

Title: Calidus 914 Engine Air Filter - Optional Position For Hot Countries		
AG-SB-2020-06-C-EN		Compliance Category:
Applicability		A – MANDATORY B – RECOMMENDED C - OPTIONAL
Aircraft type & model: AutoGyro Calidus	Affected Serial number(s): Calidus fitted with the Rotax 914 engine operating in hot countries	
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 on 49(0)5121 88056-00, or email airworthiness@auto-gyro.com.		

Documentation (Service Bulletin Completion action)

The accomplishment of this Service Bulletin, or the decision of its rejection, must be properly documented, if such procedure is required by the relevant authority

Category Codes

- | | |
|-----------------|---|
| A – Mandatory | – failure to comply result in a significant reduction of flight safety, injury or death |
| B – Recommended | – failure to comply may result in reduced safety margin, injury and/or equipment damage |
| C - Optional | – improves operating behavior, reliability and/or maintainability |

Chief Certification Officer	Chief Technical Officer
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Reason and overview of the Service Bulletin (cause of problem if known)

For Calidus aircraft fitted with the 914UL turbo-charged engine, when operating in hot ambient conditions or using a high power setting for long periods of slow flight, it has been found that the Rotax turbo-control unit (TCU) detects over-temperature of the compressed air and restricts the power output. This is exacerbated by the location of the air inlet inside the engine cowling, so repositioning this outside the cowling will provide cooler incoming air. This is achieved by means of an extension tube and aperture cut into the engine cowling just above the exhaust aperture. The tube is attached to the turbo inlet by means of a pipe clip, the same method as the original filter attachment. The new aperture does not significantly affect the strength of the cowling and no reinforcement is required. The whole installation is protected against detachment by means of a 1.5mm safety wire.

Manpower estimates

The task may only be performed by an organization or individual entitled and trained to carry out maintenance on AutoGyro aircraft.

Estimated man-hours to complete the task as a stand-alone item is:

2.0 hr including removal and re-fitting of the engine cowlings.

Compliance

This bulletin is optional and has no compliance timeline.

Failure to embody this service bulletin may result in:

- Possible damage to the aircraft and/or engine
- Invalidation of the warranty on the items involved

Customer Support

Materials and labour hours are not covered by this Service Bulletin.

Tooling required

Standard tools.

Weight and Balance Effects

No significant change to weight and balance.

Manuals affected

POH & AMM AutoGyro is not affected.

Previous Modifications that affect the SB

None

Contact & Info:

airworthiness@auto-gyro.com
www.auto-gyro.com

AutoGyro GmbH
Dornierstr. 14
31137 Hildesheim

Accomplishment instructions (Action required to implement this bulletin):

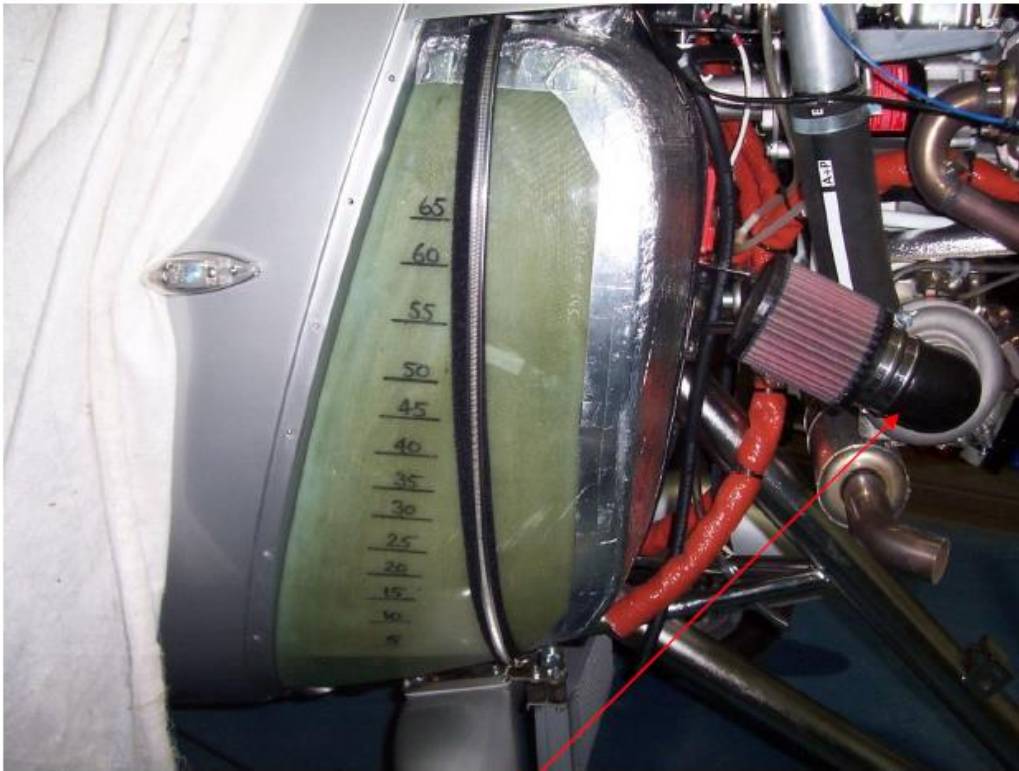
Effective date of this SB is 26 October 2020.

All work is to be carried out in accordance with the latest model-relevant AutoGyro Aircraft Maintenance Manual

Instructions

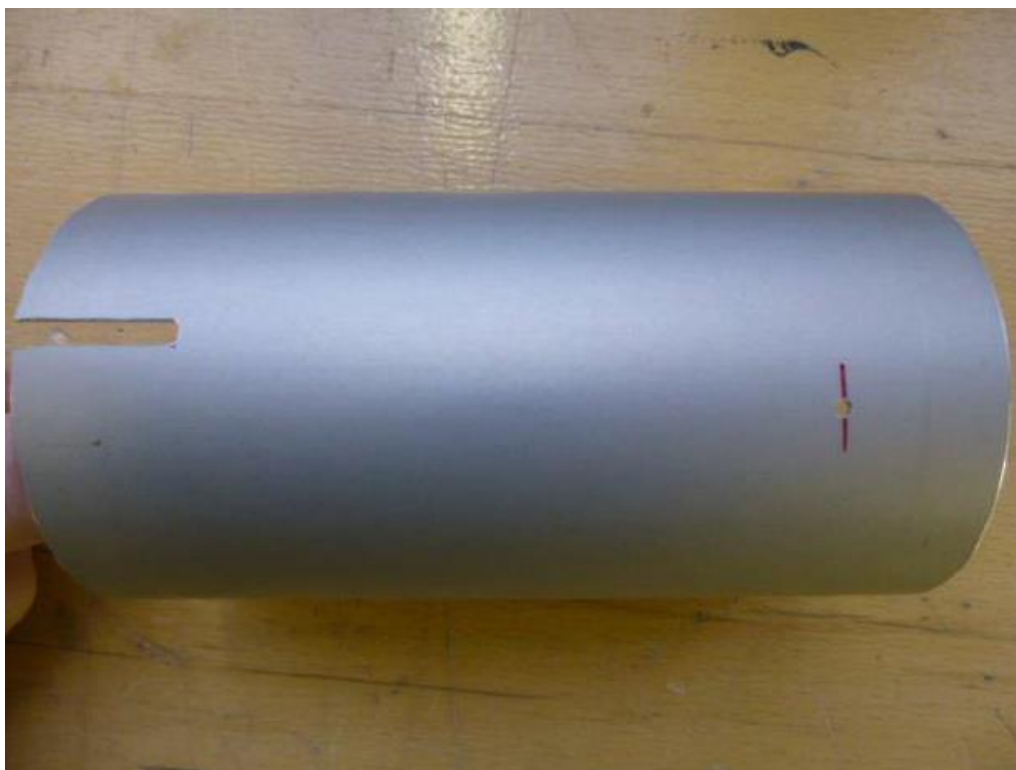
1. Remove the upper engine cowling and lower left engine cowling as described in the AMM Job Card 52-00-00 4-1.
2. Remove the existing air filter installation (Pic. 1) and cover the turbo inlet with a film of "gaffer" tape.
3. Temporarily re-attach the lower engine cowls and sighting downwards and aft, mark the surface of the left-hand cowl in-line with the centre of the turbo inlet
4. Drill a pilot hole 3mm diameter through the cowl and using a wire probe verify that the hole is in line with the centre. If necessary drill a second hole.
5. Using a hole-saw increase the hole diameter to 100mm.
6. Using a hand-held grinder (e.g. Dremmel) dress the hole into an ellipse so that with the air filter and extension tube fitted to the turbo inlet there is an equal gap of approximately 15mm around the filter.
7. Remove the left engine cowling to allow final dressing and paint-finishing of the hole.
8. Mark the aluminium inlet tube 20mm from the plain end and drill a 2.5mm hole (Pic. 2)
9. Pre-assemble the inlet system, passing the safety-wire through the drilled hole, through the filter rim, and into one of the slots (under the pipe clip) (Pic.3).
10. Remove the temporary turbo-inlet protection and fit the inlet assembly to the turbo flange.
11. Pass the safety wire under the lowest clip on the vertical air delivery pipe, tighten the two new clips then pull the safety wire tight and join the ends with a crimped Nicoflex terminal. ***Note: All clamps, the air filter pipe and the air filter must be restrained by the safety cable.***
12. Using a vacuum cleaner and/or a compressed air nozzle remove all debris from the engine/exhaust area.
13. Refit the cowlings
14. Following normal safe practice tie-down the aircraft, start the engine, warm-up, then take to full power. Cool down (minimum 2 minutes) before stopping the engine.

Illustrations



Intake before modification

(Pic. 1)



(Pic. 2)



(Pic. 3)



(Pic. 4)



Intake after modification

Exhaust

Completion of this Service Bulletin must be recorded within the aircraft documentation, in line with the requirements of the country of operation.

Material information (Parts required to be made to implement this service bulletin):

Nil

List of components (with purchasable part numbers)

35178 Attachment kit air filter 914 outside

Interchangeability

Not affected

Parts disposition

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