter provides description and information concerning maintenance of engine controls.

### 76-00.2 Description

The throttle quadrant is located in the center pedestal, just behind the lower instrument panel. It can be easily operated from both seats, although it is primarily designed to be operated from the left seat, by the pilot-in-command.

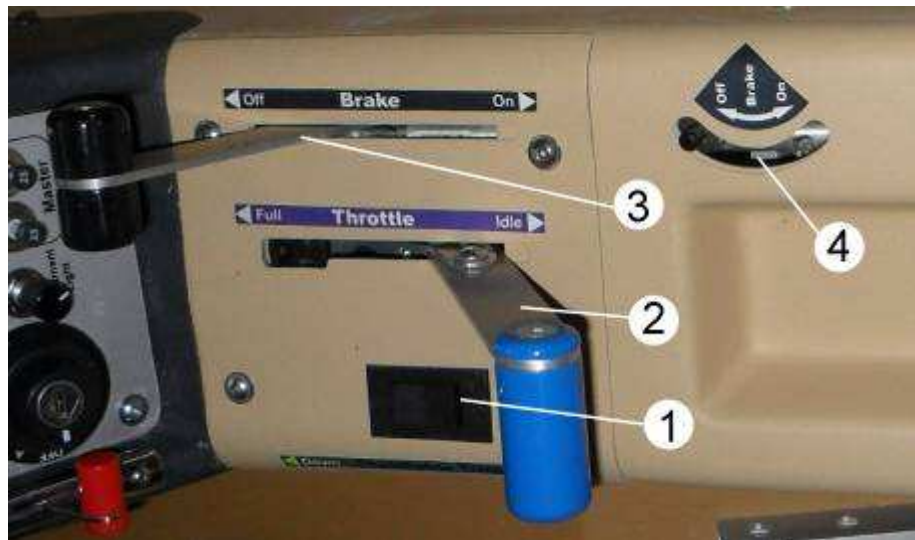


Fig. 76-00-1

Pos.	Description
1	Pitch trim control button.
2	Throttle lever.
3	Brake lever.
4	Parking brake valve.

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Detailed view is given in Fig. 76-00-2.

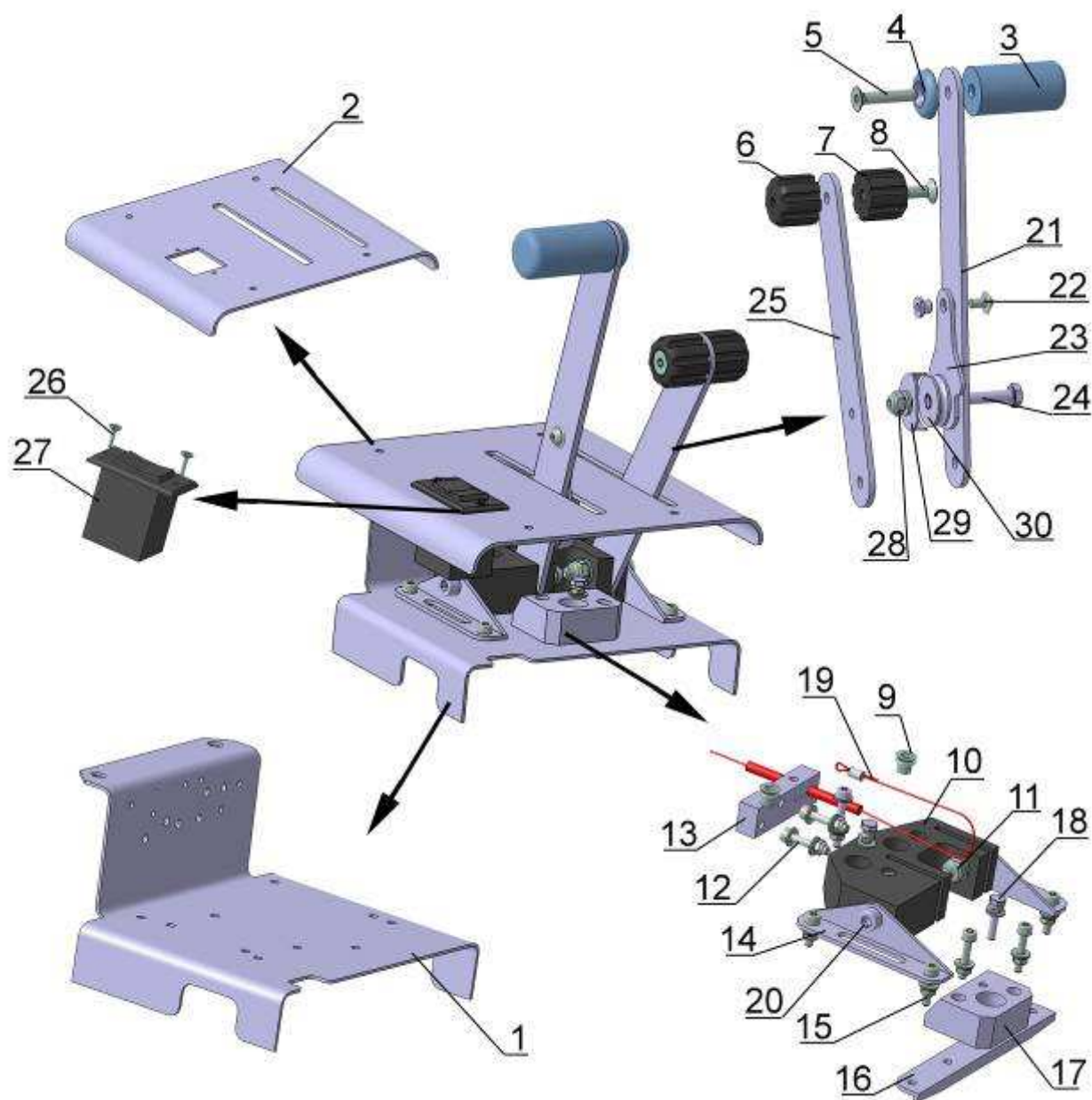


Fig. 76-00-2

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<b>Fig.</b>	<b>Item</b>	<b>Part Name</b>	<b>Torque</b>	<b>Reference</b>
76-00-2	1	Main Plate		KF76000151
	2	Covering Plate		KF76000001
	3	Grip		KF76000132
	4	Grip		KF76000131
	5	Bolt DIN 7991 M6x35 A2-70		C9996219
	6	Grip		KF32400010
	7	Grip		KF32400012
	8	Bolt DIN 7991 M6x30 A4		C9996218A
	9	Countersunk rivet nut, steel, M5		C9996834
	10	Holder		DC76000101
	11	Bolt DIN 912 M6x30-8.8		C9996059
	12	Bolt DIN 912 M4x20-8.8		C9996026
	13	Support		DC76000156
	14	Angle		KC76000152
	15	Bolt DIN 912 M4x16-8.8		C9996025
	16	Angle		KC76000154
	17	Support		KC76000105
	18	Bolt DIN 933 M4x18-8.8		C9996282E
	19	Steel rope 7x7 1 mm		C9997065B
	20	Bolt DIN 912 M6x70-8.8		C9996065
	21	Throttle Lever		DC76000130
	22	Screw ISO 7380 M5x12 A2-70		C9996161
	23	Plate		KC76000137
	24	Bolt DIN 931 M6x35-8.8		C9996259B
	25	Brakes Lever		KF32400011
	26	Machine screw DIN 965 M2x10-4.8		C9990018D
	27	S2 Rocker Switch		C9990018D
	28	Self- locking nut DIN 985-M6, regular		C9996334
	29	Yoke Roller		KF76000136
	30	Roller		KF76000134

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## 76-00.3 Maintenance Practices

### 76-00.3.1 Throttle Box Inspection

#### 76-00.3.1.1 Type of Maintenance

Line

#### 76-00.3.1.2 Minimum Level of Certification

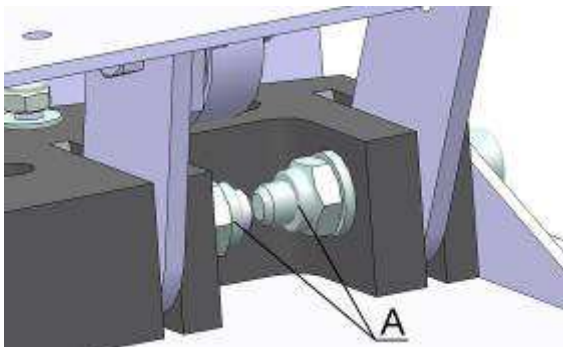
Repairman, Light Sport Aircraft-Maintenance (RLSA-M) or higher

#### 76-00.3.1.3 Procedure

##### A. Recommended Special Tools and Parts

Item	Quantity	Unit
None		

##### B. Throttle Box Inspection (Fig. 76-00-2).

Step	Action	Reference
1	Unscrew 4 bolts that fix the covering plate (2).	
2	Unscrew bolt M6 (5) that holds the grips (3, 4) of the throttle lever (21).	
3	Remove the grips (3, 4).	
4	Unscrew bolt M6 (8) that holds the grips (6, 7) of the brake lever (25).	
5	Remove the grips (6, 7).	
6	Remove the covering plate (2).	
7	Inspect the throttle cables/ropes for integrity.	
8	Inspect the control levers support (10) for signs of wear.	
9	Check control levers for smooth operation without play or undue friction.	
10	When necessary adjust the friction in levers support by nuts (A) 	

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## CHAPTER 77 – ENGINE INDICATING

For maintenance instructions regarding the engine indicating system contact the aircraft manufacturer.

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Supplement S3 to the AMM CTLS-LSA – CTLS-LSA with ROTAX 912iS	AF 0480 0011	00	05-Aug-12	77-00-1
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## CHAPTER 78 – EXHAUST

### Contents

- 78-00.1 General
- 78-00.2 Description
- 78-00.3 Maintenance Practices
  - 78-00.3.1 Exhaust Muffler and Pipes Removal
  - 78-00.3.2 Exhaust Muffler and Pipes Inspection

### 78-00.1 General

This chapter provides description and information concerning maintenance of engine exhaust.

### 78-00.2 Description

The powerplant exhaust system consists of the muffler and exhaust pipes. The exhaust gases from the cylinders go to the muffler via the exhaust elbows. The muffler has an exhaust pipe which directs the exhaust gases outside the engine compartment. The exhaust elbows are bolted directly to the cylinders with lock nuts. The muffler and exhaust elbow connections use ball joints and springs.

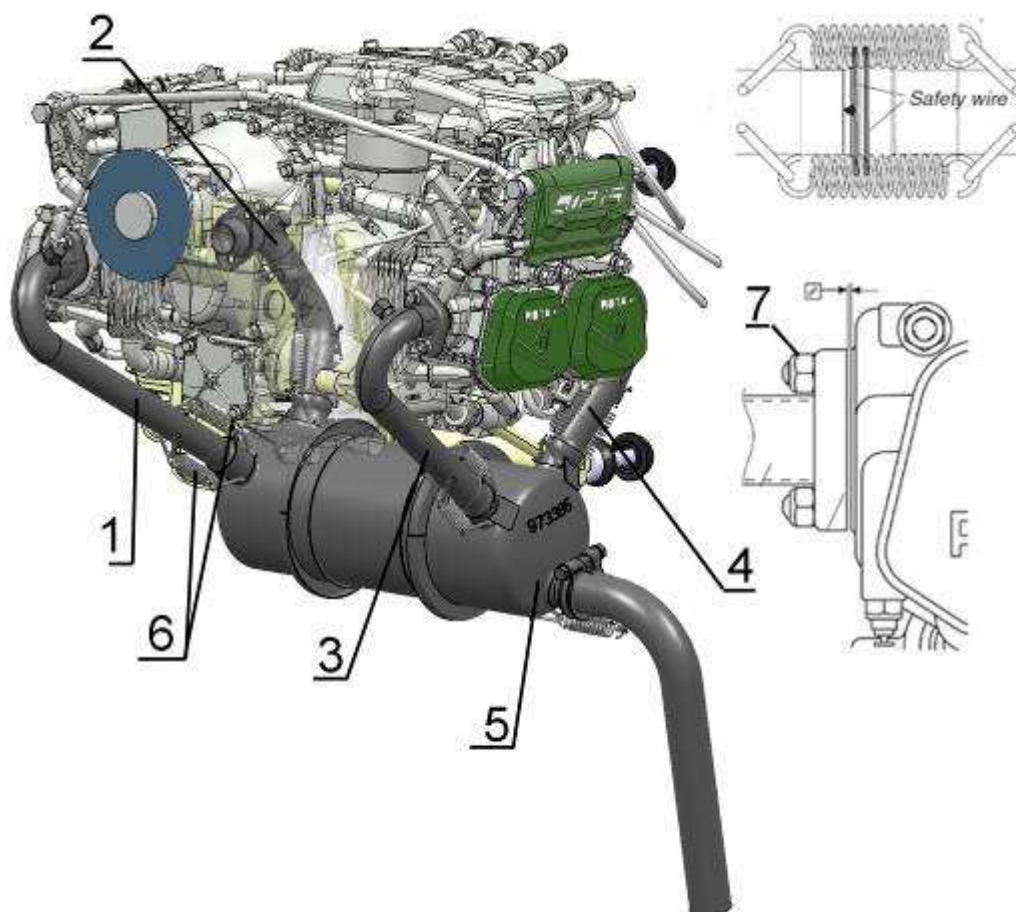


Fig. 78-00-1. Exhaust System

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<b>Fig.</b>	<b>Item</b>	<b>Part Name</b>	<b>Torque</b>	<b>Reference</b>
78-00-1	1	Forward exhaust pipe, right		KF78000010
	2	Rear exhaust pipe, right		KF78000020
	3	Forward exhaust pipe, left		KF78000030
	4	Rear exhaust pipe, left		KF78000040
	5	Muffler		KF78000050
	6	Spring		Spring
	7	Nut	12 Nm	C9996035

## 78-00.3 Maintenance Practices

### 78-00.3.1 Exhaust Muffler Removal

#### 78-00.3.1.1 Type of Maintenance

Line

#### 78-00.3.1.2 Minimum Level of Certification

Repairman, Light Sport Aircraft-Maintenance (RLSA-M) or higher

#### 78-00.3.1.3 Procedure

A. Recommended Special Tools and Parts

<b>Item</b>	<b>Quantity</b>	<b>Unit</b>
None		

B. Exhaust Muffler and Pipes Removal

<b>Step</b>	<b>Action</b>	<b>Reference</b>
1	Cut the safety wire, disconnect Springs (6).	
2	Disconnect the cabin heat tube from the heating shroud flange as per instructions in the basic AMM.	
3	Remove the muffler.	
4	Inspect muffler and heating shroud for cracks, corrosion and leakages.	
5	Mount and secure Muffler in reverse order.	

### 78-00.3.2 Exhaust Muffler and Pipes Inspection

#### 78-00.3.2.1 Type of Maintenance

Line

#### 78-00.3.2.2 Minimum Level of Certification

Repairman, Light Sport Aircraft-Maintenance (RLSA-M) or higher

#### 78-00.3.2.3 Procedure

A. Recommended Special Tools and Parts

<b>Item</b>	<b>Quantity</b>	<b>Unit</b>
None		

<b>Document Title</b>	<b>Document No.</b>	<b>Revision</b>	<b>Date</b>	<b>Section</b>
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## B. Exhaust Muffler and Pipes Inspection

<b>Step</b>	<b>Action</b>	<b>Reference</b>
1	Inspect exhaust system for damage and missing parts.	
2	Checks attachment Nuts 7 and Springs 6 for securing and fit.	
3	Inspect exhaust pipes and mounting flanges for cracks, corrosion and leakages.	
4	Remove heating shroud from Muffler as per instructions in the basic AMM.	
5	Inspect muffler for cracks, corrosion and leakages.	
6	Mount and secure Muffler in reverse order.	

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# CHAPTER 79 – OIL SYSTEM

## Contents

79-00.1	General
79-00.2	Description
79-00.3	Maintenance Practices
79-00.3.1	Oil System Inspection
79-00.3.2	Oil Hoses and Lines Replacement

## 79-00.1 General

This chapter provides description and information concerning maintenance of engine oil system.

## 79-00.2 Description

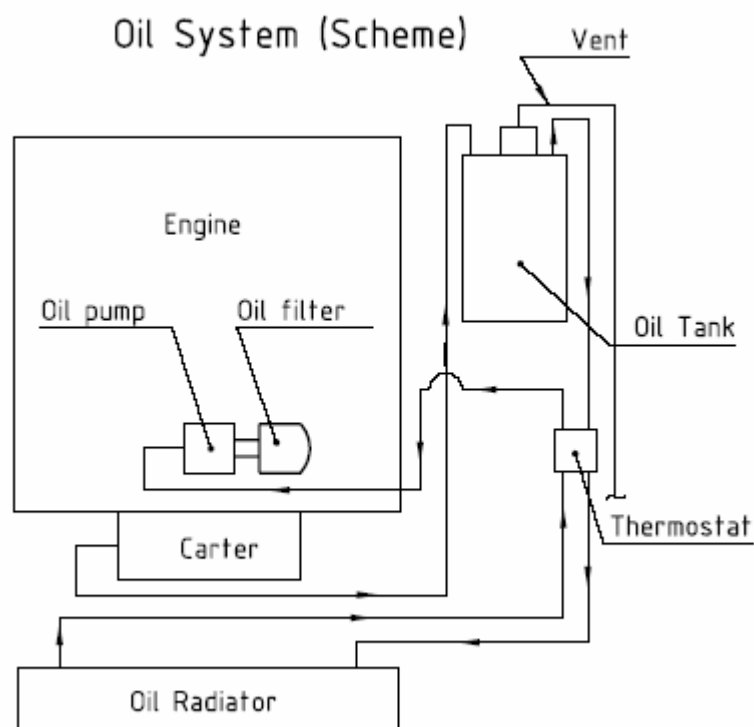
The oil system is available in two variants:

- with oil thermostat;
- without oil thermostat.

Configuration of oil system with oil thermostat installed is shown in Fig. 79-00-1.

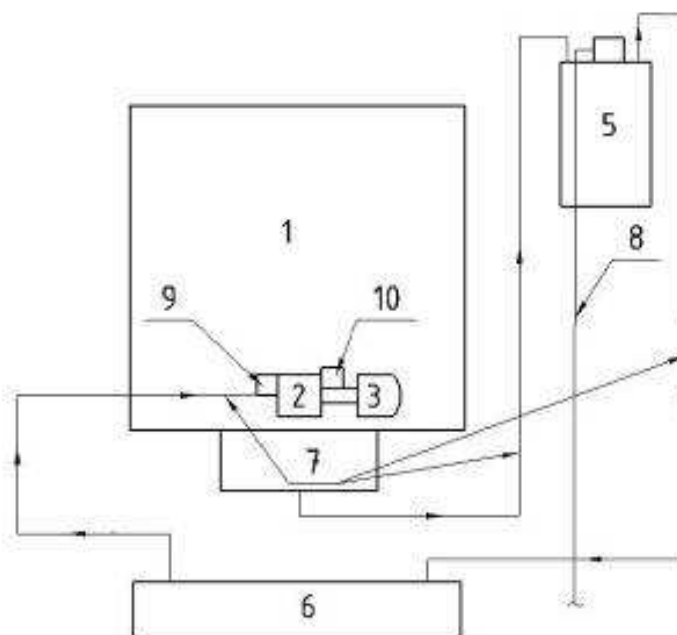
Configuration of oil system without oil thermostat is shown in Fig. 79-00-2.

Both oil system configurations make use of the following components:



**Fig. 79-00-1. Oil System diagram (with thermostat)**

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**Fig. 79-00-2. Oil System diagram**

<i>Fig.</i>	<i>Item</i>	<i>Part Name</i>	<i>Torque</i>	<i>Reference</i>
79-00-1 79-00-2	1	Engine ROTAX® 912 iS		C9997789Z/C9997791Y
	2	Oil pump		C9993515J
	3	Oil filter		C9997793R
	4	Oil thermostat		C9997793Y
	5	Oil tank		C9997791I
	6	Radiators Unit		KF79000050
	7	Oil hose		C9997792D
	8	Fuel hose (vent line)		C9993184G
	9	Oil pressure sensor		C9997798O
	10	Sensor for oil temperature		C9997793X

When in operation, the oil pump draws the oil from the oil tank through the thermostat to the oil radiator and forces it through the oil filter to the lubrication points. From here the engine oil is distributed to all lubrication points and flows from there back into the oil tank, driven by piston blow-by gases.

When installed, the thermostat bypasses the radiator when the oil temperature are below the normal operating temperature range.

In case of the oil filter mat clogging, an emergency pressure valve will open and unfiltered lube oil will flow to lubrication points.

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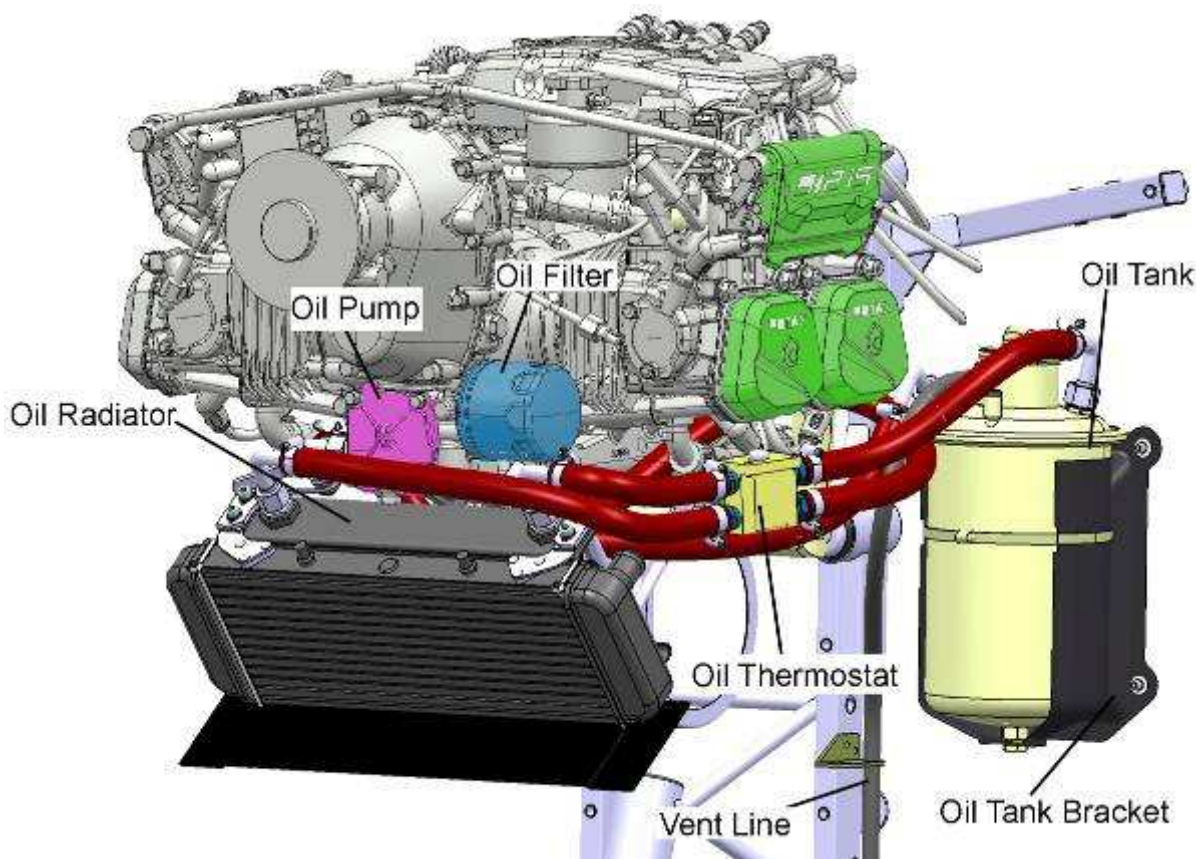


Fig. 79-00-3

## 79-00.3 Maintenance Practices

### 79-00.3.1 Oil System Inspection

#### 79-00.3.1.1 Type of Maintenance

Line

#### 79-00.3.1.2 Minimum Level of Certification

Repairman, Light Sport Aircraft-Maintenance (RLSA-M) or higher

#### 79-00.3.1.3 Procedure

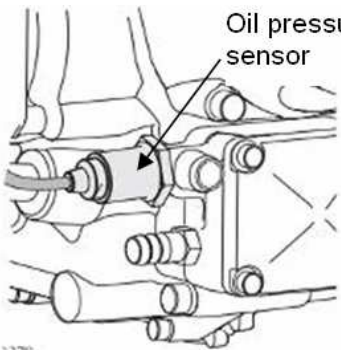
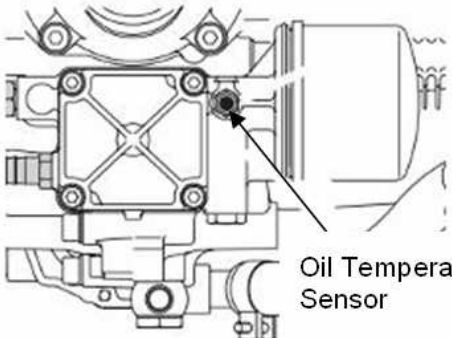

##### A. Recommended Special Tools and Parts

Item	Quantity	Unit
None		

##### B. Oil System Inspection

Step	Action	Reference
1	Inspect connections for leaks.	
2	Check oil level. Replenish if required.	
3	Check conditions of oil lines, fire sleeves and connections for leakages. Check oil lines and fire sleeves for damage, overheating marks. Replace line or clamp if required.	
4	Inspect oil tank vent line for damage and blockage. Replace if required.	
5	Inspect oil radiator matrix for dirty/blocked.	

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6	<p>Check the securing and conditions of Oil pressure sensor. Tighten sensor with torque 15Nm and secured with Loctite 243.</p>  	
7	Check the securing and conditions of oil temperature sensors.	
8	<p>Check the securing and conditions of magnetic plug.</p> 	12-20-00 12

### 79-00.3.2 *Oil Hoses and Lines Replacement*

For maintenance instructions regarding oil hoses and lines replacement contact the aircraft manufacturer.

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