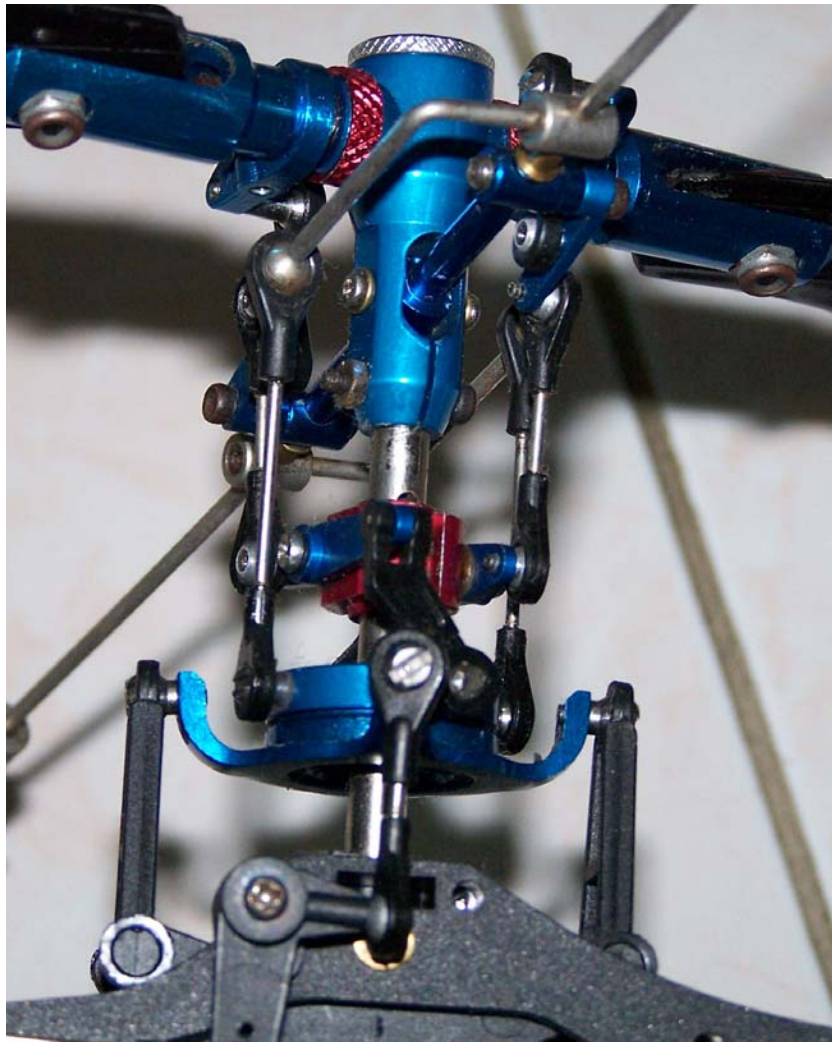


Walkera DF36

Metal Head Assembly Procedure



Walkera DF36 Head Assembly

This is a manual for building the Metal Head for the Walkera DF36 Heli.

Items needed for this build

- 2 x 1.5 hex wrench
- 2.0 hex wrench
- Precision Screw driver Set
- CA (Loctite)
- non silicone Grease
- Loctite RED/Green



The Head is shipped already pre assembled and Complete knocked down. All parts are within the bag. A replacement shaft for the DF36 is also included with the package.



Walkera DF36 Head Assembly

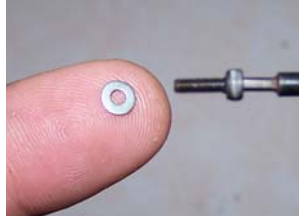
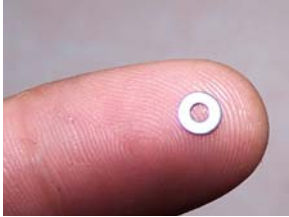
Head Assembly



Main Rotor Blade Grip Assembly

- Parts as seen on fig 1.a (Blade grip, Hex Screw , Washer, inner bearing, outer bearing, tapered washer, Rubber O-ring, feathering shaft. Head holder)

- Clean all parts with alcohol before assembly make sure all oils have been removed from the screws



- Add Liquid thread lock on the M2 screw before boltin in the feathering shaft. Don't forget to add the washer

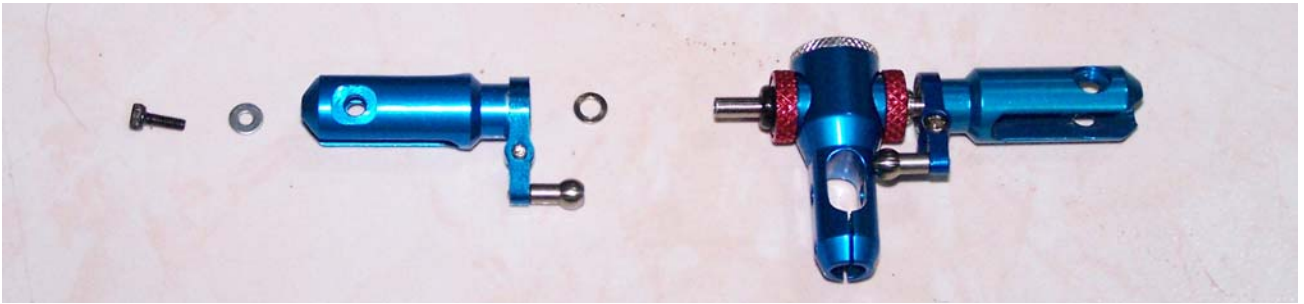


- Push the feathering shaft through the blade grip
- add the tapered washer with the small side facing the blade grip bearing
- On the head assembly add the rubber bushing and set the bushing flat



- Place the red ring on the head block add thread lock to make sure that the red ring will not get loose
- add silicone oil or light grease on the feathering shaft before insertion on the head block

Walkera DF36 Head Assembly



• sequence of head assembly

1. Hex screw
2. Washer
3. Bearing
4. Blade grip
5. Bearing
6. Tapered washer
7. Rubber oring
8. Red Ring nut
9. Head block insert
10. Head Block
11. Feathering shaft



Main Blade Controlling set



- 1x Balance bar sleeve
- 2x Balance bar sleeve inserts
- 2x Grub Screw
- 1x Pitch Slider
- 2x Brass cap washer
- 2x L-Shape Bell crank
- 2x L-Shape Bell crank link
- 2x pins
- 2x Bell crank
- 4x 3mm aluminum balls
- 4x set screw

Walkera DF36 Head Assembly

Main Blade Controlling set



- Insert the Brass Cap washer on the head block assembly. Make sure to add some silicone oil or grease on the washer insides before to have a smooth moving balance bar sleeve.



- Add liquid thread lock on the grub screw and place screw in the balancer sleeve inserts. There is a flat spot at the tips of the balancer bar sleeve were the grub screw must set. Set the inserts at far end of the balancer bar.



- Assemble the Bell crank arm in this manner then insert on the balancer sleeve inserts. Make sure to grease up the insert since there is direct contact between the two aluminum parts. Possibility of binding may occur which can cause bad cyclic controls.



- Assemble the L – shape bell crank using the small pin supplied

Walkera DF36 Head Assembly

Main Blade Controlling set



- Insert the longer Brass Cap washer on the L-shape bell crank in this manner make sure the protruding side is at the outside and the Brass cap washer ring is facing the pitch slider. As seen on the picture above



- Check the pitch slider assembly for binding. There should be no binding that can affect the movement of the arms once placed on the head assembly

Swashplate Assembly Kit



- 4x Ball links 3mm
- 4x Ball links 4mm
- 1x Roller Bearing large
- 1x Upper swash block
- 1x Lower swash block
- 1x Ball bushing
- 1x Ball slider

Walkera DF36 Head Assembly

Swashplate Assembly Kit



- Insert the Roller bearing on the bottom of the upper swashplate block. Place the Ball slider on the top side of the upper swashplate block



- The swashplate assembly is force fitted. It will be a little hard to press in the upper block and lower block on the roller bearing. Make sure the alignment of the parts are to be straight



- It is best to use a C-clamp or a bench vise to press the parts together, This will reduce the possibility of damage on the bearing or deformation on the parts. Make sure the upper swash block will be smooth and slick when rotated.

Walkera DF36 Head Assembly

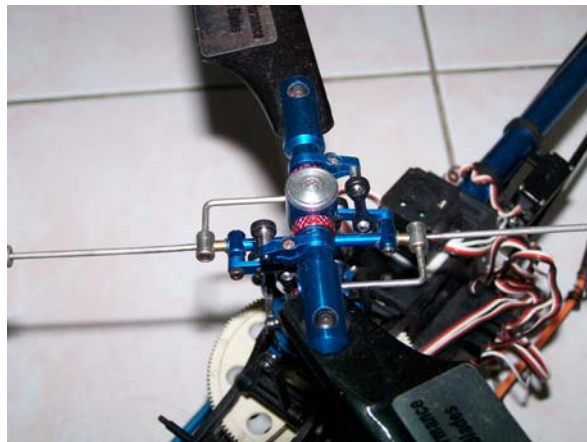
Swashplate Assembly Kit



- There are 2 type of ball sizes. The larger ones goes at the outer side of the swash the smaller ball 3mm goes on the upper block of the swash.



- Insert the main shaft on the Head block assembly and fasten using the m2 screw and nut.



Walkera DF36 Head Assembly

Build Quality

The Walkera 36 metal head is just as similar in performance with the plastic head. The only major difference is the smooth rolling of the swashplate and the better main blade grip assembly. For the other parts such as the mixing arms. Bell crank assembly seems to be on the poor side. The material is not hardened T6 aluminum and has a tendency to bend easily. The small ball parts are using small screws that are too weak for this application. The possibility of parts getting off in flight may occur, this is one reason that all metal to metal parts should be used with thread lock as assurance.

Flight performance seem to be similar with just a slight difference on the cyclic response due to the swashplate but overall performance is not what you expect on a metal upgrade. This upgrade is more of a cosmetic upgrade than performance. There is really no good reason why the heli will not perform similar even when using the plastic head.

I have not fully utilize the head in 3D flight as in my assessment there is a greater possibility that the links and ball screws will pop out due to the forces that it will undergo. As far as FF and hovering is concern it is okay.

In comparison with the other heads made and designed by the Walkera Company, this is far the worst design that they have made, I would prefer to get other after market parts just to be on the safe side.

RATING	
Performance	★
Durability	★
Build Quality	★
Value for Money	★★
Overall Performance	★