

## Replacement of Bendix drive shaft RK21

# MANDATORY

### Repeating symbols:

- ❖ **WARNING:** Identifies an instruction, which if not followed, may cause serious injury or even death.
- **CAUTION:** Denotes an instruction which if not followed, may severely damage the aircraft or could lead to suspension of warranty
- **NOTE:** Information useful for better handling

## 1. Planning information

### 1.1 Reference

#### 1.1.1 All Gyrocopter

1. MTOsport: time of manufacture 01.2008 - 07.2008
2. MT 03: time of manufacture 01.2008 - 07.2008
3. MT 03: all models which had between 01/2008 and 07/2008 an annual inspection with replacement of Bendix
4. MTOsport: all models which had between 01/2008 and 07/2008 an annual inspection with replacement of Bendix

### 1.2 Reason

In isolated cases the shaft weld can fail during prerotation.

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### 1.3 Subject

Change of Bendix drive shaft RK21

### 1.4 Compliance

Within next inspection (25 or 100 hours)

- **NOTE** this is no flight safety related
- **NOTE** Without the pre-rotator the pre-rotation of the rotorsystem can be started by hand

### 1.5 Approval

The technical content is approved under the authority of

- AutoGyro GmbH

### 1.6 Manpower

Estimated man-hours: change of Bendix ca. 0,5 h

### 1.7 Mass data

none change

### 1.8 Electrical load data

none change

### 1.9 References

In addition to this technical information refer to current issue of

- Parts catalog [www.auto-gyro.de](http://www.auto-gyro.de)

### 1.10 Other publicatons affected

none

### 1.11 Interchangeability of parts

All used parts which cannot be used must be returned to AutoGyro GmbH or authorized distributor

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### 2. Material Information

#### 2.1 Material - cost and availability

Price and availability will be supplied on request by AutoGyro GmbH

After sending back the spare part, AutoGyro GmbH will refund the spare part cost

#### 2.2 Material requirement per gyro

Should removal of a locking device (e.g. lock tabs, self-locking fasteners, etc.) be required when undergoing disassembly/assembly, always replace with a new one

#### 2.3 Material requirement per spare part

Bendix drive shaft RK21

#### 2.4 Rework of parts

none

#### 2.5 Special tooling/lubricant-/adhesives-/sealing compound - Price and availability

Loctite 243 (blue) WZ17

HHS2000 (or equivalent) WZ10

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## 3. Accomplishment / Instructions

### 3.1 Accomplishment

All the measures must be taken and confirmed by the following persons or facilities:

- AutoGyro GmbH maintenance authorised persons
- AutoGyro GmbH

- ❖ **WARNING:** Proceed with this work only in a non-smoking area and not close to sparks or open flames. Switch off ignition and secure engine against unintentional operation. Secure aircraft against unauthorized operation. Disconnect negative terminal of aircraft battery.
- ❖ **WARNING:** Should removal of a locking device (e.g. lock tabs, self-locking fasteners, etc.) be required when undergoing disassembly/assembly, always replace with a new one

### 3.2 Instructions

1. Block wheels against rolling away
2. Fix stick in front position
3. Turn Flight/Brake-switch to „Brake“
4. Engage compressor to maximum compression
5. Fix rotor system from turning with tie down bag
6. Grease new Bendix shaft RK21 with HHS 2000 (or equivalent)WZ10
7. Disassemble Bendix and shaft from Rotor Head by releasing the M6 bolted connection at the upper cardan joint and pulling down the joint from the bendix shaft.
8. Remove 4 off M4x8mm cap head screw from the bottom plate that retains the bottom bearing, and then remove the plate and bearing.
9. Slide the bendix shaft vertically out downwards from the gear, and remove both.
10. Clean the bendix gear, and refit with the new shaft. Make sure the shaft gear is lightly greased
11. Refit the bearing and plate
12. Refit the M4x8mm cap head screws, making sure the threads are coated in Loctite 243 WZ 17. Tighten securely.
13. Ensure the gear spins freely, and slides easily up and down.
14. Refit the drive shaft, with either a new nylock or loctite 243 on the nut threads. Tighten securely.

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### 3.3 Checking of Bendix

1. Check correct operation by pushing up the Bendix to the main gear. It should cleanly slide into full engagement, and back out again.
2. Check clearance of gear teeth between the bendix and the main gear wheel

### 3.4 Test run

After assembling test run with the engine running, and check whether the Bendix declutches from the rotor drive gear.

### 3.5 Summary

These instructions (section 3) have to be conducted in accordance with section 1.5.

The execution/completion of the mandatory Service information must be annotated in the aircraft logbook

## 4. Fotos

Bendix drive shaft RK21 **NEW**

Bendix drive shaft RK21 **OLD**

