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.
### 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.

**Warning**: For safety reasons we suggest not to 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.

### Spare Parts

- **Blade Grip** [H0182-S]
  - 2 x Blade Grip.
  - 1 x Swashplate Assembly.
- **Blade Grip Arm** [H0183-S]
  - 2 x Blade Grip Arm.
- **Center Hub** [H0410-S]
  - 1 x Center Hub.
  - 1 x Socket Head Cap Screws M3x12mm.
- **Spindle Shaft** [H0412-S]
  - 2 x Spindle Shaft.
  - 1 x Metric Hex Nylon Nut M4.

- **Linkage** [H0417-S]
  - 2 x Linkages M3x50mm.
  - 4 x Plastic Ball Links.
- **Swashplate** [H0420-S]
  - 1 x Swashplate Assembly.
  - 2 x Bearings 3x1.8x6.5mm.
- **Radius Arm** [H0421-S]
  - 2 x Radius Arms.
  - 2 x Spacer Arm Ø5x2.7mm.

- **Damper Derlin** [H0426-S]
  - 3 x H0426-A.
  - 3 x H0426-B.
  - 3 x H0426-C.

**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.

### Details

![Detail B](image-url)