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 for updates and other important information. Thanks You.

**Blade Grip Linkage Assembly**
- Flanged Bearing ∅2.5x∅6x2.5 (HC400-S)
- Head Cap Screw M2.5x15mm (HC028-S)
- Plastic Ball Link (H0403-S)
- Linkage Rod (H0561-S)

**Swashplate Assembly**
- Swashplate Assembly (H0600-S)
- Uniball M2 (H0538-S)
- Uniball M2 (H0537-S)

**Center Hub Assembly**
- Center Hub (H0595-S)
- Spindle (H0596-S)

**Blade Grip Assembly**
- Head Cap Screw M2.5x8mm (HC020-S)
- Bearing ∅5x∅10x4mm (HC411-S)
- Main Blade Grip (H0513-S)

**Note**
- Linkage Rod A Assembly . . . .x3
- Already Assembled
- HEX 2.5 Inside

**Linkage Rod A Assembly . . . .x3**
(Initial length for the rods from the swashplate to the Blade Grip.)

**Blade Grip Linkage Assembly**

**Swashplate Assembly**

**Center Hub Assembly**

**Blade Grip Assembly**

**Head Cap Screws Shoulder M3x18 (HC079-S)**

**Nylon Nut M3 (HC206-S)**

**Bushing**

**Head Cap**

**Screw M2.5x15mm (HC028-S)**

**Flanged Bearing**

**∅2.5x∅6x2.5 (HC400-S)**

**Plastic Ball Link (H0403-S)**

**Linkage Rod (H0561-S)**

**Already Assembled**

**Swashplate Assembly**

**Uniball M2 (H0538-S)**

**Uniball M2 (H0537-S)**

**Center Hub Assembly**

**Spindle (H0596-S)**

**Already Assembled**

**HEX 2.5 Inside**

**Blade Grip Assembly**

**Head Cap Screw M2.5x8mm (HC020-S)**

**Bearing ∅5x∅10x4mm (HC411-S)**

**Main Blade Grip (H0513-S)**

**Note**
- eg: Microlube GL261

**Grease**

**Thrust Bearing ∅5x∅10x4mm (HC435-S)**

**Button Head Cap Screw M4x6mm (HC096-S)**

**C Washer ∅5x∅7x0.2mm (HC449-S)**

**Washer ∅7.5x∅10x0.5 (H0349-S)**

**Blade Grip Assembly**

**[H0595-S]**

**[HC449-S]**

**[H0513-S]**

**Nylon Nut M3 (HC206-S)**

**Head Cap Screws Shoulder M3x16mm (HC074-S)**

**SAB HELI DIVISION**

**A27_Rev 01**

**Page 1**
### Recommendations

These parts should be used only with models SAB Goblin 380.

- 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.

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### Spare Parts

#### Blade Grip

- [H0513-S]
- 2 x Blade Grip.
- 2 x Thrust Bearing ∅5x ∅10x4mm.
- 4 x Bearing ∅5x ∅10x4mm.
- 2 x Washer ∅7.5x ∅10x0.5mm.
- 2 x Button Head Socket Cap M3x4mm.
- 2 x Washer ∅5x ∅7x0.1mm.

#### Spindle Shaft

- [H0596-S]
- 1 x Spindle Shaft.
- 1 x C Washer ∅5x ∅5x0.2mm.

#### Linkage

- [H0598-S]
- 1 x Linkages.
- 1 x Linkage Rod.
- 1 x Bushing.
- 2 x Flanged Bearings ∅2.5x ∅6x2.5mm.

#### Blade Grip Arm

- [H0597-S]
- 1 x Blade Grip Arm.
- 1 x Socket Head Cap Screw M2.5x8mm.

#### Center Hub

- [H0595-S]
- 1 x Center Hub.
- 1 x Socket Head Cap Screw Shouldered M3x16mm.
- 1 x Metric Hex Nylon Nut M3.

#### Swashplate

- [H0600-S]
- 1 x Swashplate Assembly.
- 5 x UniBall M2 ∅4.7H3.
- 1 x UniBall M2 ∅4.7H20.

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### About HPS3

For safety reasons we suggest to not exceed 3400 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 20T tail rotor pulley in the kit for this purpose.

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### 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.

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### Details B

SPARE PARTS

- 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.

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### Recommendations

These parts should be used only with models SAB Goblin 380.

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- 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.

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### Spare Parts

#### Blade Grip

- [H0513-S]
- 2 x Blade Grip.
- 2 x Thrust Bearing ∅5x ∅10x4mm.
- 4 x Bearing ∅5x ∅10x4mm.
- 2 x Washer ∅7.5x ∅10x0.5mm.
- 2 x Button Head Socket Cap M3x4mm.
- 2 x Washer ∅5x ∅7x0.1mm.

#### Spindle Shaft

- [H0596-S]
- 1 x Spindle Shaft.
- 1 x C Washer ∅5x ∅5x0.2mm.

#### Linkage

- [H0598-S]
- 1 x Linkages.
- 1 x Linkage Rod.
- 1 x Bushing.
- 2 x Flanged Bearings ∅2.5x ∅6x2.5mm.

#### Blade Grip Arm

- [H0597-S]
- 1 x Blade Grip Arm.
- 1 x Socket Head Cap Screw M2.5x8mm.

#### Center Hub

- [H0595-S]
- 1 x Center Hub.
- 1 x Socket Head Cap Screw Shouldered M3x16mm.
- 1 x Metric Hex Nylon Nut M3.

#### Swashplate

- [H0600-S]
- 1 x Swashplate Assembly.
- 5 x UniBall M2 ∅4.7H3.
- 1 x UniBall M2 ∅4.7H20.