

# HPS3 ROTOR HEAD [H0430-K]

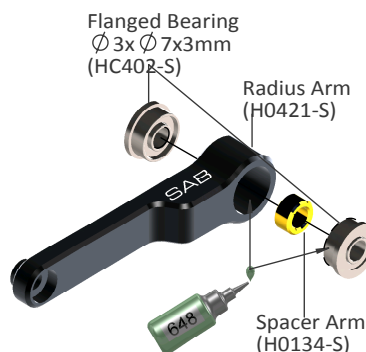


H0430M\_Rev01

Please read this user manual carefully, it contains instructions for the correct assembly of the KIT.  
Please refer to the website [www.goblin-helicopter.com](http://www.goblin-helicopter.com) for updates and other important information. Thanks You.

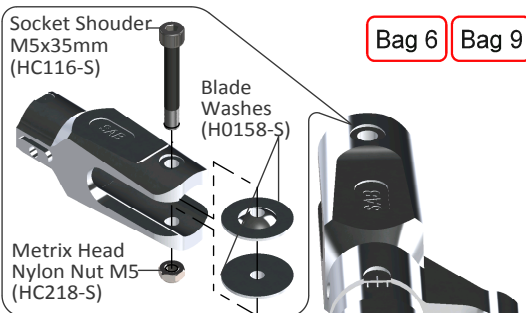
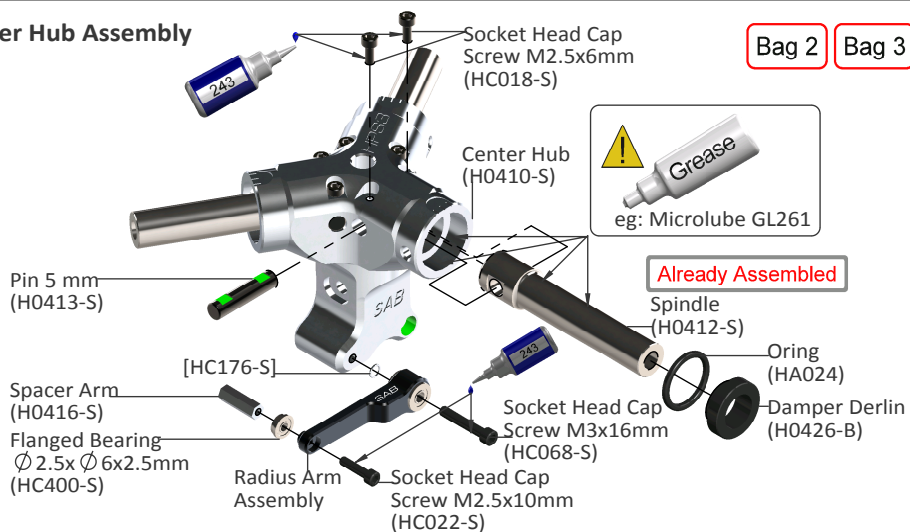
## Radius Arm Assembly ... x 2

Bag 1



## Center Hub Assembly

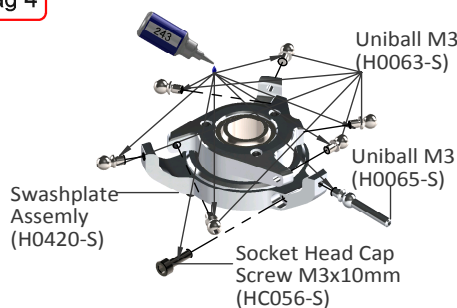
Bag 2 Bag 3



Bag 6 Bag 9

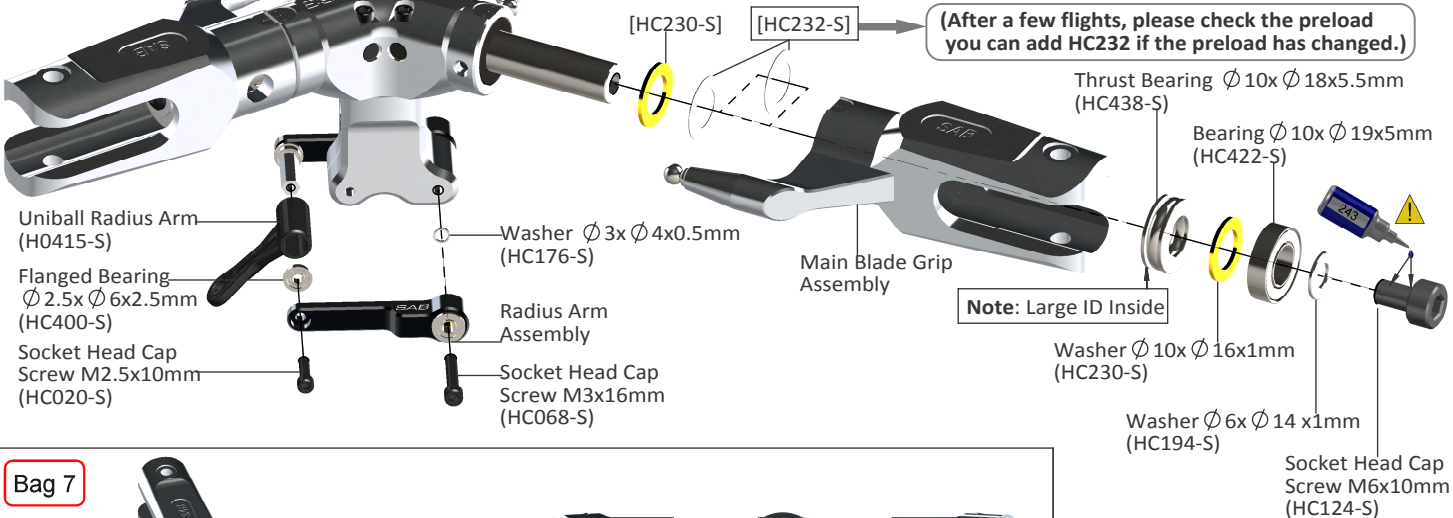
## Swashplate Assembly

Bag 4

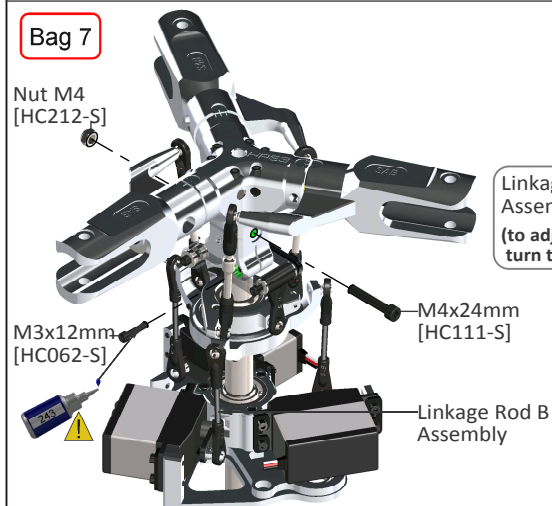


## Main Blade Grip Assembly ....x2

Bag 5



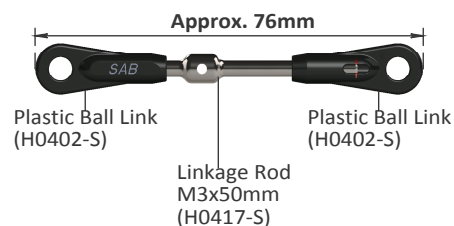
Bag 7



Linkage Rod A Assembly  
(to adjust the tracking, turn this linkage.)

## Linkage Rod A Assembly ...x3

Bag 8



(Initial length for the rods from the swashplate to the Blade Grip.)

## ABOUT HPS3

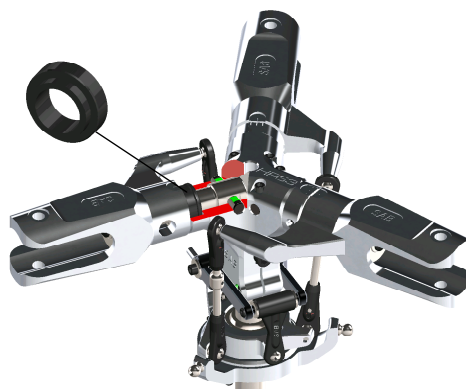
The new HPS 3 head offers an independent dampening system for each blade grip, there are three dampening settings:

- A = Soft for smooth response.
- B = Medium.
- C = Firm for direct and precise response.

We recommend starting with the medium setting.

**⚠ For safety reasons we suggest to not exceed 2300 rpm.**

In addition, we recommend using a smaller tail pulley in order to increase the tail rotor speed to counteract the additional torque introduced by the 3rd rotor blade. You will find a 24T tail rotor pulley in the kit for this purpose.



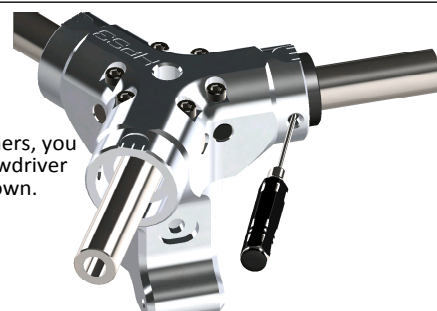
## RECOMMENDATIONS

These parts should be used only with models SAB Goblin.

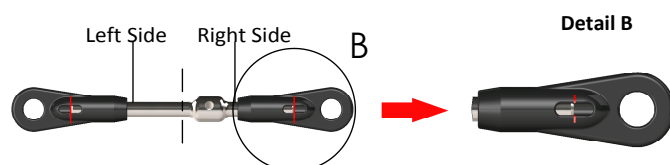
- URUKAY and G770 (recommended blades SAB 3BL730, max 750 mm)
- Goblin 700 (recommended blades SAB 3BL690, max 710 mm)
- Goblin Speed (recommended blades SAB 3BL720-1D, max 720 mm)
- 3 blade rotor heads require a much lower cyclic gain on flybarless systems. We recommend that you set your gain at least 30% lower than the gain you normally use on your 2 blade rotor head helicopters. You can start increasing the gain after you complete your first flight. Running too high of a gain can induce a violent oscillation that can potentially cause damage to your helicopter in flight.
- Please follow all the instructions shown in the Goblin main manual. In this manual please read Chapter 2, Important notes
- Use Loctite on all threads.
- Put a small amount of grease inside the hub and the O-Ring.
- Check the spindle for axial play at least after the first few flights and add shims as necessary, slight axial preload is optimal. The blade grips must move freely, but they should not move just under their own weight.
- Firmly tighten the blades before flight.

## TIPS:

\* To remove the dampeners, you can use a flathead screwdriver through the hole as shown.



- \* Clock-wise, counter clock-wise thread
- \* By turning the linkages you can adjust tracking. If tracking is adjusted correctly, you'll see the metal part line up around in the center of the opening.



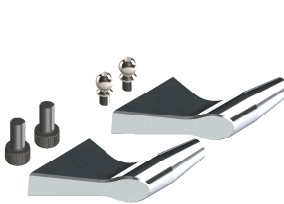
## SPARE PARTS

### Blade Grip [H0182-S]



- 2 x Blade Grip.
- 2 x Thrust Bearing  $\varnothing 10x \varnothing 18x5.5mm$ .
- 4 x Bearing  $\varnothing 10x \varnothing 19x5mm$ .
- 2 x Washer  $\varnothing 10x \varnothing 16x1mm$ .
- 2 x Button Head Socket Cap M4x8mm.

### Blade Grip Arm [H0183-S]



- 2 x Blade Grip Arm.
- 2 x Socket Head Cap Screw M4x10mm.
- 2 x Uniball M3x4  $\varnothing 5 H3.5$ .

### Center Hub [H0410-S]



- 1 x Center Hub.
- 1 x Socket Head Cap Screws M3x12mm.
- 1 x Socket Head Cap Screw Shouldered M4x25mm.
- 1 x Metric Hex Nylon Nut M4.

### Spindle Shaft [H0412-S]



- 2 x Spindle Shaft.
- 2 x Pin 5mm.
- 4 x Socket Head Cap Screw M2.5x6mm.
- 2 x Socket Head Cap Screw M4x10mm
- 2 x Washer  $\varnothing 6,3 x \varnothing 15 x 1mm$

### Linkage [H0417-S]



- 2 x Linkages M3x50mm.
- 4 x Plastic Ball Links.

### Swashplate [H0420-S]



- 1 x Swashplate Assembly.
- 2 x Bearings 30x  $\varnothing 37x4mm$ .
- 6 x Uniballs M3x4  $\varnothing 5 H3$ .
- 1 x Uniball M3x4  $\varnothing 5 H18$ .
- 3 x Socket Head Cap Screws M2x5mm.
- 4 x Socket Head Cap Screws M2x8mm.
- 3 x Swasher  $\varnothing 2x \varnothing 5x0.5mm$

### Radius Arm [H0421-S]



- 2 x Radius Arms.
- 2 x Spacer Arm  $\varnothing 3x \varnothing 5x2.7mm$ .
- 1 x Spacer Hex.
- 1 x Uniball Radius Arms.
- 2 x Socket Head Cap Screws M3x16mm.
- 2 x Socket Head Cap Screws M2.5x10mm.
- 2 x Flanged Bearings  $\varnothing 2.5x \varnothing 6x2.5mm$ .
- 4 x Flanged Bearings  $\varnothing 3x \varnothing 7x3mm$ .

### Damper Derlin [H0426-S]



- 3 x H0426-A.
- 3 x H0426-B.
- 3 x H0426-C.
- 3 x Washers  $\varnothing 10x \varnothing 16x1mm$ .
- 3 x Washers  $\varnothing 10x \varnothing 16x0.2mm$ .
- 3 x Orings 3050.