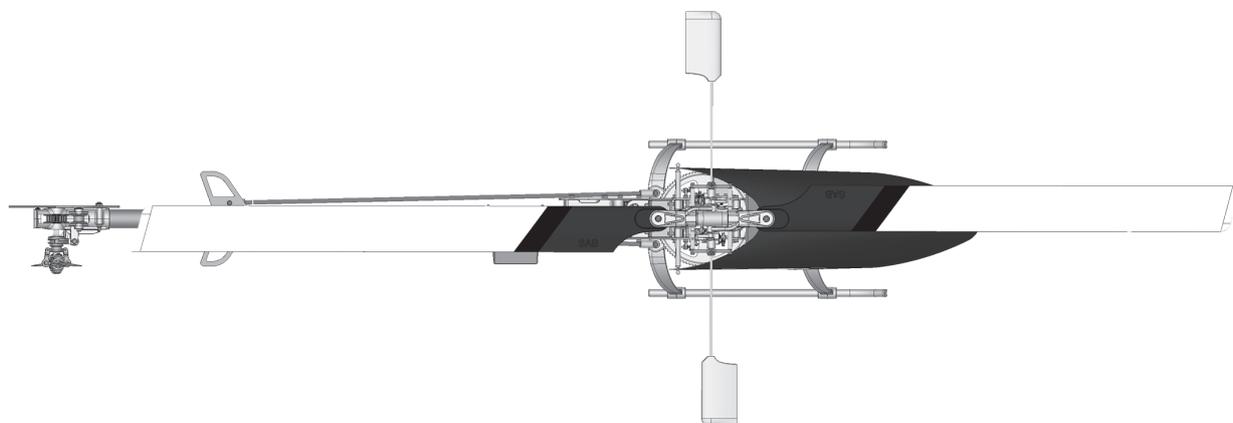
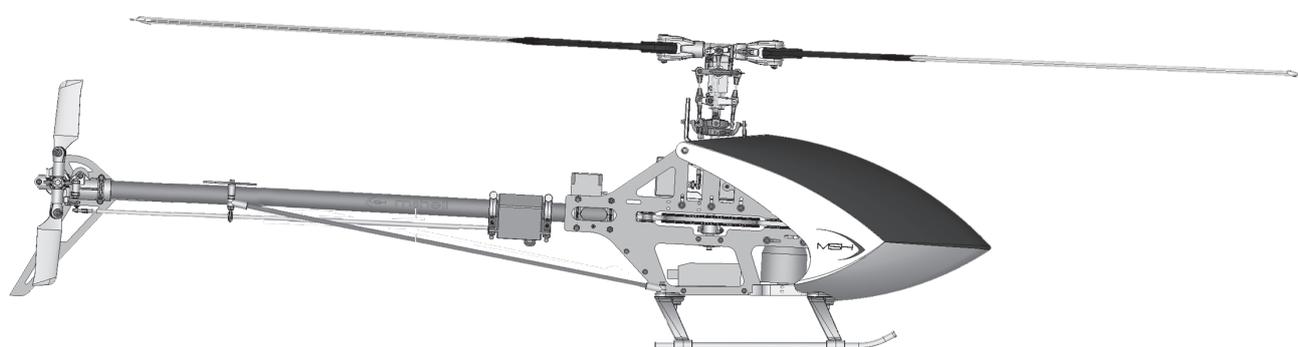


RC Helicopter

PROTOS

Stretch kit

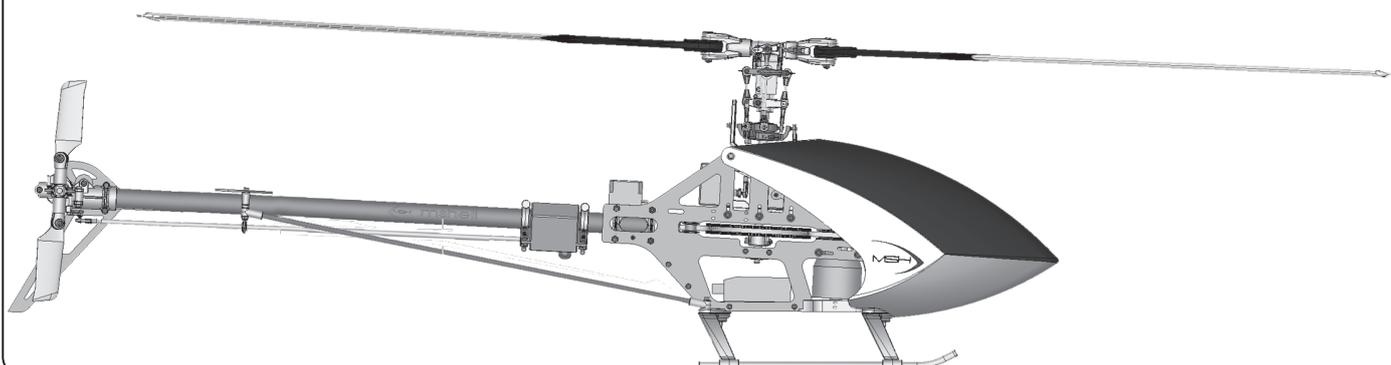
430mm to 470mm Main blades



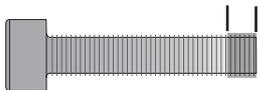
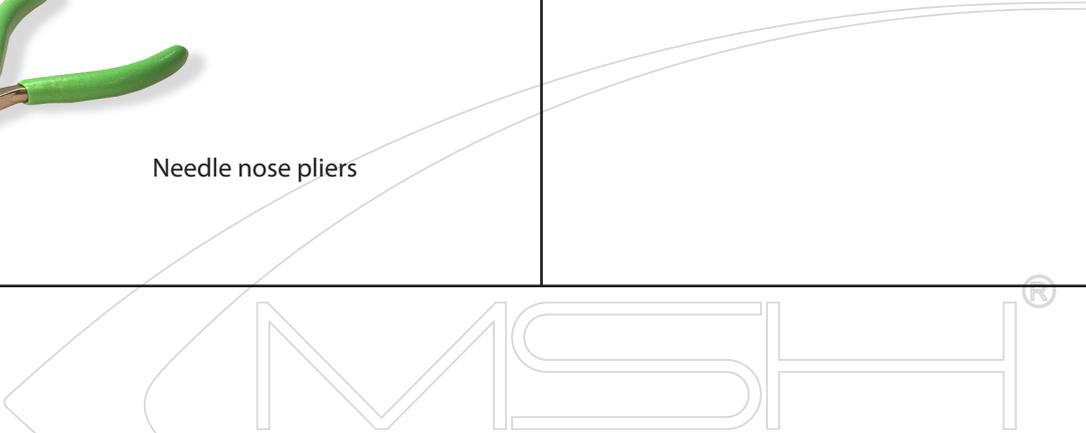
Main rotor diameter : 1045mm
 Tail rotor diameter : 192mm (*unchanged*)
 Length without main blades : 952mm
 Length with main blades : 1222mm
 Main blades length : 470mm
 Overall height : 282mm (*unchanged*)
 Tail rotor - Main rotor ratio : 4,185 (*18T tail pulley*)
 Main pulley : 93T (*unchanged*)
 Weight ready to fly with 6sLipo : 1600g (*may vary with different electronics*)

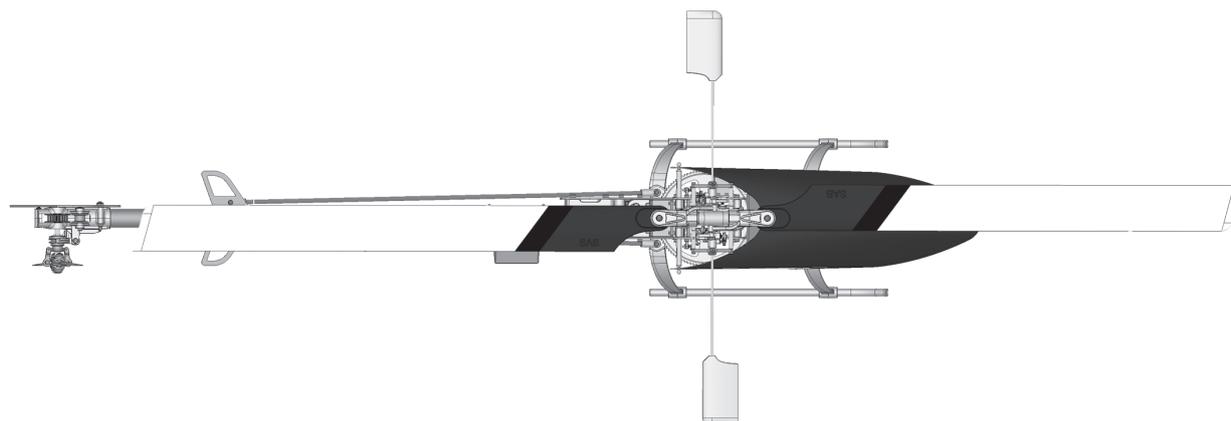
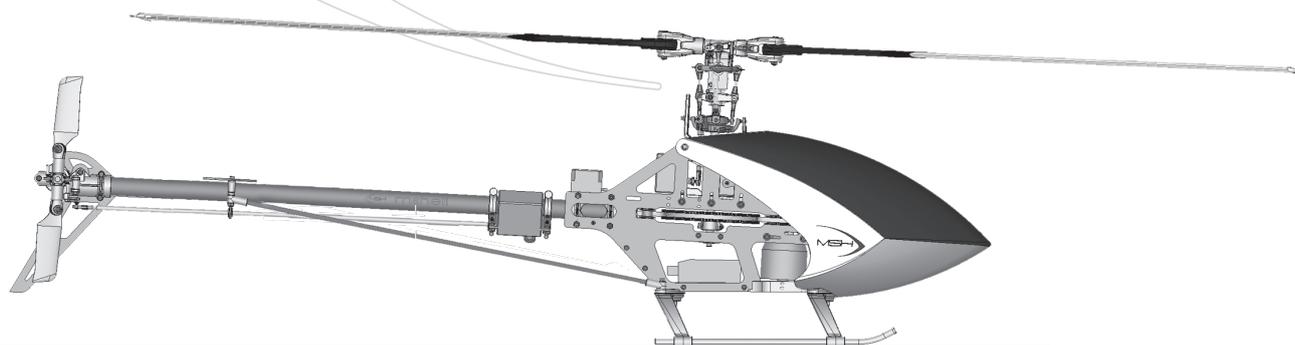
Always follow these rules for safety

With stretch kit do not exceed 2700 rpm headspeed .



Tools required for assembly

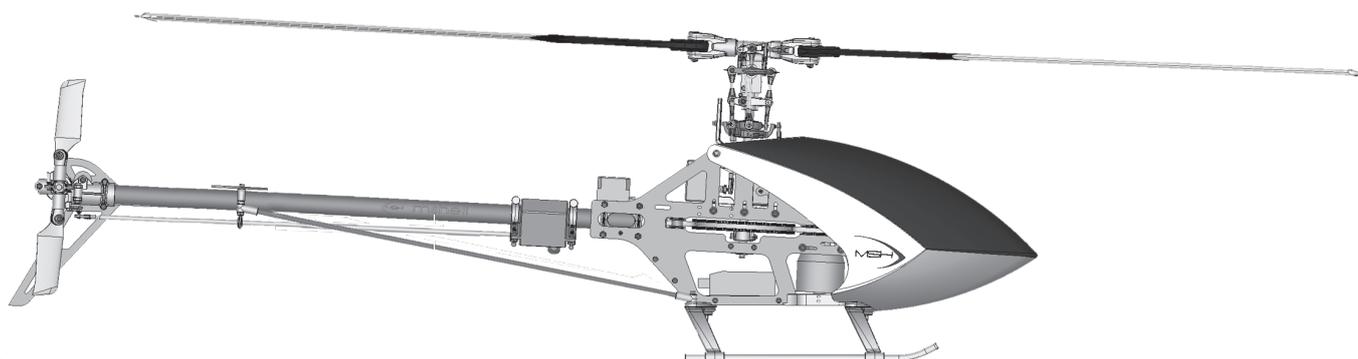
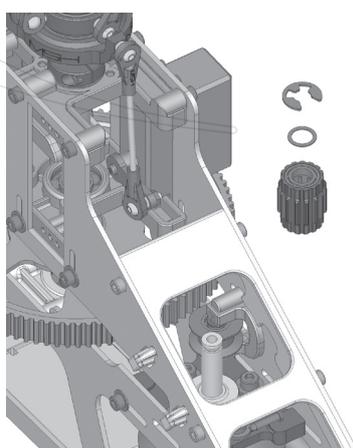
| | |
|---|---|
|  <p>1.5 / 2 / 2.5 mm Hexagon screw drivers</p> |  <p>Glue width 2mm aprox.</p>  <p>Thread lock Medium (blue)</p> |
|  <p>Needle nose pliers</p> |  |



Motor pinion teeth choice (with ESC at 100%)

| Fly Style \ Battery type | | LiPo 5s 3700mAh | LiPo 6s 2500mAh |
|--------------------------|--|--------------------|--------------------|
| Beginner | | 13T (2200RPM) | 13T |
| Sport | | 14T (2350RPM) | 13T |
| Soft 3D | | 15T (2500RPM) | 13T (2650RPM) |
| Hard 3D | | 16T (2700RPM) | 14T (2850RPM) |

With new YGE by MSH ESC it's possible to reduce throttle to 75%
 It is possible to run a 6s LiPo with 14T pinion to run headspeeds from 2100rpm to 2850rpm just changing throttle curves.



Usual procedures :

- Remove main rotor head assembly including main shaft
- Remove main pulley
- Open tail box assembly
- Remove orizontal stabilizer and brace rods
- Remove tail control rod
- Remove boom and clamp (frame side). Slide out tail servo support
- Remove belt
- Install new boom on clamp (frame side). Slide in tail servo support
- Install orizontal stabilizer do not tighten screws yet
- Install new lung belt
- Reassemble main pulley
- Reassemble main rotor head assembly including main shaft

Motor pulley replacement with new long motor adapter

MSH 50052

Washer
4.1x6x0.2
MSH 40087

Motor Pulley 14T
MSH 50157

MSH 50195

Hex Grub Screw
M3x3
MSH 50117

Grub Screw
M3x3
MSH 50117

Washer
3.1x10x1
MSH 50121

Free spin

While inserting make sure that the pinion spins freely clockwise looking from above.

Tips/Instructions
Apply thread lock to M3x5 grub screw.

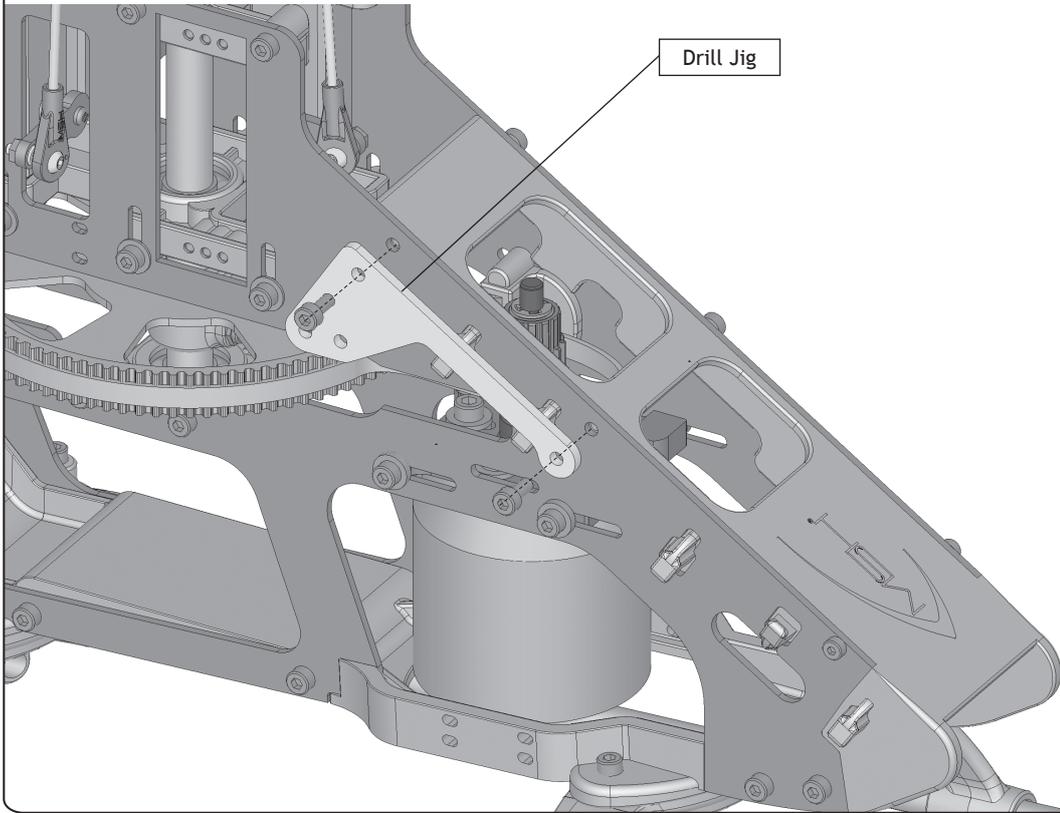
Tips/Instructions
Make sure that one of the two adapter grub screws lays on motor shaft flat spot.

IMPORTANT !!
Check that guide pulley support is screwed on frame side in **FRONTAL POSITION**

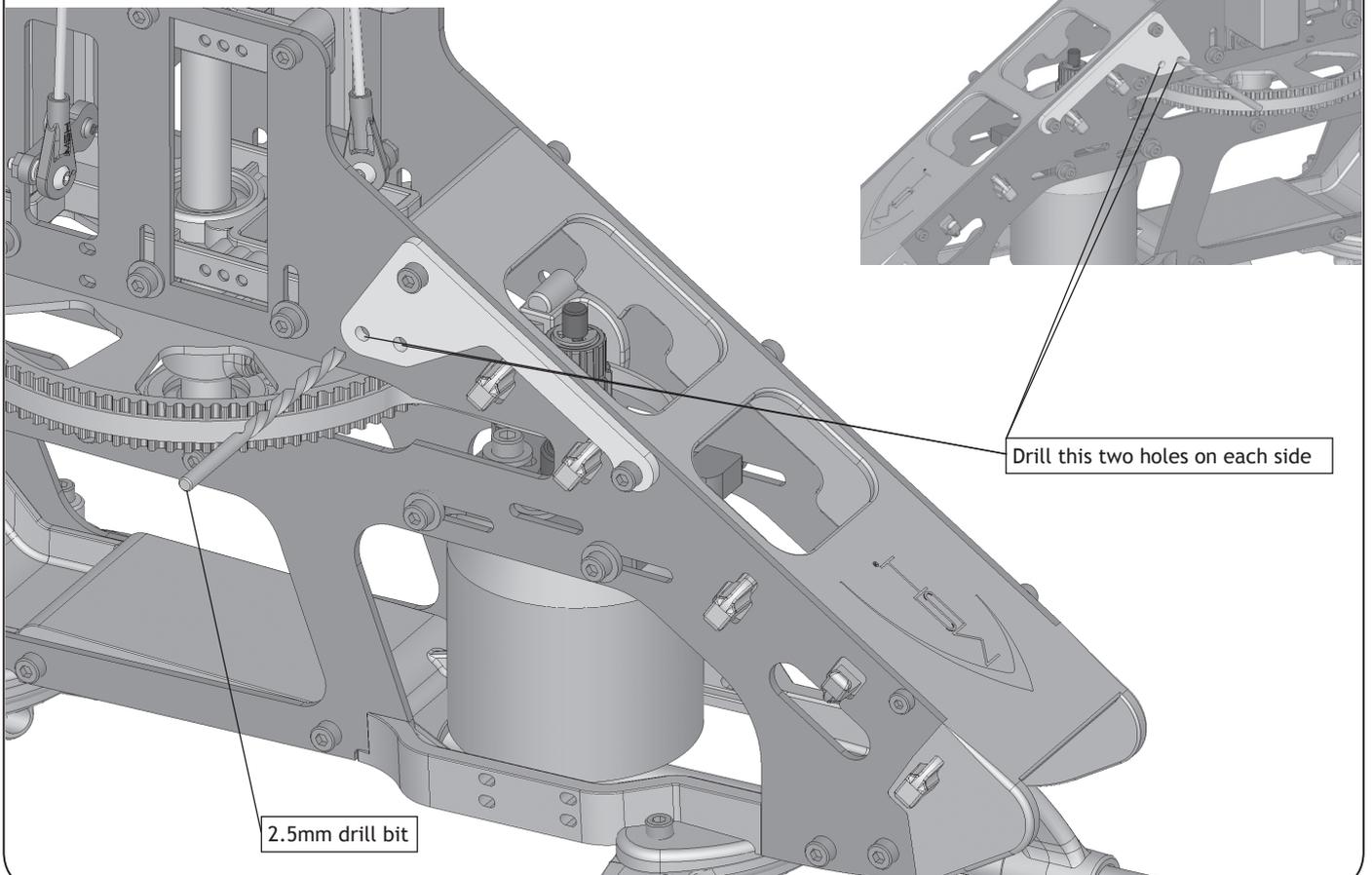
NOT HERE

Mounting of drill jig.

Do not fly with jig in place. Jig has to be removed after the holes on the frames are made.

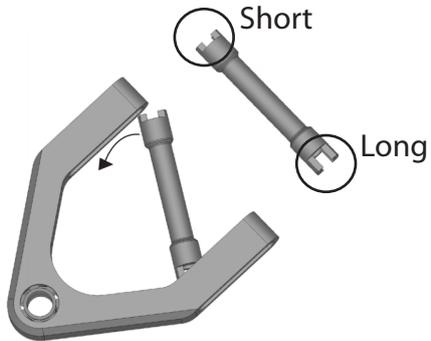


Drill

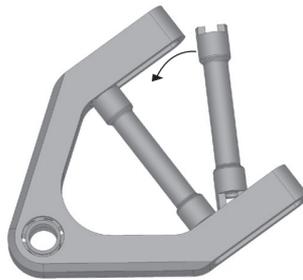


Installation of Y support cross brace

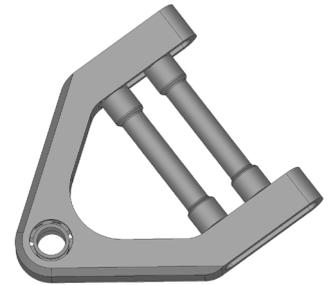
STEP 1



STEP 2



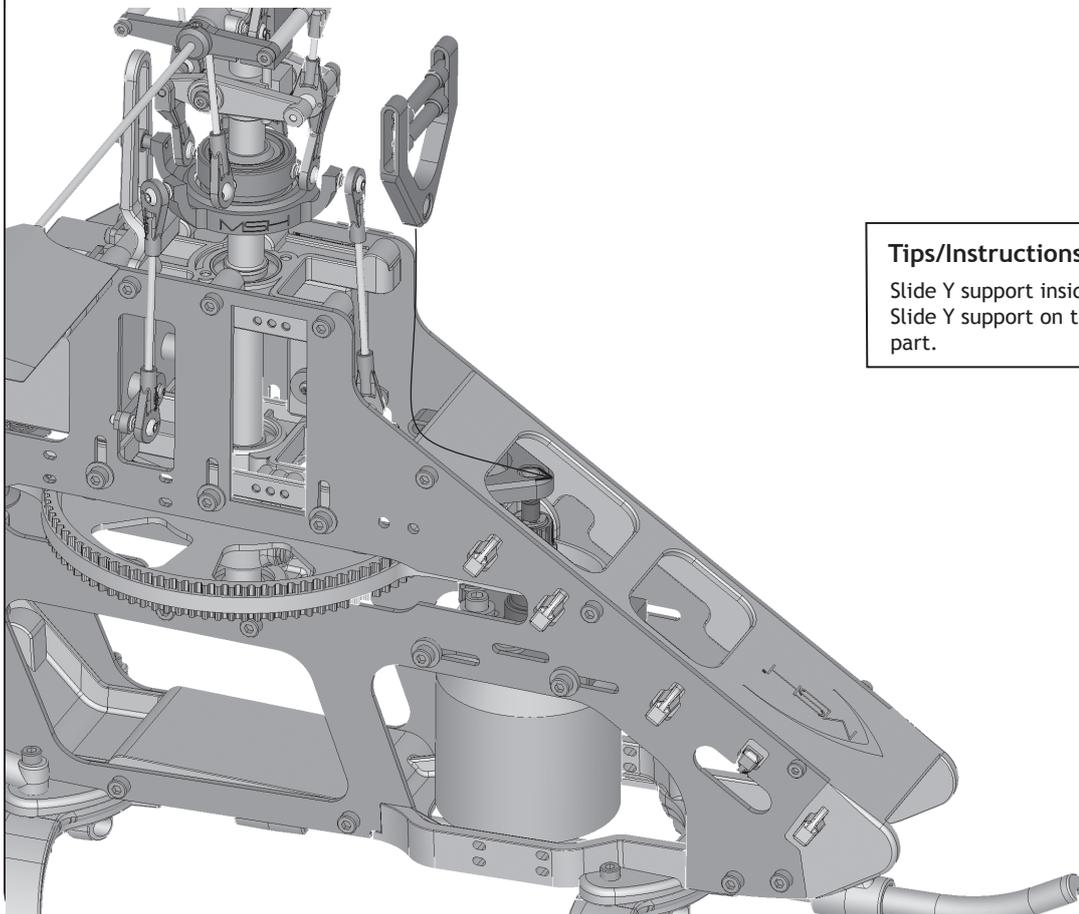
STEP 3



Tips/Instructions

Possibly apply a little bit of force to enlarge two Y brace in order to put in the cross brace

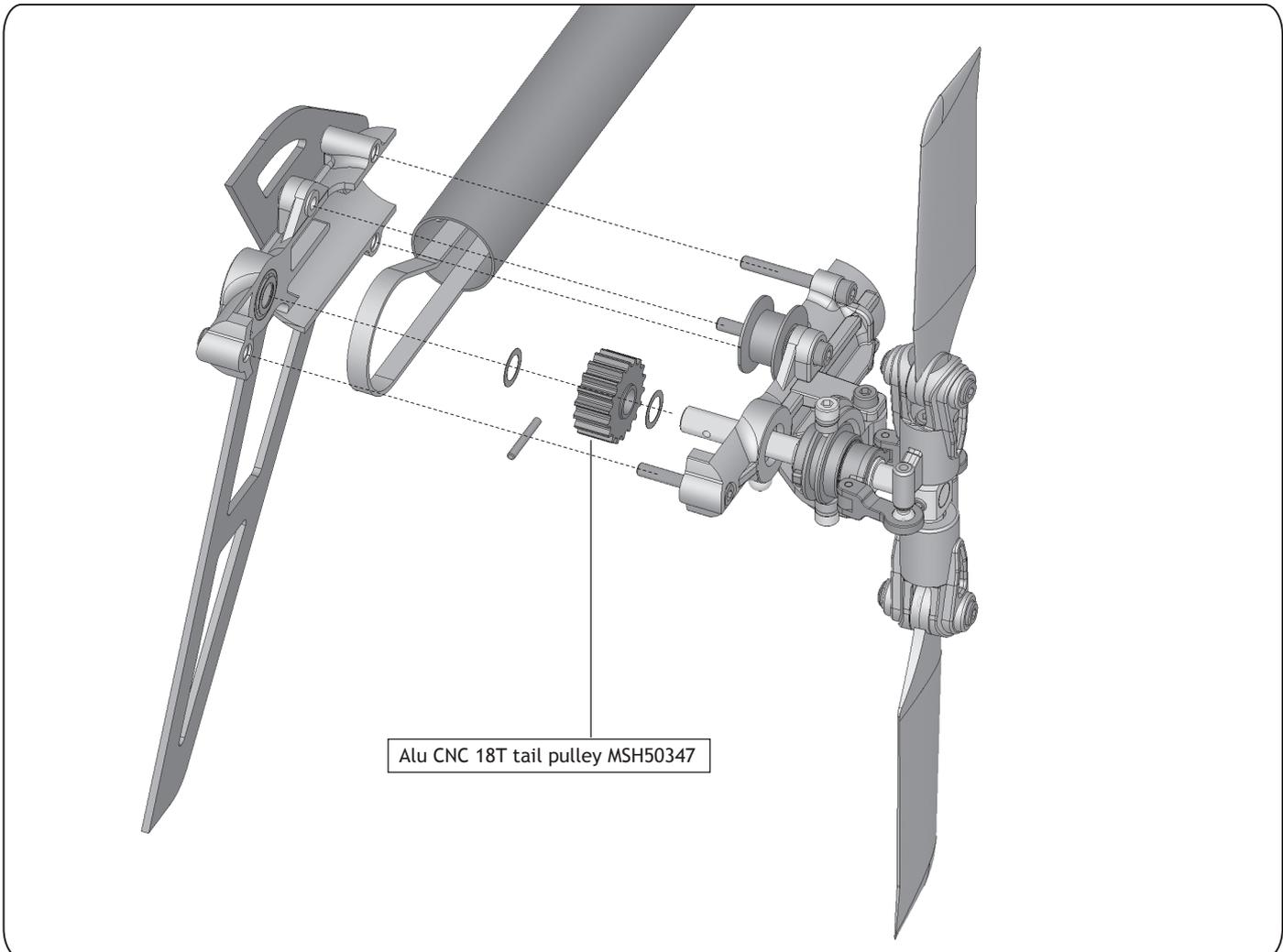
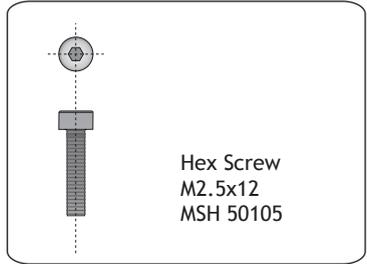
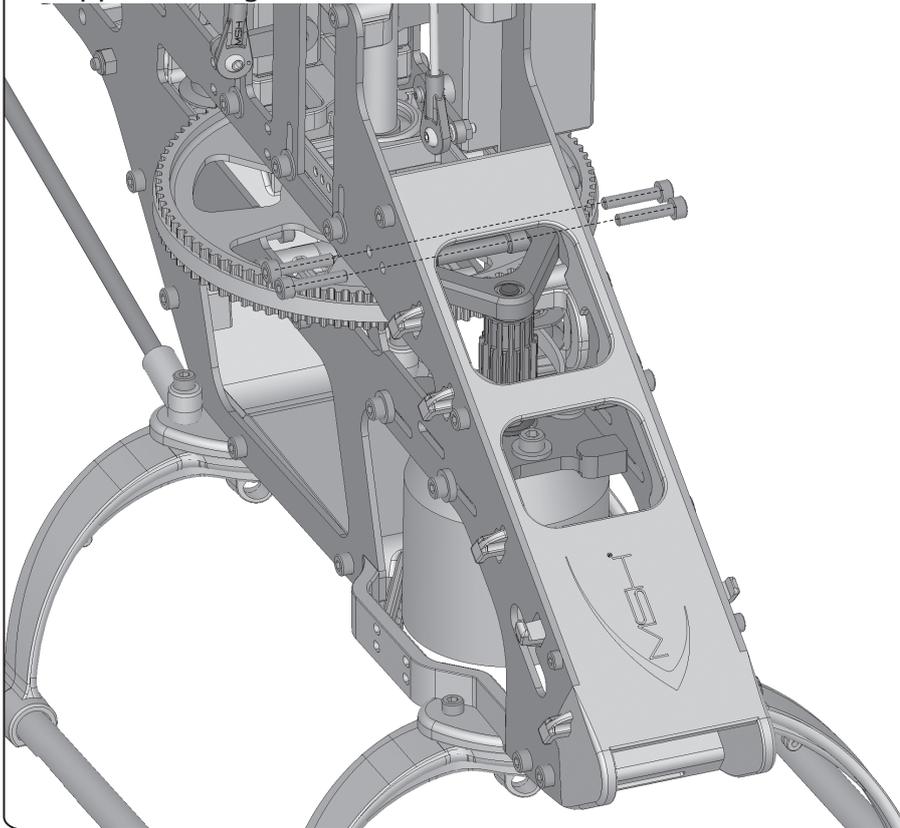
Installation of Y support



Tips/Instructions

Slide Y support inside the frame following arrow. Slide Y support on the motor adapter protruding part.

Y support locking



Usual procedures :

- Glue tail control fittings on rod
- Mount 2 uniball hand (one of each side)
- Glue 4 brace rod end on 2 rod and install it on the tail stabilizer support

- Check belt tension (as usualy) and lock 4 tail boom clamp screws (frame side)
- Lock 4 screws on motor mount and lock other 4 screws on Y support
- Install new 470mm SAB main blade holder

GOOD FLY WITH YOUR NEW POWERFUL MODEL !

MSHely S.r.l.
Italy

Belt Tension Adjustment

Very important when tightening the belt on the front side!!!

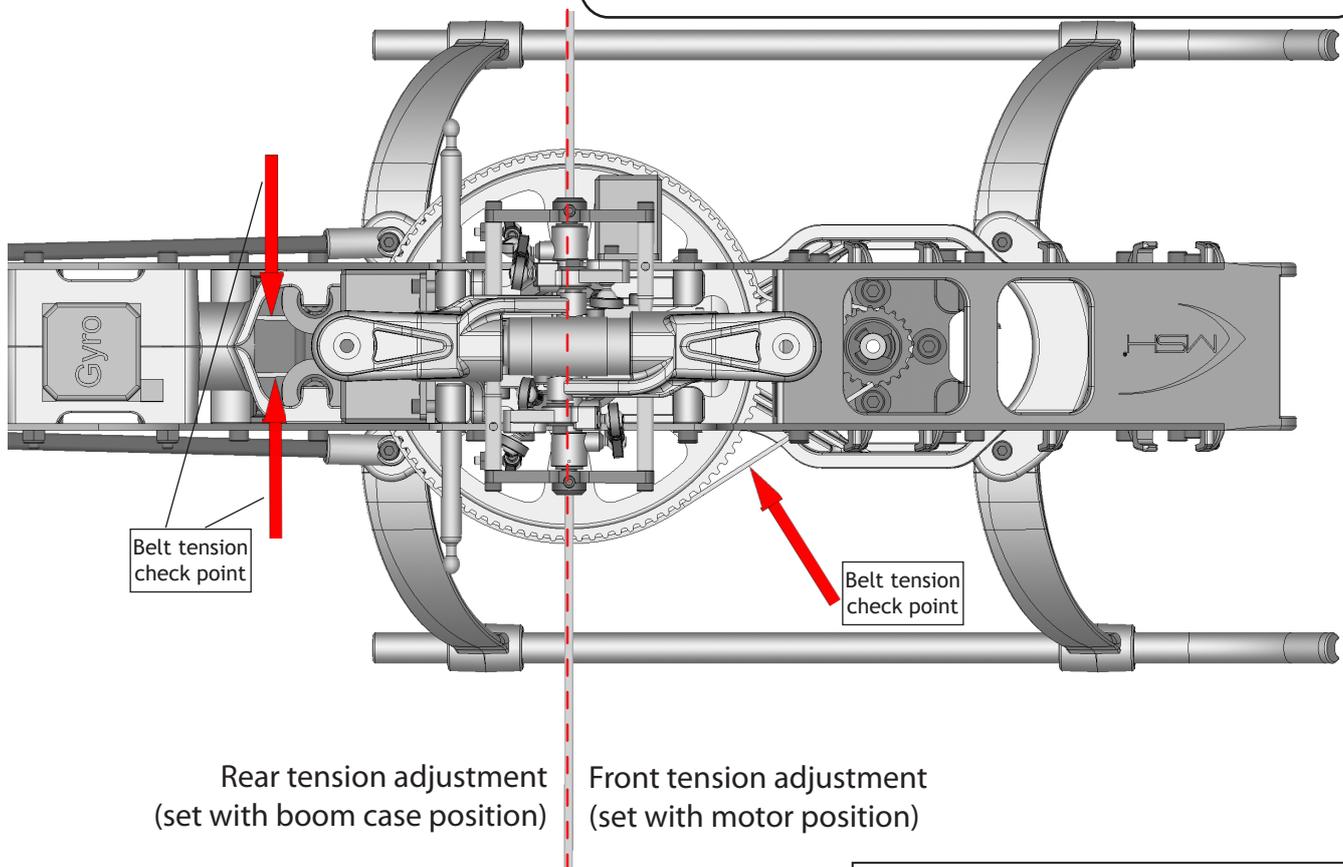
When tightening the belt, do not tighten the 4 M2,5x12 hex screws that hold the pinion support in place yet. Just tighten the motor plate screws while keeping the belt tightened as needed.

After the motor plate is secured in position, take the belt off the main gear (pull it up on one side and disengage it) and turn the motor by hand 2-3 times.

With the belt still of tighten now the 4 M2,5x12 hex screws that keep the pinion support in position. After the pinion suport is tightened in position put the belt back on the main gear.

Doing the tightening following this procedure it is much better because the belt is not in tension and there is no chance of tightening the pinion support in a bent position.

Please make sure that belt tension is set properly on boths sides.
Front and Rear tension is set independtly !!



Pressing the belt moderately, it should move 1-2 mm.
Test tension as indicated in the picture.

Tips/Instructions

Belt on stretched protos has to be run tighter than on regular Protos.

| Spare Code | Spare Description | Part Code | Part Description | Part Qty |
|------------|--------------------------------|-----------|-------------------------------|----------|
| MSH51322 | Tail boom stretch | MSH50191 | Tail boom stretch | 2 |
| MSH51323 | Belt stretch | MSH50192 | Belt stretch | 1 |
| MSH51324 | Tail support stretch | MSH50065 | Brace rod end | 4 |
| | | MSH50065 | Tail boom brace stretch | 2 |
| MSH51325 | Tail control rod stretch | MSH50092 | Uniball hand L | |
| | | MSH50166 | Tail control rod fitting | |
| | | MSH50194 | Tail control rod stretch | |
| MSH51326 | 3rd bearing pinion support | MSH50105 | Hex screw M2,5x12 | 4 |
| | | MSH50161 | BB 4x8x2 | 2 |
| | | MSH50196 | Y support cross brace stretch | 2 |
| | | MSH50197 | Y support stretch | 1 |
| MSH51327 | Motor adapter hardened stretch | MSH40087 | Washer 4,1x6x0.2 | 1 |
| | | MSH50156 | Seeger RS 3.2 DIN 6799 | 1 |
| | | MSH50117 | Hex grub screw M3x3 | 2 |
| | | MSH50195 | Motor adapter stretch | 1 |
| MSH51328 | Sab blades 470 stretch | MSH50198 | Sab blades 470 stretch | 2 |