

# NICOLAI Bearing Tool (NBT)

bearing tool for full suspension NICOLAI frames

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### Manual description

*This manual explains how to use the NICOLAI bearing tool (NBT) in all configurations. In the following paragraphs, after a short product description, the manual explains how to use the NBT for fitting and removing the bearings. Moreover, for every single application, exploded views explain how to assemble the NBT for every single case.*

### Caution!

**The NICOLAI Bearing Tool (NBT) must only be used for NICOLAI full suspension bicycles and is not suitable for every other kind of purpose.**

**Bearings are products of high precision standards, as well as the NBT. In order to use it properly, handle the bearings and the NBT with care. It's recommended to keep all NBT parts clean and the thread always lubricated.**

**For every kind of questions please visit our website ([www.nicolai-bicycles.com](http://www.nicolai-bicycles.com)) or give us a call (+49 (0) 5068 72699 810)**

### Product description

The NICOLAI Bearing Tool (NBT) is developed for fitting and/or removing the bearings on full suspension NICOLAI frames. It can be used for the swingarm bearings and for the ION-G series Horst link bearing. The NBT can be also used for the bearings on the shock lever and the shock lever of the G1 /Saturn14.

The NBT than can be used in different configuration, changing the order of the single components, as explained in the following paragraphs.

A list of NICOLAI model compatibility is shown below.

# NBT

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## NBT components:



- Bolt M10x70, M10 Nut, 2x Washer 18,6x2



- Plate bearing D23,7 d12x10x10



- Plate bearing D23,7 d14,8x10x10



- Plate bearing D27,7 d14,8x10x10



- spacer 18,5x10x13,6



- sleeve 30x20x7



- sleeve 33x20x7



- sleeve holder 33x10x6

## Required tools:

- 8mm allen key
- 17mm wrench
- seeger plyers (only for horst link and Saturn 14)

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### **NBT compatibility**

Regarding the bearings mounted on the swingarm, the NBT is compatible with the following NICOLAI models:

**HELIUS-AC, HELIUS-TB / ION-15, ION-16, ION-20 / ION-G13, ION-G16, ION-G19**  
(also Horst link) / **HELIUS-GPI, ION-GPI**

Regarding the bearings mounted on the shock lever, the NBT is compatible with the following NICOLAI models:

**G1, HELIUS-AC / ION-15, ION-16, ION-20 / ION-G13, ION-G16, ION-G19 / HELIUS-GPI, ION-GPI, Saturn 14**

### **Using the NBT - fitting the bearing**

Before fitting the bearing, clean the bearing seat and the area of the part using a clean rag with a small amount of oil on it. Make sure the bearing seat is clean before starting. Once the seat has been cleaned put some grease on in order to give a better protection against water and dust.

Position the bearing carefully by hand on the top surface than follow the right sequence of the NBT as shown in the following exploded views for each part. Carefully tighten the nut by hand and be sure that the bearing is parallel to the surface. Once the bolt is tight enough to avoid bearing movement start to tighten the NBT using the 8mm alley key and the 17mm wrench. The first tight step is the most critical procedure. Again be sure that the bearing is exactly parallel to the surface. If the bearing is fitted properly just a small amount of force is required to put it on the seat. Do not tighten the bearing on the seat using extra force. To make sure that the bearing is fitted properly on the seat unscrew the NBT and observe the flushness with the surface. If an extra amount of force is required the bearing is not parallel to the surface. Check if the NBT is assembled as shown on the correct exploded view. Remove the bearing from the seat before continuing and start all over again.

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## Using the NBT - removing the bearing

Before starting the procedure of removing the bearing, clean the closest area to the bearing carefully. In case of mud use a slightly wet rag. Be sure that the working area is clean before start.

Position the NBT as shown the exploded views in the following pages for each part. Tighten the nut by hand carefully and be sure that the plate bearing (or the spacer) is parallel to the bearing surface. Once the bolt is tight enough to avoid movement of the NBT start tightening the NBT using the 8mm alley key and the 17mm wrench. The first tightening step is the most critical part. Be sure that the plate bearing is exactly parallel to the bearing surface. If the NBT is fitted properly just a small amount of force is required for pressing the bearing out its seat. Most force is required for setting the bearing in motion. If an extra amount of force is required then the NBT is not fitted properly to the bearing, the plate bearing or the spacer. can not be parallel to the bearing surface. Also, check if the NBT is assembled as shown on the correct exploded view.

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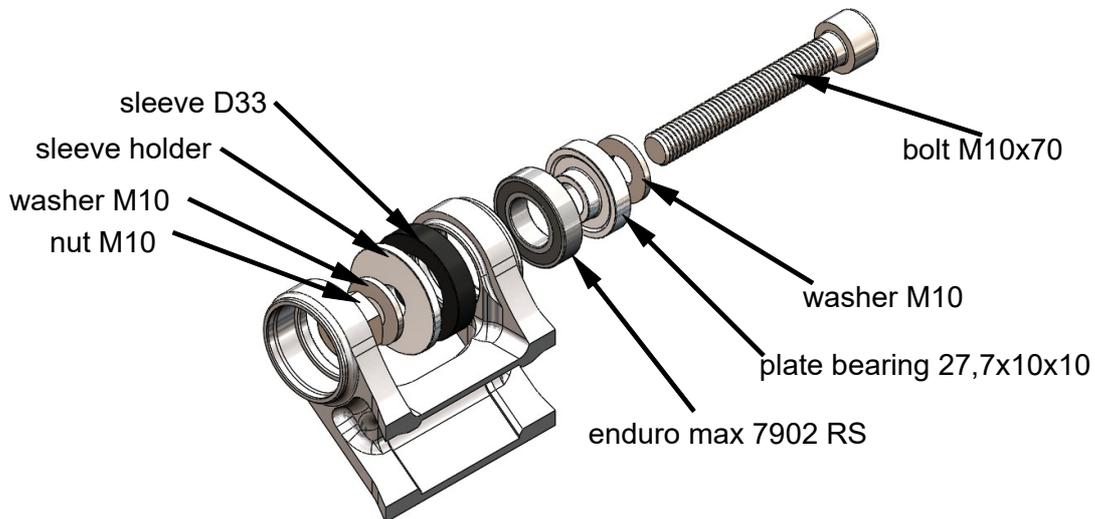
**Volker:**

## Swingarm bearings

The following procedure is for fitting and/or removing the bearings on the swingarm.

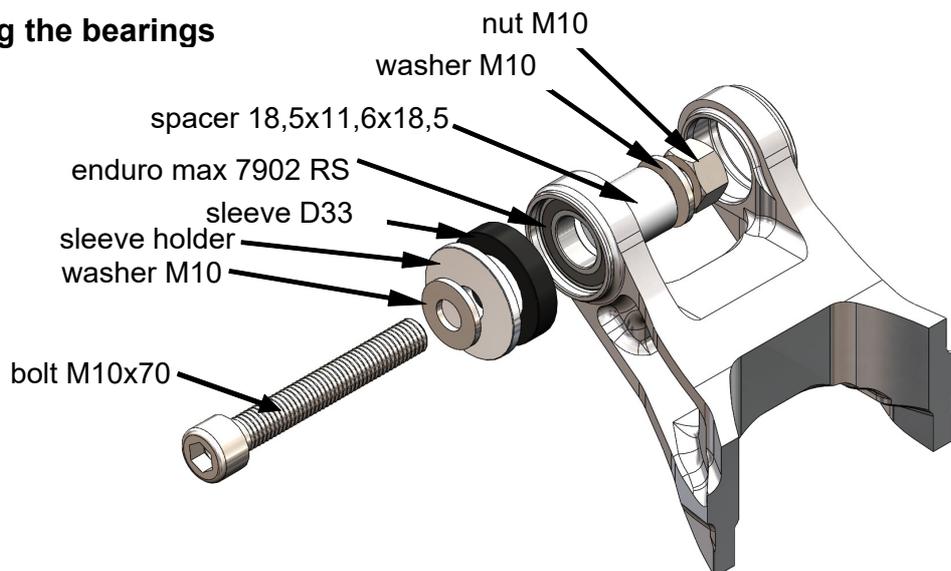
**Attention!!! The bearing Enduro Max 7902 RS must be mounted with the blue face on the inner direction (bearing seat direction).**

### Fitting the bearings



The procedure is the same for both bearings

### Removing the bearings



The procedure is the same for both bearings

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### **Shock lever bearings**

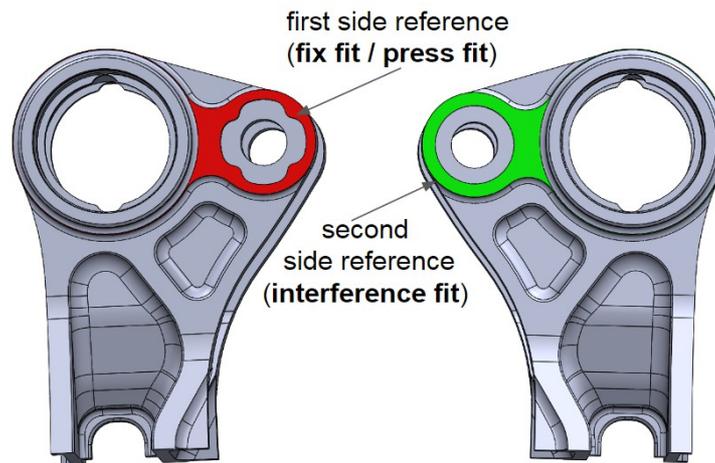
This procedure is for fitting and/or removing the bearings on the ION shock lever. The procedure is the same for the HELIUS shock lever.

#### **Side references on the lever**

The following picture shows the first side reference (on the left) and the second side reference (on the right).

The first side is easily recognizable by the groove of the nut for the shock.

It is very important to keep in mind the first side as a reference in order to fit and remove the bearings in a proper way.



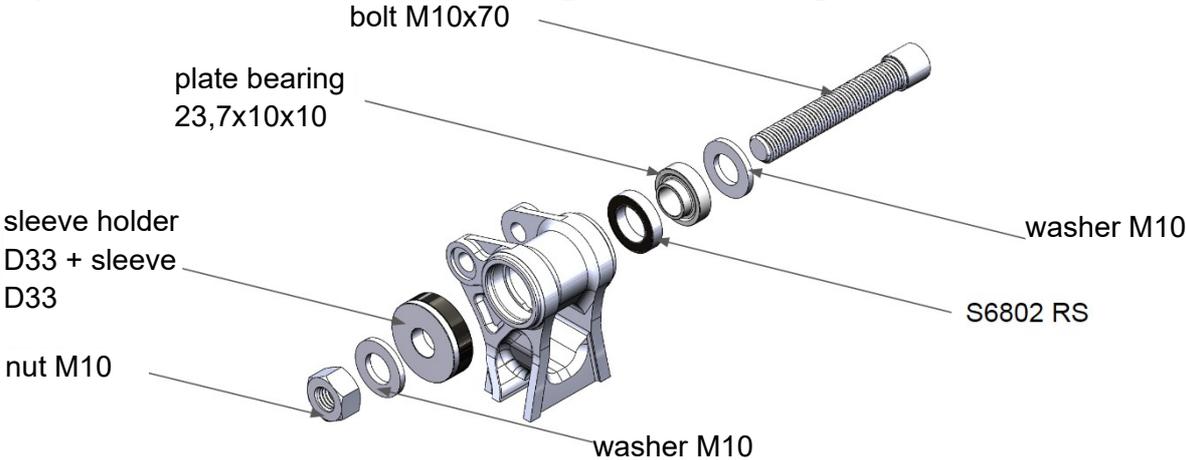
As a rule regarding the fitting sequence:

- *The first bearing must be fitted on the first side (red)*
- *To remove the first bearing the bolt must be inserted from the first side reference*

Moreover, the inner spacer between the two bearings must be fitted in a proper orientation as shown in the following paragraph

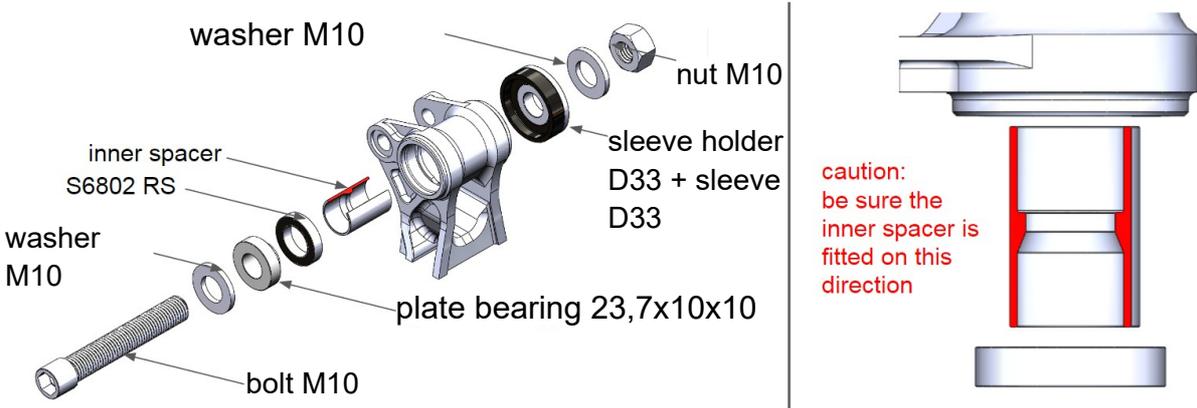
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**Exploded view shock lever top / fitting the first bearing**



**Caution:** It is very important to mount the first bearing on the first side reference

**Exploded view shock lever top / fitting the second bearing**



**Caution:** It is very important to fit the inner spacer on the right direction

**NBT**

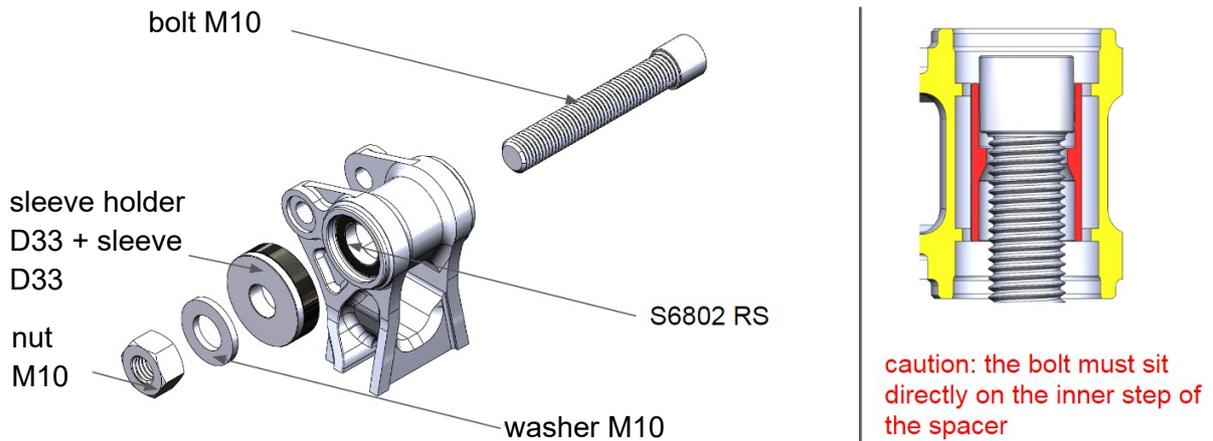
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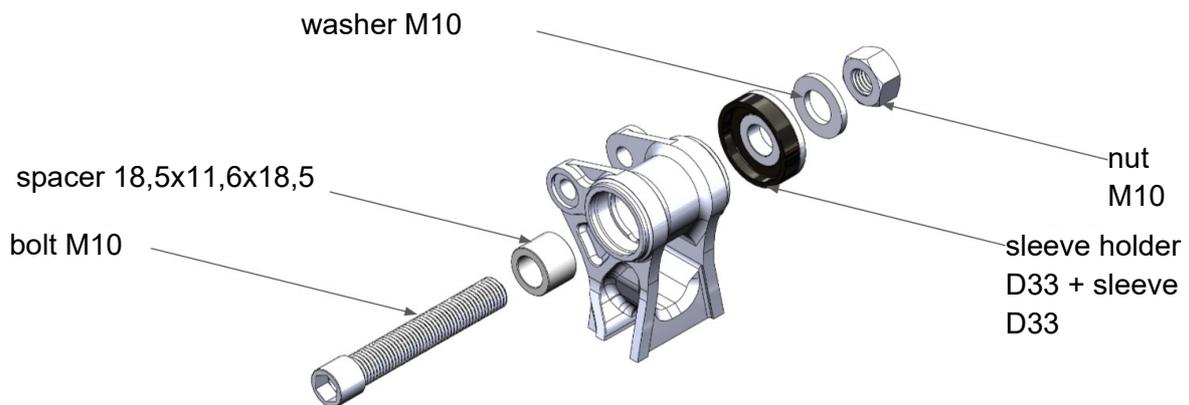
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**Exploded view shock lever top / removing the first bearing**



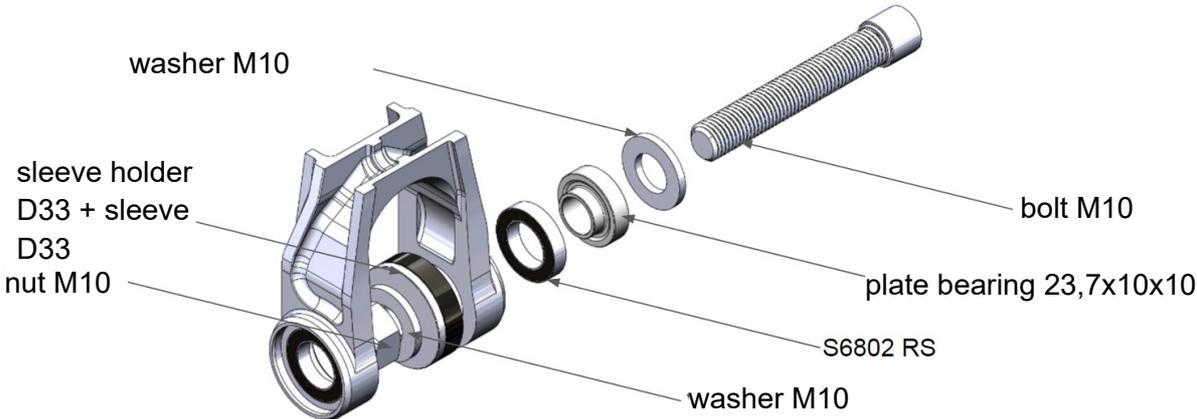
Caution: It's very important to remove the first bearing inserting the M10 screw from the first side reference

**Exploded view shock lever side / removing the second bearing**



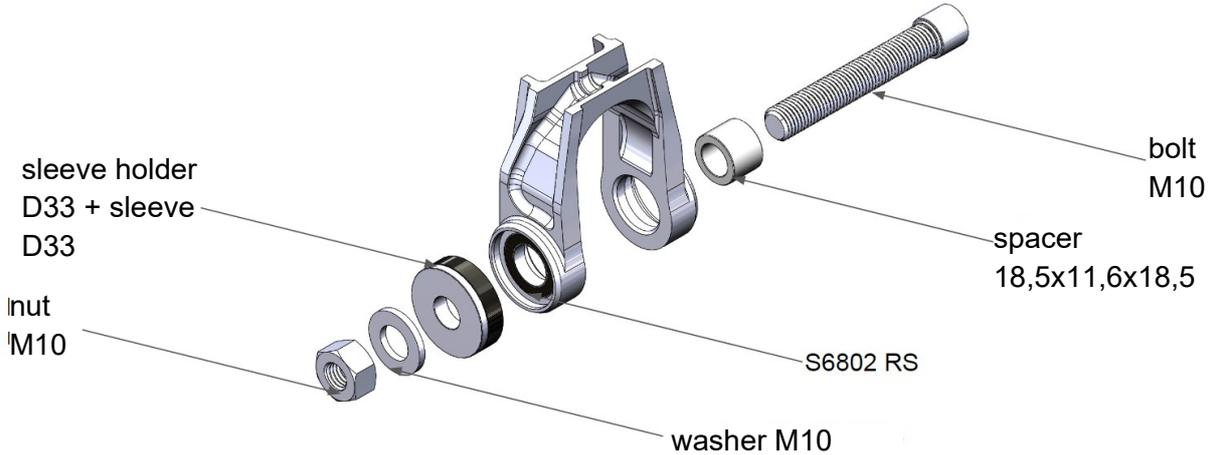
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**Exploded view shock lever bottom / fitting the first bearing**



The procedure is the same for both bearings

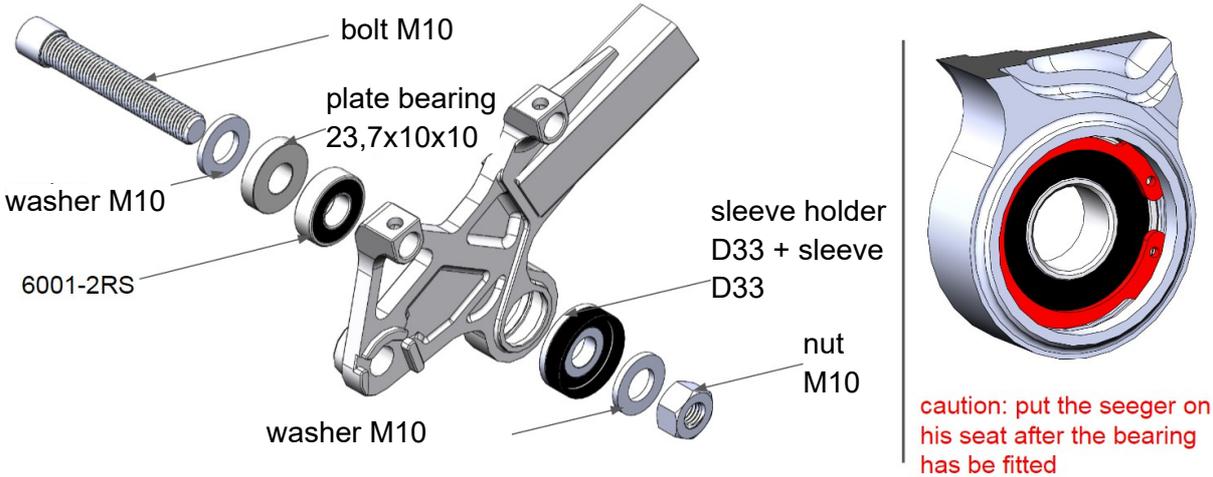
**Exploded view shock lever bottom / removing the second bearing**



The procedure is the same for both bearings

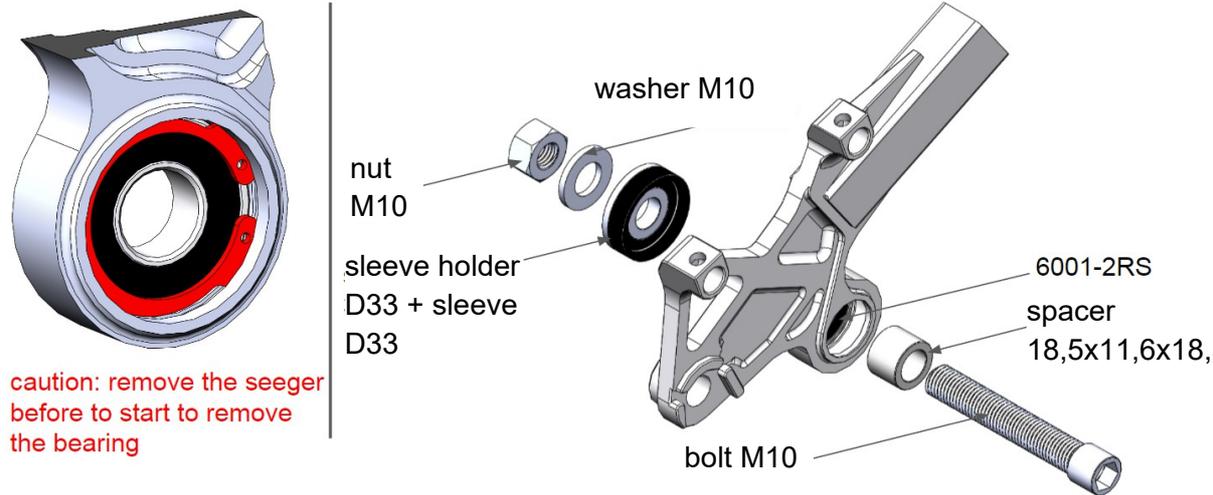
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**Exploded view Horst link (only ION-G models) / fitting the bearing**



The procedure is the same for both bearings

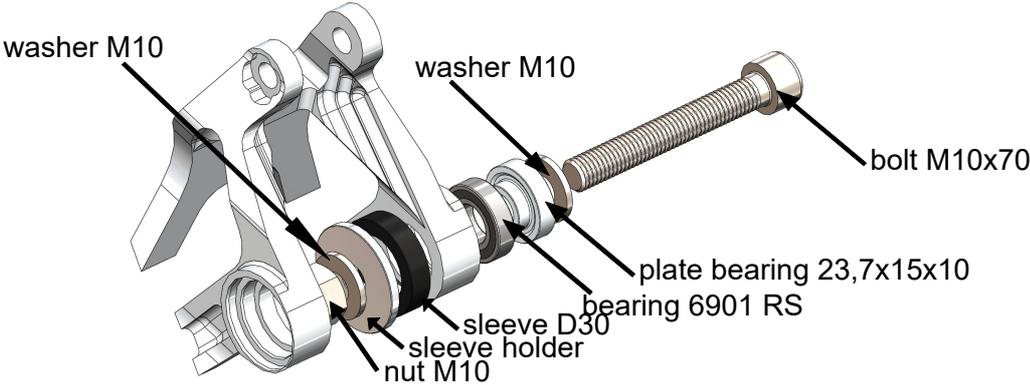
**Exploded view Horst link (only ION-G models) / removing the bearing**



The procedure is the same for both bearings

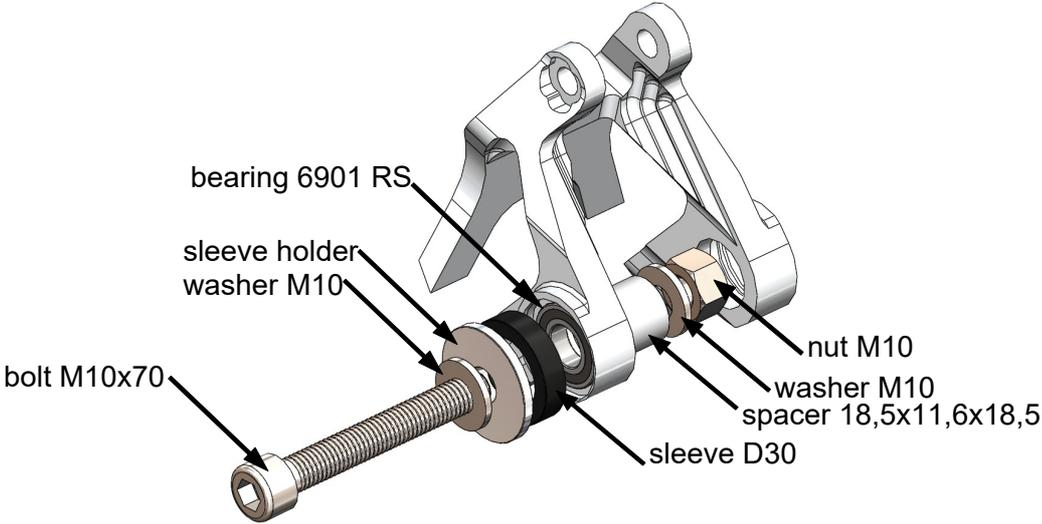
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**Exploded view Saturn 14 / fitting the top bearing**



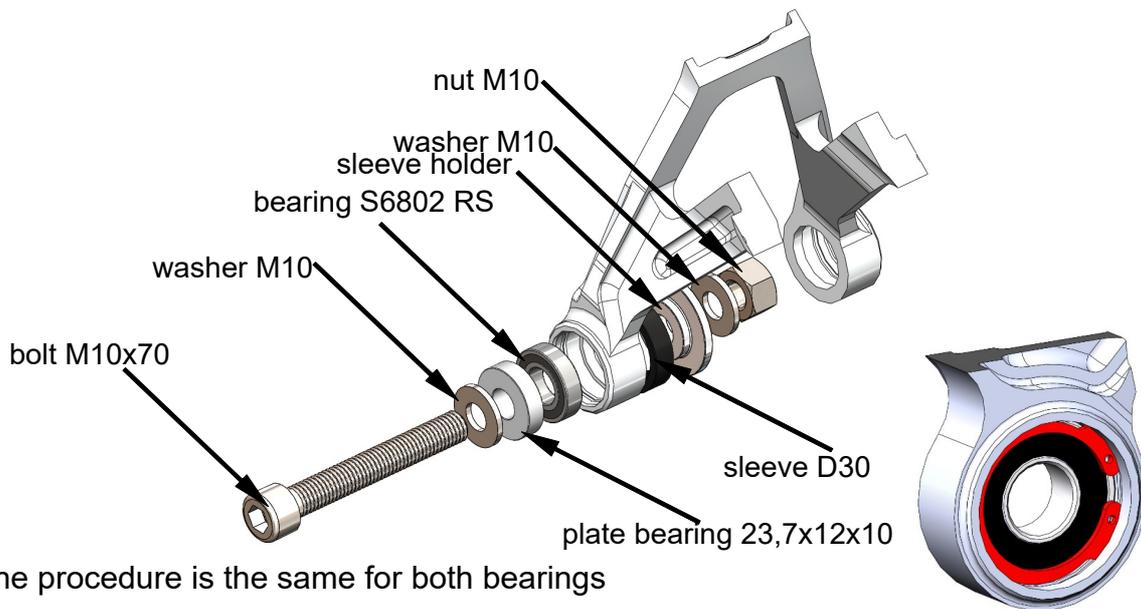
The procedure is the same for both bearings

**Exploded view Saturn 14 / removing the top bearing**



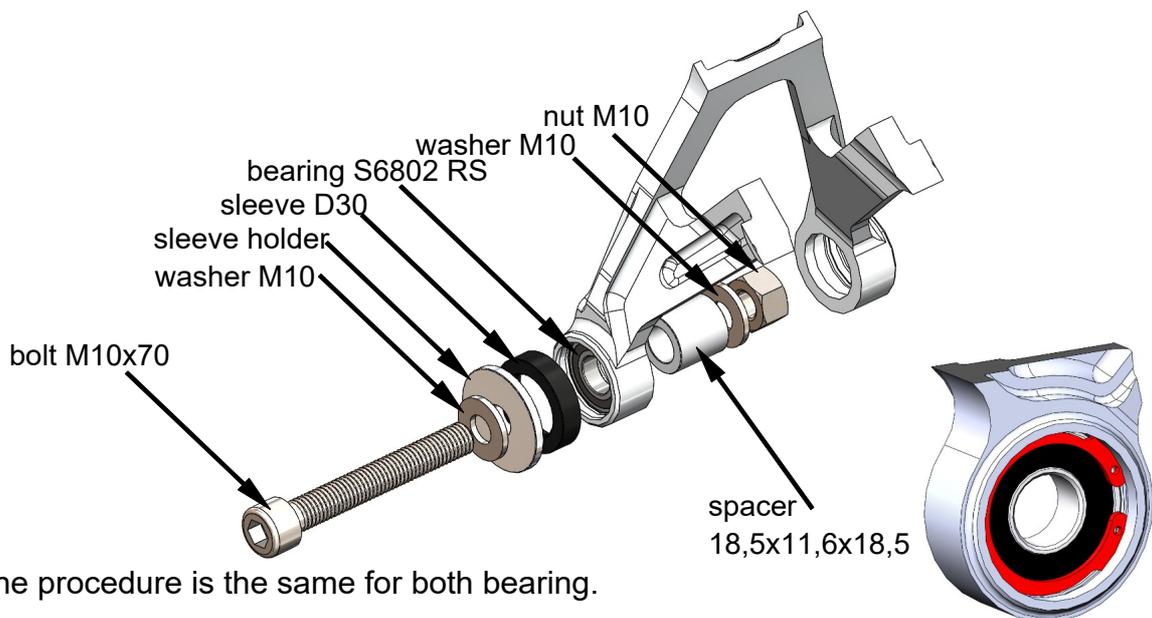
The procedure is the same for both bearings

### Exploded view Saturn 14 / fitting the bottom bearing



The procedure is the same for both bearings

### Exploded view Saturn 14 / removing the bottom bearing



The procedure is the same for both bearing.

caution: remove the seeger before to start to remove the bearing

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