

Title: Nose Wheel Fork Inspection		
AG-SIL-2020-02-EN		Released: 30 Nov 2020
Applicability		
Aircraft type & model: MTO2017, Calidus & Cavalon	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 on 49(0)5121 88056-00, or email airworthiness@auto-gyro.com.		

<u>Documentation (Service Information Letter Completion action)</u> 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

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Chief Certification Officer G. Speich	Chief Technical Officer O. Birkner
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Reason and overview of the Service Information Letter

Part of the 25/100hr or yearly inspection for all models of AutoGyro aircraft in their respective maintenance protocols under "Nose Gear" calls for an inspection of the nose wheel fork, general condition, secure installation, freedom of movement, no excessive play, distortion or damage.

Although not specifically stated, this is expected to include a check for cracks, bends and corrosion. Current market feedback would suggest further guidance is appropriate, particularly if the aircraft has suffered any form of excessive external force through the fork.

This service information letter provides clearer instruction for carrying out an inspection of the nose wheel fork for each respective model.

Manpower estimates

There are no manpower estimates associated with this SIL. The inspection is encompassed within the maintenance requirement.

Compliance

There are no compliance requirements associated with this SIL

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 SIL

None

Accomplishment instructions (Action required to implement this bulletin):

All work is to be carried out in accordance with the latest model-relevant AutoGyro Aircraft Maintenance Manual and Periodic Service Worksheet.

Contact & Info:

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Instructions

Ensure the wheel brakes are applied and the mag switches/ignition are switched in the "off" position.

There are two levels of inspection.

1. With the nosegear installed in the aircraft, and
2. With the nosegear removed.

Removing the nosegear takes time and disturbs the nosegear controls. In most cases a reasonable standard of inspection can be achieved with an external inspection and physical sideways and for/aft loading of the nosegear fork.

If there is any suspicion of a heavy nosegear landing or taxi damage, then a full removal should be considered.

The following describes the removal, inspection, and refit process. The inspection techniques are applicable regardless of whether fitted or not.

MTO2017

1. Raise the nose wheel from the ground by either placing a weight sack or similar on the keel tube, or a suitable support under the nose of the gyro.
2. Remove the 3 screws securing the right side of the rear cockpit cover to the cockpit, to gain access to the top of the nose wheel access securing bolt (Pic 1).
3. Disconnect the nose wheel push rod connection bolts (Pic. 2).
4. Disconnect and remove the nose wheel fork securing bolt (Pic. 3).
5. Remove the nose wheel and fork assembly from the aircraft (Pic 4).
6. Remove the rubber damper from the axle and clean all grease from the axle.
7. Using a suitable light source and magnifying glass, inspect the complete nose wheel fork assembly general condition, no distortion, damage or weld cracks, paying particular attention to the circumferential weld between axle and fork (area 'A', Pic. 2).
8. If cracks are suspected but not clearly visible, use a suitable medium (for example dye-penetrant) for confirmation.
9. Any cracking found at welds in any area is cause for rejection and replacement of the fork assembly.
10. Grease the fork axle using Liqui Moly LM47 and assemble the rubber damper onto the fork.
11. Re-assemble the nose wheel and fork assembly into the aircraft using the reverse of steps 2 to 5 above. Ensure that the o-ring, washer and bolt are assembled in the correct sequence, and the bolt, pre-coated with Loctite 243 or equivalent, torqued to 40Nm (Pic. 2).
12. Inspect the nose wheel assembly for secure installation, freedom of movement, no excessive play.

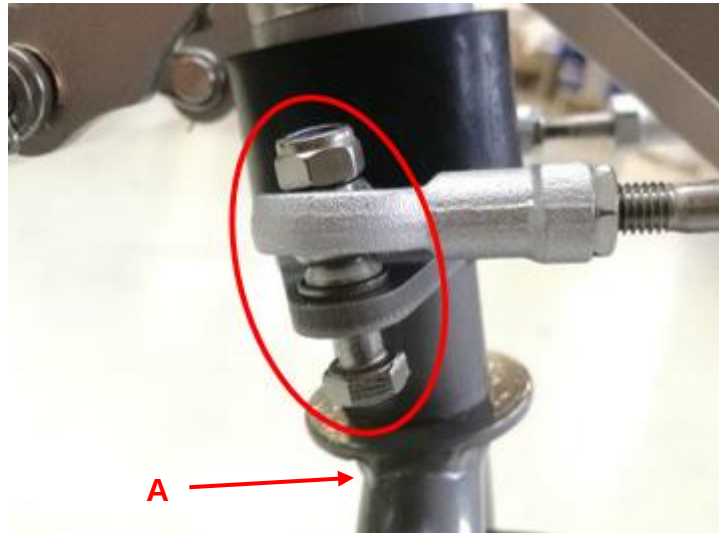
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Pic. 1



Pic. 2



Pic. 3



Pic. 4

Calidus

1. Remove the nose wheel assembly in accordance with AMM Job Card 32-20-00 8-1. NOTE: It is not necessary to replace the rubber damper and o-ring as stated, unless defect.
2. Remove the rubber damper and wheel spat (Pic. 1 - if fitted) from the axle.
3. Clean all grease from the axle.
4. Using a suitable light source and magnifying glass, inspect the complete nose wheel fork assembly general condition, no distortion, damage or weld cracks, paying particular attention to the circumferential weld between axle and fork (area 'A', Pic. 2).
5. If cracks are suspected but not clearly visible, use a suitable medium (for example dye-penetrant) for confirmation.
6. Any cracking found at welds in any area is cause for rejection and replacement of the fork assembly.
7. Grease the fork axle using WHS2002 and assemble the rubber damper and wheel spat (if fitted) onto the fork.
8. Re-assemble the nose wheel and fork assembly into the aircraft in accordance with AMM Job Card 32-20-00 8-1. Ensure that the o-ring, washer and bolt are assembled in

the correct sequence, and the bolt, pre-coated with Loctite 243 or equivalent, torqued to 40Nm (Pic. 3).

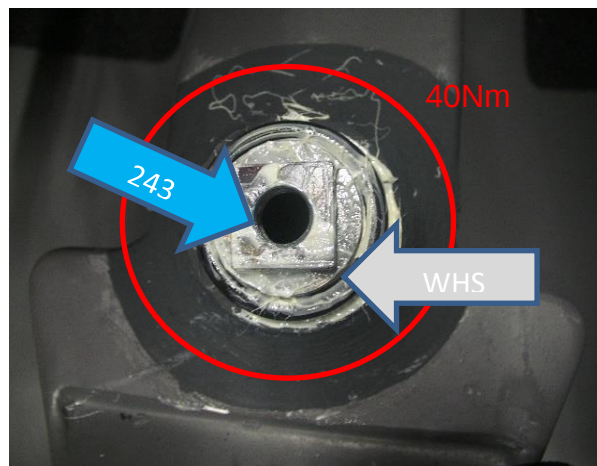
9. Inspect the nose wheel assembly for secure installation, freedom of movement, no excessive play.



Pic. 1



Pic. 2



Pic. 3

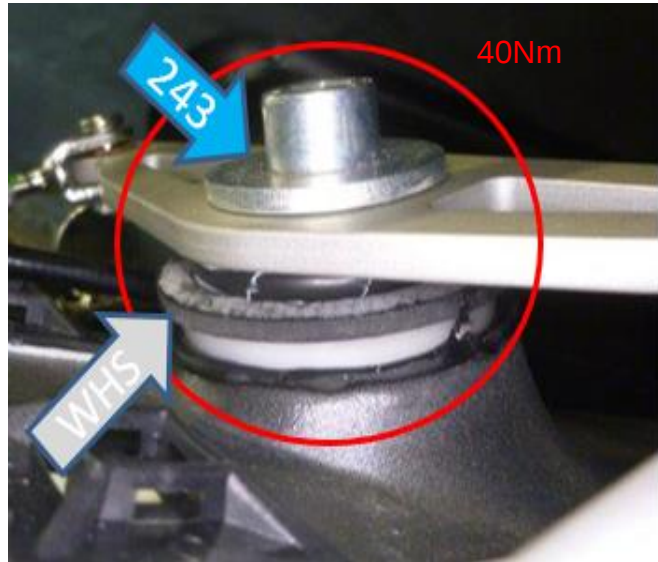
Cavalon

1. Remove the nose wheel assembly in accordance with AMM Job Card 32-20-00 8-1.
NOTE: It is not necessary to replace the rubber damper and o-ring as stated, unless defect.
2. Remove the rubber damper and wheel spat (if fitted) from the axle.
3. Clean all grease from the axle.
4. Inspect the complete nose wheel fork assembly general condition, no distortion, damage or weld cracks, paying particular attention to the circumferential weld between axle and fork (area 'A', Pic. 1).
5. If cracks are suspected but not clearly visible, use a suitable medium (for example dye-penetrant) for confirmation.
6. Any cracking found at welds in any area is cause for rejection and replacement of the fork assembly.

7. Grease the fork axle using WHS2002 and assemble the rubber damper and wheel spat (if fitted) onto the fork.
8. Re-assemble the nose wheel and fork assembly into the aircraft in accordance with AMM Job Card 32-20-00 8-1. Ensure that the o-ring, any spacers, washer and bolt are assembled in the correct sequence, and the bolt, pre-coated with Loctite 243 or equivalent, torqued to 40Nm (Pic. 2)
9. Inspect the nose wheel assembly for secure installation, freedom of movement, no excessive play.



Pic.1



Pic. 2

Changes to the indication limits 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)

45506 Liqui Moly LM47 MOS2
30477 WHS2002
30483 Loctite 243 Blue

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