

Title: MTO2017 Thermostat Oil temperature Sensor Re-positioning		
AG-SB-2021-04-B-EN	Effective Date: 16 June 2021	Compliance Category: A – MANDATORY B – RECOMMENDED C – OPTIONAL
Applicability		
Aircraft type & model: AutoGyro MTO2017	Affected Serial number(s): AutoGyro MTO2017 912/914 fitted with an oil thermostat II incorporating an oil temperature sensor	
The maintenance manual to be referenced is this stated or subsequent issue.		As per AutoGyro website
<p>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.</p>		

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

Reason and overview of the Service Bulletin

AutoGyro has developed and released a single thermostat III assembly (47543) and hose set (47422) for the MTO2017 912/914.

The thermostat housing no longer contains the mounting point for the oil temperature sensor assembly. This means that a number of MTO2017 models that have this mounting point will require the sensor re-positioning should the thermostat set require replacement.

AutoGyro has therefore released an adapter set, item 47855, for this eventuality.

This document gives instructions on the re-positioning of the oil temperature sensor.

Manpower estimates

This task is to be included as part of the MTO2017 oil thermostat replacement if relevant. It is estimated that its embodiment should take no longer than 30 minutes.

Compliance

At next oil thermostat replacement where relevant.

Customer Support

Not applicable.

Tooling required

Standard tools.

Weight and Balance Effects

Nil

Manuals affected

POH & AMM AutoGyro is not affected.

Previous Modifications that affect the SB

None

Accomplishment instructions (Action required to implement this bulletin):

Instructions

1. Remove the sensor cable from the sensor (Pic. 1) and carefully remove the oil temperature sensor from the old thermostat assembly housing. Heat may be required to release the Loctite bond. Clean/degrease threads using Loctite 7063 (Pic. 2).
2. Cut the cable shoe from the end of the ground cable, protect with heat-shrink and secure suitably (Pic. 2).

3. Connect the oil temperature sensor cable extension (Pic. 3) to the existing cable and suitably re-route to run across the top of the engine to the rear right side of the engine (the current position of the low oil pressure LED sensor, Pic. 4). Ensure the cable connection is insulated with heat shrink or similar once connected.
4. Remove the low oil pressure LED switch & adapter from the engine (Pic. 4).
5. Remove the switch from the adapter. Clean the threads of the sensor and the (now open) engine mounting position with Loctite 7063. Assemble the switch into the new adapter (Pic. 3) using 1 x copper washer (Pic. 3). NOTE: The adapter has been modified – the item in Pic. 3 is correct, the item in Pic. 10 is the older version.
6. Apply Loctite 542 thread sealant to the threads of the temperature sensor and assemble to the engine (Pic. 5).
7. Connect the temperature sensor cable to the temperature sensor (Pic.6).
8. It may be the case that the oil temperature gauge has a resistor installed. This can be verified by gaining access to the rear of the instrument and observing if an additional item in the signal wire between instrument and wire is visible (Pic. 7). If this is found to be present, the resistor should be removed and the wire re-joined with a suitable in-line connector.

912 Engine:

9. Remove the plug from the engine oil pump housing (Pic. 8). Clean the internal threads in the housing using Loctite 7063.
10. Apply Loctite 542 thread sealant to the threads of the banjo bolt (Pic. 3) and assemble the pressure switch/adaptor assembly, banjo bolt and 2 x copper washers (Pic. 3) to the engine. Ensure a copper washer is assembled either side of the adapter. The third copper washer in Pic. 3 is only required for 914 assembly.
11. Connect the low pressure LED switch extension cable (Pic. 3) to the existing pressure switch cable and suitably re-route between the propeller gearbox and oil pump housings to the new sensor position. Connect to the sensor.

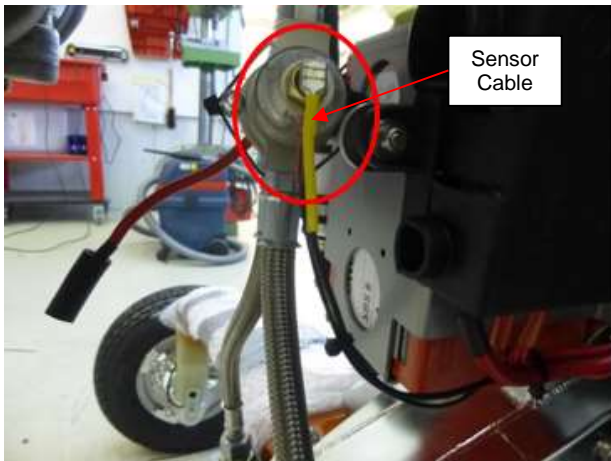
914 Engine:

12. Remove the banjo bolt securing the turbo oil line to the oil pump housing (Pic. 9). This item is re-used for the assembly of the low pressure switch.
13. Remove the spacer between housing and oil line (Pic. 9). Clean the internal threads of the housing and banjo bolt using Loctite 7063.
14. Apply Loctite 542 thread sealant to the threads of the original banjo bolt and assemble the pressure switch/adaptor assembly, banjo bolt, oil line and 3 x copper washers (Pic. 10) to the engine. Ensure new copper washers are assembled either side of the adapter and oil line (Pic. 10).
15. Connect the low pressure LED switch extension cable (Pic. 3) to the existing pressure switch cable and suitably re-route between the propeller gearbox and oil pump housings to the new sensor position. Connect to the sensor.

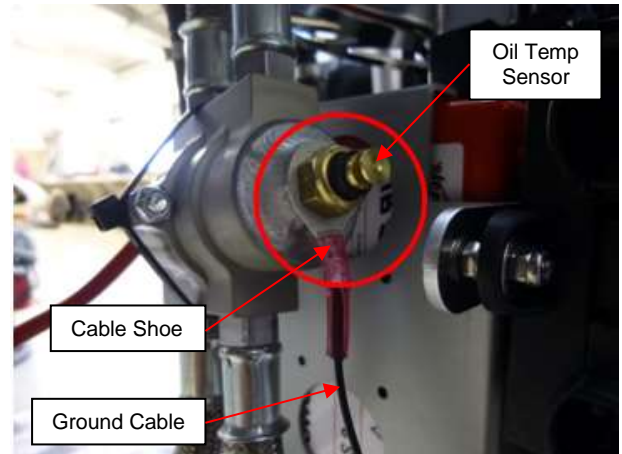
Final steps:

16. Carry out a loose article and tool check.
17. Check the engine oil level and top up as required.
18. Suitably secure the gyro for a ground run.
19. Switch on the ignition and ensure the low oil pressure warning LED is lit.
20. Ensure the area around the propeller is clear. Start the engine and ensure the oil pressure gauge shows pressure within 10 seconds and the low pressure LED is extinguished.
21. Carry out a leak check of all oil connections.
22. Ensure the engine oil temperature gauge registers oil temperature increase.

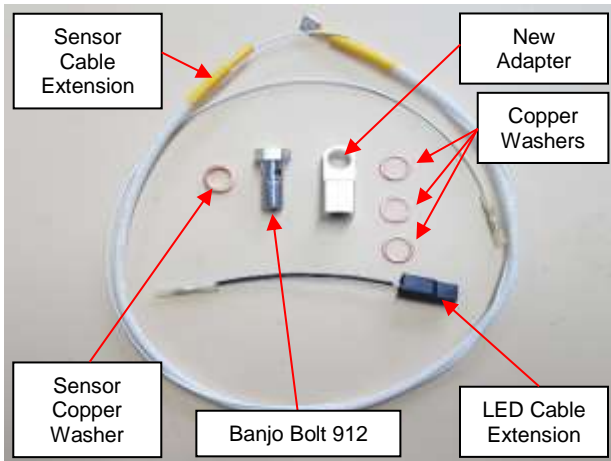
Illustrations



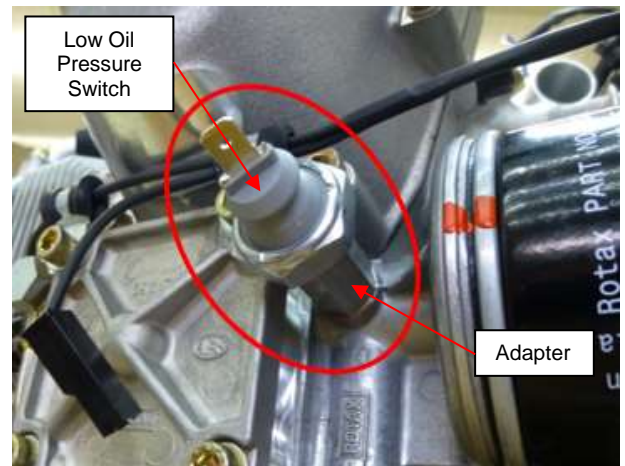
Pic. 1



Pic. 2



Pic. 3



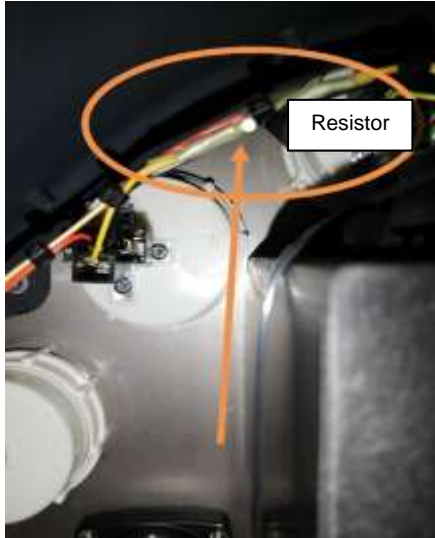
Pic. 4



Pic. 5



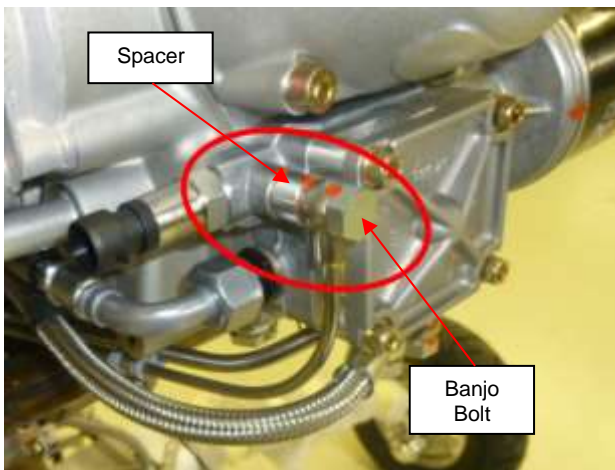
Pic. 6



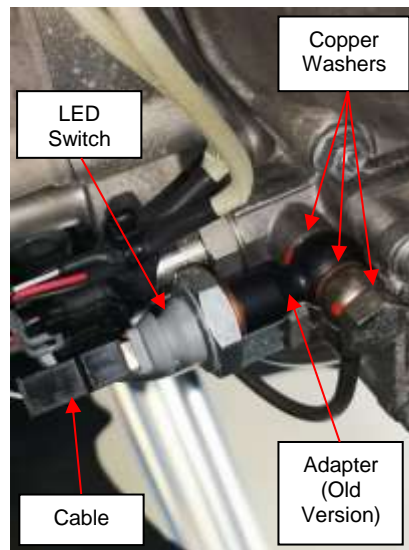
Pic. 7



Pic. 8



Pic. 9



Pic. 10

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)

- 47855 Conversion kit Oil pressure switch- oil temp position 912/914 (2017)
- 35915 Loctite 7063 Super Clean 400ml
- 30488 Loctite 542

Interchangeability

Not affected

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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