Thank you for buying Agile products. Please read this manual carefully before assembling. We recommend that you keep this manual for future reference regarding tuning and maintenance.

**SAFETY PRECAUTIONS**

This radio controlled helicopter is NOT A TOY! It has some technical requirements, you must pay attention to the flying environment and correct operation. Never fly your radio controlled helicopter over people or near crowds. Teenagers must fly under the guardian's guide. Beginners must fly under the guardian of experienced pilot.

**Product Specifications**
- Length: 1370mm
- Height: 420mm
- Width: 200mm
- Main Rotor Diameter: Ø1560
- Main Blade Length: 690-713mm
- Tail Rotor Diameter: Ø294mm
- Tail Blade Length: 105-115mm
- Motor Pinion: 19T
- Motor KV: 540KV
- Driving Gear: (19/54)(20/66)
- Gear Ratio: 19T(9.37:1)
- Tail Gear Ratio: 4.75:1
- Weight (w/o power): 4000g
- Flying Weight: 5600g
- Battery: 22.2V 5000mAh x2
- ESC: 160-200A
1. INTRODUCTION

Congratulations on your purchase of the Agile 7.2 radio controlled helicopter kit. Agile 7.2 was designed in Europe by Eng. Gaziano Roberto and is proudly manufactured by KDS Model. Our goal was to offer you something different with a minimum of parts, easy maintenance, and outstanding flying performances.

It's time to fly different!...

Enjoy the built and have a great time with you Agile 7.2!

IMPORTANT NOTES
R/C helicopters, including the AGILE 7.2 are not toys. R/C helicopters utilize various high-tech products and technologies to provide superior performance. Improper use of this product can result in serious injury or even death. Please read this manual carefully before using and make sure to be conscious of your own personal safety and the safety of others and your environment when operating all AGILE products. Agile 7.2, KDS Model, their affiliates and authorized distributors are not responsible for personal injuries to the operators and others, and property damages that could occur from the assembly, maintenance or your use/misuse of this product. Always respect the rules provided by your local remote control aircraft organization.

NOTE FOR ASSEMBLY
The following manual provide important instructions to correctly assemble the model. It is structured in a logical way, based on the work done in previous step. If you change the order, it may result in additional or unnecessary steps. So we suggest you to read this user manual very carefully to understand correctly the assembly procedure. Failure to do so may not only downgrade performances but also increase the risk of danger. Apply thread lock as indicated, allow the threadlock to cure before mounting parts. It is recommended to use threadlock on each bolt or screw that are engaged with metal parts.

2. SAFETY NOTES

● LOCATE AN APPROPRIATE LOCATION
R/C helicopters fly at high speed, thus posing a certain degree of potential danger. Choose an appropriate flying site consisting of flat, smooth ground, a clear open field, or a large open room, such as gymnasion or warehouse without obstacles. Do not fly near buildings, high voltage cables, or trees to ensure the safety of yourself, others and your model. Do not play your model in inclement weather, such as rain, wind, snow or darkness.

● OBTAIN THE ASSISTANCE OF AN EXPERIENCED PILOT
Before turning on your model and transmitter, check to make sure no one else is operating on the same frequency. Frequency interference can cause your model, or other models to crash. The guidance provided by an experienced pilot will be invaluable for the assembly, tuning, trimming, and actual first flight (recommend you to practice with computer-based flight simulator).

● ALWAYS BE AWARE OF THE ROTATING BLADES
During the operation of the helicopter, the main rotor will be spinning at a high rate of speed. The blades are capable of inflicting serious bodily injury and damage the environment. Be conscious of your actions, and careful to keep your face, eyes, hands, and loose clothing away from the blades. Always fly the model a safe distance from yourself and others, as well as surrounding objects. Never take your eyes off the model or leave it unattended while it is turned on. Immediately turn off the model and transmitter when you have landed the model.

● PREVENT MOISTURE
R/C models are composed of many precision electrical components. It is critical to keep the model and associated equipment away from moisture and other contaminants. The introduction or exposure to water or moisture in any form can cause the model to malfunction resulting in loss of use, or a crash. Do not operate or expose to rain or moisture.

● KEEP AWAY FROM HEAT
R/C models are made up of various forms of plastic. Plastic is very susceptible to damage or deformation due to extreme heat and cold climate. Make sure not to store the model near any source of heat such as an oven, or heater. It is best to store the model indoors, in a climate-controlled, room temperature environment.
• PROPER OPERATION
Please use the replacement of parts on the manual to ensure the safety of instructors. This product is for R/C model, so do not use for other purpose.

• SAFE OPERATION
Operate this unit within your ability. Do not fly under tired condition or improper operation, which may cause danger.

3. Tools Required

- Hex drivers: 1.5, 2, 2.5, 3, 4mm
- Nut Drivers: 2, 4, 7mm
- Ball link pliers
- Diagonal cutting pliers
- Scissors
- Metric ruler
- Soldering iron + solder (for motor and ESC wiring)
- Pitch gauge (for set up)
- Swashplate leveller
- Threadlock blue * (medium)
- Threadlock red * (high strength)
- Bearing retainer compound
- Epoxy A+B Glue
- Grease
- Oil

*Colors may vary depending on your area.

When you see the marks as below, please use glue or grease to ensure flying safety.

When you see the marks as below, please use glue or grease to ensure flying safety.

- Epoxy
- Threadlock (medium)
- Bearing retainer compound
- Threadlock (high strength)
- Oil

“A” Glue width: approx. 2mm

“OIL” Lubrication grease. “A” thread lock, apply a small amount on screws or metal parts and wipe surplus off. When disassembling, recommend to heat the metal joint about 15 seconds. (NOTE: Keep plastic parts away from heat.)
4. Equipment Required for Assembly

RADIO TRANSMITTER AND ELECTRONIC EQUIPMENT REQUIRED FOR ASSEMBLY

- Transmitter (7-Channel or more, helicopter system)
- Receiver (6-Channel or more)
- Remote receiver

- Brushless electric motor: 12s – 500~550KV / 3000W (4mm bolt holes, 30mm mount width, 6mm * 37mm motor shaft)
- Speed controller: minimum 120A (ESC specs limits should be rated accordingly to the maximum amps handling by the motor)
- LiPo Batteries: 12s 4000-5500 mAh
- Electronic flybarless system
- 3 cyclic servos, standard size
- 1 tail rotor servo, high speed required
- 690~720 mm main rotor blades
- 105~115 mm tail rotor blades
- 6 channel or more helicopter transmitter system, 2.4 Ghz frequency preferred
- Receiver 6 channel or more (working with your transmitter specs)

ADDITIONAL EQUIPMENT REQUIRED (not included)
- Brushless electric motor: 12s LiPo - 500~550KV / 3000W (4mm bolt holes, 30mm mount width, 6mm * 37mm motor shaft)
- Speed controller: minimum 120A (ESC specs limits should be rated accordingly to the maximum amps handling by the motor)
- LiPo Batteries: 12s 4000-5500 mAh
- Electronic flybarless system
- 3 cyclic servos, standard size
- 1 tail rotor servo, standard size, high speed required
- 690~720 mm main rotor blades
- 105~115 mm tail rotor blades
- 6 channel or more helicopter transmitter system, 2.4 Ghz frequency preferred
- Receiver 6 channel or more (working with your transmitter specs)

5. Package Illustration

The first level: all CF parts

- Colorful pointy canopy x1
- Main blade holder x1
- Landing skid x2

Metal parts of main Rotor Head x1
Metal parts of main frame x1
Metal parts of Tail Unit x1

Tail boom x1
Drive shaft (torque tube) x1
Tail boom brace x2
Tail pitch linkage rod x2
Skid pipe x2

Screws bag
REM: Apply Medium Thread lock equivalent to all screws, balls, and threads which are engaged with metal-parts.

5x Set Screw M3 x 12 mm

1x Lipo Battery tray

5x Cup point set screw M3x12 mm

Frame spacers

You may use some pins throughout this drilling to hold frame spacer when tightening screw.

Attention: Be sure that frame spacers are correctly mounted, housing sholder must be placed into carbon battery tray
Do not overtighten

It is recommended to put on this area some adhesive Hook and loop tape to hold the battery
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>KA-72-034</td>
<td>Right Main Frame</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>KA-72-066</td>
<td>Servo Spacer</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>KA-72-066</td>
<td>Servo Clamp</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>KA-72-074</td>
<td>Frame Aluminum Washer</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>Not included in Standard kit</td>
<td>Tail Servo</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>KA-72-066</td>
<td>Screw M3 x 16 mm</td>
</tr>
</tbody>
</table>

Servo ball nut M2 mm
Rudder servo ball

17mm is recommended, but may vary according to your rudder servo arm brand and the mechanical tail travel provided by the tail gyro function of your FBL system.

Use this opening to get your rudder servo wire inside frame
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

### PARTS LIST

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>KA-72-033</td>
<td>Left Main Frame</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Not included in standard kit</td>
<td>Cyclic Servo</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>KA-72-066</td>
<td>Servo Clamp</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>KA-72-066</td>
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<tr>
<td>5</td>
<td>4</td>
<td>KA-72-074</td>
<td>Frame Aluminium Washer</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>KA-72-066</td>
<td>Screw M3 x 16 mm</td>
</tr>
</tbody>
</table>

20 mm is recommended, length may vary according to your cyclic servo arm brand, and the mechanical cyclic/pitch travel provided by your FBL system settings.
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

<table>
<thead>
<tr>
<th>PARTS LIST</th>
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<tbody>
<tr>
<td>ITEM</td>
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<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

Clean surface with alcohol. Apply Loctite Retaining Compound to this area wait 24H at least before flying

**Important:**
Keep this orientation in mind for future assembly
Bearings must facing up

<table>
<thead>
<tr>
<th>PARTS LIST</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<tr>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PARTS LIST</th>
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</thead>
<tbody>
<tr>
<td>ITEM</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>
10. Assembly Process of Main Frames and Power System

REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

Ensure that a flat surface exists on the motor shaft. Thus you could tighten the M4 motor pulley setscrew

<table>
<thead>
<tr>
<th>PARTS LIST</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM</td>
<td>QTY</td>
</tr>
<tr>
<td>1</td>
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<td>2</td>
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<td>3</td>
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<tr>
<td>4</td>
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<td>5</td>
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<tr>
<td>6</td>
<td>1</td>
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<tr>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
</tr>
</tbody>
</table>

Clean with Alcohol
Apply loctite retaining compound to this area

Line up the set screw motor pulley with the motor shaft flat surface.

The Motor pulley must be aligned to the pulley by adjusting the height with the main gear of the first stage, so that the belt will stay perfectly horizontal, thus works as well as can be expected.

Shaft length Recommended 37 mm at Minimum

Shaft Diameter Ø6 mm
REM: Apply Medium Thread lock or Equivalent to all screws, bolts, and threads which are engaged with metal-parts.

REM: Bearings Facing Up

Take note of the third main shaft bearing block orientation.

Refer: KA-72-011
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

4 x M3 x 6 mm
4 x Frame Washer
1 x M3 x 4 mm

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>KA-72-062</td>
<td>FRONT CANOPY DAMPING</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>KA-72-062</td>
<td>ALUMINIUM SLEEVE FOR CASE BOLTS</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>KA-72-038</td>
<td>ELECTRONIC BOARD</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>KA-72-039</td>
<td>BOTTOM PLATE</td>
</tr>
</tbody>
</table>

Ensure you get all the insert guides into the right place.
13. Assembly Process of Main Frames and Power System

REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

<table>
<thead>
<tr>
<th>PARTS LIST</th>
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</thead>
<tbody>
<tr>
<td>ITEM</td>
</tr>
<tr>
<td>1</td>
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<td>2</td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
</tr>
</tbody>
</table>

16x M3 x 8mm
16x Frame Washer

2x Set Screw M3 x 12 mm

2x Standoff Canopy

1x M3 x 14 mm

1x Set Screw 4x25 mm
1x Nylstop Nut M4

Set Screw M3 x 12 mm

1x Nylstop Nut M4
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

REM:
1) Rubber damper should be mounted with the Chamfer on the outside
2) Check carefully which type of Thread Lock to use
3) Apply some Grease inside the Thrust Bearing
4) Check the orientation of the Thrust Bearing, larger inner diameter on the inside.
15. Assembly Process of Main Frames and Power System

REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

1x KA-72-089
Bearing 10 x 22 x 6 mm

1x KA-72-090
Bearing 12 x 24 x 6 mm

2x Round Head Screw M3 x 6 mm

Clean surface with alcohol.
Apply Loctite Retaining Compound to this area
wait 24H at least before flying

1x KA-72-090
Bearing 12 x 24 x 6 mm

2x Socket Head Screw M2 x 6 mm

Clean surface with alcohol.
Apply Loctite Retaining Compound to this area
wait 24H at least before flying

Agile Helicopter is a Trademark of Flight Research Re. Europe. Proudly made by KDS Model Shenzhen
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

8x Socket Head Screw M2.5 x 10 mm

8x Servo Washer M2.5

REM: Before mounting servo arms, do not forget to set their neutral position. Check the manual of your flybarless system for more informations.

Washer M2.5

Socket Head Screw M2.5 mm

Nut M2 mm

Ball Link M 2 mm

2x Ball Linkage M2 x 3.5 mm

2x Nut M2 mm

20 mm is recommended, length may vary according to your cyclic servo arm brand, and the mechanical cyclic/pitch travel provided by your FBL system settings.
17. Assembly Process of Main Frames and Power System

REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

6x M3 x 8mm
6x Frame Washer

4x M4 x 10 mm
4x Frame Washer

4x M3 x 10 mm
4x Frame Washer

KA-72-021

KA-72-089

KA-72-070

2x KA-72-020

Rem: It is recommended to read carefully the next step of this manual before tightening motor mount screws. In fact, you have to apply the right belt tension at the same time you will tighten them.
1. Push the motor in the opposite direction of the main shaft as far as you can (by hand).
2. Tighten slide screws #1
3. Tighten motor mount locking screws #2
4. Rotate the motor several times by hand. Ensure that belt is correctly aligned with the big pulley.
5. Tighten counter bearing screws #3
6. You can check the belt tension by hand, you just have to push the belt with one of your finger through the round opening on frame # 4. It should be difficult to push motor belt.

Assembling the Main Gear

- **5x Countersunk screw M3 x 6mm**
- **1x Nylstop Nut M4 mm**
- **1x Socket Head Screw M4 x 26 mm**
- **1x Socket Head Screw M3 x 6 mm**
- **2x Setscrew M3 x 3 mm**
- **5x Rounded Head Screw M2 x 4mm**
- **1x Keyway 5 x 11 x 2.7 mm**

**Clean surface with alcohol. Apply LocTite Retaining Compound to this area.**

Wait 2-6H at least before flying.
19. Assembly Process of Main Frames and Power System

REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

Do not tighten right now tall gear counter bearing screws.

Rem: the main shaft should slide along the 3 bearing blocks (upper, medium and lower) effortlessly. If not the case, remove the 6 screws of the medium bearing block, then slide down the main shaft and tighten again these 6 screws.

Set Screw M5 x 5 mm should be tightened on main shaft flat surface

Main Gear Washer

Washer 10x15x0.5

REM: The bevel of the main gear washer should be towards the bottom
REM: Apply Medium Thread lock or Equivalent to all screws, bolts, and threads which are engaged with metal-parts.
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

4x Ball Linkage
1x Ball Linkage Guide

Rem: To get a safety lock
The “A of Agile” should facing out

Rem: At this point, you may set the neutral position of your servos and switchplate according to the manual of your FLB system.
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

Front Torque tube Assy

Line up the Set screws with the front torque shaft flat surfaces.

Clean with Alcohol
Apply loctite retaining compound to this area

Cylindrical Pin 3 x 12 mm
Position the cylindrical pin in a symmetrical way

Tail Case Assy

Line up one of the Set screws with the tail shaft flat surfaces.

Special Threaded Lockpin
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

Rem:
1. install the main spindle and metal helical gear.
2. Install side bearings
3. Slide the tail shaft between the two side bearings Notice that the plastic gear and its collar must be install on the tail shaft inside the tail case as shown on drawing below
4. Tighten the special threaded lockpin inside the plastic gear.
5. check the play between metal and plastic gears. you shall have a smooth rotation and no axial play.
6. tighten the set screws of the collar to keep this (don’t forget to line up one of set screws with tail shaft flat surface)

6x Round Head Socket Screw M2.5 x 6 mm
2x Round Head Socket Screw M2 x 6 mm
6x Flange Bearing 2.5 x 6 x 2.6 mm
2x Washer 2.6 x 5 x 0.5 mm
1x Nut M2 mm
1x Ball link M2 mm

Rem:
Take care of the Washer Orientation
The small Shoulder diameter must face the bearing
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

Pre Assembled Tail Slider Mechanism

- 1x Colar 8 x 9 x 2.4 mm
- 2 x Bearing 8 x 12 x 3.5 mm
- 2 x Grooved Shaft 2 x 9 mm
- 4 x Clip

Pre Assembled Tail Blade grip

- 2x Socket head Screw M3 x 20 mm
- 2x Washer 3 x 8 x 0.5 mm
- 2x Thrust Bearing 5 x 10 x 4 mm (F- 1XM)
- 4x Bearing 5 x 10 x 4mm
- 2x Washer 7 x 9.8 x 0.5 mm
- 1x Set Screw M4 x 4 mm
- 2x Linkage Ball M3 x 3.5 mm

Rem:
Apply Grease on Thrust Bearing
25. Torque Tube Bearing Guide Assy

REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

Line up set screw with tail shaft flat surface

Rem:
At the Neutral position to get the best resolution ±5° of Pitch
Nevertheless you may take into account your FBL system recommendations.

Torque Tube Bearing Guide Assy
KA-72-049

Torque tube Assy

No Need to glue bearings on the torque tube!

Step 1 - Slightly scratch with sandpaper both ends of the torque tube on about 8mm long
Step 2 - Slide the 3 bearing guides assy
Step 3 - Clean with Alcohol the tube and the internal surface of the coupling
Step 4 - Apply some glue inside the coupling. Use ONLY two components epoxy (A+B)
Step 5 - Secure the coupling with the lock pin

Rem:
Wait 24H at least before flying to be sure that Epoxy is completely dry

3x KA-72-087
Bearing 8 x 16 x 5 mm

Lock Pin 3 x 12 mm
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

Rem:
Before tightening screws, be sure that all drillings are aligned.

8x Locknut

2x Canopy Standoff

8x Shoulder washer

Long Threaded shaft
M3 x 72 mm

4x KA-72-042

8x Shoulder washer

2x KA-72-062 Canopy Standoff

6x Lock Nut

Shoulder washer should be positioned inside the opening.
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

It's advised to not put the third bearing perfectly centered and keep ≤ 90 mm offset to avoid resonance and vibrations.

Rem:
Use Oil to lubricate the rubber before to insert them into the carbon tail boom.

Keep the Cut at the front side.

2x Socket Head Screw M3 x 14 mm
4x Socket Head Screw M3 x 10 mm
2 x M3 x 8 mm
2 x Frame Washer

This washer is used for adjusting the tightness of gear.

1x Socket Head Screw M3 x 10 mm
2 x M3 x 8 mm
2 x Frame Washer

Rem:
Do not tighten tail boom clamp screw at this time.

Tail Boom Clamp
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal parts.

Rem:
Slightly scratch carbon tail pushrod with sandpaper before applying Epoxy on about 1cm long

Tail Boom Brace Assy

Set Screw M2.5 x 10 mm

Keep the same orientation

The best solution to mount tail boom brace correctly is to apply some Epoxy as shown. Then, screw them on position on Agile main frames and tail boom clamp. Insert set screws to secure. And let Epoxy drying for at least 24h.
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.

**Assorted**
- 2x M3 x 10 mm
- 2x Frame Washer
- 2x M3 x 14 mm
- 2x Frame Washer

**Diagram**

**REM:**
Step 1: tighten tail boom brace on Agile main frames and tail boom clamp
Step 2: Put them on right position on tail boom
Step 3: tighten now the tail boom clamp screw.

**REM:**
At this stage move by hand the tail rotor and tight the counter bearing here
Apply threadlock
REM: Apply Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-part.

2x Socket Head Screw M4 X 20 mm

2x Locknut M4

Socket Head Screw M4 X 20 mm

2 x Socket Head Screw M5 X 35 mm

2x Locknut M5

Wehser thk. depending on your Main blade manufacturer

Locknut M5

Locknut M4
31. Examples of positioning the Electronic Components

REM: Apply Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-part.

Important Before fly,
1) check the servo direction, according your flybarless module.
2) make sure your helicopter is well balanced in term of center of gravity passing thru the main shaft.

Calculation for your total ratio:

\[
\begin{align*}
Pignon \ z = 17 \\
(54/17) \times (66/20) = 10.48
\end{align*}
\]

\[
\begin{align*}
Pignon \ z = 18 \\
(54/20) \times (66/20) = 9.9
\end{align*}
\]

\[
\begin{align*}
Pignon \ z = 19 \\
(54/19) \times (66/20) = 9.378
\end{align*}
\]

\[
\begin{align*}
Pignon \ z = 20 \\
(54/20) \times (66/20) = 8.91
\end{align*}
\]
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.
REM: Apply Medium Thread lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.
34. Assembly Process of Main Frame and Power System

REM: Apply Medium Thread lock or Equivalent to all screws, bolts, and threads which are engaged with metal-parts.
REM: Apply Medium Thread Lock or Equivalent to all screws, balls, and threads which are engaged with metal-parts.
**40. PARTS LIST 4**

**Battery strips**
KA-72-075

**Washers set**
KA-72-076

**Screws set**
KA-72-077

**Canopy**
KA-72-078

2 x Canopy rubber ring
1 x Canopy

**Thrust bearings**
KA-72-079

2 x Thrust bearings F5-38M
2 x Thrust bearings F10-18M

**Flange bearings**
KA-72-081

2 x Flange bearings 92.5x16x2.6mm
2 x Flange bearings 88x15x2.5mm

**Surface bearings**
KA-72-086

2 x Surface bearings 5x10x4mm
2 x Surface bearings 6x13x3.5mm

2 x Surface bearings 6x13x4mm

**Surface bearings**
KA-72-087

2 x Surface bearings 6x13x3.5mm
2 x Surface bearings 6x13x4mm

**Surface bearings**
KA-72-089

2 x Surface bearings 10x18x3mm
2 x Surface bearings 10x18x4mm

**Surface bearings**
KA-72-091

2 x Surface bearings 10x18x6mm
2 x Surface bearings 10x20x6mm
2 x Surface bearings 12x20x6mm

**Main rotor head**
KA-72-093

1 x Main rotor head

**Brushless motor**
KA-72-094

5 x Brushless motor 4015-4040KV
2 x CF Tail blade

**CF Main blade**
S193-10

3 x CF Main blade
Regular maintenance is required to keep the KDA AGILE 7.2 helicopter in optimal and safe flying condition. The model requires precise configuration of the components and settings to be kept by the owner. Maintain regular maintenance on the model to avoid accidents or loss, and optimum performance.

**MAJOR ROTOR CHECKLIST**

1. **Main Rotor Housing:** When the main rotor housing is worn or faulty, there will be obvious vibration and poor flight control. Check the main rotor, main shaft, and feathering shaft for wear or deformity. Replace parts as necessary to eliminate imbalance.

2. **O-Rings:** The O-Rings will lose their elasticity over time. This will cause excess play on rotor and cause instability. Replace them as needed.

3. **Main Rotor Holder:** When the helicopter dose not fly or reacts sluggishly, even after checking for proper setting of pitch and throttle, check the following items: Plastic parts, Bearings, Ball bearings, Rotor Blades. Check for excess play or broken parts, or binding or restricted movement. It is important to check for main rotor balance before each flight. Operating the model when out of balance will cause excessive wear and premature failure of parts, possibly resulting in a dangerous situation.

4. **Control Arm Assembly:** Check regularly for cracked, worn, bent or binding control arms and pushrods. Smooth movement of control arms and linkages is required for stable, vibration free flight.

5. **Swashplate:** Check for excess slop in the main ball where the main shaft rides on, and slop or looseness between the plastic and metal surfaces. Swashplate wear will result in poor stability and lack of control during flight. Replace them as necessary.

**FUSELAGE/CHASSIS**

1. **Main Shaft Bearing:** Normal replacement interval for proper operation is between 60-100 flights. If flying 3D or extreme aerobatics often, inspect the bearing more frequently and shorten the interval as necessary.

2. **One-way Bearing:** One-way bearings have longer lifetimes. Failure is not common. To keep the one-way bearing in good operation, remove it to clean and lubricate after every 50 flights. If the main drive gear is loose, you should replace the one-way bearing.

3. **Drive Belt:** Agile and KDS uses only top quality, stretch-proof belts. It is however, impossible to prevent the belt from stretching or wearing out. Check belt tension regularly, and check for the wear on the teeth. Replace it as necessary.

**LINKAGE RODS & CONNECTING PARTS**

During assembly, take special care to keep the connecting parts in smooth operation, and avoid excess play or binding. Failure to do so will result in poor flight stability. The linkage rods and ends will break and wear due to normal usage, crashing, and poor maintenance and environment. Check for wear and proper operation regularly, replace them as needed.

**TAIL ROTOR SYSTEM**

1. **Tail Rotor Control Set:** Check the tail rotor bearing regularly. If there is excess play or gaps, replace it immediately. Avoid any binding or improper contact on the tail components and bearings as this will cause excess wear and heat, potentially melting or deforming the tail system.

2. **Tail Unit Assembly:** Avoid flying in tall grass or weeds. If grass or weed becomes lodged in the tail rotor unit, it will interfere with the operation, and cause the helicopter to lose control. Always check for foreign objects in the tail and clean them off immediately. Avoid using lubricants on the exposed surfaces of the model as it will attract dirt and debris, and cause failure.

3. **Tail Rotor Housing:** Disassemble tail rotor housing for cleaning and maintenance after every 50 flights. If the tail does not operate smoothly or shows any signs of stress or wear, please replace immediately.

4. **Tail Rotor:** Check the tail rotor blades regularly for damage, especially if the helicopter ever strikes the ground while flying, or after hard landings. Damaged tail rotor blades can induce vibration.