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› TSPFJX Metal Rotor Head Upgrade for Wltoys and XK RC Helicopters User Manual

## TSPFJX Metal Rotor Head

# TSPFJX Metal Rotor Head Upgrade for Wltoys and XK RC Helicopters User Manual

Models: Wltoys V966, V977, V988, V930; XK K110, K110S, K120

## INTRODUCTION

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This manual provides instructions for the installation, operation, and maintenance of the TSPFJX Metal Rotor Head. This component is designed as an upgrade part for various Wltoys and XK series RC helicopters, offering enhanced durability and performance compared to standard plastic components.

### Product Features:

- Compatible with Wltoys V966, V977, V988, V930 RC Helicopters.
- Compatible with XK K110, K110S, K120 RC Helicopters.
- Constructed from durable metal for improved longevity and flight stability.

## PRODUCT OVERVIEW

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Figure 1: TSPFJX Metal Rotor Head. This image displays the red anodized metal rotor head, featuring the main shaft mounting point and two blade grip attachment points.

The TSPFJX Metal Rotor Head is a precision-engineered component designed to replace the stock rotor head on compatible RC helicopter models. Its metal construction provides increased rigidity and resistance to impact, which can lead to more precise control and reduced wear over time.

## SETUP AND INSTALLATION

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Before beginning installation, ensure your RC helicopter is powered off and the battery is disconnected. It is recommended to have a clean, well-lit workspace and appropriate small tools (e.g., miniature screwdrivers, pliers).

1. **Preparation:** Carefully remove the main rotor blades from your helicopter. Refer to your helicopter's original manual for specific blade removal instructions.
2. **Remove Existing Rotor Head:** Locate the screws or pins securing the existing rotor head to the main shaft. Carefully remove these fasteners and detach the old rotor head. Note the orientation of all components as you disassemble them.
3. **Inspect Main Shaft:** Examine the helicopter's main shaft for any damage or bends. Replace the main shaft if necessary before installing the new rotor head.
4. **Install New Rotor Head:** Slide the TSPFJX Metal Rotor Head onto the main shaft, ensuring it is correctly oriented. The blade grip attachment points should align with the helicopter's design.
5. **Secure Rotor Head:** Use the original screws or pins (or new ones if provided and compatible) to

securely fasten the metal rotor head to the main shaft. Do not overtighten, as this can strip threads or damage components.

6. **Reattach Blades:** Carefully reattach the main rotor blades to the new metal rotor head. Ensure they are balanced and secured according to your helicopter's specifications.
7. **Pre-Flight Check:** Before powering on, manually check that the rotor head moves freely and smoothly without excessive play. Ensure all screws are tight and components are correctly aligned.

*Note: If you are unsure about any step, consult a qualified RC technician or refer to online resources specific to your helicopter model.*

## OPERATING CONSIDERATIONS

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The TSPFJX Metal Rotor Head is a passive component that enhances the structural integrity and responsiveness of your RC helicopter. Its operation is directly tied to the helicopter's flight control system.

- **Improved Durability:** The metal construction is designed to withstand more stress than plastic alternatives, potentially reducing damage from minor crashes or hard landings.
- **Enhanced Precision:** The increased rigidity of the metal rotor head can contribute to more precise control inputs and a more stable flight experience.
- **Weight Impact:** While metal is more durable, it may also be slightly heavier than the original plastic part. This minor weight difference is generally accounted for in the helicopter's design but may subtly alter flight characteristics.

Always perform a thorough pre-flight check before each flight, especially after installing new components.

## MAINTENANCE

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Regular maintenance ensures the longevity and optimal performance of your TSPFJX Metal Rotor Head and the overall helicopter.

- **Visual Inspection:** After each flight, visually inspect the rotor head for any signs of damage, bends, cracks, or loose screws.
- **Cleanliness:** Keep the rotor head free from dirt, dust, and debris. Use a soft brush or compressed air to clean intricate areas.
- **Lubrication:** If the rotor head incorporates moving parts that require lubrication (e.g., bearings, pivots), apply a small amount of appropriate RC-grade lubricant as needed. Avoid over-lubrication.
- **Screw Tightness:** Periodically check the tightness of all screws securing the rotor head and blade grips. Do not overtighten.
- **Component Replacement:** If any part of the rotor head becomes damaged or excessively worn, replace it immediately to prevent further issues or unsafe flight conditions.

## TROUBLESHOOTING

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This section addresses common issues that may arise after installing or during the use of the metal rotor head.

Problem	Possible Cause	Solution
Excessive vibration during flight.	<ul style="list-style-type: none"> <li>• Unbalanced rotor blades.</li> <li>• Loose rotor head screws.</li> <li>• Bent main shaft or feathering shaft.</li> <li>• Damaged bearings in the rotor head.</li> </ul>	<ul style="list-style-type: none"> <li>• Balance rotor blades carefully.</li> <li>• Check and tighten all rotor head screws.</li> <li>• Inspect and replace bent shafts.</li> <li>• Replace worn or damaged bearings.</li> </ul>
Helicopter drifts or is difficult to control.	<ul style="list-style-type: none"> <li>• Incorrect rotor head installation.</li> <li>• Swashplate not level.</li> <li>• Damaged blade grips or linkages.</li> </ul>	<ul style="list-style-type: none"> <li>• Re-check installation steps for correct orientation and secure fastening.</li> <li>• Adjust swashplate level according to helicopter manual.</li> <li>• Inspect and replace any damaged components.</li> </ul>
Rotor head feels stiff or binds.	<ul style="list-style-type: none"> <li>• Overtightened screws.</li> <li>• Debris in moving parts.</li> <li>• Misaligned components.</li> </ul>	<ul style="list-style-type: none"> <li>• Loosen screws slightly, then re-tighten to appropriate tension.</li> <li>• Clean the rotor head thoroughly.</li> <li>• Disassemble and reassemble, ensuring correct alignment.</li> </ul>

## SPECIFICATIONS

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- **Product Type:** Upgrade Metal Rotor Head
- **Material:** Metal
- **Compatibility:**
  - Wltoys V966, V977, V988, V930 RC Helicopters
  - XK K110, K110S, K120 RC Helicopters
- **Manufacturer:** TSPFJX
- **Recommended Age:** 12 years and up
- **ASIN:** B09C3HD2KZ

## WARRANTY AND SUPPORT

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Information regarding specific warranty terms or direct manufacturer support for the TSPFJX Metal Rotor Head is not provided in the product details. For any issues or inquiries, please refer to the retailer where the product was purchased or consult the manufacturer's official website if available.