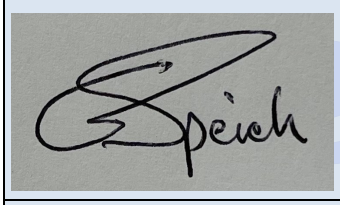
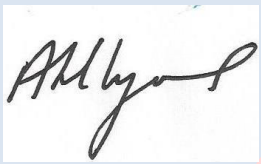
Title: Pre-flight and maintenance inspection tasks for exhaust Rotax 916iS		
AG-SIL-2025-01-EN		**Released:** **01.03.2025**
Applicability		
Aircraft type & model: **All aircrafts equipped with Rotax 916iS**	**Affected Serial number(s):** **all**	
The maintenance manual to be referenced is this stated or subsequent issue.		As per AutoGyro website

This form is the response from AutoGyro GmbH either against a problem found in the product in service requiring a containment or rectification action, or as service information for aircraft modification incorporation.
For help, contact AutoGyro Technical Support: airworthiness@auto-gyro.com.

Documentation (Service Information Letter Completion action)

The purpose of this document is to provide maintenance personnel with information over and above that currently available in the relevant AMM. Its compliance must be properly documented, if such procedure is required by the relevant authority

Document approval signatures	
Head of Engineering	**Head of Airworthiness**
 Gerald Speich 21-Feb-25	 Digitally signed by Andrew Lyons Date: 2025.03.11 21:18:04 Z

The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: DAI/9917/06

Reason and overview of the Service Information Letter

The aim of this SIL is to raise awareness to complete exhaust system crack checks as part of the pre-flight inspection in accordance with the manufacturer's documentation. Lack of attention to detail of pre-flight inspections can lead to potentially harmful situations as in the example below, which is specific to the Rotax 916 iS engine aftermuffler.

Manpower estimates

There are no manpower estimates associated with this SIL.

Compliance

There are no compliance requirements associated with this SIL.

Customer Support

Can be contacted if necessary.

Tooling required

No tools required.

Weight and Balance Effects

Nil

Manuals affected

Nil

Previous Modifications that affect the SIL

Nil

Accomplishment instructions (Action required to implement this SIL):

Rotax and AutoGyro pre-flight inspection instructions can be found in the engine operator's manual and the Pilots Handbook, which can be found on the Rotax and the AutoGyro Website.
Exhaust system cracks normally develop over a period of many flights.

Pictures:


Exhaust system aftermuffler Cavalon 916iS


Remains after the aftermuffler shell has detached in flight

Welding seam which has to be checked

Welding seam is visible with installed cowlings

Cracked welding seam, aftermuffler lost

The inspection of the exhaust system is mandatory in the 100h inspection of the engine, mentioned in the inspection protocol in the line maintenance manual for the Rotax 916iS.

Inspection of the GENUINE ROTAX® exhaust system included in the standard delivery. **NOTE** *If there is no GENUINE ROTAX® exhaust system in use, the specifications of the manufacturer must be observed.*			X						

In addition the inspection of the exhaust is mentioned in the operators manual for the 916iS:

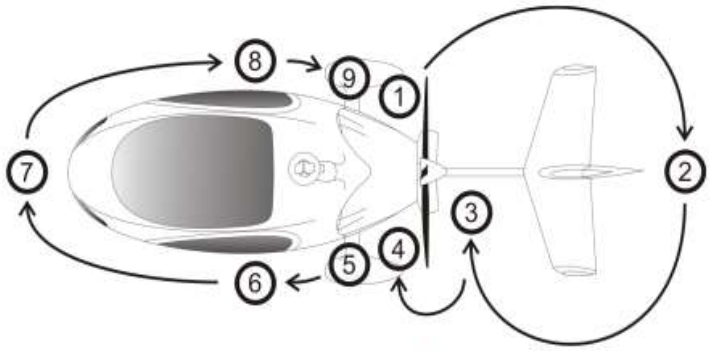
Mech./electronic components Check of mechanical/electronic components.

Step	Procedure
1	Turn propeller slowly by hand in direction of engine rotation several times and observe engine for odd noises or excessive resistance and normal compression.
2	Verify free movement of throttle valve and the complete range.
3	Inspect for damages, leakage and general condition of exhaust system and turbocharger.
4	Visual inspection for mechanical and thermal damages of sensor, actuators and the wiring harness.
5	Visual inspection for mechanical and thermal damages of pressure control valve, fusebox and ECU.

These documents can be downloaded on the Rotax website:

Technical documentation | Manuals | Rotax Aircraft Engines

The pre-flight inspection which is under pilots responsibility states the following point:



The following checks must be carried out before each flight. However, if the gyroplane is operated by a single pilot or within an organization where the checks are performed by or under the supervision of qualified personnel, check list items marked with a preceding 'O' may be carried out daily, before the first flight of the day.

Before exterior check

O	Fuel tank drain	Sample and check sealed
O	Snow/ ice (if any)	Removed
	Documents	Check complete

Exterior check

Station 1 (engine, RH side)

Open upper engine cowling

O	Before turning prop: Remove keyswitch, LANE switches	Check OFF
O	Engine oil level	Check
O	Dip stick and oil cap	Installed and secure
O	Coolant level	Check level and cap security
	Oil cooler and hoses	Clean, no leaks, fittings tight
	Exhaust system	No cracks
	Lower engine cowling	Properly installed, all fasteners locked
	External generator	Secure, V-belt in good condition
	General inspection of engine bay interior	All equipment secure

Station 2 (stabilizer)

O	Stabilizer general condition	Check
	Stabilizer attachment	Check
	Rudder control cable linkage	Check
	Upper rudder bearing	Secure, no excessive play
	Rotor blades condition and cleanliness	Check
	Blade tips	Tight
	Aft keel tube protection pad	No excessive wear

Any life-limit changes must be recorded within the aircraft documentation, in line with the requirements of the country of operation.

Nil

Material information (Parts required relevant to this SIL):

Nil

List of components (with purchasable part numbers)

Nil

Interchangeability

Not affected

Parts disposition

a) Disposal requirements – Nil
b) Environmental hazards of parts containing hazardous materials – Nil
c) Scrap requirements (e.g. mutilate scrapped items beyond use) – Nil