

Title: Teeter Tower Main Bearing Replacement		
AG-SB-2024-06-B-EN	Effective Date: 01.09.2024	Compliance Category:
Applicability		A – MANDATORY B – RECOMMENDED C – OPTIONAL
Aircraft type & model: All models	Affected Serial number(s): All models equipped with rotor system II	
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 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 within the aircraft records, in line with the requirements of the responsible aviation Regulatory Authority.

A worksheet may be attached to this bulletin to aid correct embodiment of this SB. This should be completed and retained with the aircraft records.

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

Document approval signatures	
Head of Engineering	Head of Airworthiness
The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: DAI/9917/06	
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Reason and overview of the Service Bulletin (cause of problem if known)

As stated in the aircraft relevant maintenance manuals and maintenance protocols, the teeter tower main bearing is life-limited to 1500 flying hrs and requires replacing once this limit has been reached.

This can be achieved in one of two ways. Either:

1. A teeter tower assembly replacement, which includes the new bearing. AMM job card 62-20-00 8-1 references removal and installation of the teeter tower.
2. If the tools stated in the SB are available, the bearing may be replaced in the original tower.

This service bulletin provides instructions on how to replace the teeter tower bearing as an individual item.

Manpower estimates

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

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

2.0 -3.0 hrs

Compliance

This bulletin is recommended and has no compliance timeline. It must however be complied with at the next main rotor bearing replacement.

Customer Support

Materials and labour hours are not covered by this Service Bulletin. Can be contacted for questions.

Tooling required

Standard tools.

Teeter Tower II:

34515 Gauge Set Teetertower II bearing position

Teeter Tower III:

49519 Gauge Set Teetertower III bearing position

Teeter Tower III.1:

49520 Gauge Set Teetertower III.1 bearing position

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Weight and Balance Effects

Nil

Manuals affected

POH not affected, AMM will be updated with the next revision.

Previous Modifications that affect the SB

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.

Procedure

To replace the teeter tower and bearing as a complete assembly (recommended) refer to the relevant AMM Job Card 62-20-00 8-1.

To replace the bearing as an individual item:

Ensure the wheel brake is applied and the ignition/mag switches are switched off/key removed.

1. Remove the rotor system in accordance with AMM job card 62-11-00 4-1.
2. Remove the teeter tower from the rotor head, and the crown gear from the teeter tower in accordance with AMM job card 62-20-00 8-1.
3. Inspect the teeter tower bushes by cleaning any residue grease from the bolt and TEF-Met bushes, insert the bolt and check for play. If wear is present then the bushes should be replaced in accordance with AMM Job card 62-11-00 8-1.
4. Remove the teeter stop plate by removing the 4 attachment screws.
5. Warm the teeter tower to 120°C. Use of a temperature controlled oven is recommended. **DO NOT EXCEED 140degC, or the aluminium structural properties will be reduced!**
6. Using a suitable press tool, push the old main bearing out of the teeter tower. Dispose of the old main bearing.
7. Thoroughly clean the tower, removing all traces of adhesive in the bearing bores. Do not use sharp pointed steel tools, scratches and damage to the surface may induce fracture points!
8. Carefully inspect the cleaned tower for any damage that would render the part unserviceable. Only continue if serviceable.
9. Warm the teeter tower for 3-4 hours in a tempering oven at 60°C.
10. Wet the Teetertower on the main bearing seat with Loctite 603, item 30486 (Pic.1).
11. Wet the main bearing (Article 20689) evenly and thinly with Loctite 603 on the outside and insert it into the teeter tower with the help of the respective setting tool so that it rests flat (Pic.2).

NOTE: Ensure that bearing is orientated so that the bearing designation writing is uppermost (Pic.3).

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12. From the opposite side, clamp the assembly with screw and plug from the respective setting tool set. Leave the tower for at least 10 minutes to allow the Loctite to set (Pic.4).
13. Then check that the distance between the setting tool and the Teetertower is even on both sides. Make sure that the same force is used on both sides. The feeler gauge must fit into the gap with only slight friction (Pic.5).
14. Check the distance between the setting tool and the teeter bolt with a feeler gauge (Pic.6)
Important: The tolerance is 0.05mm!
15. Place the Teeter tower in a vice with soft jaws. Apply Loctite 243 to the four M8x16 Allen flat and assemble the teeter stop plate to the teeter tower assembly with a torque wrench (20Nm) (Pic.7).
16. If the teeter tower already carries a serial number, then record that serial number on the job record sheet. If no serial number is present, etch the job number on the tower where shown (Pic.8).
Etch carefully, the etching is visible in service and must look aesthetically acceptable. Approx 5mm high letters/numbers.
17. Re-assemble the main crown gear on the teeter tower, and the teeter tower on the rotor head in accordance with AMM job card 62-20-00 8-1.
18. Re-assemble the rotor system onto the aircraft in accordance with AMM job card 62-11-00 4-4.
19. Carry out a tool and loose article check.

NOTE: It may be necessary to carry out a rotor balance after a teeter tower bearing replacement.

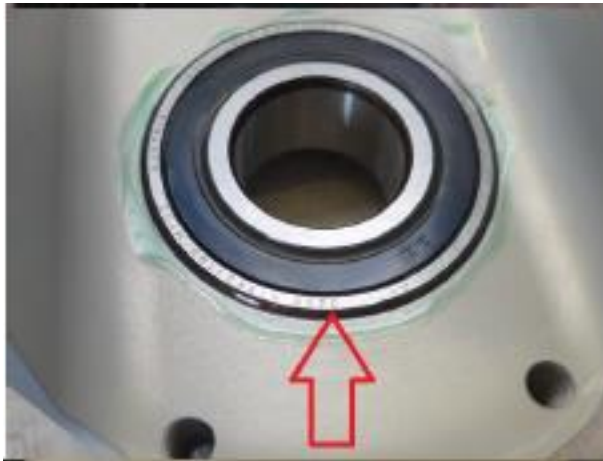
Illustrations



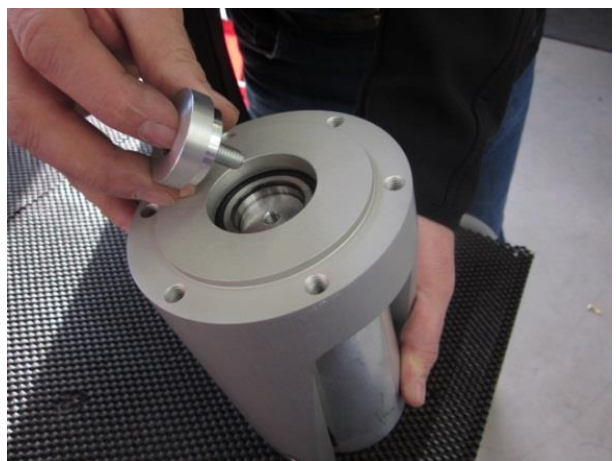
Pic.1



Pic.2



Pic.3



Pic.4



Pic.5



Pic.6



Pic.7



Pic.8

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 to be made to implement this service bulletin):

NIL

List of components (with purchasable part numbers)

- 30483 Loctite 243 Blue
- 30486 Loctite 603
- 20689 Bearing Teetertower
- 34515 Gauge Set Teetertower II bearing position
- 49519 Gauge Set Teetertower III bearing position
- 49520 Gauge Set Teetertower III.1 bearing position

Interchangeability

Not affected

Parts disposition

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