

Walkera DF36 CNC Tail Assembly Procedure

This is a manual for building the CNC tail assembly for the Walkera DF36 Heli.

Items needed for this build

- 2 x 1.5 hex wrench
- 2.0 hex wrench
- Tweezer
- Precision Screw driver Set
- CA (Loctite)
- non silicone Grease
- Loctite (Blue) or tread lock

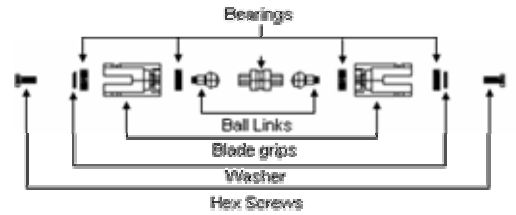


The KIT is contained in 3 different plastic bags



Walkera DF36 CNC Tail Assembly Procedure

Blade Grip Assembly



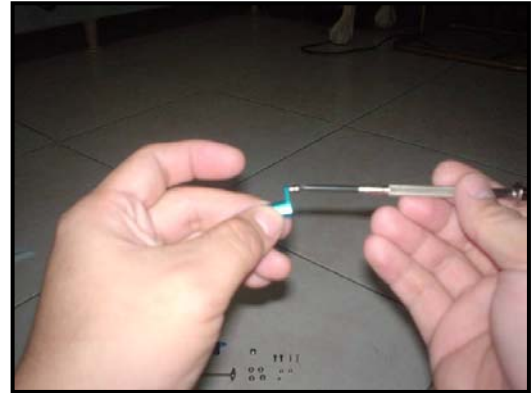
Kit contains


- | | |
|-----------------------------|--------------------|
| 2 pcs. Aluminum Blade grips | 2 pcs. Ball |
| 4 pcs. Ball bearings | 2 pcs. Mech. Screw |
| 2 pcs. M2 Hex screws | 2 pcs. nut |
| 1 pc. Collar | 1 pc shaft |
| 1 pc. Grub screw | |

Assembly Procedure



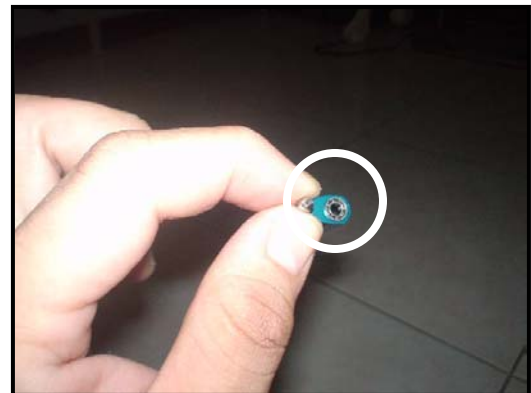
First start with the ball screw link. Put some liquid thread lock (Blue Loctite) on the thread



Gently screw the ball screw into the blade grip in a clockwise rotation  make sure that the thread is nice and smooth during tightening to prevent loose threads.



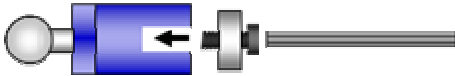
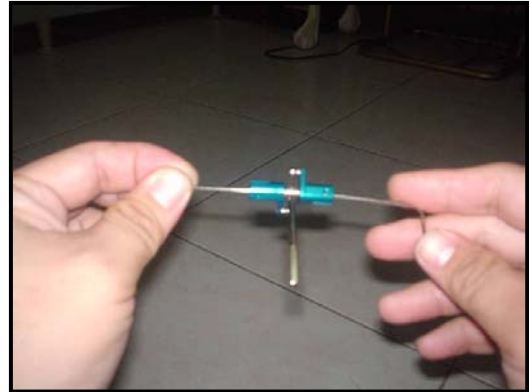
insert the ball bearing at the end of the blade grip in this manner.



Make sure that the bearing sits in the blade grips firmly and flat, perform this procedure on both blade grips

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Blade Grip Assembly



Using the M2 screw and Allen wrench place the bearing on the screw and insert in into the inner portion of the blade grips, make sure that the bearing is well press against the inner part of the blade grips do this on both grips

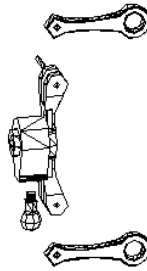
Using 2 x 1.5mm Allen screws, gently screw in the M2 hex screw in through the blade grips to the shaft, make sure the screw is tight to prevent loosening during flights.



With the supplied grub screw, Screw it in the collar in a clockwise rotation 

Walkera DF36 CNC Tail Assembly Procedure

Tail Pitch slider assembly



Kit contains

- | | |
|---------------------|---------------------------------------------|
| 2 pcs. pins | 2 pcs. Ball bearings |
| 2 pcs. Ball links | 1 pc. slider |
| 1 pc. slider sleeve | 1 pc. Link holder (tail rotor bell crank) |

Assembly Procedure



Insert the ball bearing on the pitch slider. The bearing is forced fit, be very careful not to damage the bearing. A good way if to use a C clamp or vise to insert the bearing, make sure it evenly distributed on the whole circumference of the bearing



Bearings are inserted on both sides of the pitch slider

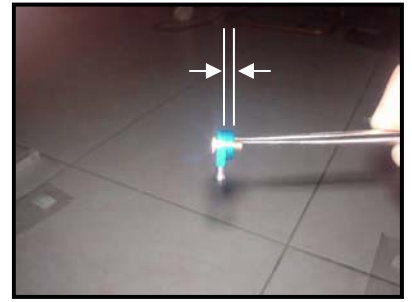


Add small amount of liquid thread lock (blue Loctite) on the ball thread and gently screw in the ball on the pitch slider make sure to do this gently and accurately to prevent loose threading, The pitch slider is already threaded so minimal amount of force is needed.



Walkera DF36 CNC Tail Assembly Procedure

Tail Pitch slider assembly



Insert the slider sleeve on the bearing, note of the orientation of insertion. The threaded portion should protrude out of the thicker part of the sleeve.



The slider sleeve has a threaded portion which will hold the link holder (tail rotor bell crank) This is force threading on plastic, Apply force on threading the link holder on the slider sleeve. Make sure that it is aligned correctly to prevent wrong threading. Use a flat screw driver to hold the slider sleeve while threading the link holder.



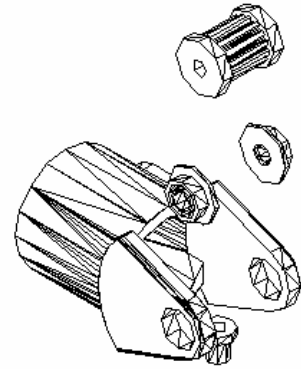
Insert the links on the holder using the supplied pins gently thrust the small pins on the link to hold the ball links.

Note: there is an orientation on the links. The tail assembly design is leading edge so the ball on the grips is located at the right side of the link when on top make sure not to place the links inverter or will need to redo assembly.



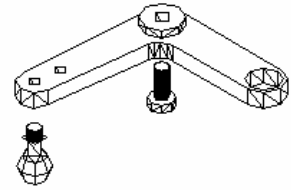
Walkera DF36 CNC Tail Assembly Procedure

Tail case assembly



Kit contains

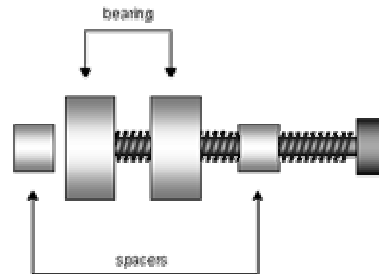
- | | |
|---------------------------------------|-------------------------|
| 2 pcs. Ringed Ball bearing | 1 pc. L arm link |
| 2 pcs. Ball ball bearing 1 pc. slider | 1 pc. Tail case |
| 2 pcs. Bushing | 1 pc synchronous pulley |
| 1 pc. Brass bushin | 1 pc tail fin holder |
| 1 pc tail boom | 1 pc. M2 hex screw 14mm |
| 1 pc M2 hex screw 20mm | 2 pcs lock nut |
| 1 pc machine screw | 2 pcs hat screw |
| 1 pc tapping screw | |



Assembly Procedure

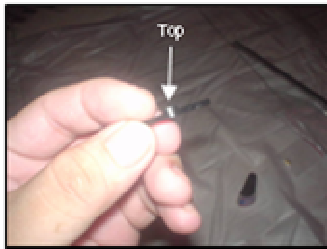


Insert the ring bearing on the the tail case holder. The bearing is forced fit. Make sure not to damage the bearing during insertion.



Using the M2 hex screw 14mm assemble the belt guide pulley in this manner, " spacer/bearing/bearing/spacer" then screw the tail case. Use thread lock on screw (blue Loctite) to prevent screw from loosening during use.

Tail case assembly



- Next will be the tail crank set.
- Note that The lever arm has top part and a lower part
- The Ball link should be screwed at the bottom of the lever arm on the 2nd hole from the end.
- This is the one on the middle using a Flat screw driver gently force thread the soft plastic

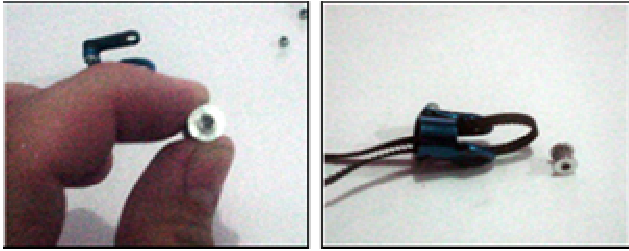


- Then remove the ball link again and add small amounts of medium CA on the threaded plastic link this is to prevent popping out of the ball link from the plastic lever arm.
- Next is to place the brass washer bushing at the center of the link **top side** this will just fit thru the hole
- Apply some light grease on the bushing. Not too much or it will gather dust. Just a thin film will do



- Apply some Loctite on the screw thread and some on the nut to prevent the screw from falling off during flight
- now screw in the link on the bottom part of the Tail rotor holder the one with the L bend bracket.
- The orientation should be as seen on above picture

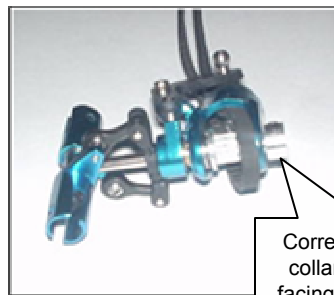
Pulley Assembly on the Tail box



- Next will be the pulley.
- Note that The pulleys hole has a tapered side. This will go thru the tapered shaft end and will hold the pulley in place during flights
- But before adding the pulley to the Tail box the belt should be already in place
- Place the Pulley at the inner portion of the belt where the teeth are
- Align the pulley on the washer bearing and gently push in the tail rotor shaft.
- Make sure that the tapered side on the shaft is aligned with the pulley or the shaft will not go thru
- minimal amount of force is only needed. Do not hammer in the shaft or it might damage the pulley or may bend the shaft

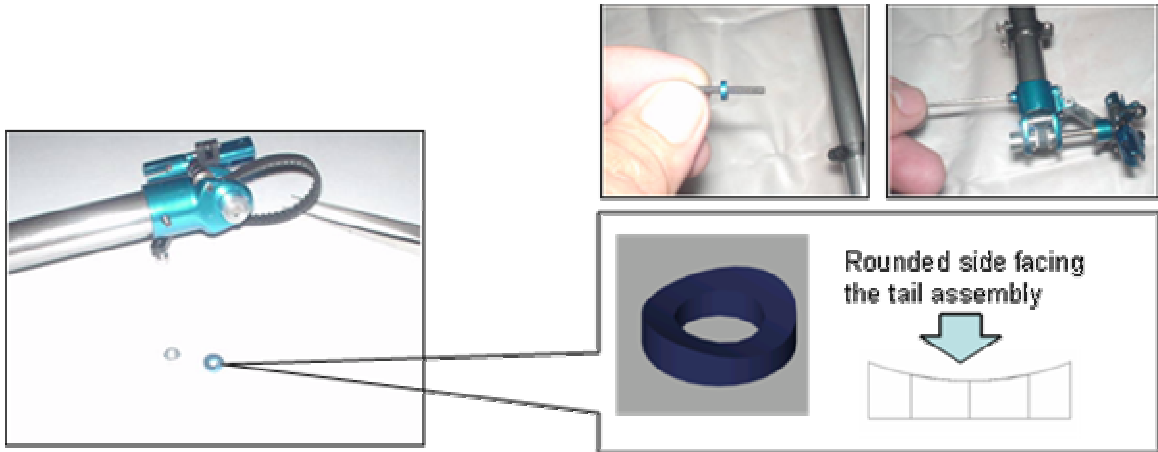


- Included on the plastic bag where the bearings are is the lock collar.
- Note: there is an orientation on placing the collar. This has a tapered side, this side should go in first facing the bearing. Do not plug it the other way around it may produce friction during flights and may damage the bearing.

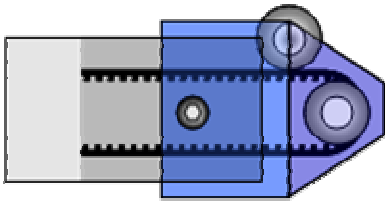


Correct orientation of collar the flat side is facing outside and the tapered portion at the bearing side

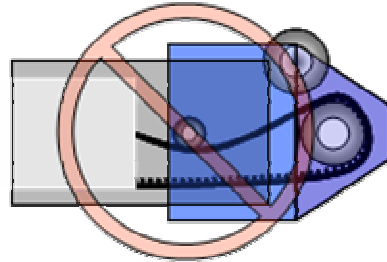
Tail Boom Installation



- Next will be the boom installation
- there are small blue washers included with the kit. This blue washer will be used of the tail boom assembly
- the rounded side must be facing the tail boom
- Before pushing in the screw make sure that screw is located at the center of the belt there is a possibility that the belt might be under the screw. If this happens there will be too much binding and possible grinding of teeth during use.



Correct



Wrong

