Routine Maintenance Checklist

Quite naturally, drones are subject to the wear and tear from constant use so because of this regular maintenance checks are required to ensure everything is functioning properly.

This Routine Maintenance checklist is designed to suit the needs of routine checkups and can be applied as frequently as necessary. We recommend performing schedule maintenance before each flight, and as often as needed. That way, scheduling more accurately reflects the likelihood of the drone requiring service.

You'll also want to refer to your manufacturer's maintenance protocol. This guide is to be used in conjunction. Run this checklist to confirm everything is working properly and that any repairs or replacements can be carried out before the next flight.

Preparation

Basic Information
Record pilot identification and drone model details for the unit being serviced.

Technician Name

_____

Date of Maintenance

_____

Drone Make + Model

_____

Drone Serial Number

_____

Drone Weight

_____

Materials Needed

Isopropyl Alcohol
Cleans electronics and evaporates quickly.

Precision Screwdriver
PH000 or T6 for small drone screws.

Anti-static Cloth
Prevents static while cleaning delicate components.

Lens Cleaning Tissue
Used for cleaning the camera lens.

Blower
Gently removes dust from sensitive parts.

Soldering Iron
Used to fix or connect electronic components.

Soldering Wick
Removes excess solder during repairs.

Hex Wrenches
Tighten or loosen bolts on the drone body.

Compressed Air
Blows out dust and debris from tight spaces.

Tweezers
Handles small components safely.

Pliers
Grips or cuts small parts during repairs.

Tip: Instead of purchasing individual tools, consider buying a complete drone maintenance kit on a site like Amazon, which includes everything you need in one package.

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Routine maintenance is performed regularly, typically every 2-3 flights or every 1-2 weeks, depending on usage. This involves tasks such as inspecting the propellers, cleaning the frame, checking for loose screws, and verifying battery health. The goal is to catch minor issues before they escalate, ensuring smooth operation.

- [ ] **Battery Health:**
  - Inspect battery packs for bulges, leaks, or deformities. Replace damaged batteries immediately
  - Fully discharge and recharge batteries every 10-20 charge cycles to optimize battery life
  - Check for proper charging output from the charger and clean ports as needed.

- [ ] **Propeller Inspection:**
  - Inspect propellers for cracks, wear, or damage. Replace them every 200 flights or sooner if issues are found
  - Clean the propellers with a soft cloth and ensure they are securely attached

- [ ] **Motor Maintenance:**
  - Rotate the motors manually to check for smooth movement and ensure no obstructions or rubbing
  - Clean the motor chambers using compressed air to remove debris like dirt or grit
  - If necessary, lubricate motor bearings and ensure the motors are functioning efficiently

- [ ] **Frame & Structural Integrity:**
  - Inspect the frame for cracks or damage. Clean the frame using a microfiber cloth and isopropyl alcohol
  - Tighten any loose screws but avoid over-tightening to prevent structural strain

- [ ] **Wiring & Soldering Check:**
  - Open the drone frame and inspect internal wiring. Look for frayed wires or loose solder joints
  - Resolder any connections that appear weak, following manufacturer guidelines

- [ ] **Landing Gear & Antenna:**
  - Inspect landing gear for damage, bent parts, and ensure rubber shock absorbers are intact
  - Ensure antennae are securely attached and free from physical damage

Periodic Maintenance

Periodic maintenance is done less frequently, around every 10 flight hours or every 1-2 months. This includes deeper cleaning, firmware updates, component replacements, and sometimes professional servicing. It focuses on addressing wear and tear that accumulates over time.

- [ ] **Deep Cleaning:**
  - Perform a thorough cleaning of all drone components, including sensors, camera lenses, propellers, and motors
  - Use compressed air and a soft cloth to remove dust and debris from critical areas

- [ ] **Component Replacement:**
  - Replace propellers after 50 flights or sooner if visible damage occurs
  - Consider replacing other consumable parts like landing gear, motor bearings, or propeller adapters if wear and tear are detected

- [ ] **Firmware & Software Update:**
  - Ensure the drone's firmware and control station software are up to date for optimal performance and compliance with safety regulations

- [ ] **Professional Service (optional):**
  - DJI recommends considering a professional service every 200 flight hours or 6 months for deep maintenance, including motor calibration, component testing, and firmware updates

Finishing Up

- [ ] Forward maintenance report to the appropriate parties

Comments

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